

# SERVICE MANUAL



# T 753

Surround Sound Receiver

# T 753

Surround Sound Receiver

# SAFETY INFORMATION

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THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:  
 (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE.  
 (2) THIS DEVICE MUST ACCEPT INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE OPERATION.

**NAD ELECTRONICS INTERNATIONAL**  
 633 GRANITE COURT, PICKERING, ON CANADA L1W 3K1

**MODEL T 753 A/V SURROUND SOUND RECEIVER**

**POWER RATING** 120V 60Hz 6A ~

CUSTOM MANUFACTURED TO NAD SPECIFICATIONS  
 IN THE PEOPLE'S REPUBLIC OF CHINA

**AH VERSION**

**NAD ELECTRONICS INTERNATIONAL**  
 633 GRANITE COURT, PICKERING, ON CANADA L1W 3K1

**MODEL T 753 A/V SURROUND SOUND RECEIVER**

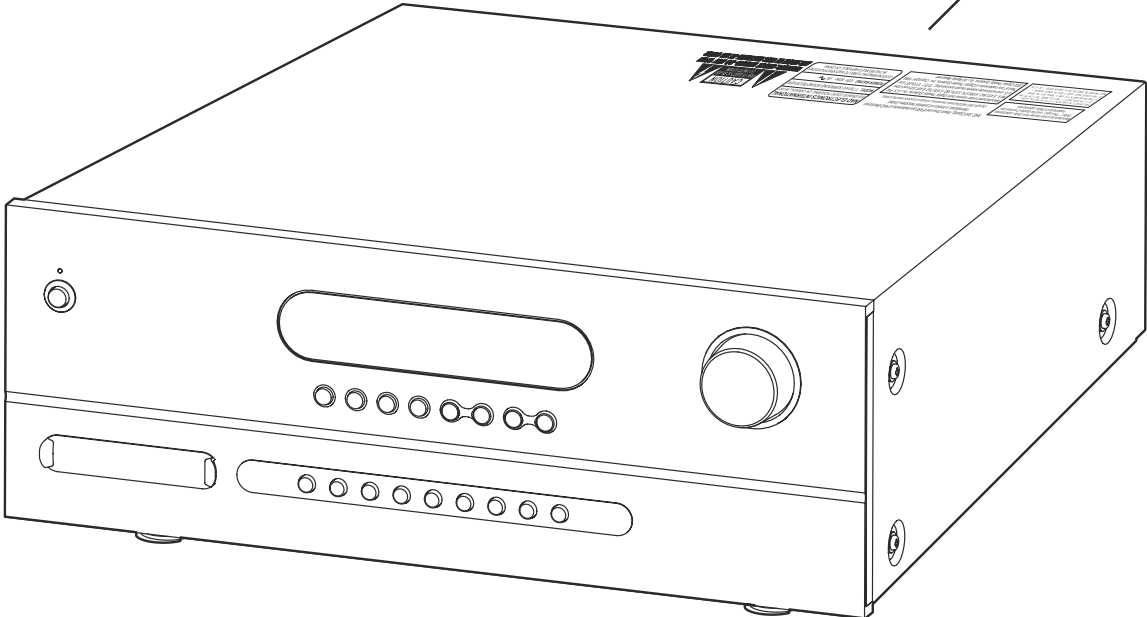
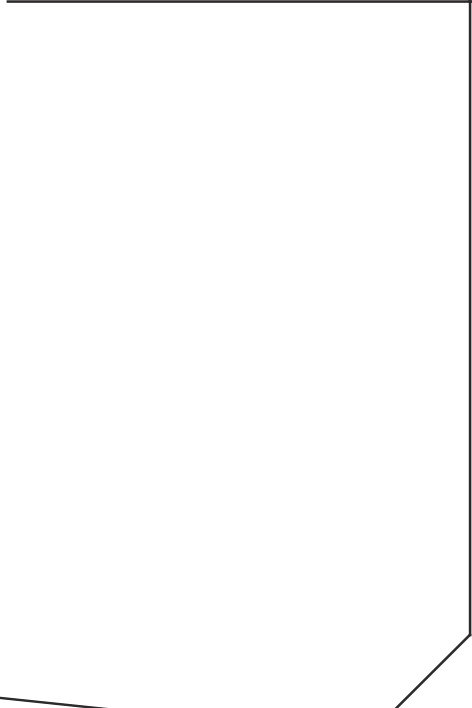
**POWER RATING** 230V 50Hz 3A ~

CUSTOM MANUFACTURED TO NAD SPECIFICATIONS  
 IN THE PEOPLE'S REPUBLIC OF CHINA

**C VERSION**

**CAUTION**  
 RISK OF ELECTRIC SHOCK  
 DO NOT OPEN

**WARNING: SHOCK HAZARD - DO NOT OPEN**  
**AVIS: RISQUE DE CHOC ELECTRIQUE - NE PAS OUVRIR**



# SERVICE SAFETY PRECAUTIONS

## 1. Replacing the fuses

### CAUTION:

FOR CONTINUED PROTECTION AGAINST THE RISK OF FIRE REPLACE ONLY WITH SAME TYPE OF FUSE.

| <b>Reference Designator</b> | <b>Part Number</b> | <b>Description</b>                                   |
|-----------------------------|--------------------|--|
| F751*AH                     | 33-0191001-00-88   | Fuse 10A 250V Time Lag 5x20 MM UL/CSA                |
| F751*C                      | 33-0181006-00-88   | Fuse 6.3A 250V Time Lag 5x20 MM<br>UL/CSA/SEMKO/VDE  |
| F752*AH                     | 33-0111006-00-48   | Fuse 1.6A 250V Time Lag 5x20 MM<br>UL/CSA/VDE/SEMKO  |
| F752*C                      | 33-0151006-00-48   | Fuse 800mA 250V Time Lag 5x20 MM<br>UL/CSA/VDE/SEMKO |

### NOTE:


<\*AH > : USA, CANADIAN MODEL ONLY.

<\*C > : EUROPEAN MODEL ONLY.

## 2. Safety check out

(Only U.S.A. model)

Before returning the product to the customer, make leakage current or resistance measurements to determine that exposed parts are acceptably insulated from supply circuit.

Parts marked with the symbol  are critical with regard to the risk of fire and electric shock.  
Replace only with parts recommended by the manufacturer.

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# SPECIFICATIONS

## POWER AMPLIFIER SECTION

|                          |   |   |
|--------------------------|---|---|
| Rated distortion         | (Rated power level into 8 ohms, THD 20 Hz-20 kHz FL/C/FR)<br>(Rated power level into 8 ohms, THD 20 Hz-20 kHz SL/SR/BS) | $\leq 0.1 \%$<br>$\leq 0.1 \%$                      |
| Input Sensitivity        | (ref. 8 ohms, 1 kHz)  | <b>127 <math>\pm</math> 20 mV</b>                   |
| S/N Ratio                | (A-wtd, 1kHz, 1 W, 8 ohm, SL/SR/BL)   | <b><math>\geq -72</math> dB</b>                     |
| Frequency Response       | (20 Hz - 20 kHz)  | <b>0 <math>\pm</math> 1.0 dB</b>                    |
| Channel Balance          | (1 dB to -40 dB, 1 kHz)<br>(-41 dB to -50 dB, 1 kHz)  | $\leq 2$ dB<br>$\leq 3$ dB                          |
| Audio muting at 1 kHz    |   | <b><math>\geq 55</math> dB</b>                      |
| Subwoofer out, 500 mV in | (THD at 2 V O/P, 100 Hz)  | $\leq 0.5 \%$                                       |
| Crosstalk                | (500 mV input, 10 W, 1 kHz)   | <b><math>\geq -57</math> dB</b>                     |
| <b>Controls</b>          |   |   |
| Bass                     | (at 500 mV in, 1 W out, 100 Hz)   | <b><math>\pm 10</math> dB <math>\pm 2</math> dB</b> |
| Treble                   | (at 500 mV in, 1 W out, 10 kHz)   | <b><math>\pm 10</math> dB <math>\pm 2</math> dB</b> |

## DOLBY DIGITAL SECTION

|                                      |  |  |
|--------------------------------------|--|--|
| Channel Difference(FL ref. Track 30) |  | <b><math>\pm 1.2</math> dB</b>   |
| Frequency Response at Dolby config.2 | SL Track 46 200 - 20 kHz<br>SR Track 47 200 - 20 kHz<br>C Track 44 200 - 20 kHz  | <b><math>\pm 0.8</math> dB</b><br><b><math>\pm 0.8</math> dB</b><br><b><math>\pm 0.8</math> dB</b> |
| Harmonic Distortion                  | (1 W, Audio LPF, Dolby Congfig 1)<br>FL Track 65 997 Hz<br>FR Track 67 997 Hz<br>SL Track 68 997 Hz<br>SR Track 69 997 Hz<br>C Track 66 997 Hz | $\leq 0.08 \%$<br>$\leq 0.08 \%$<br>$\leq 0.08 \%$<br>$\leq 0.08 \%$<br>$\leq 0.08 \%$             |
| S/N Ratio                            | (31 for O/P 1 W, Track 35)<br>CCIR / ARM<br>Audio LPF<br>A-wtd   | <b><math>\geq 65</math> dB</b><br><b><math>\geq 70</math> dB</b><br><b><math>\geq 70</math> dB</b> |
| Channel Separation                   | (1 W, 20 kHz LPF)<br>Track 65 997 Hz   | <b><math>\geq 60</math> dB</b>   |

## DOLBY PRO LOGIC II SECTION

### **Frequency Response**

|  |                                |                 |  |
|--|--------------------------------|-----------------|--|
| I/P mode : L, R                                      | : 1 V in, 1 W, Ch L/R          | 40 Hz<br>20 Hz  | <b>0 <math>\pm</math> 2.0 dB</b><br><b>0 <math>\pm</math> 2.0 dB</b> |
| I/P mode : L=R                                       | : 1 V in, 1 W, Ch /L/R<br>Ch C | 40 Hz<br>20 kHz | <b>0 <math>\pm</math> 2.0 dB</b><br><b>0 <math>\pm</math> 2.0 dB</b> |
| I/P mode : L=-R                                      | : 1 V in, 1 W, Ch SL/SR        | 40 Hz<br>20 kHz | <b>0 <math>\pm</math> 2.0 dB</b><br><b>0 <math>\pm</math> 2.0 dB</b> |
| S/N Ratio (200 mV in, 1 W, A-WTD w/ 1 k termination) |                                |                 | <b><math>\geq 65</math> dB</b>                                       |
| I/P mode : L, R                                      | : 1 kHz, Ch L/R                |                 | <b><math>\geq 65</math> dB</b>                                       |
| I/P mode : L=R                                       | : 1 kHz, Ch C                  |                 | <b><math>\geq 65</math> dB</b>                                       |
| I/P mode : L=-R                                      | : 1 kHz, Ch SL/SR              |                 | <b><math>\geq 65</math> dB</b>                                       |
| THD (2.2 V in, 1 W, w/ 80 kHz LPF, 1 kHz)            |                                |                 | <b><math>\leq 0.2 \%</math></b>                                      |

## DTS SECTION

|  |                             |                      |
|--|-----------------------------|----------------------|
| Output Level (Vol 0 dB) : FL/FR/C/SL/SR            | Track 6 1 kHz               | <b>0.3 ± 1.3 W</b>   |
| Channel Difference (FL ref): FL/FR/C/SL/SR         | Track 6 1 kHz               | <b>± 1.0 dB</b>      |
| Harmonic Distortion (Audio Filter) : FL/FR/C/SL/SR | Track 10-14 1 kHz           | <b>≤ 0.08 %</b>      |
| Frequency Response (20 Hz to 20 kHz)               | Track 26-30                 | <b>+2/-1.5</b>       |
| Subwoofer Output Level 1 kHz ref at pre-out (FL)   | Play Track 10, charge to 15 | <b>12.5 ± 1.5 dB</b> |

## AM TUNER SECTION

Input level is expressed as the reading in open circuit of 75-ohm source impedance signal generator

|  |  |                       |
|--|--|-----------------------|
| Usable sensitivity (999/1000 kHz)        |  | <b>≤ 30 dBuV</b>      |
| S/N Ratio (5 mV in)                      |  | <b>≥ 38 dB</b>        |
| THD (5 mV in)                            |  | <b>≤ 3 %</b>          |
| IF Rejection (450 kHz)                   |  | <b>≤ 36 dB</b>        |
| Image Rejection (F+2xIF)                 |  | <b>≥ 28 dB</b>        |
| Selectivity                              |  | <b>≥ 17 dB</b>        |
| Output                                   |  | <b>170 -20/+30 mV</b> |
| Loop sensitivity (20 dB S/N)             |  |                       |
| 999/1000 kHz                             |  | <b>≤ 66 dB</b>        |
| 603/600 kHz                              |  | <b>≤ 66 dB</b>        |
| 1404/1400 kHz                            |  | <b>≤ 66 dB</b>        |
| Frequency Response (100 - 2.3 kHz, 5 mV) |  | <b>± 6 dB</b>         |

## FM TUNER SECTION

\*C

\*AH

Input level is expressed as the reading in open circuit of 75-ohm source impedance signal generator

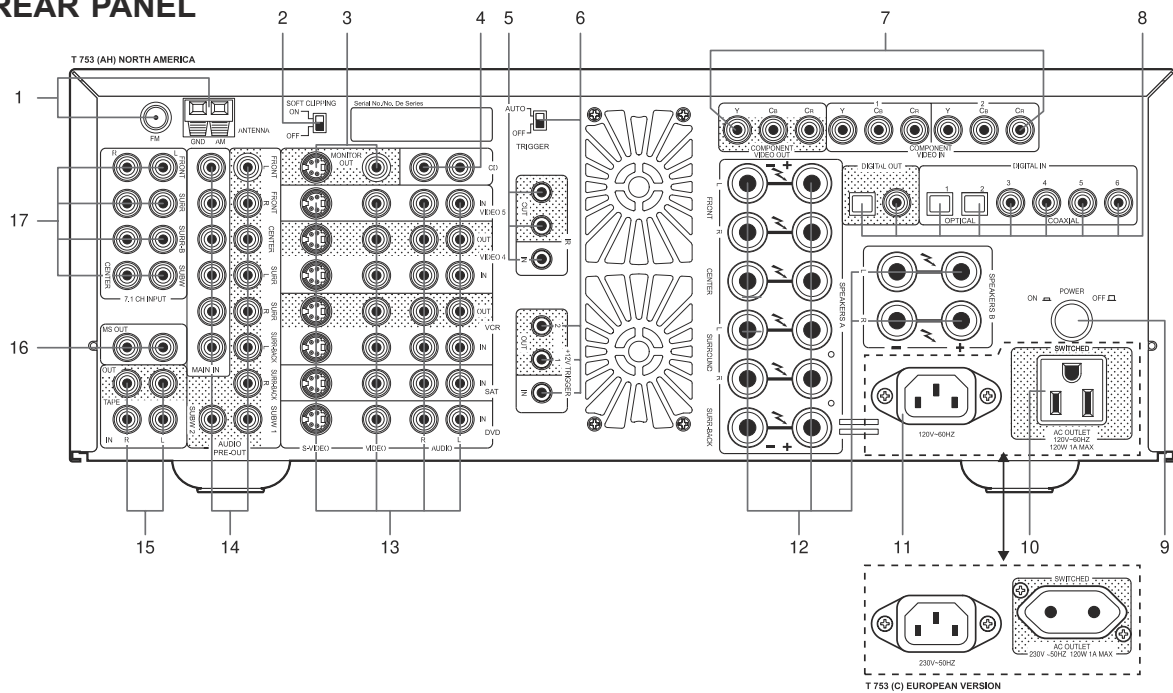
|  |        |                   |                   |
|--|--------|-------------------|-------------------|
| Usable sensitivity (98 MHz)                        |        | <b>≤ 15 dBμV</b>  | <b>≤ 15 dBuV</b>  |
| S/N Ratio (60 dB, IHF wtd)                         | Mono   | <b>≥ 63 dB</b>    | <b>≥ 63 dB</b>    |
|  | Stereo | <b>≥ 63 dB</b>    | <b>≥ 63 dB</b>    |
| Frequency Response (20 Hz - 15 kHz, 60 dBμ)        |        | <b>0 ± 1.5 dB</b> | <b>0 ± 1.5 dB</b> |
| Channel Separation (60 dBμ)                        | 100 Hz | <b>≥ 30 dB</b>    | <b>≥ 30 dB</b>    |
|  | 1 k    | <b>≥ 38 dB</b>    | <b>≥ 38 dB</b>    |
|  | 10 kHz | <b>≥ 30 dB</b>    | <b>≥ 30 dB</b>    |
| Alternate Channel Selectivity (40 dBμ, ± 400 kHz)  |        | <b>≥ 60 dB</b>    | <b>≥ 45 dB</b>    |
| Capture Ratio (40 dBμ)                             |        | <b>≤ 3 dB</b>     | <b>≤ 3 dB</b>     |
| AM Suppression (60 dBμ, 100% Mod. FM, 30% Mod. AM) |        | <b>≥ 48 dB</b>    | <b>≥ 48 dB</b>    |
| Image Rejection (119.4 MHz)                        |        | <b>≥ 65 dB</b>    | -                 |
| I.F. Rejection (10.7 MHz)                          |        | -                 | <b>≥ 78 dB</b>    |
| Pilot Suppression (98 MHz)                         |        | <b>≥ 60 dB</b>    | <b>≥ 60 dB</b>    |
| THD (60 dBμ, L=R 75 kHz for AH, 40 kHz Dev for C)  | Mono   | <b>≤ 0.25 %</b>   | <b>≤ 0.25 %</b>   |
|  | Stereo | <b>≤ 0.35 %</b>   | <b>≤ 0.35 %</b>   |
| Auto-Search Sensitivity                            | On     | <b>≥ 24 dBμ</b>   | <b>≥ 24 dBμ</b>   |
|  | Off    | <b>≤ 15 dBμ</b>   | <b>≤ 15 dBμ</b>   |
| RDS decode Sensitivity                             |        | <b>≤ 26 dBμ</b>   | -                 |

## PHYSICAL SPECIFICATIONS

|                                     |                             |
|-------------------------------------|-----------------------------|
| Dimensions (Width x Height x Depth) | <b>435 x 170 x 423 mm</b>   |
| Net Weight                          | <b>20.50 Kg (45.10 lbs)</b> |
| Shipping Weight                     | <b>24.0 Kg (52.80 lbs)</b>  |

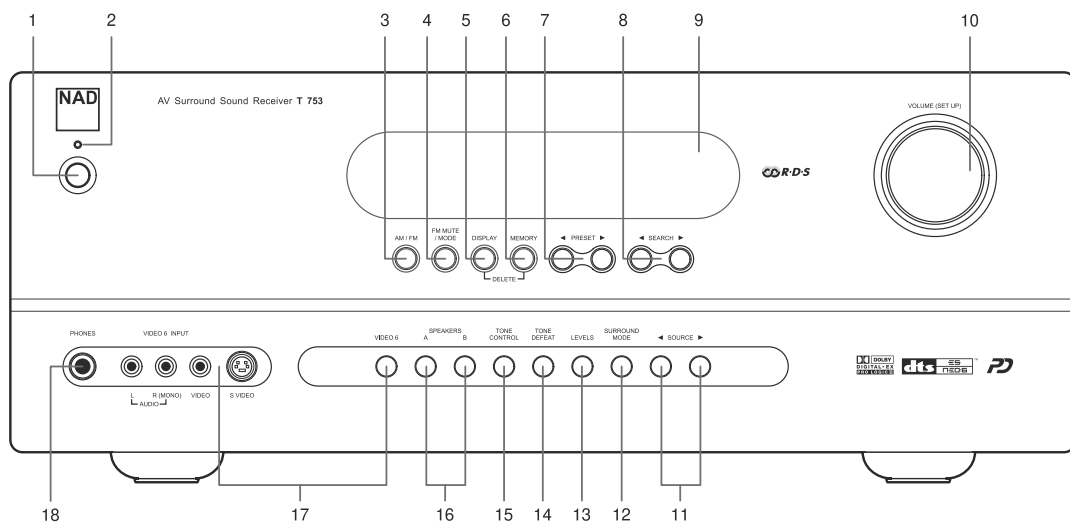
# REAR PANEL / FRONT PANEL VIEW

## REAR PANEL



- |   |   |
|---|---|
| 1. FM & AM ANTENNA                            | 9. POWER SWITCH                             |
| 2. SOFT CLIPPING ON/OFF                       | 10. SWITCHED AC OUTLETS                     |
| 3. MONITOR OUT                                | 11. AC POWER INLET                          |
| 4. CD INPUT                                   | 12. SPEAKERS A & B                          |
| 5. IR INPUT & OUTPUT                          | 13. DVD, SAT, VCR, VIDEO 4 & VIDEO 5        |
| 6. +12V TRIGGER INPUT & OUTPUT                | 14. MAIN IN /AUDIO PRE-OUTS / SUBWOOFER OUT |
| 7. COMPONENT VIDEO IN & COMPONENT VIDEO OUT   | 15. TAPE INPUT & OUTPUT                     |
| 8. DIGITAL AUDIO INPUT & DIGITAL AUDIO OUTPUT | 16. MS OUT (MULTISOURCE OUT)                |
|   | 17. 7.1 CH. INPUTS                          |

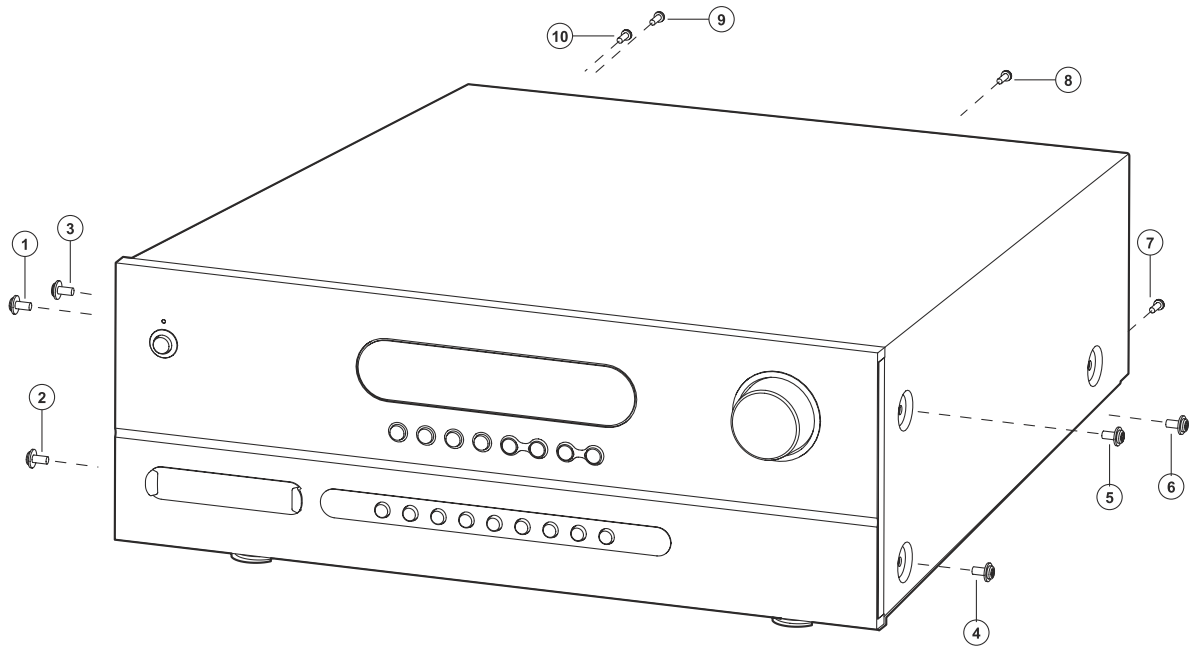
## FRONT PANEL



- |                   |                      |                    |
|-------------------|----------------------|--------------------|
| 1. STANDBY SWITCH | 7. PRESET DOWN / UP  | 13. LEVELS         |
| 2. STANDBY LED    | 8. SEARCH DOWN / UP  | 14. TONE DEFEAT    |
| 3. AM / FM        | 9. VFL DISPLAY       | 15. TONE CONTROLS  |
| 4. FM MUTE / MODE | 10. VOLUME (SETUP)   | 16. SPEAKERS A & B |
| 5. DISPLAY        | 11. SOURCE DOWN / UP | 17. VIDEO 6 INPUT  |
| 6. MEMORY         | 12. SURROUND MODE    | 18. PHONES         |

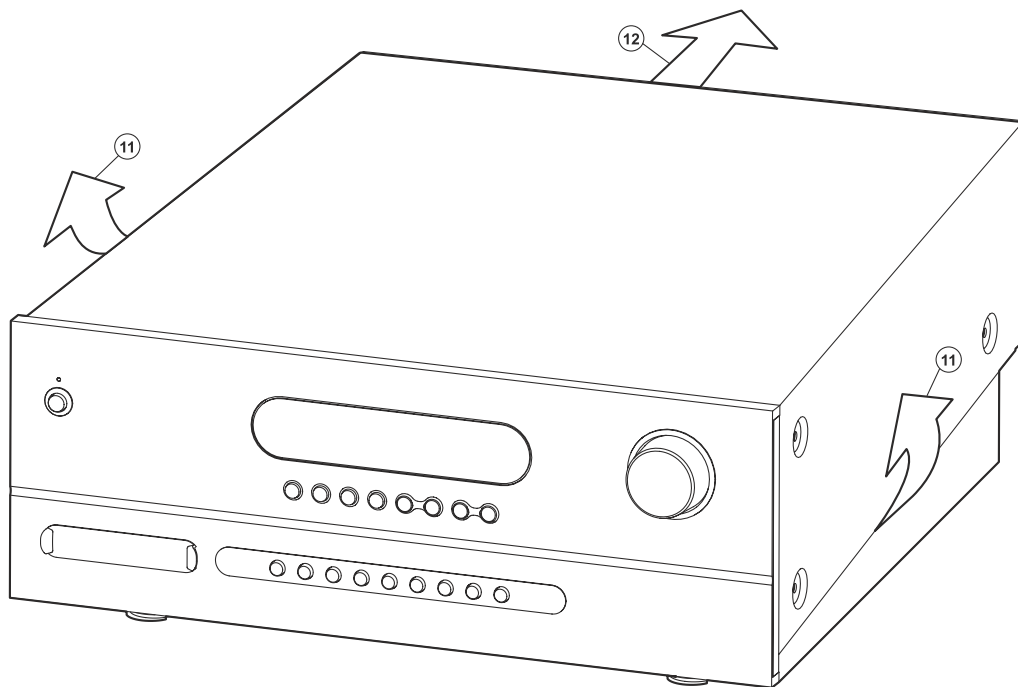
# DISASSEMBLY INSTRUCTIONS

1. Remove machine screws M4.0 x 8.0 (1 to 6) from the side panels. Remove tapping screw 3.0 x 8.0 (7 to 10) from the back panel. Refer to **Figure No. 1**.



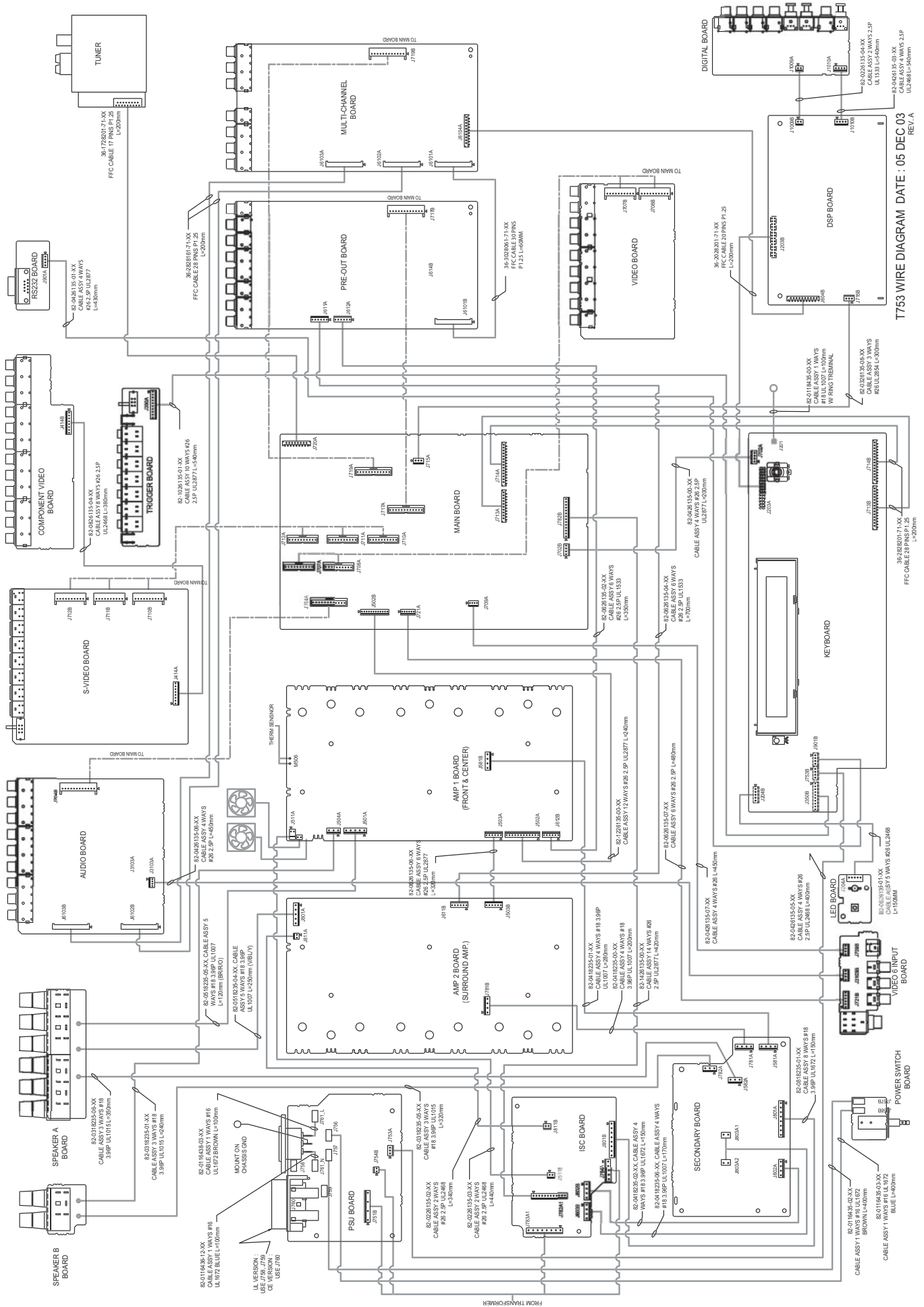
**Figure No. 1**

2. Pull both sides of the TOP COVER slightly outwards **11** and tilt approx. 35 ° and then remove in the direction as indicated by the arrow **12**. Refer to **Figure No. 2**.



**Figure No. 2**

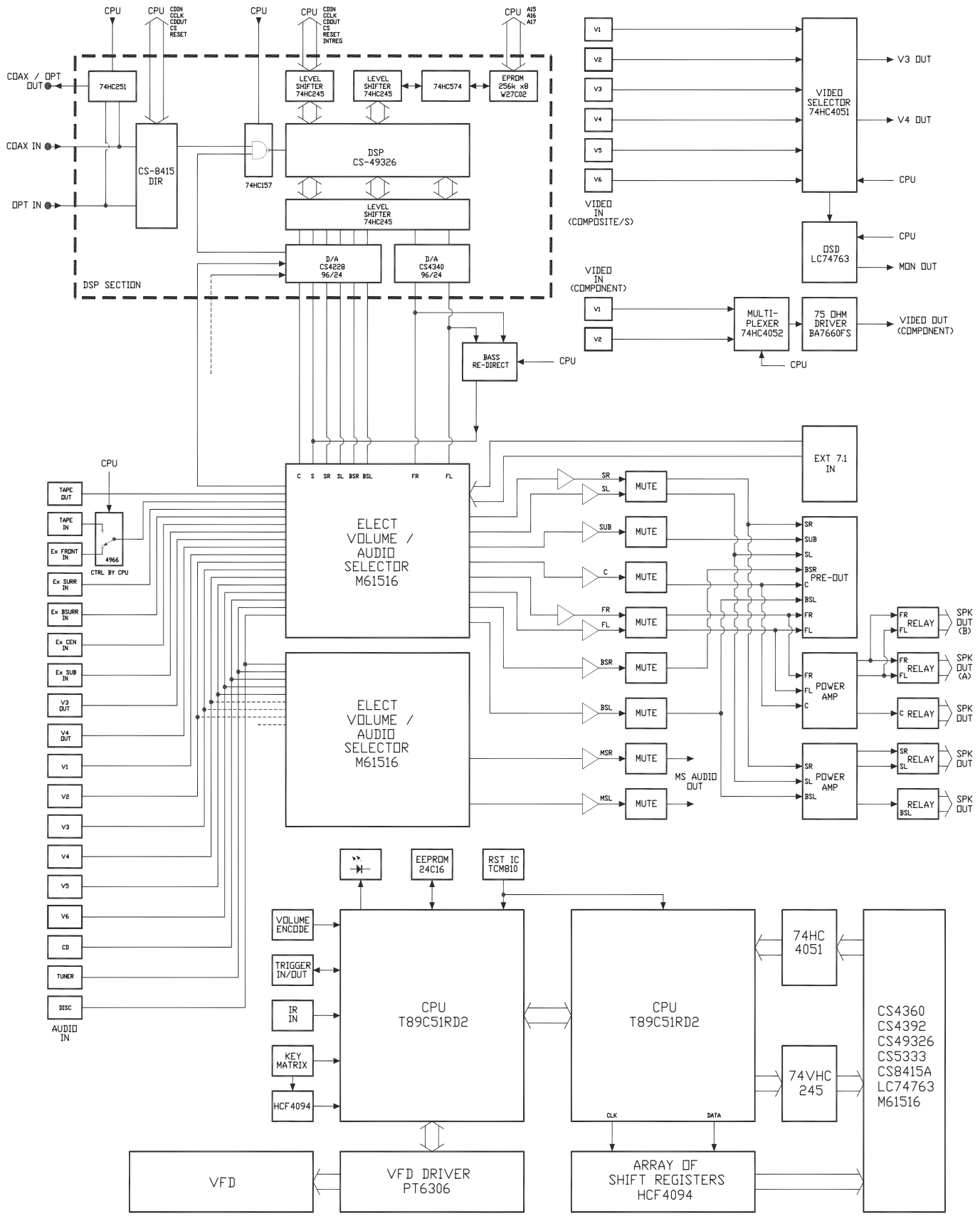
# WIRING DIAGRAM



T753 WIRE DIAGRAM DATE: 05 DEC 03 REV. A



# BLOCK DIAGRAM



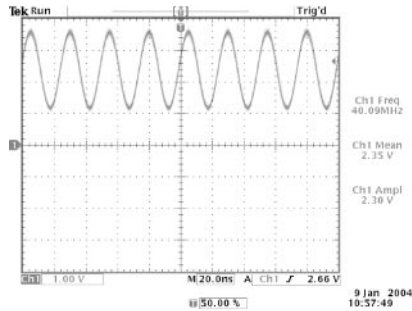
T753 Block Diagram  
Issue : 01

# SPECIAL FUNCTION

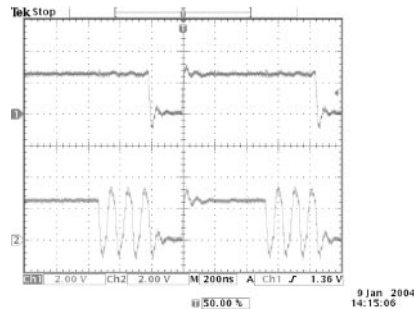
| FEATURE              | KEYS PRESS ON FRONT PANEL |
|----------------------|---------------------------|
| RESET FOR AH VERSION | VIDEO 6 +SOURCE UP        |
| RESET FOR C VERSION  | VIDEO 6 + SOURCE DOWN     |
| NTSC / PAL SELECTION | VIDEO + MEMORY            |
| VFD ALL DISPLAY      | AUDIO 6 + TONE DEFEAT     |
| AM FREQ. STEP        | AM/FM + FM MUTE           |

## DETAILS & WAVEFORMS ON SYSTEM TEST & DEBUGGING

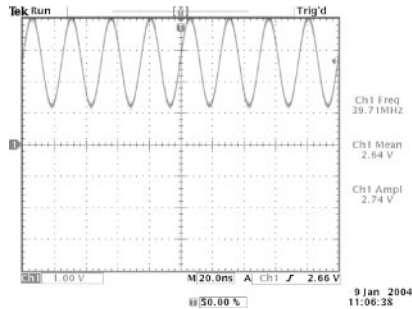
M6759(U202) main clock is at 40MHz(X202)



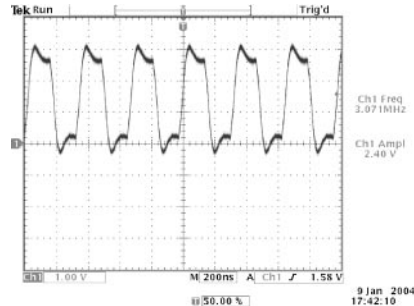
UPPER - OUTPUT ENABLE(pin 24) of EPROM (W27C02) when changing SURROUND MODES  
LOWER -  $\bar{t}$ CHIP ENABLE(pin 22) of EPROM (W27C02) when changing SURROUND MODES



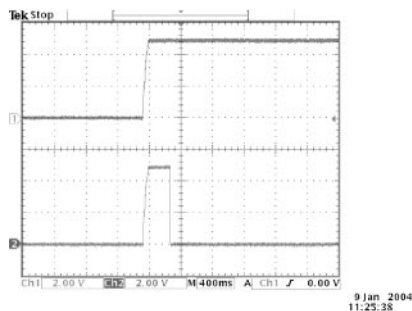
M6759(U201) main clock is at 40MHz(X201)



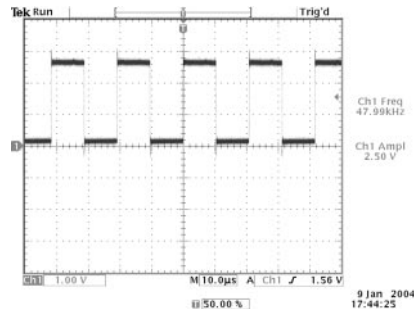
SCLK (pin 43 of CS49326)



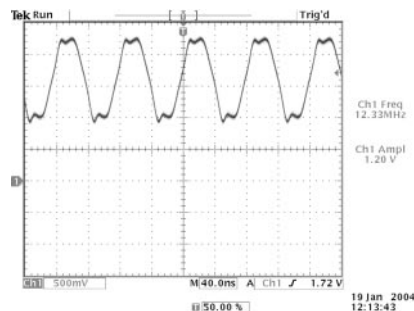
UPPER - +5V supply to KEYBOARD when power up  
LOWER - RESET line (TCM810LENB713) when power up



LRCLK (pin 42 of CS49326)



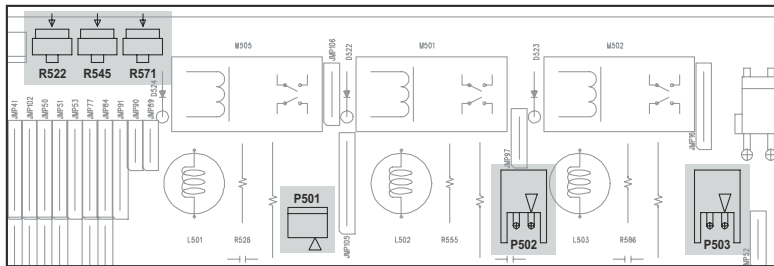
MCLK (pin 30 of CS49326)



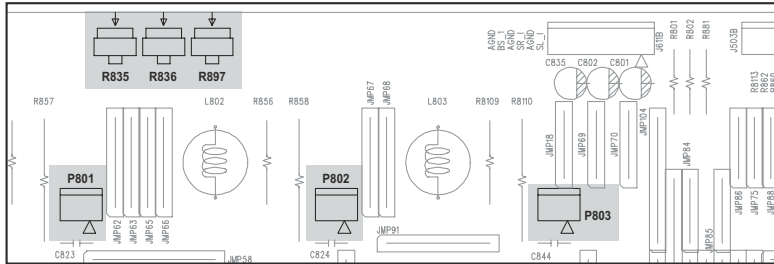
**NOTE:** The waveforms are based on software version V1.27.

# ADJUSTMENT POINT DIAGRAM

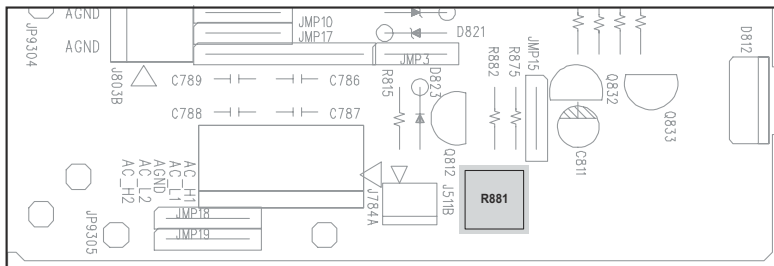
## FRONT / CENTER AMPLIFIER BOARD



## SURROUND AMPLIFIER BOARD



## SECONDARY / ISC BOARD



# AMPLIFIER ADJUSTMENT

## Idle Current

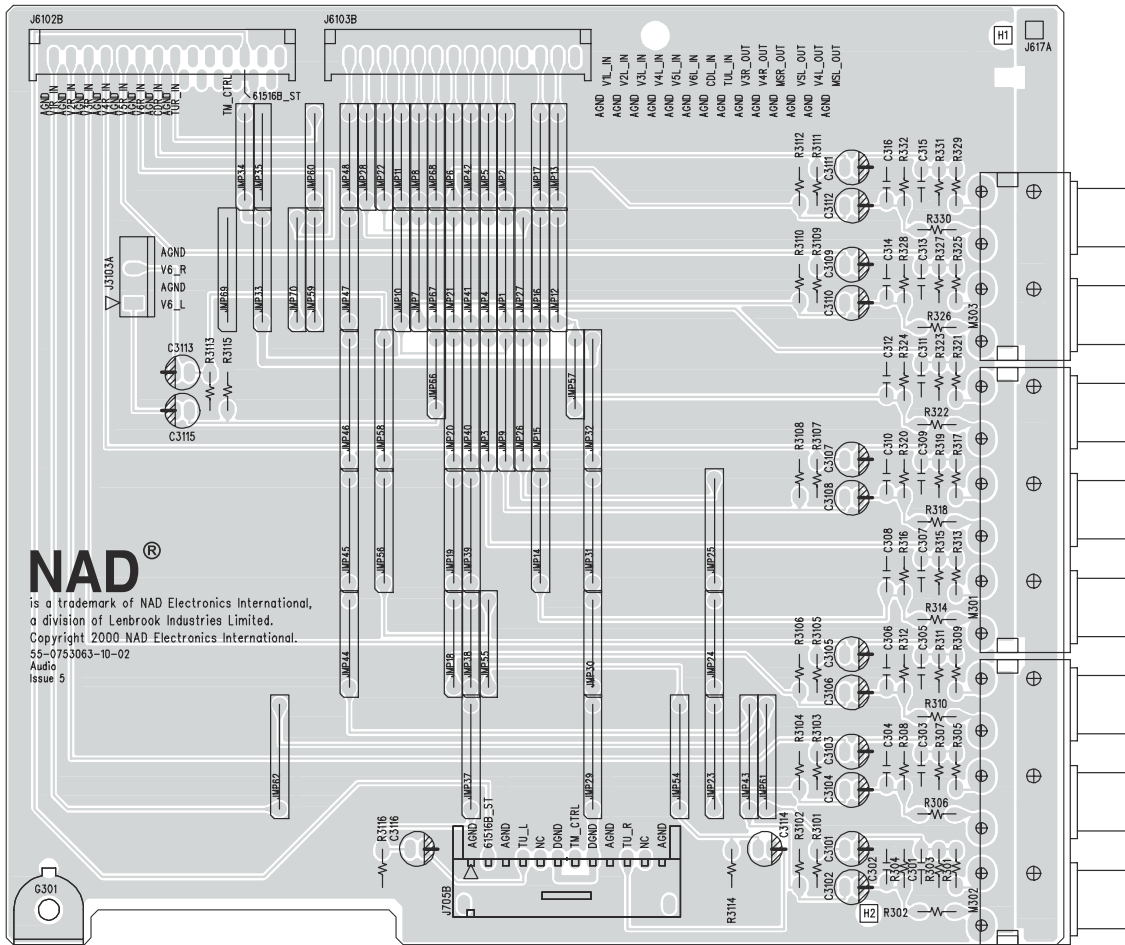
1. Rotate R522 fully clockwise.
2. Connect DC millivoltmeter to P501 (i.e. Across half of R523, 0.22 Ohm resistor).
3. Turn on the unit.
4. Adjust R522 for 1mV reading on voltmeter.
5. Leave power on for at least 5 min, and check for idle current again.
6. Repeat for other channels.

| CHANNEL | JUMPER | VR   |
|---------|--------|------|
| FL      | P501   | R522 |
| FR      | P502   | R545 |
| C       | P503   | R571 |
| SL      | P801   | R835 |
| SR      | P802   | R836 |
| BS      | P803   | R897 |

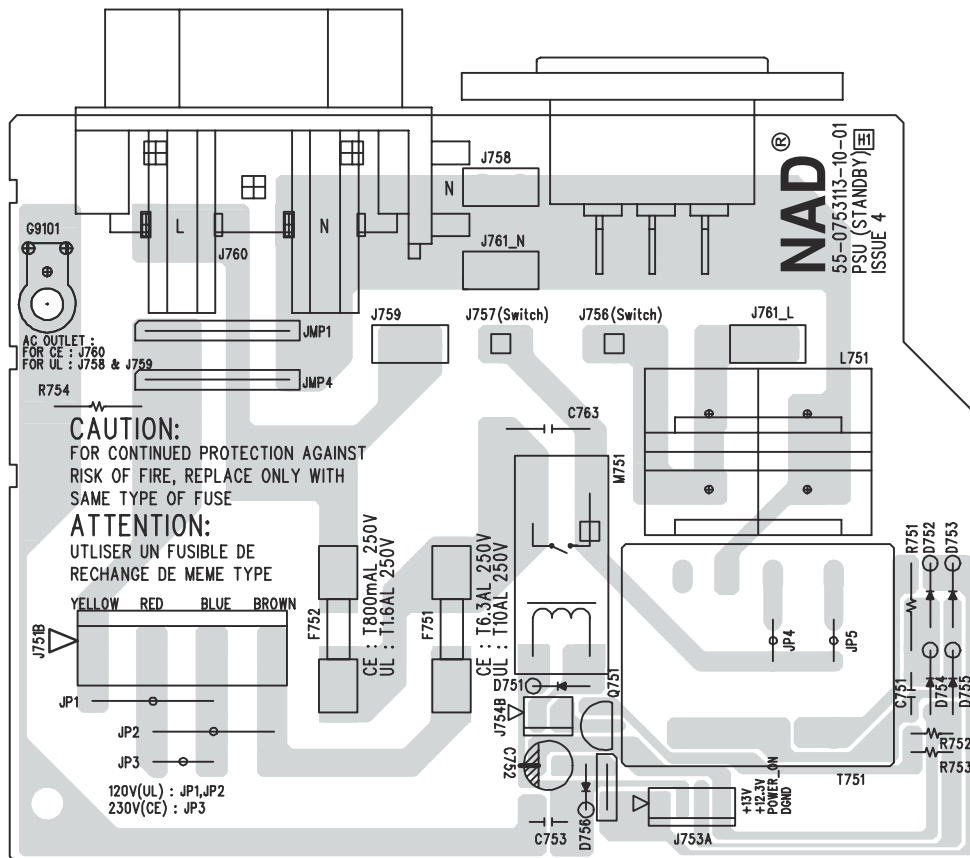
## ISC Sensitivity

1. Connect 8 ohm loading to all channels.
2. Rotate R881 fully clockwise.
3. Load all channels at full power using 1kHz sine wave.
4. At this time, monitor the THD of the SL,SR,BS output. Clipping should occur before full power achieved.
5. Rotate R834 counter-clockwise slowly until the THD just below 0.1%.
6. Repeat step 2-5 for R834 but monitor FL, FR & Center output.
7. The procedure is finish at this step.
8. Load all channels at full power using 1kHz sine wave with 4 ohm load.
9. The clipping power(at THD 0.1%) should less than 85W.

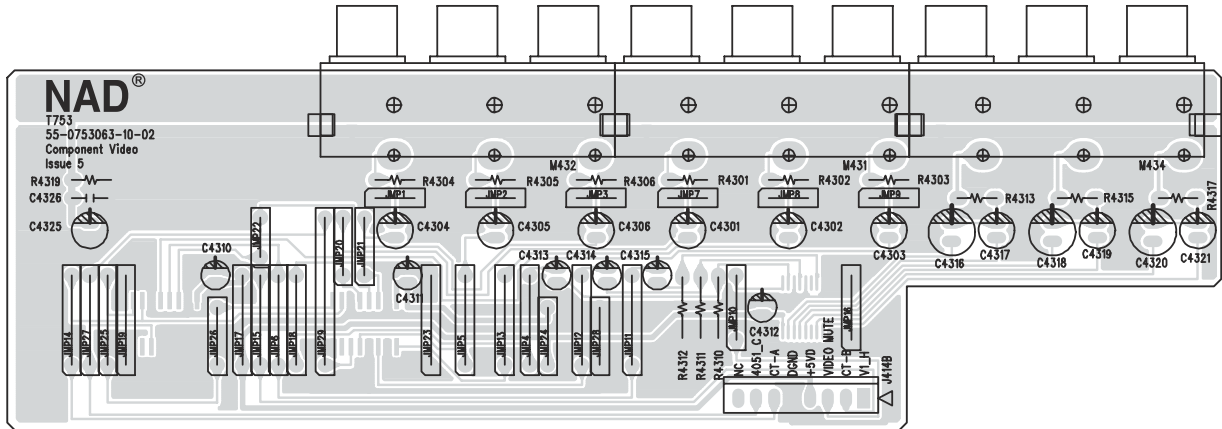
# PCB LAYOUT AUDIO BOARD



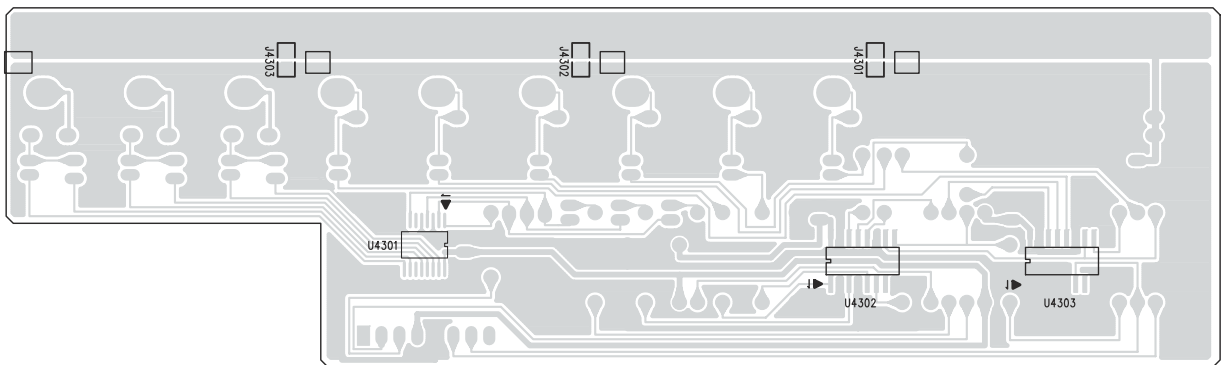
# POWER SUPPLY (STANDBY) BOARD



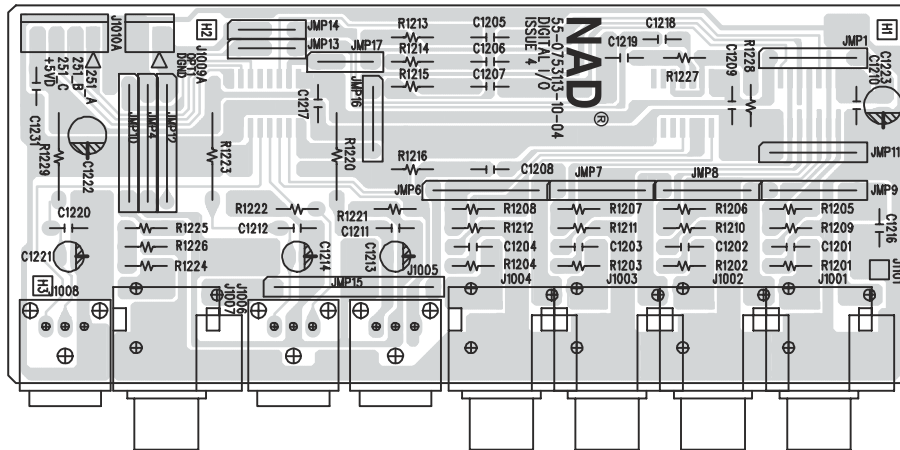
## COMPONENT VIDEO BOARD - COMPONENT SIDE



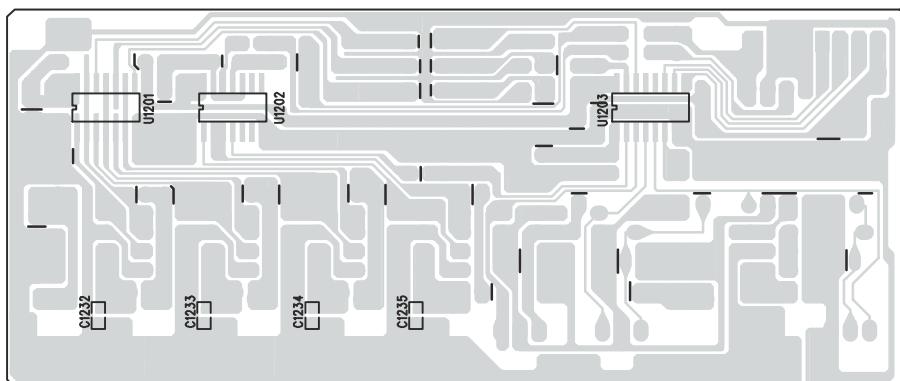
## COMPONENT VIDEO BOARD - COPPER SIDE



## DIGITAL BOARD - COMPONENT SIDE SIDE

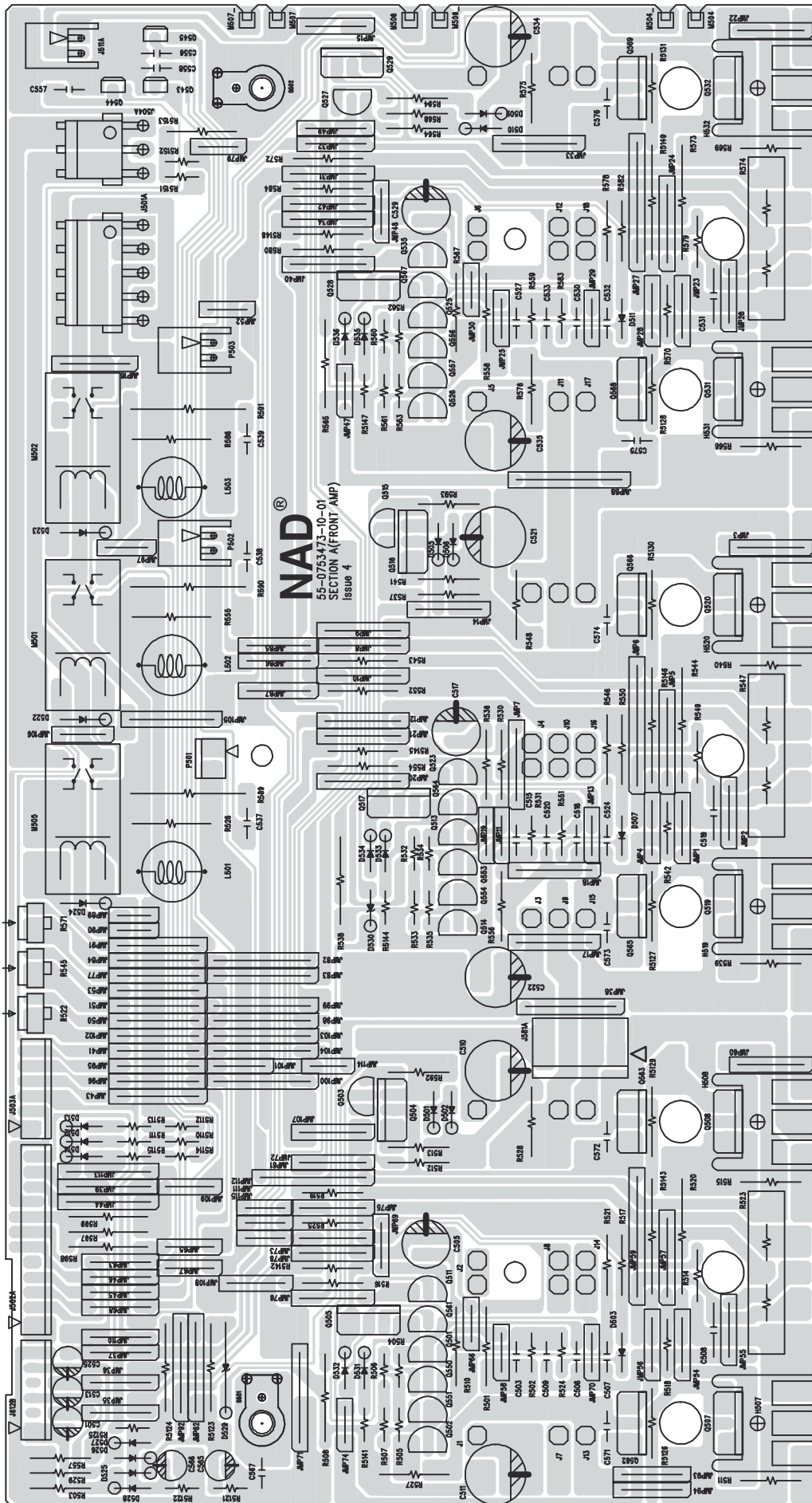


## DIGITAL BOARD - COPPER SIDE

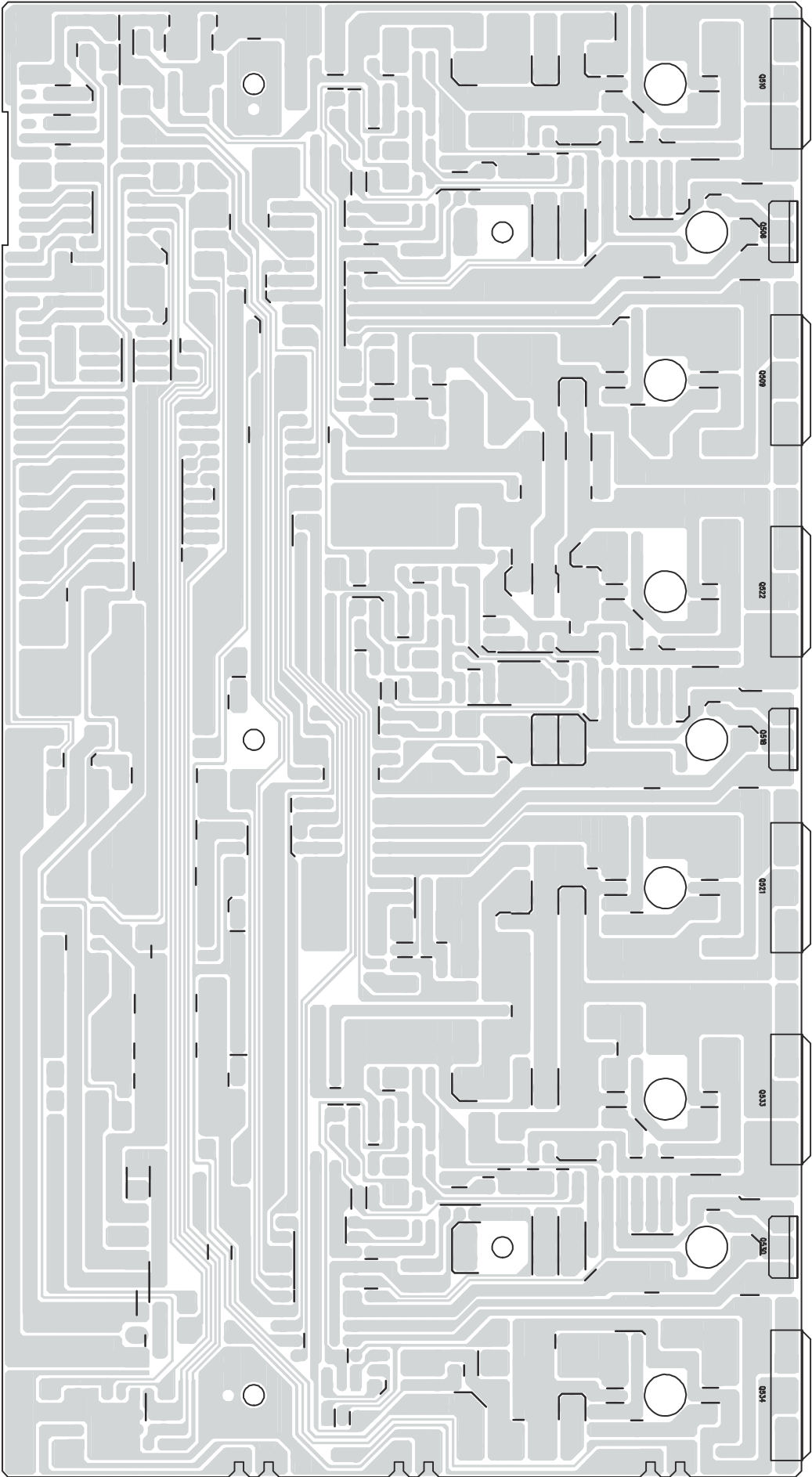




# FRONT / CENTER AMPLIFIER BOARD - COMPONENT SIDE

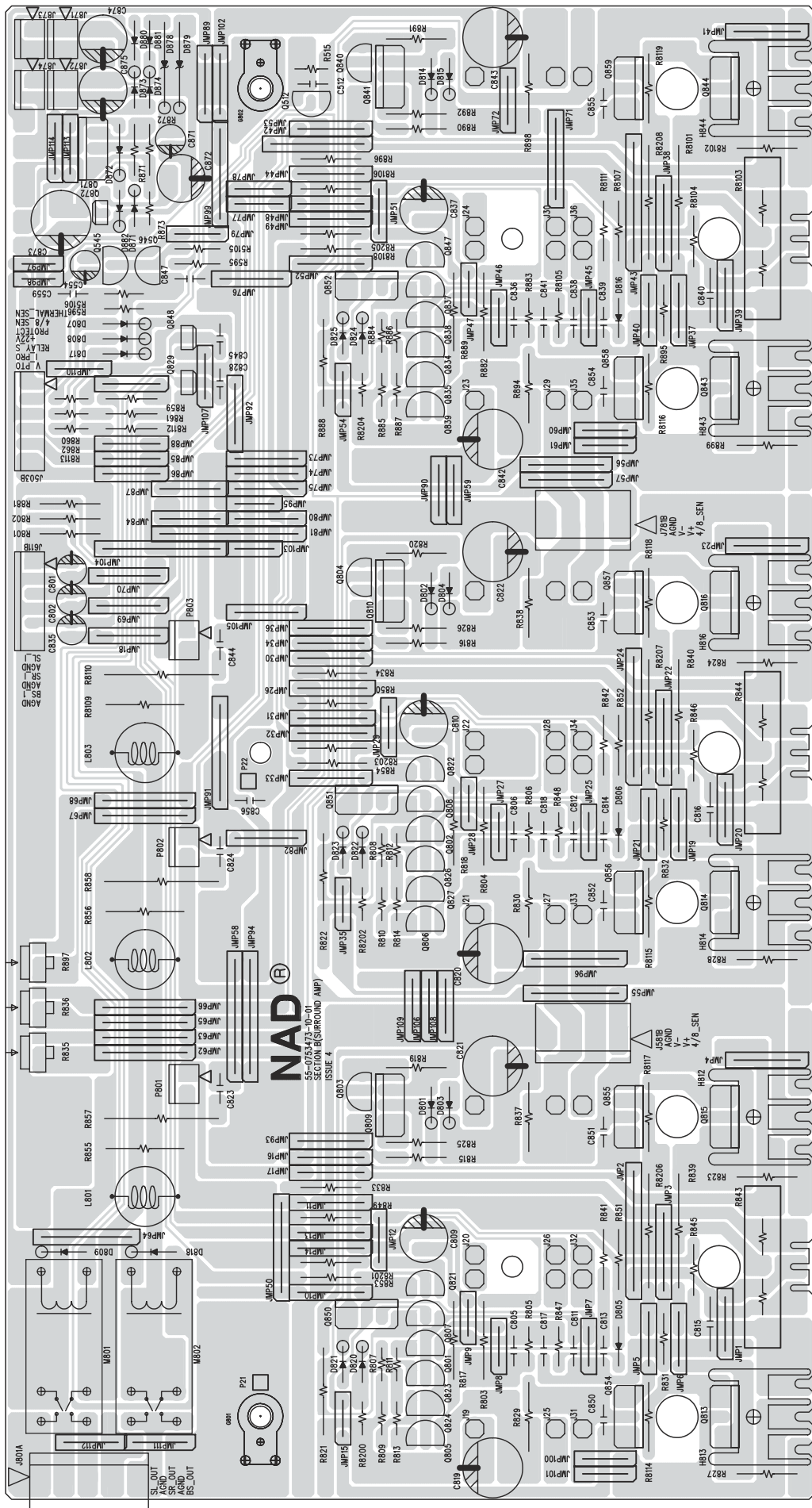


**FRONT / CENTER AMPLIFIER BOARD - COPPER SIDE**

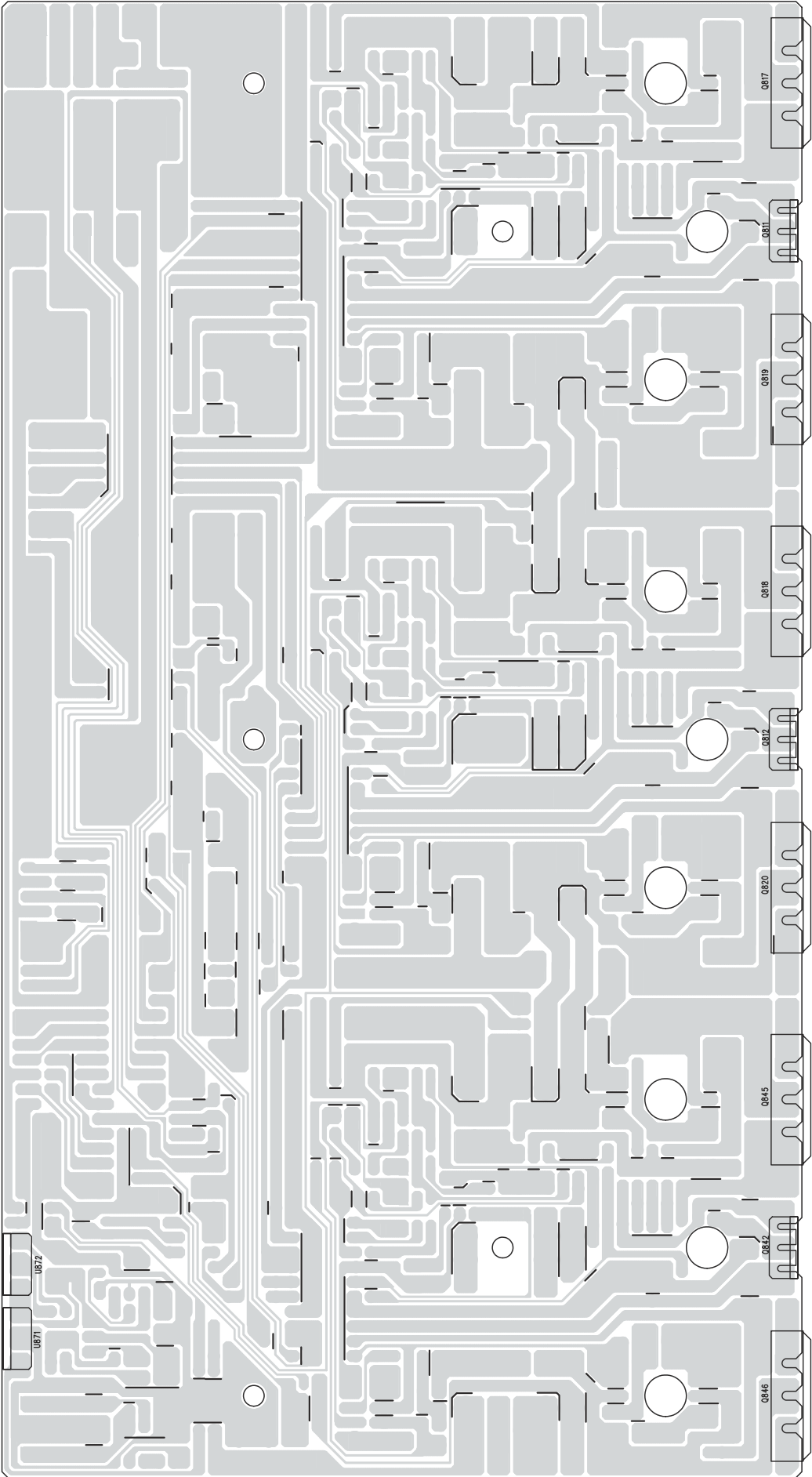




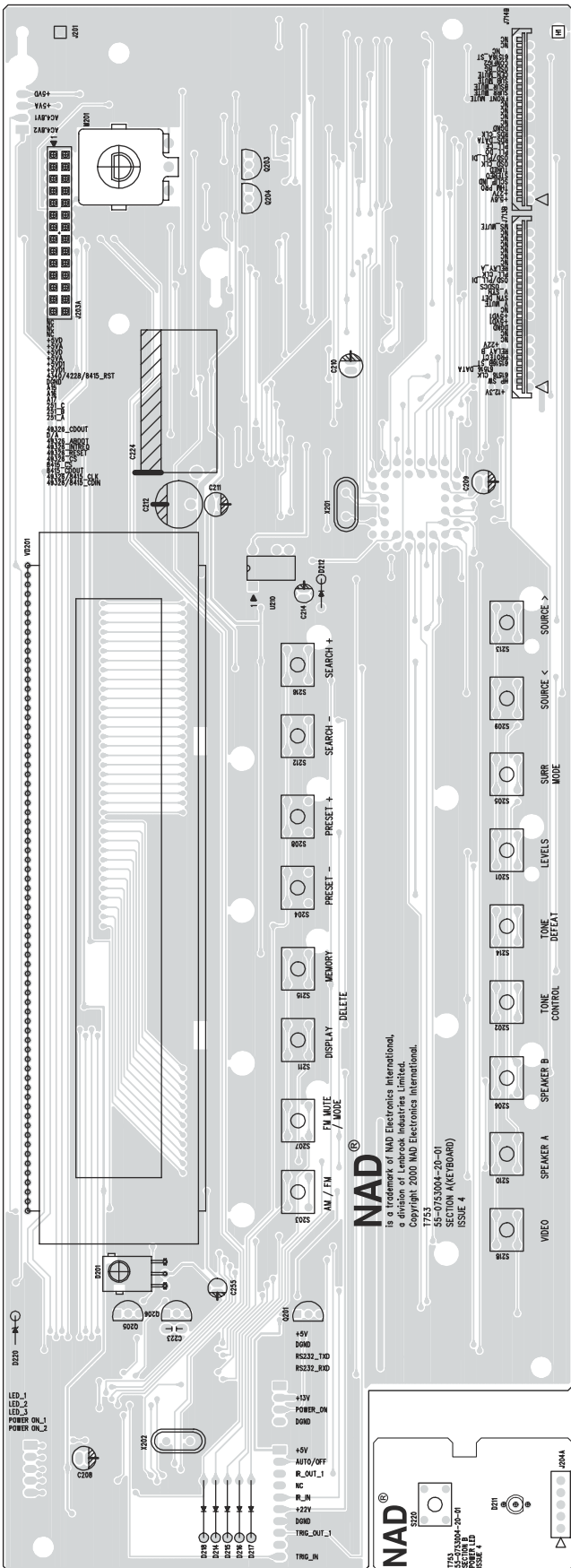
# SURROUND AMPLIFIER BOARD - COMPONENT SIDE



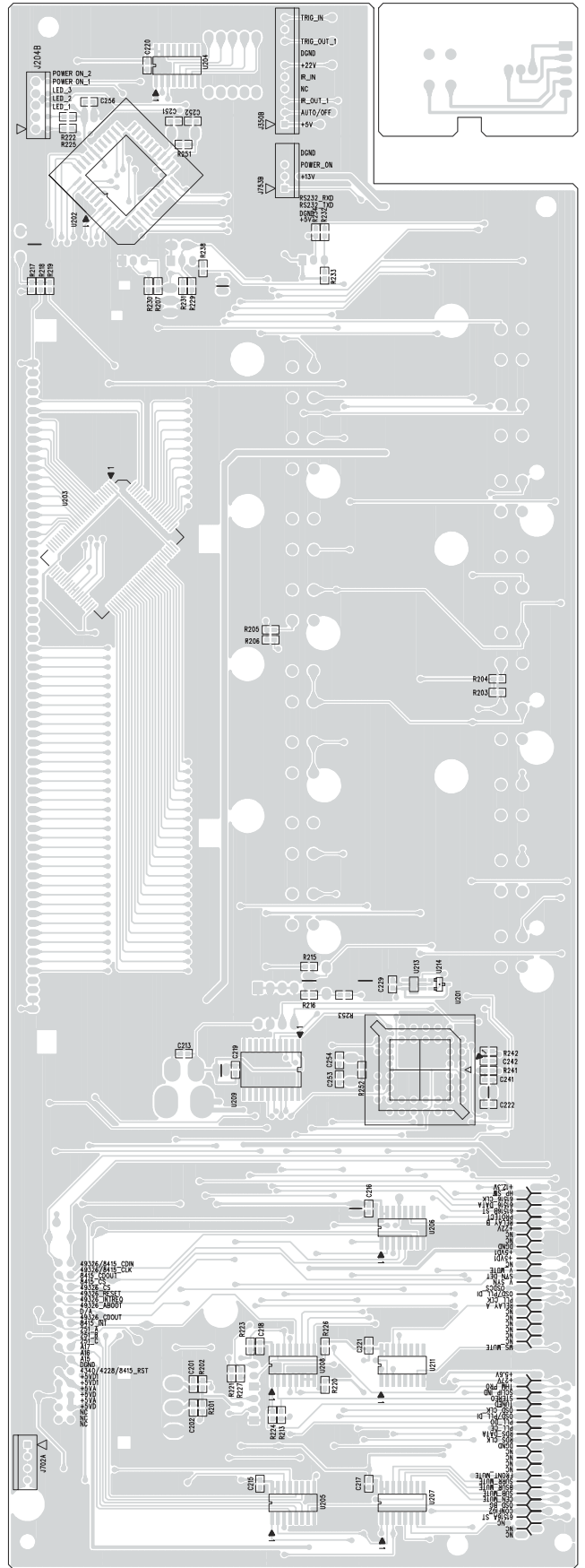
**SURROUND AMPLIFIER BOARD - COPPER SIDE**



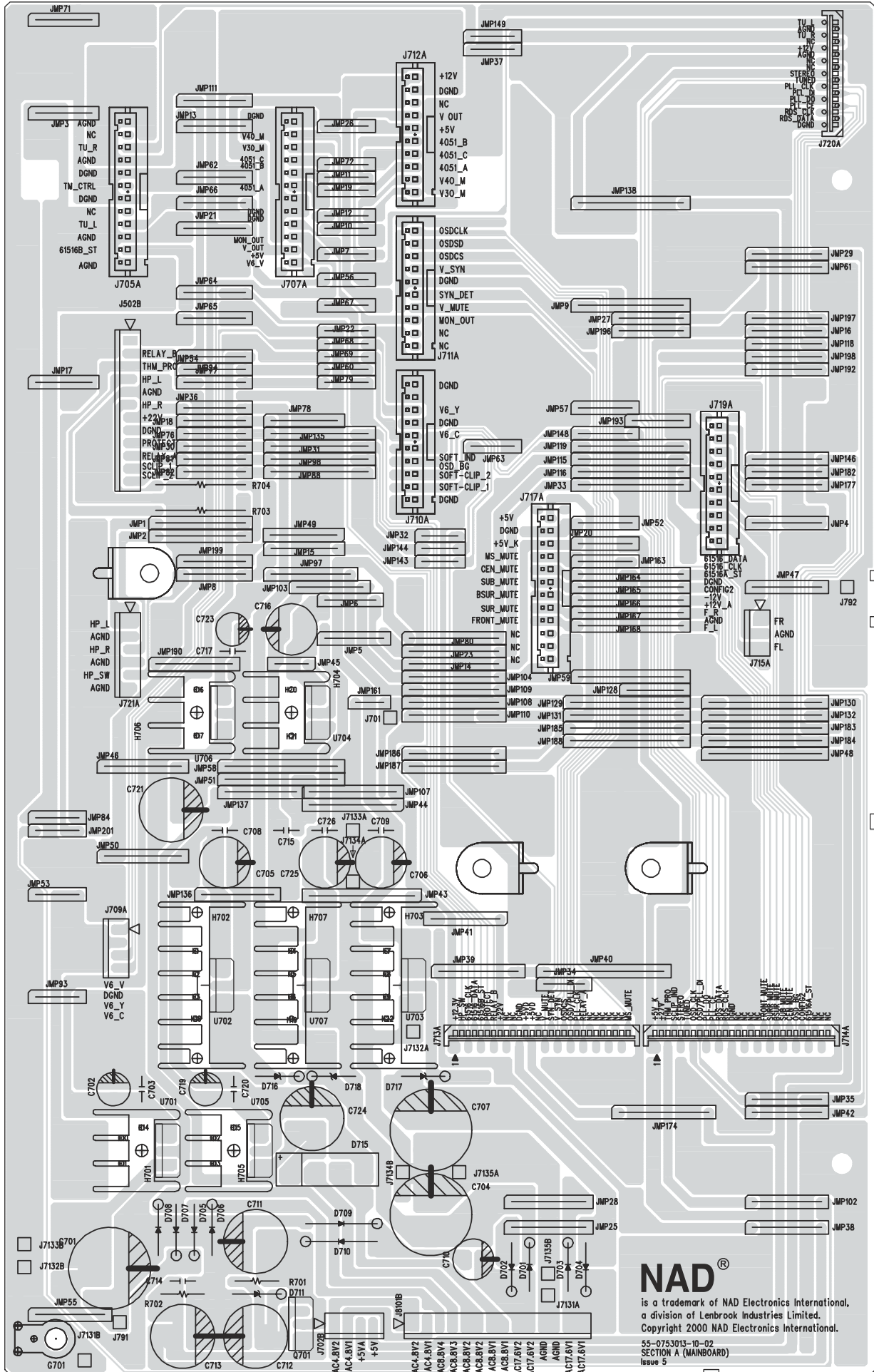
# KEY BOARD/POWER SWITCH - COMPONENT SIDE



# KEY BOARD/POWER SWITCH - COPPER SIDE

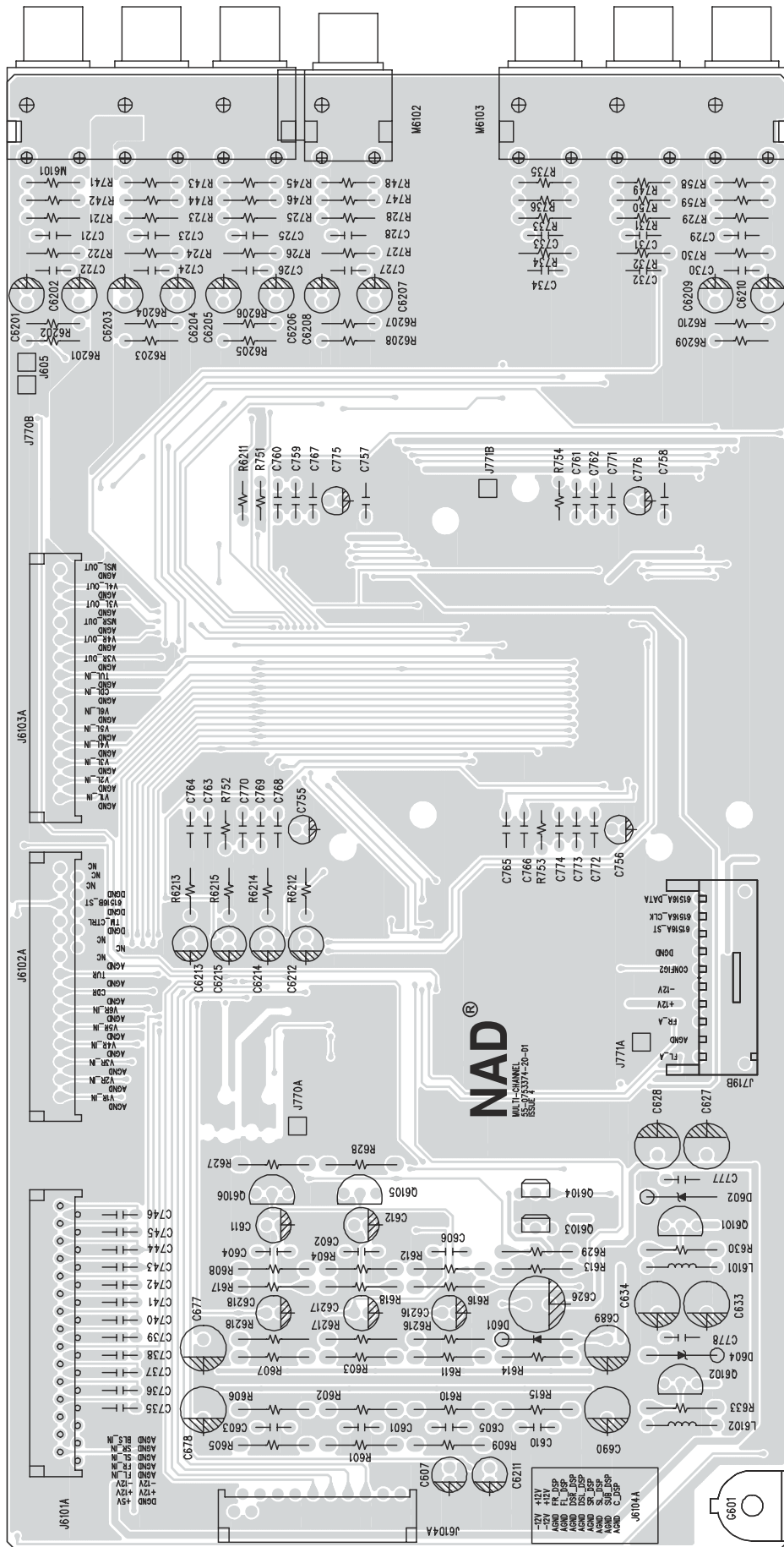


# MAIN BOARD

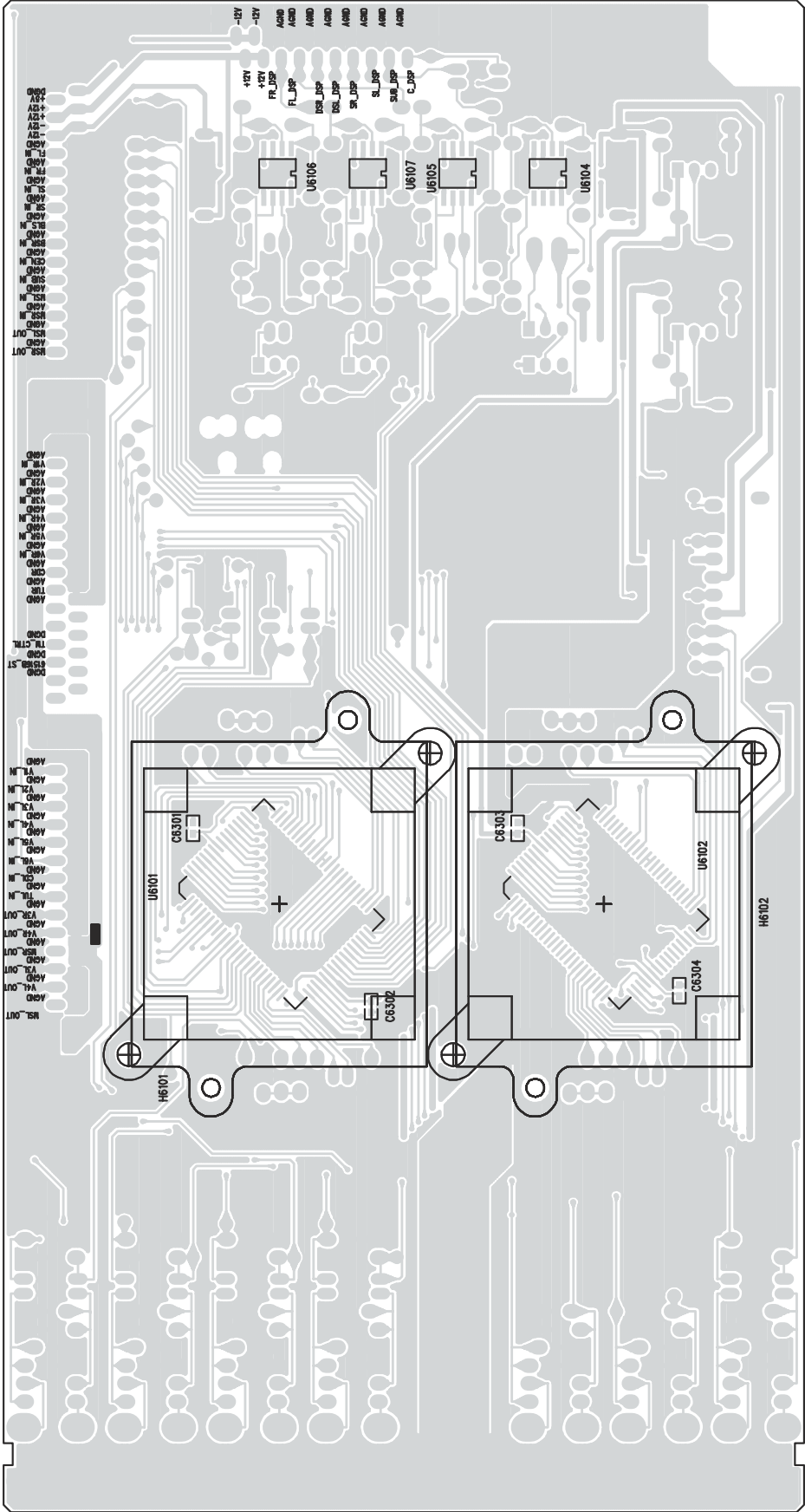


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 a division of Lenbrook Industries Limited.  
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 55-0753013-10-02  
 SECTION A (MAINBOARD)  
 Issue 5

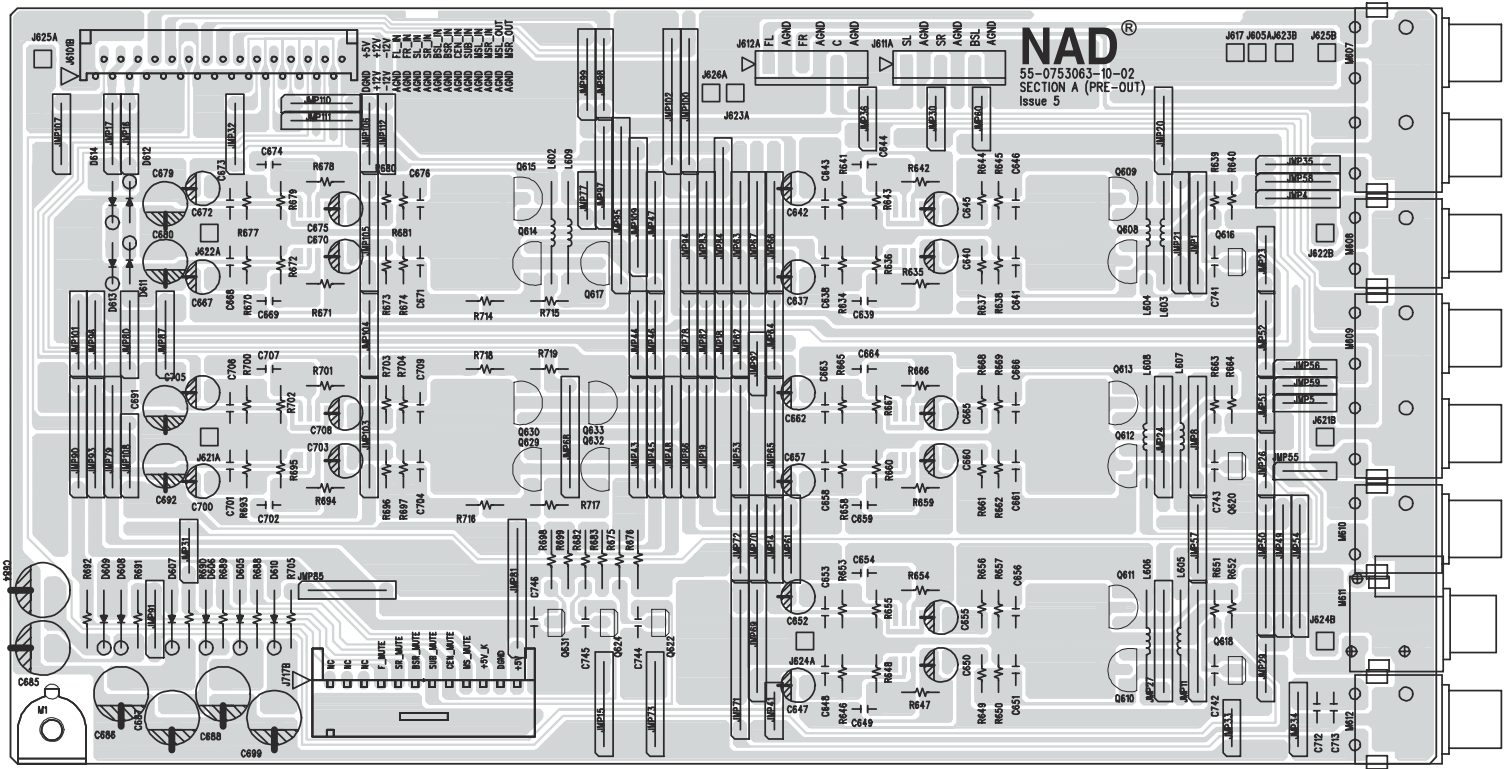
# MULTI-CHANNEL BOARD - COMPONENT SIDE



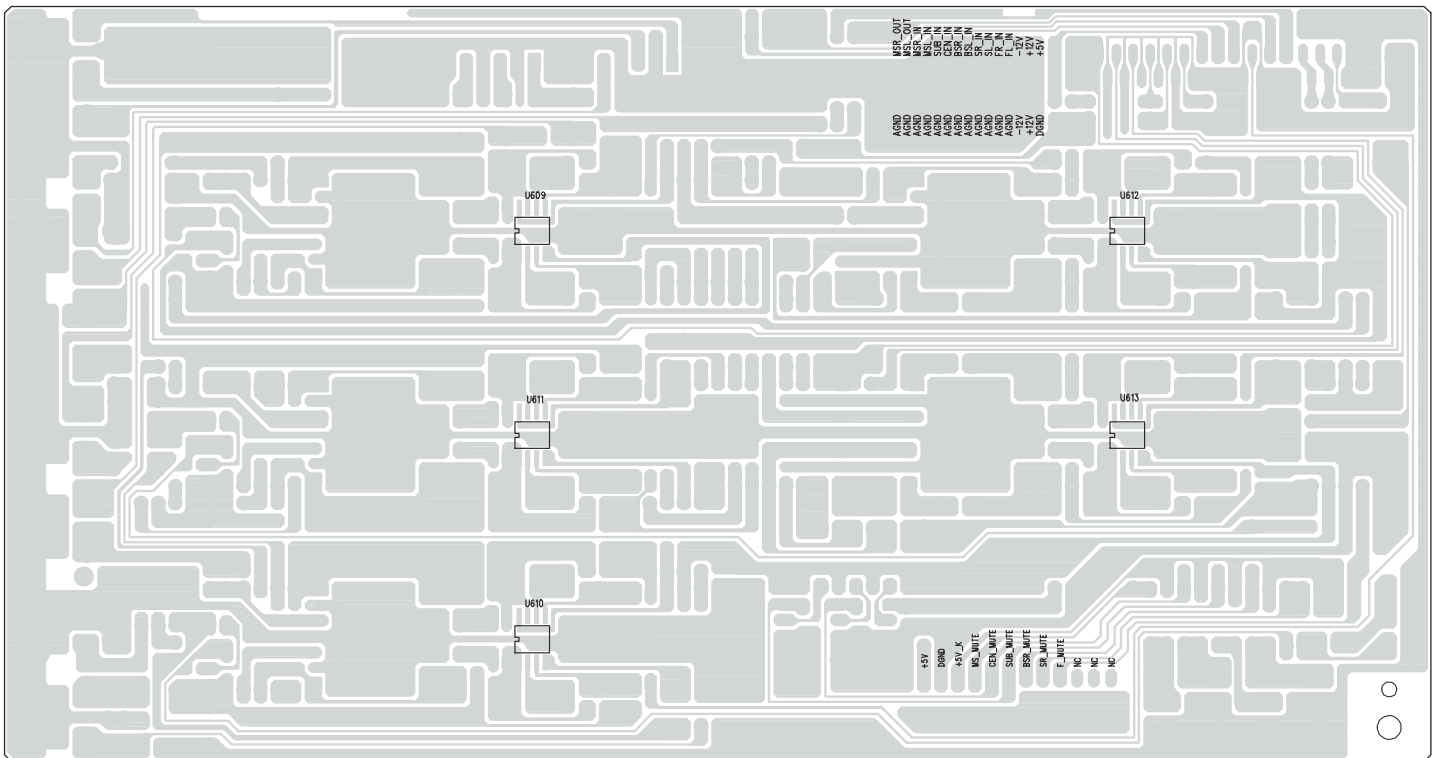
# MULTI-CHANNEL BOARD - COPPER SIDE



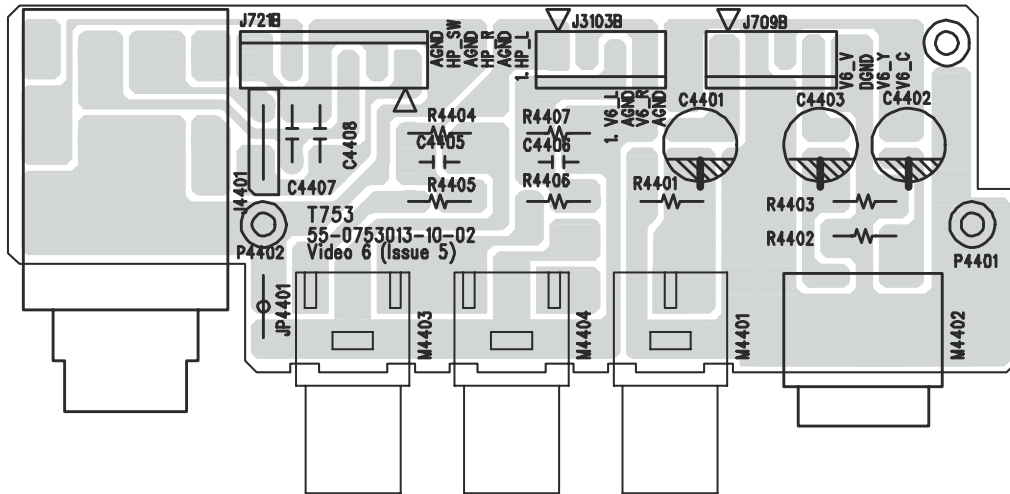
# PRE-OUT BOARD - COMPONENT SIDE



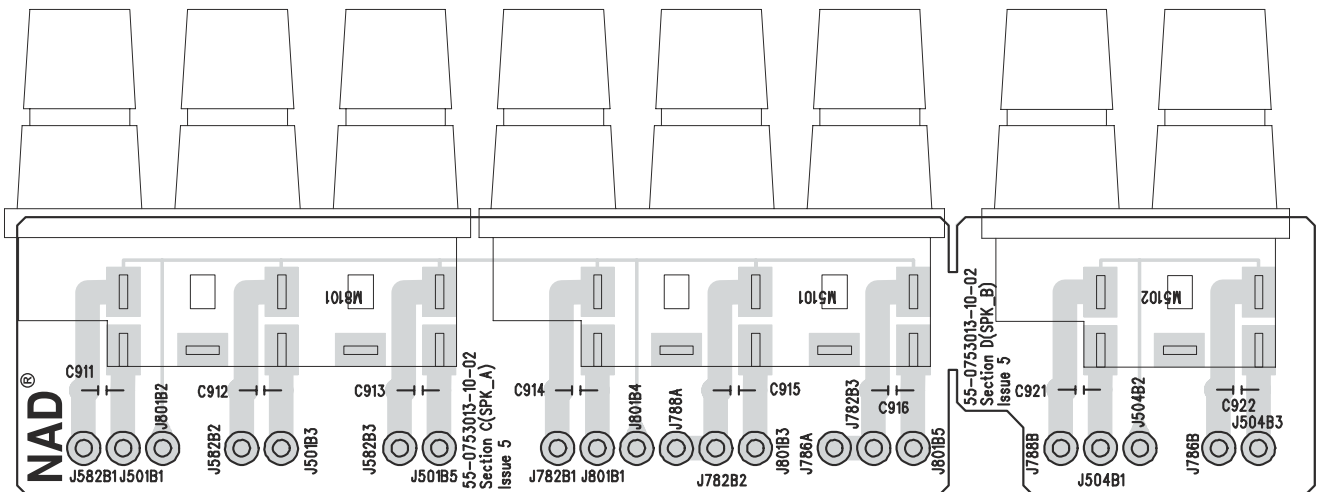
# PRE-OUT BOARD - COPPER SIDE



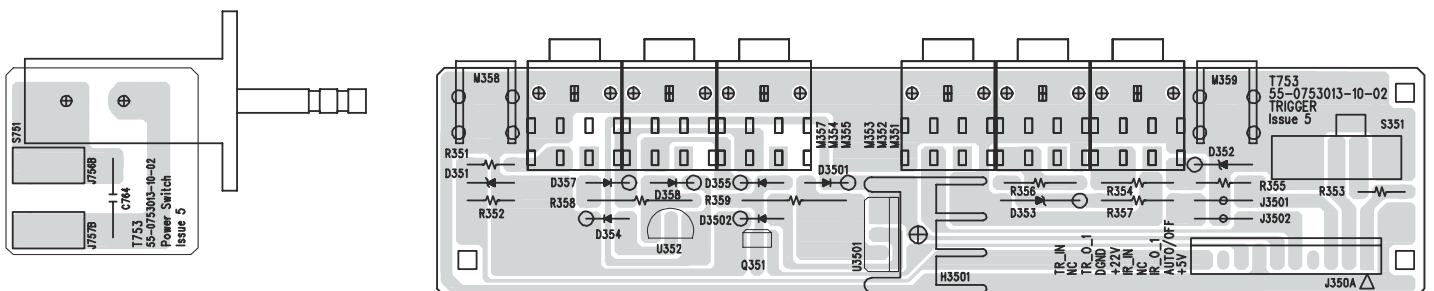
# VIDEO 6 BOARD



# SPEAKER TERMINAL BOARD

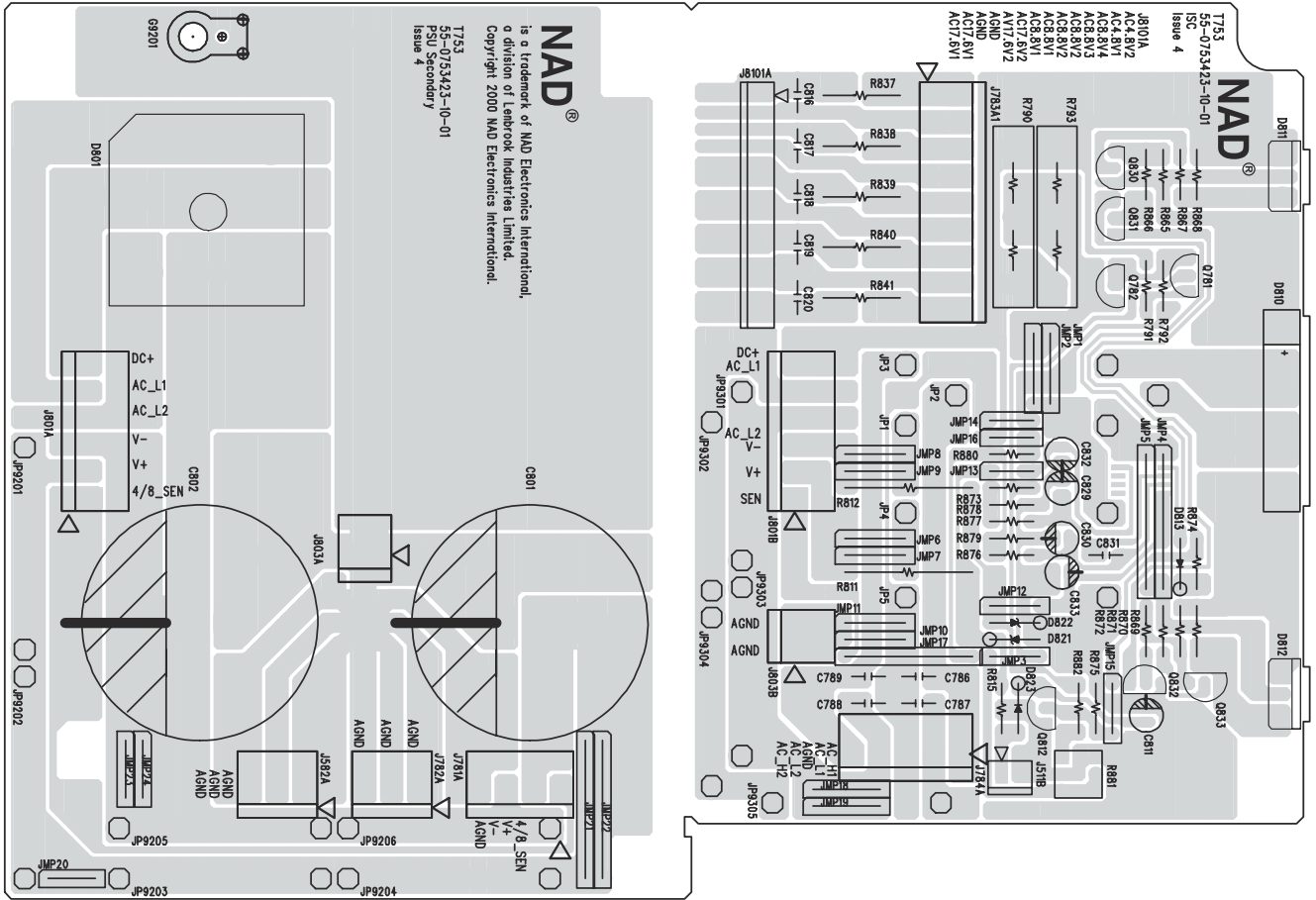


# POWER SWITCH / TRIGGER BOARD

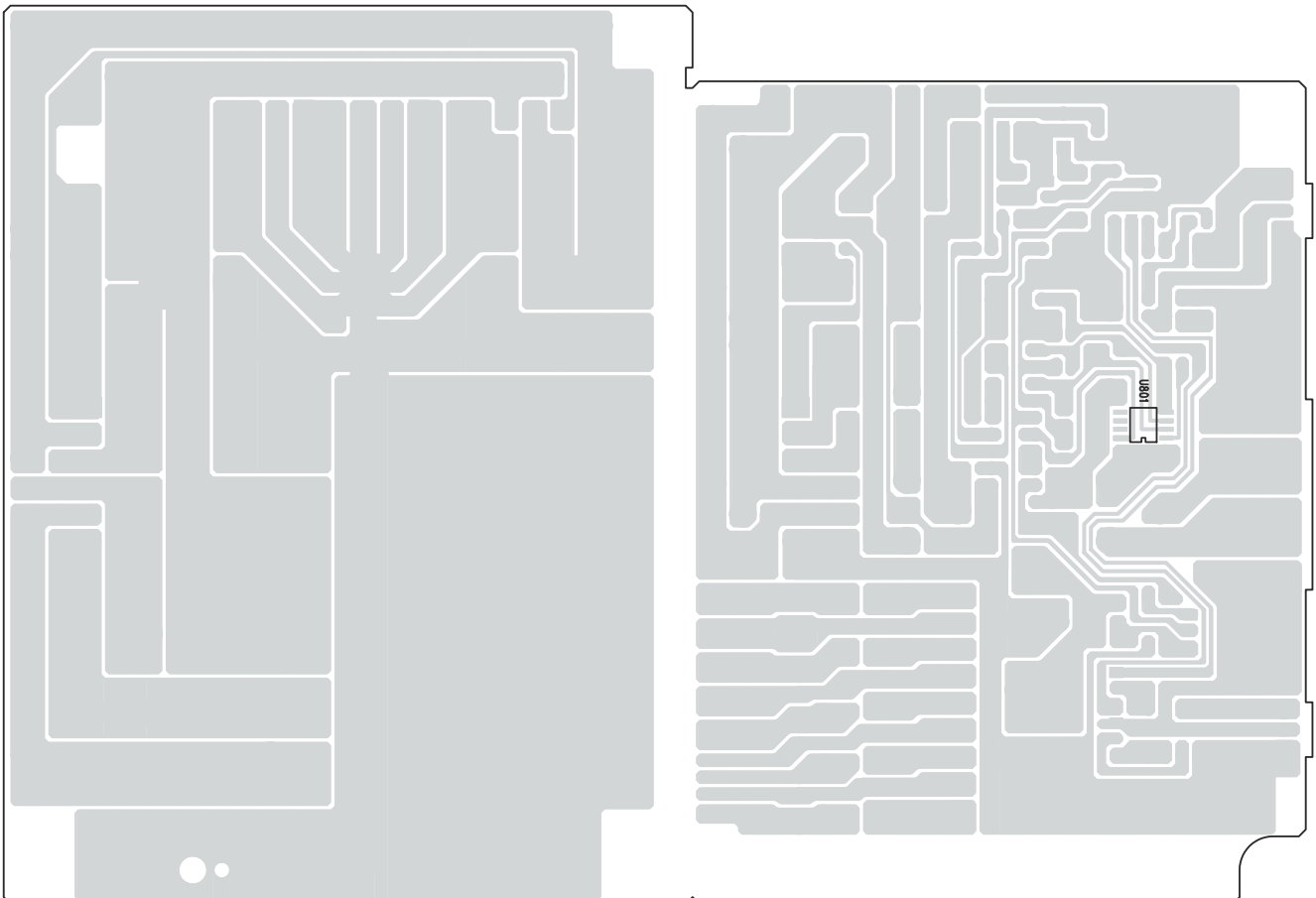




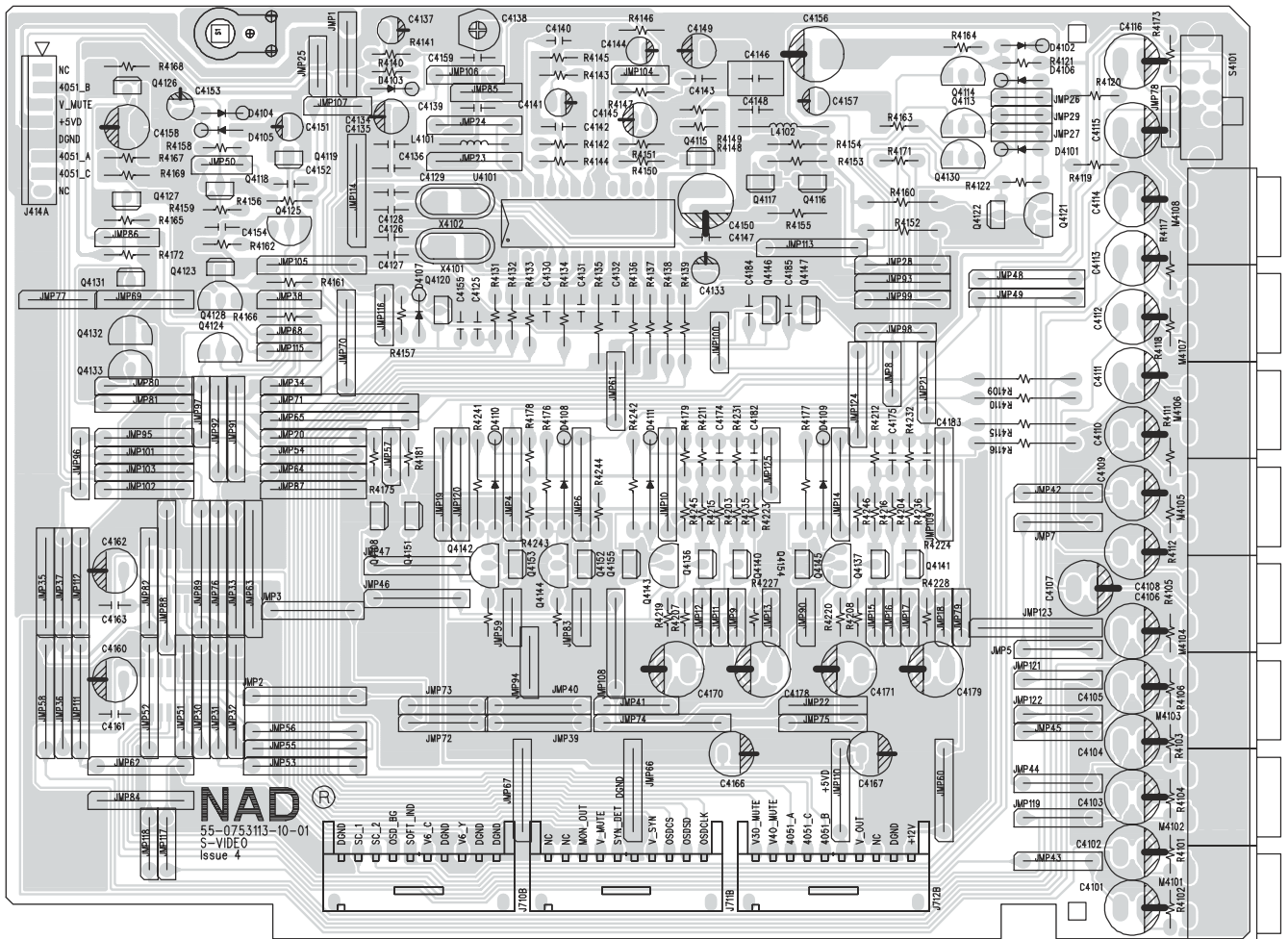
## SECONDARY / ISC BOARD - COMPONENT SIDE



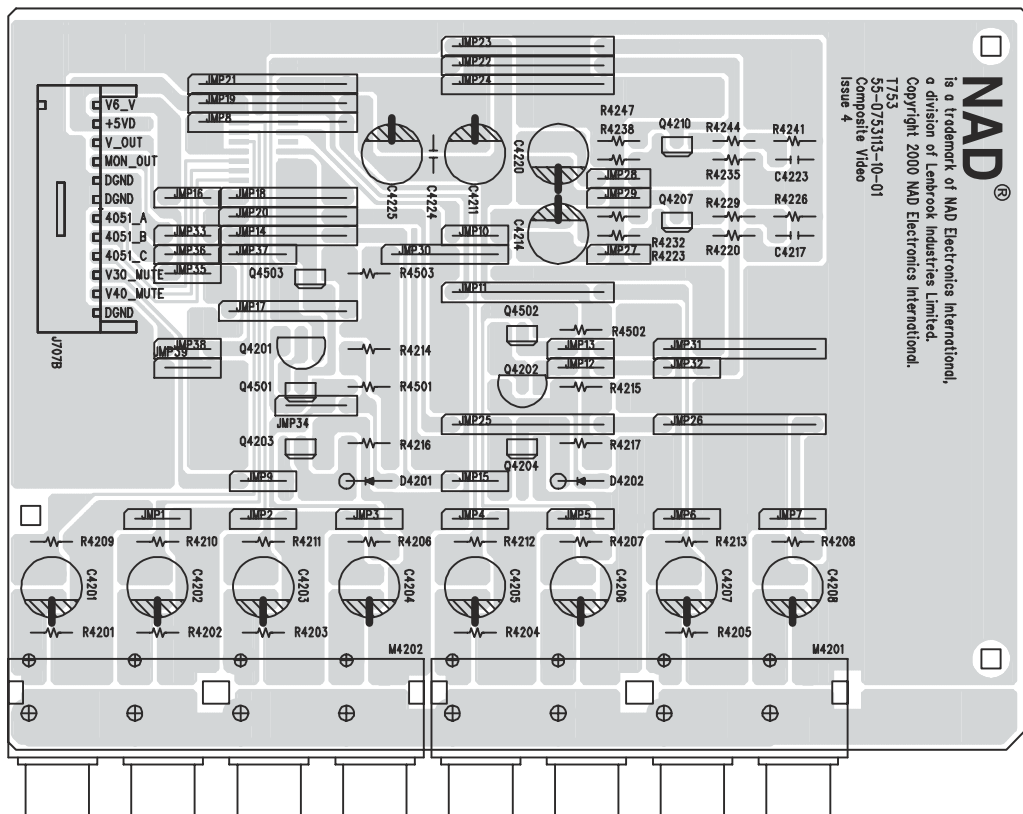
## SECONDARY / ISC BOARD - COPPER SIDE



# S-VIDEO BOARD

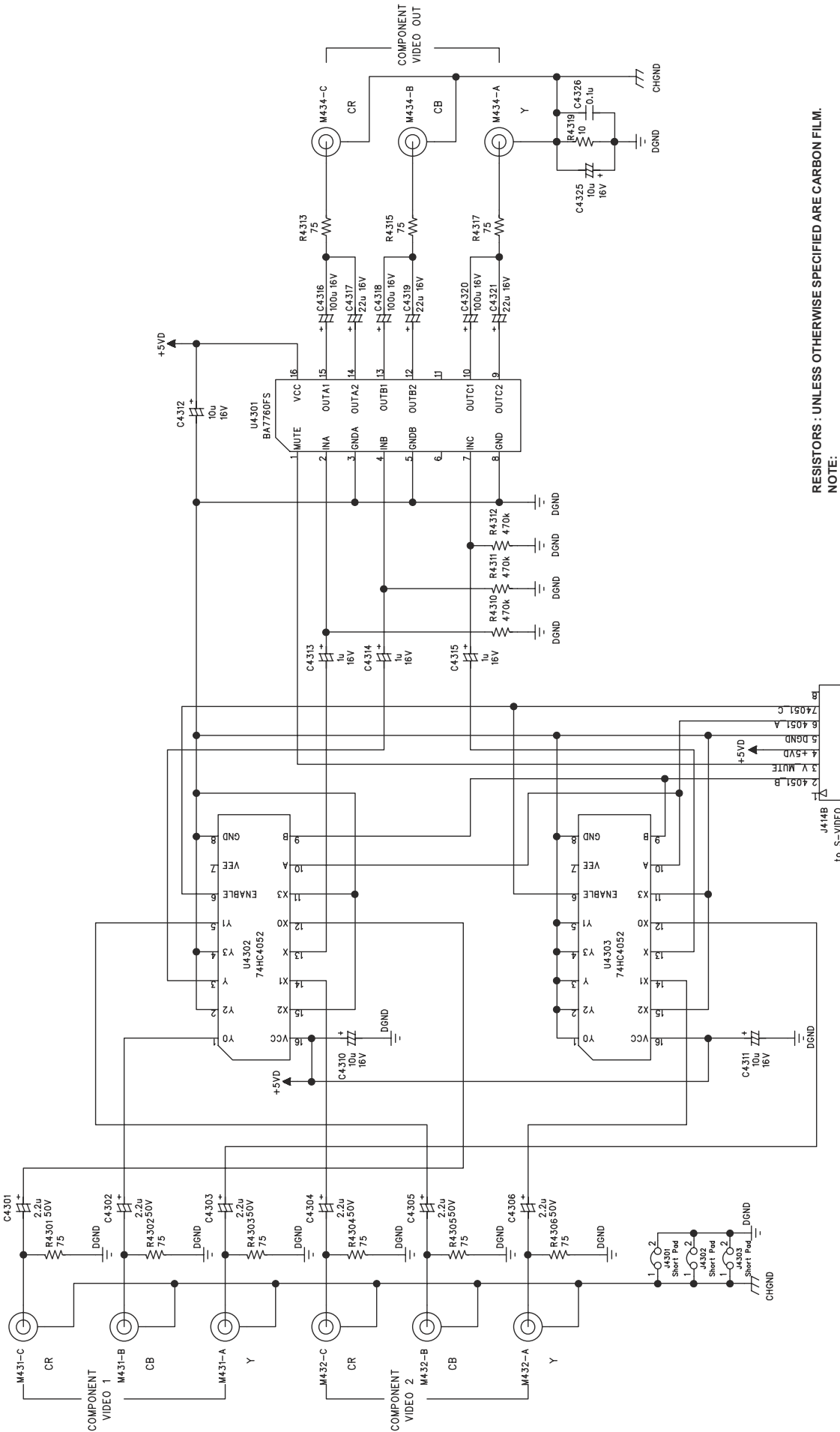


# COMPOSITE VIDEO BOARD





# COMPONENT VIDEO

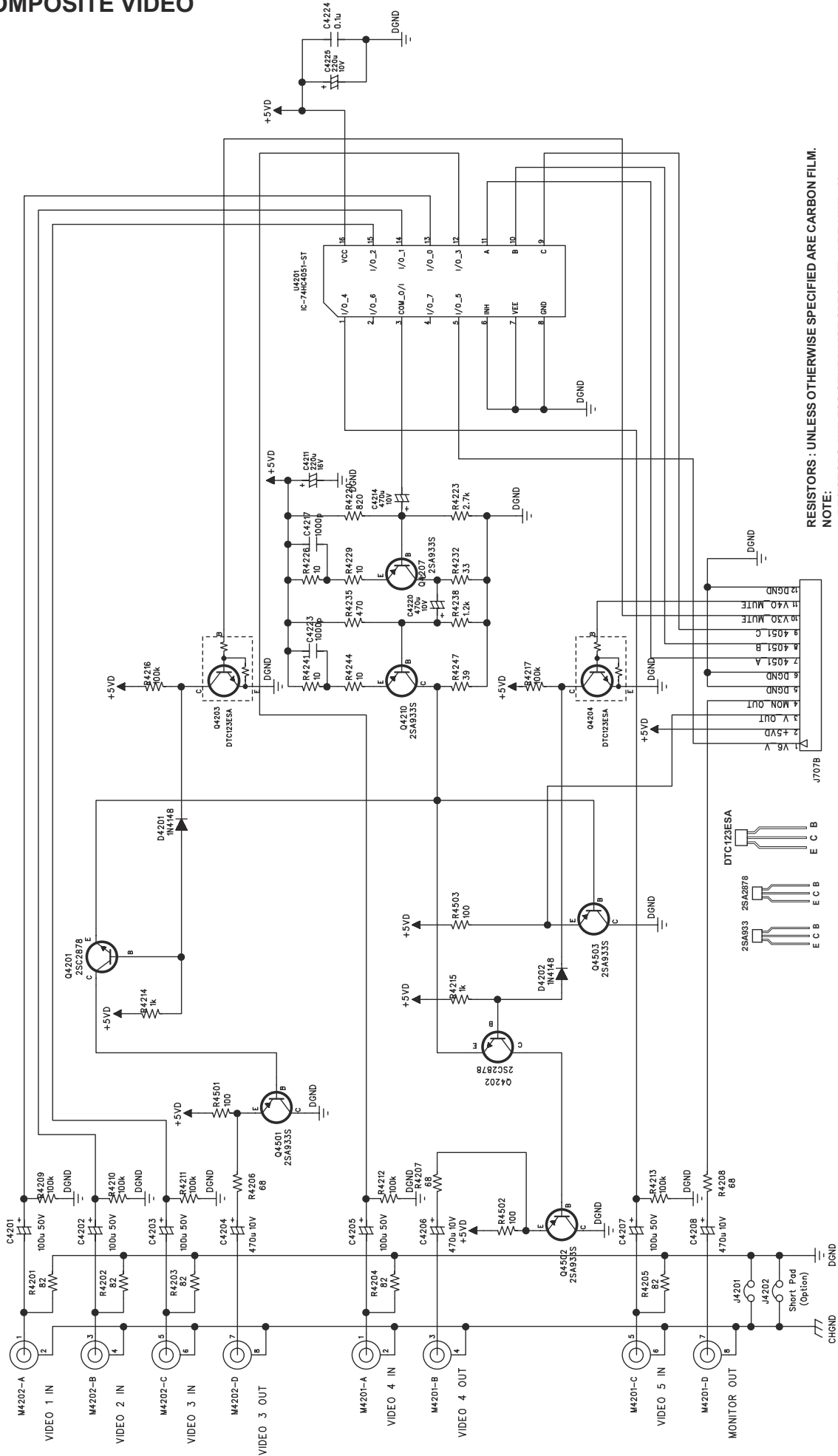


RESISTORS : UNLESS OTHERWISE SPECIFIED ARE CARBON FILM.

NOTE:

1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/6W, 5%.
2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 10%.

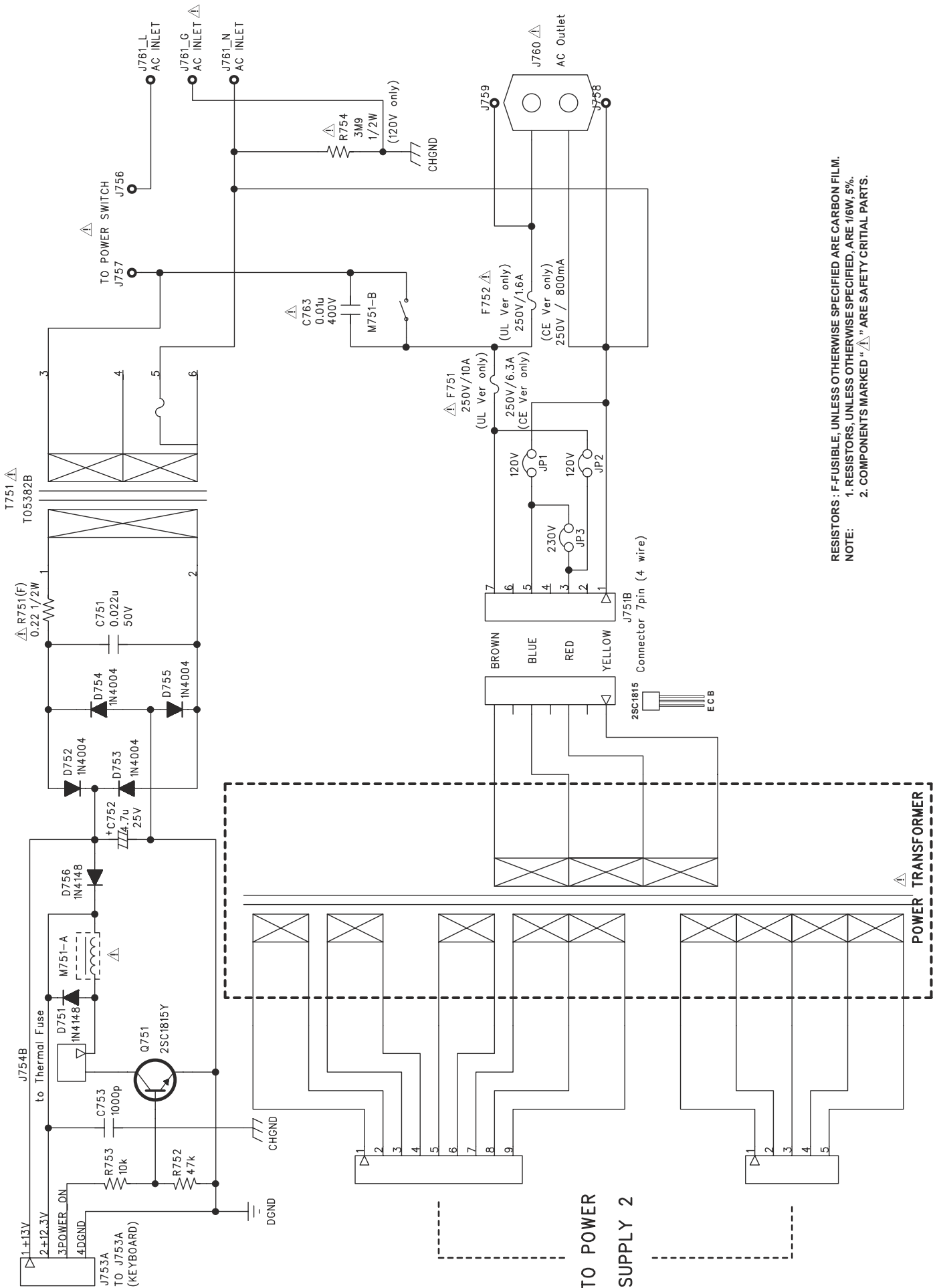
# COMPOSITE VIDEO



RESISTORS : UNLESS OTHERWISE SPECIFIED ARE CARBON FILM.  
 NOTE:  
 1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/6W, 5%.  
 2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 10%.

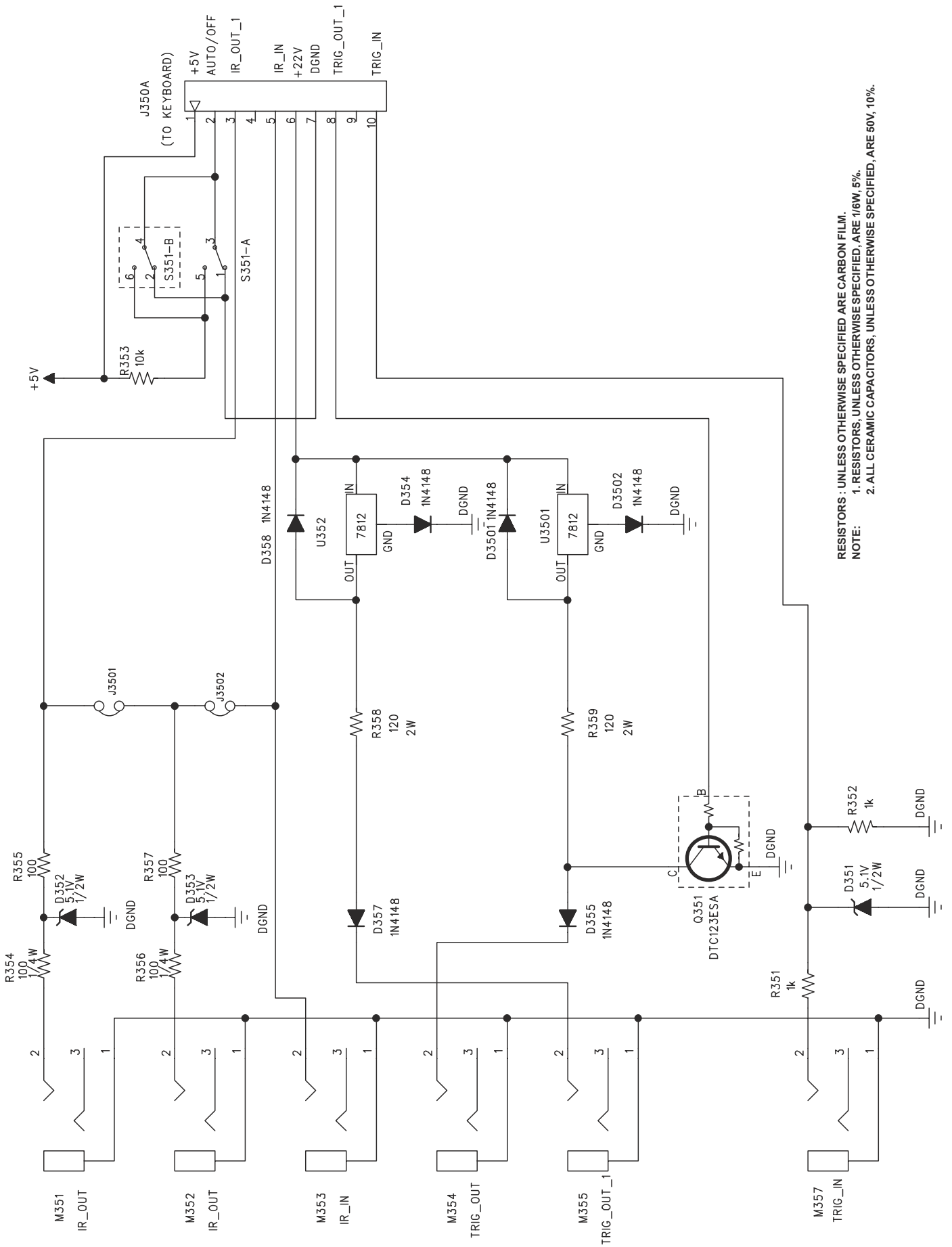


# POWER SUPPLY (STAND BY)



RESISTORS : F-FUSIBLE, UNLESS OTHERWISE SPECIFIED ARE CARBON FILM.  
 NOTE: 1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/6W, 5%.  
 2. COMPONENTS MARKED "△" ARE SAFETY CRITICAL PARTS.

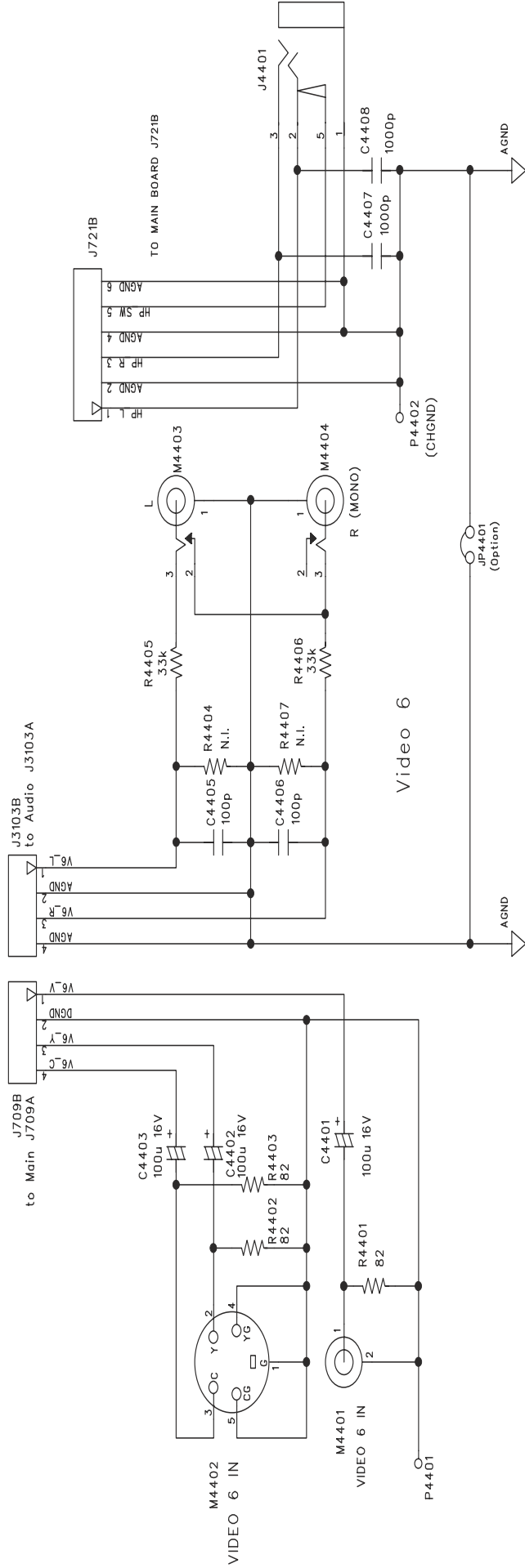
# TRIGGER



RESISTORS: UNLESS OTHERWISE SPECIFIED ARE CARBON FILM.  
 NOTE: 1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/6W, 5%.  
 2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 10%.

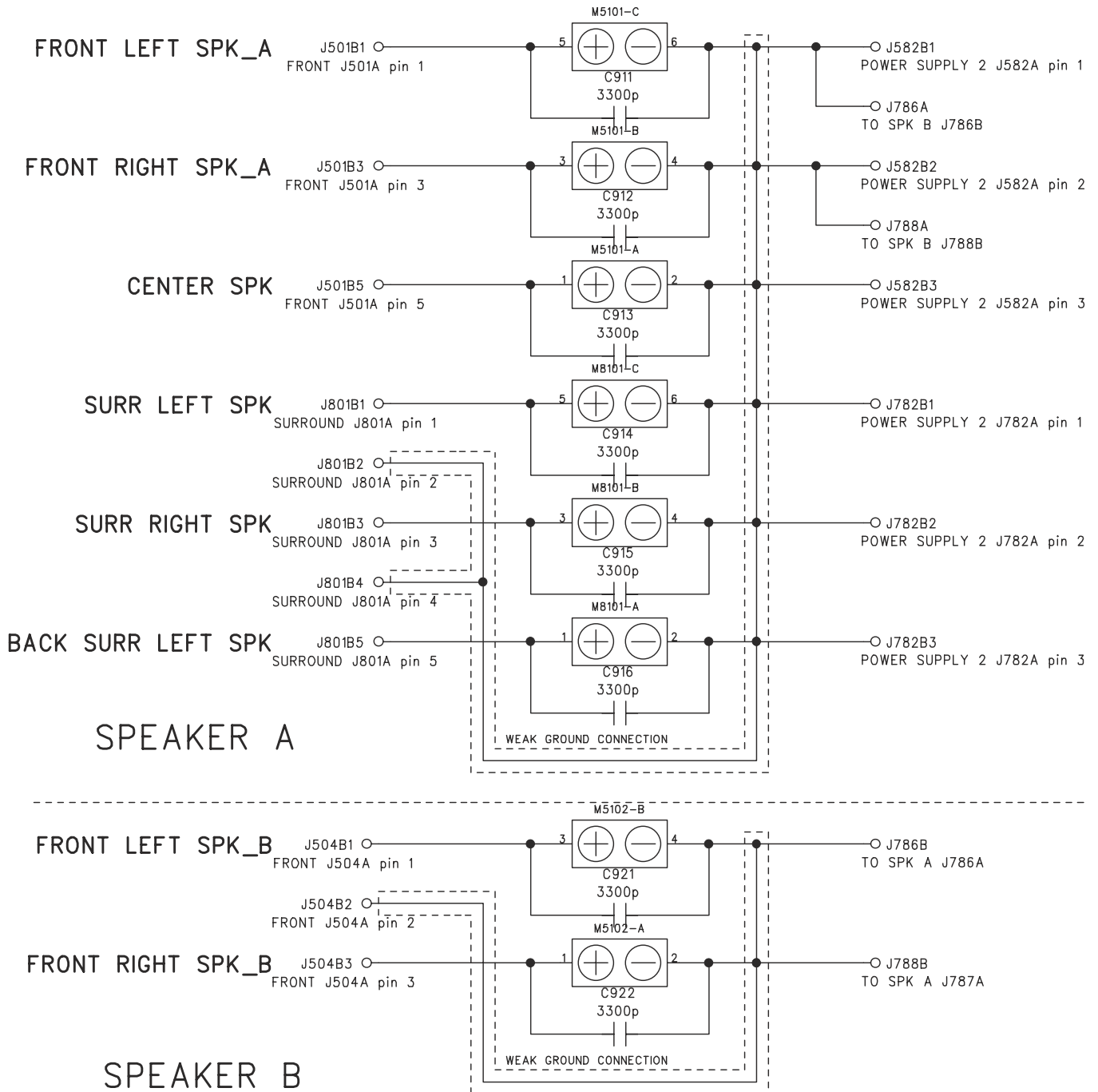


# VIDEO 6

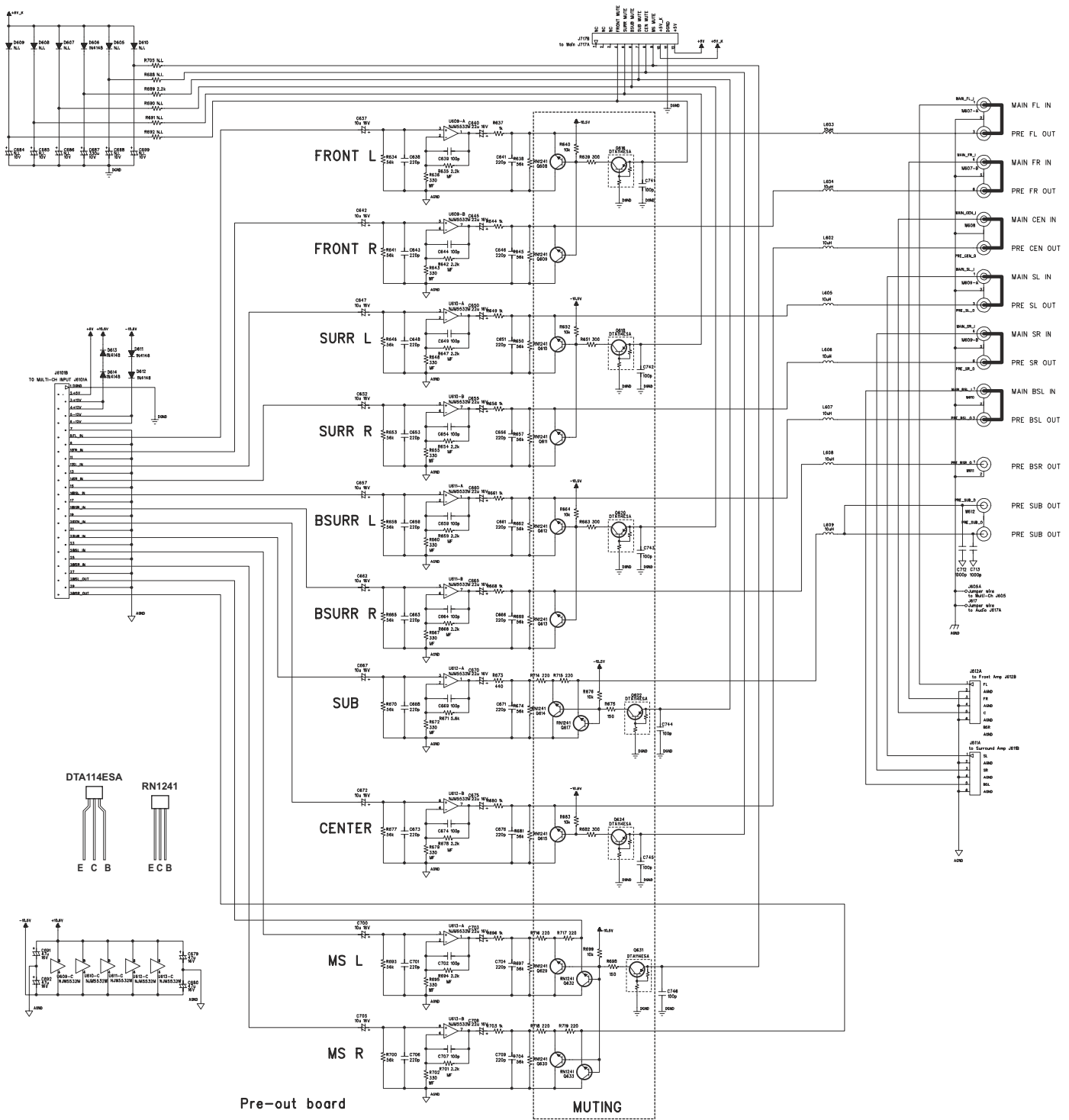


RESISTORS : UNLESS OTHERWISE SPECIFIED ARE CARBON FILM.  
 NOTE:  
 1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/8W, 5%.  
 2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 10%.

# SPEAKER A & B



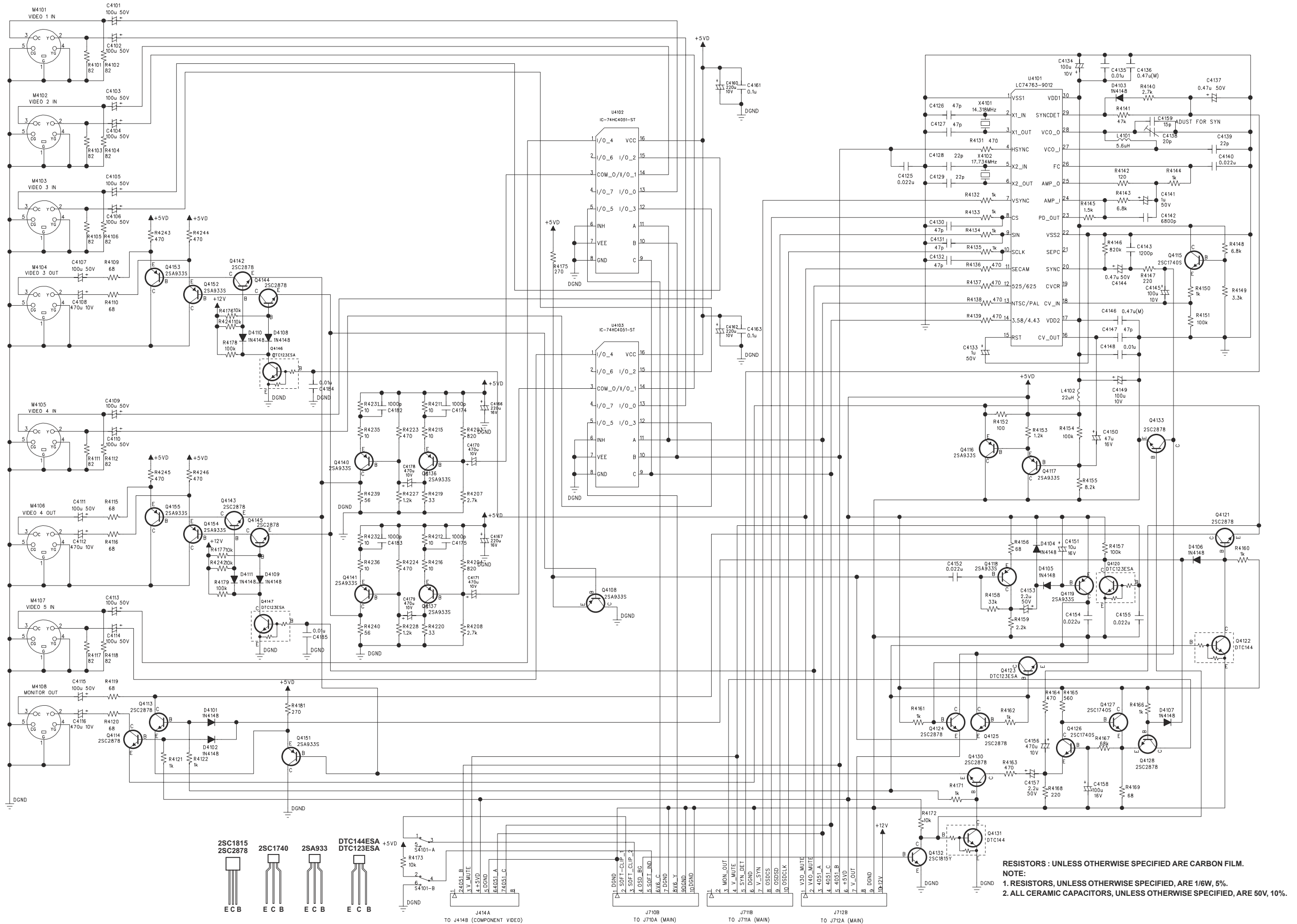
# PREOUT



- NOTE:**
1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/6W, 5%.
  2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 10%.

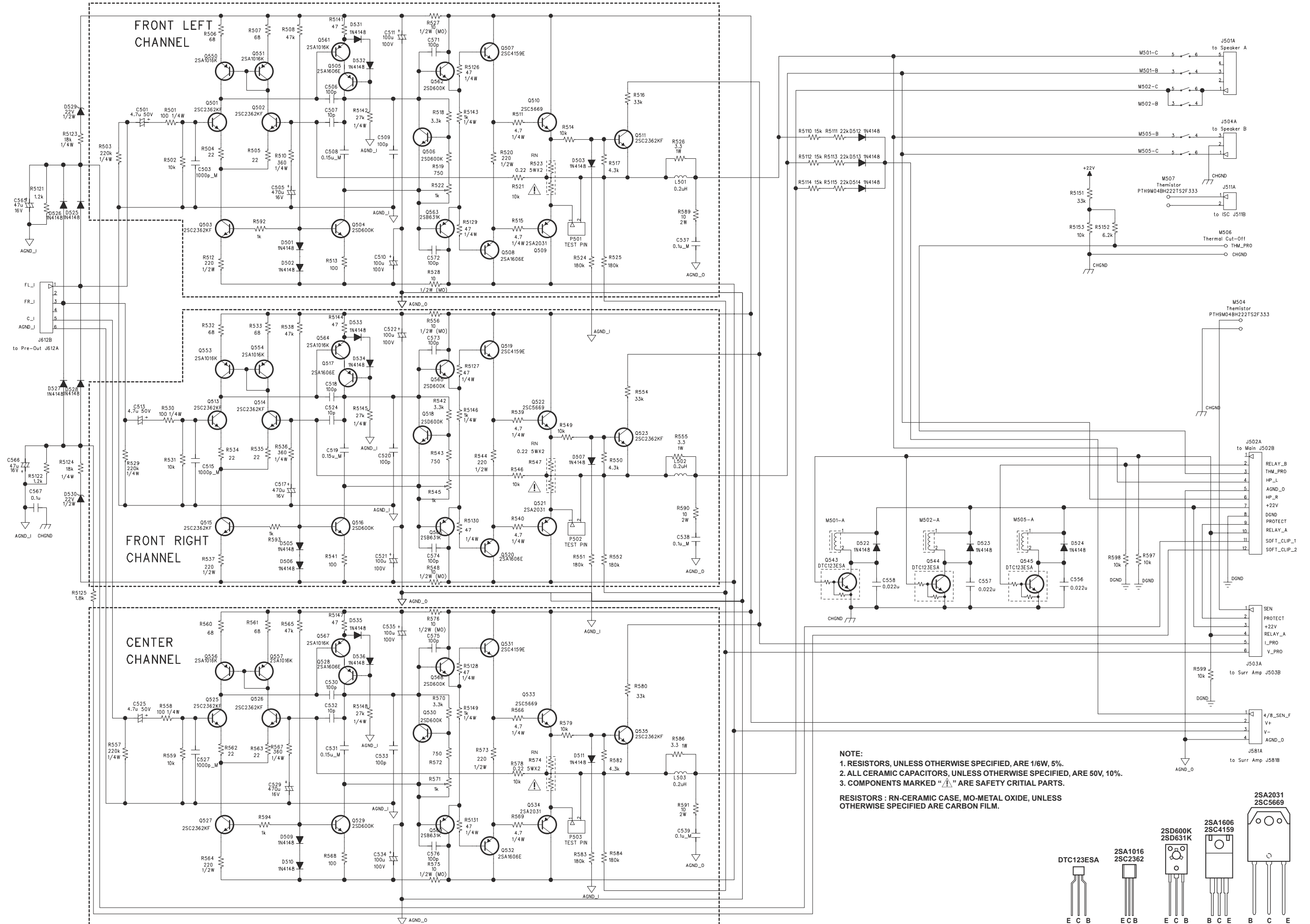


# S-VIDEO



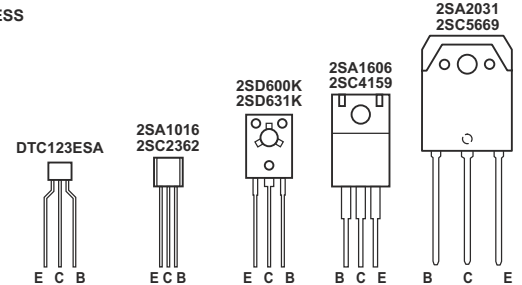
**RESISTORS : UNLESS OTHERWISE SPECIFIED ARE CARBON FILM.**  
**NOTE:**  
**1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/6W, 5%.**  
**2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 10%.**

# FRONT / CENTER CHANNEL POWER AMPLIFIER

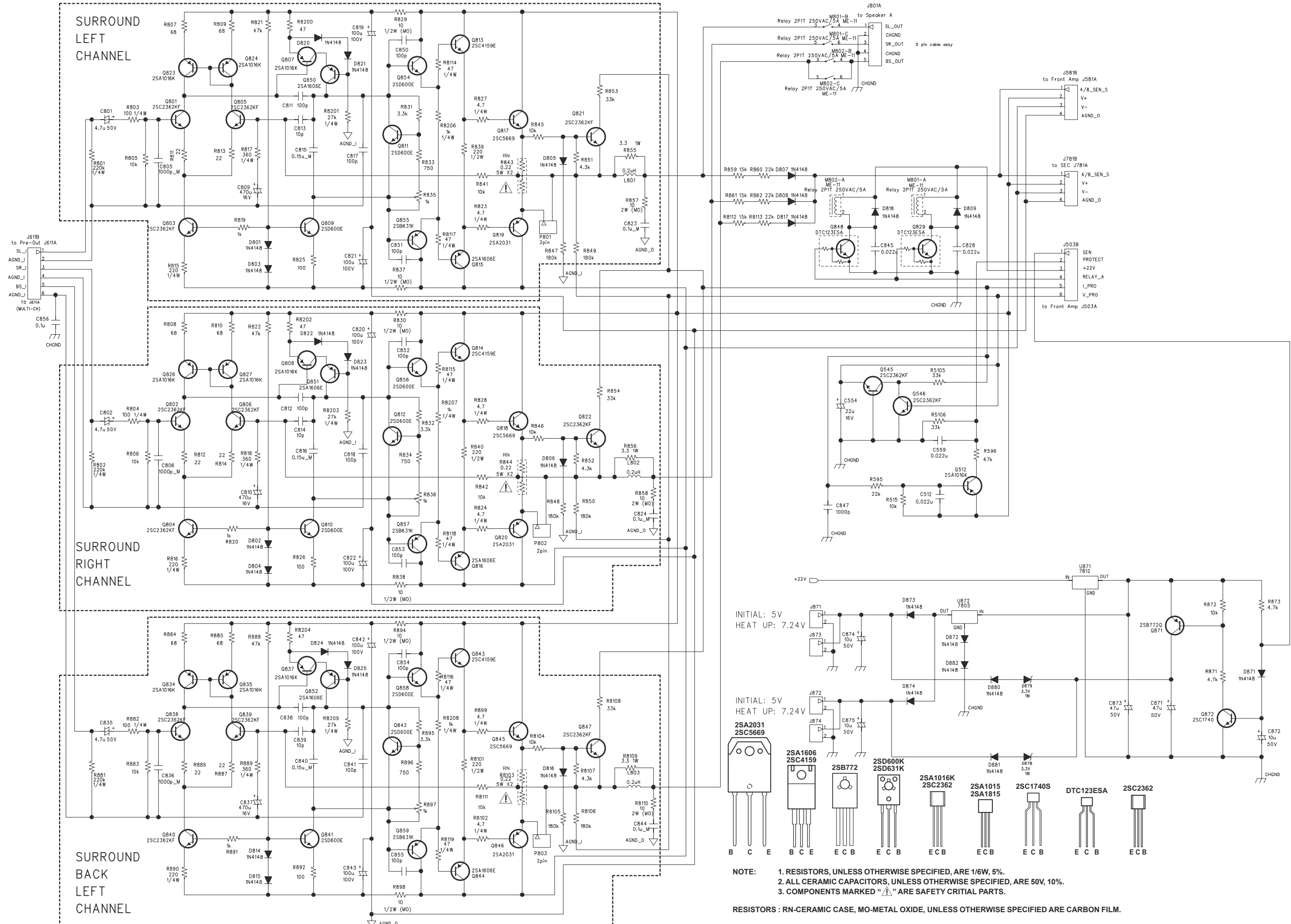


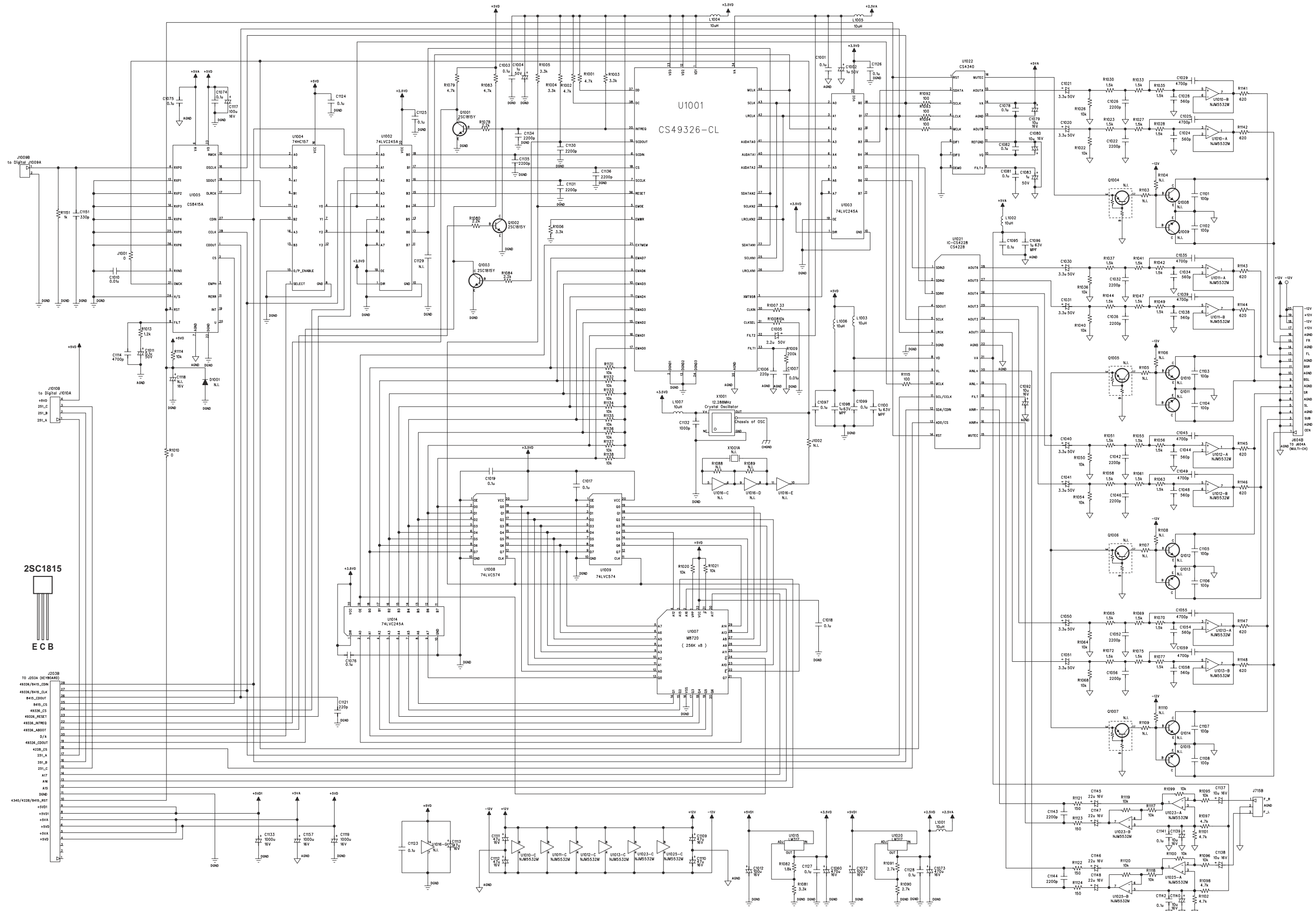
**NOTE:**  
 1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/6W, 5%.  
 2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 10%.  
 3. COMPONENTS MARKED "▲" ARE SAFETY CRITICAL PARTS.

RESISTORS : RN-CERAMIC CASE, MO-METAL OXIDE, UNLESS OTHERWISE SPECIFIED ARE CARBON FILM.



# SURROUND CHANNEL POWER AMPLIFIER



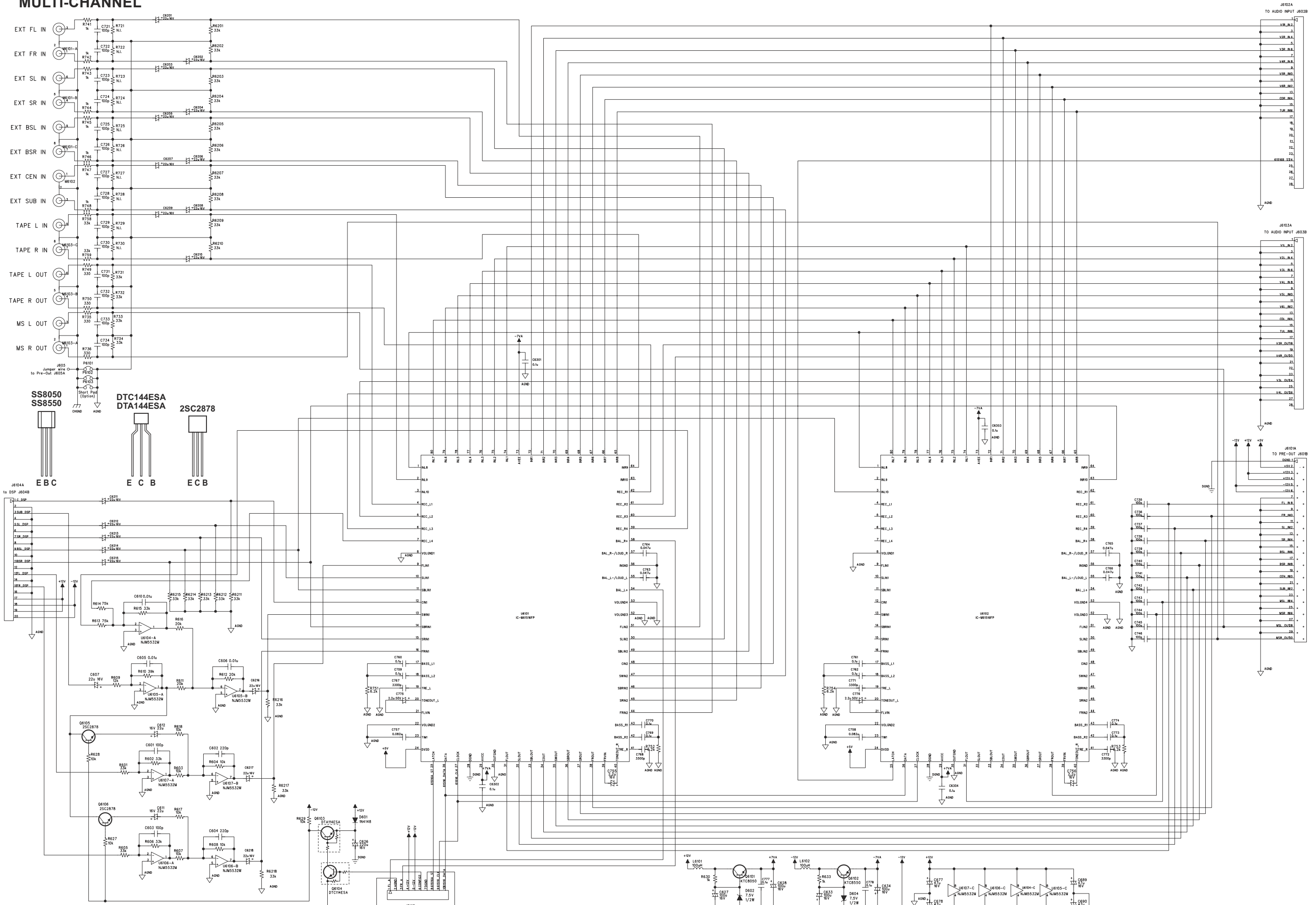


NOTE:  
1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/6W, 5%.  
2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 10%.



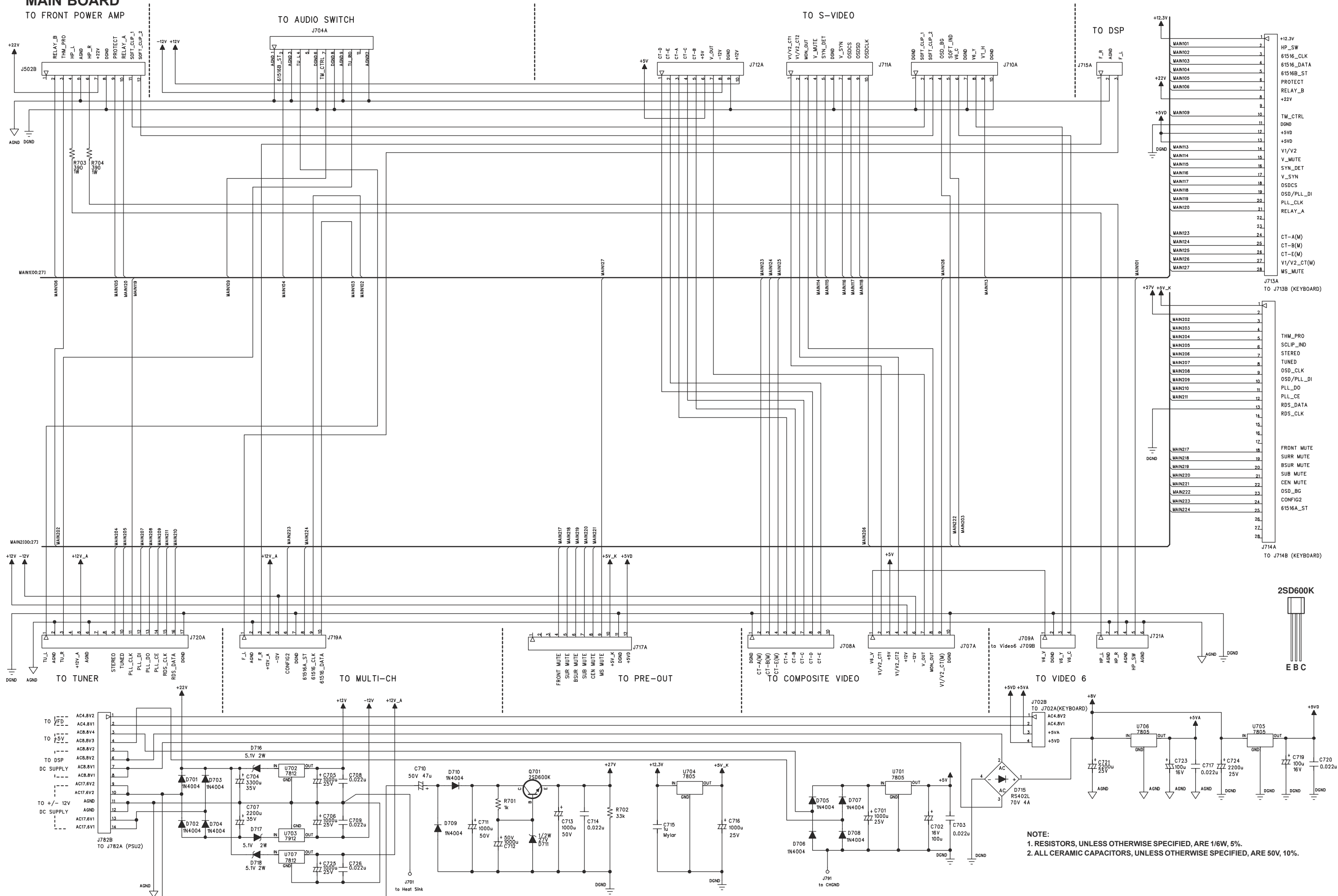


# MULTI-CHANNEL



RESISTORS : UNLESS OTHERWISE SPECIFIED ARE CARBON FILM.  
 NOTE: 1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/6W, 5%.  
 2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 10%.

# MAIN BOARD TO FRONT POWER AMP



**NOTE:**  
 1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/6W, 5%.  
 2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V, 10%.

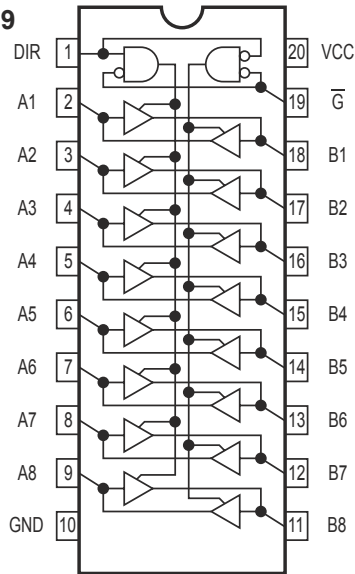
# IC BLOCK DIAGRAM

## 74LV245

DSP BOARD: U1002, U1003, U1014

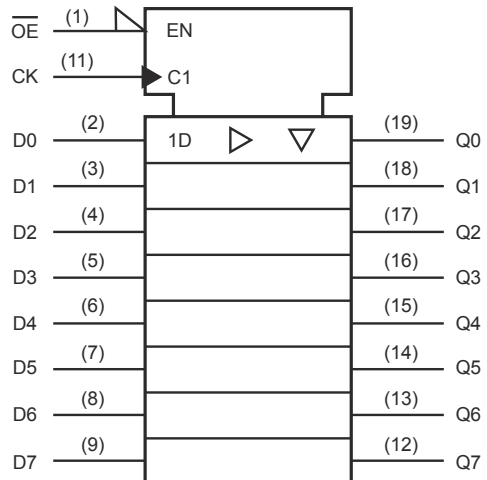
## 74VHC245

KEYBOARD: U209



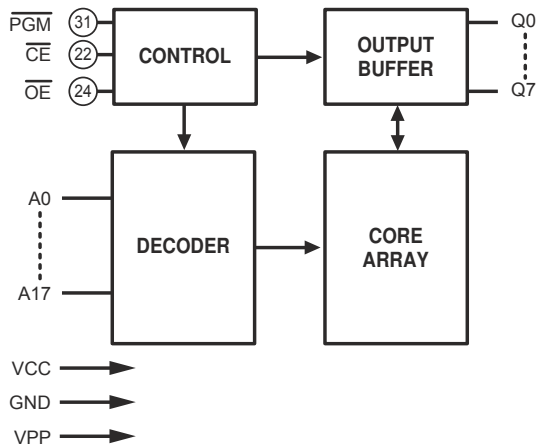
## 74LVQ574

DSP BOARD: U1008, U1009



## W27C020

DSP BOARD: U1007



## NJM5532

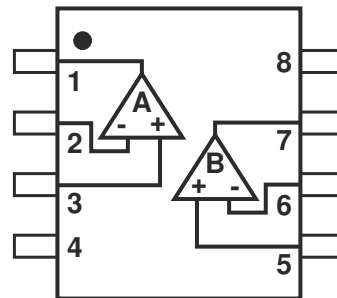
DSP BOARD: U1010~U1013, U1023 & U1025

MULTI-CHANNEL: U6104~U6107

PRE-OUT BOARD: U609~U613

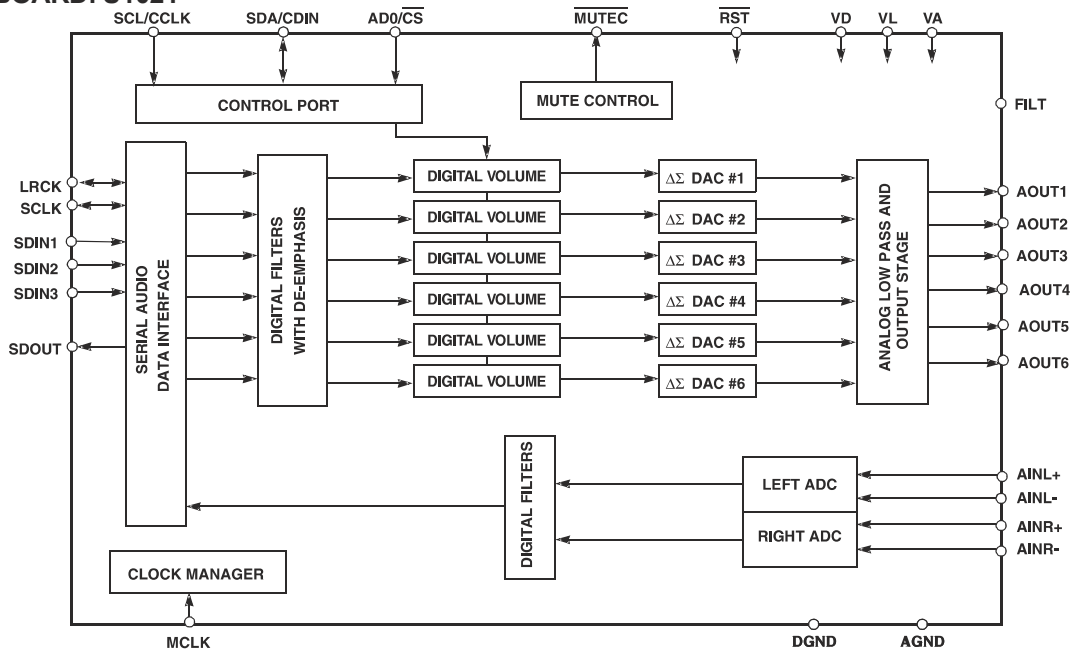
AUDIO BOARD: U305

ISC BOARD: U801

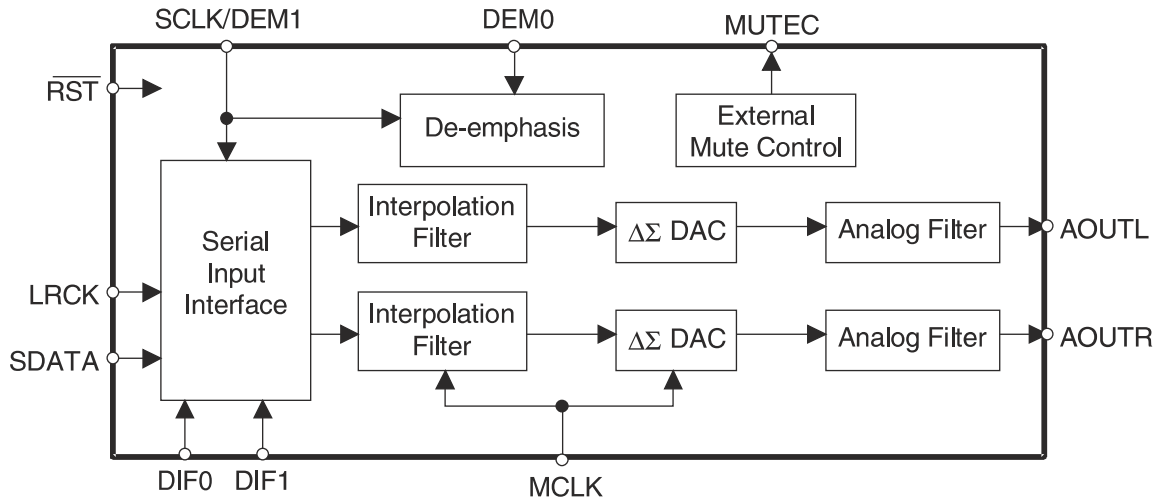


## CS4228AKS

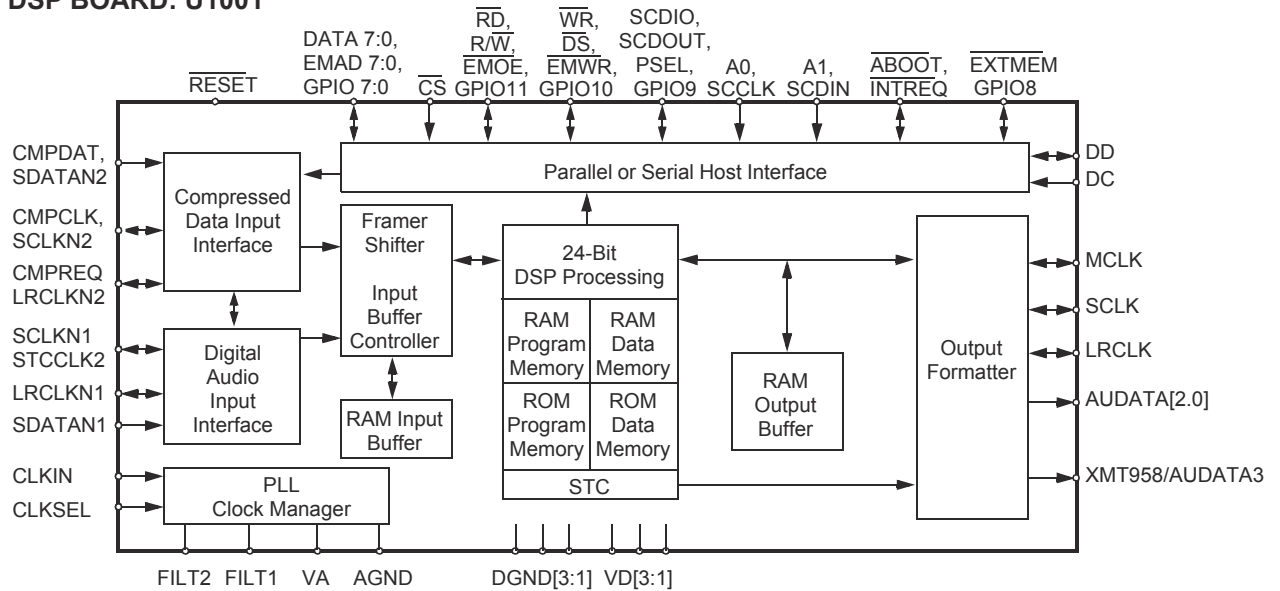
DSP BOARD: U1021



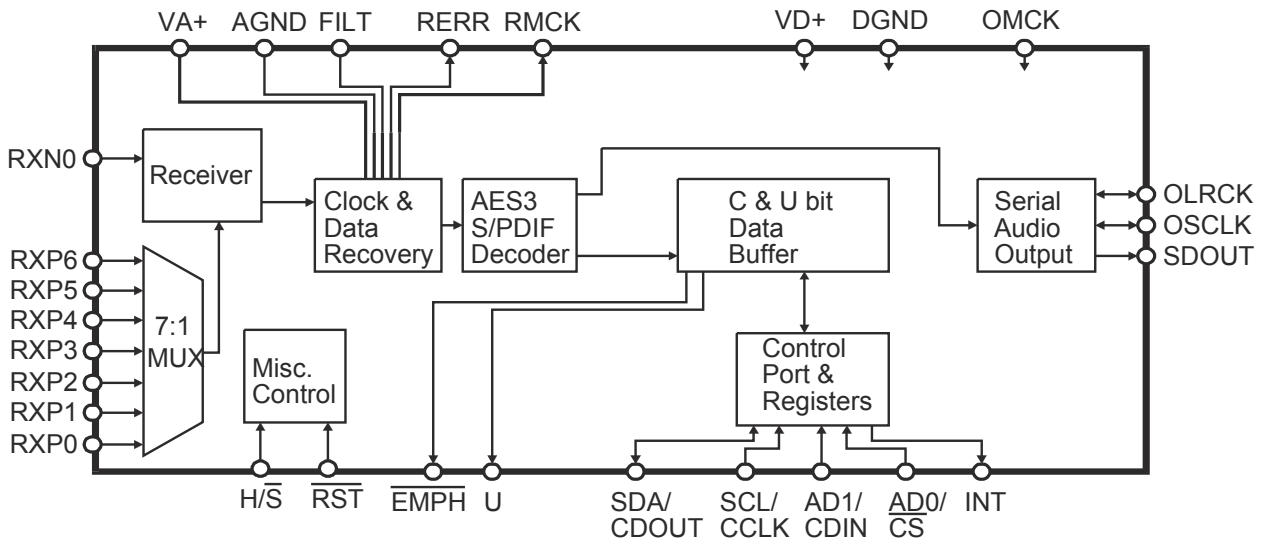
**CS4340**  
**DSP BOARD: U1022**



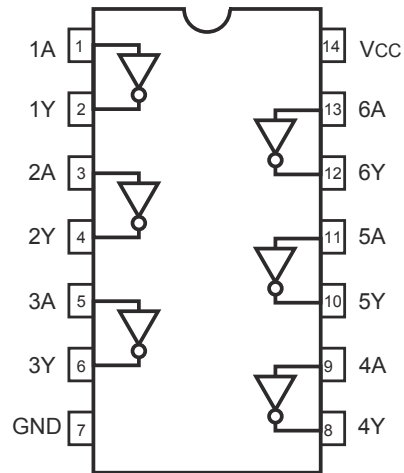
**CS49326**  
**DSP BOARD: U1001**



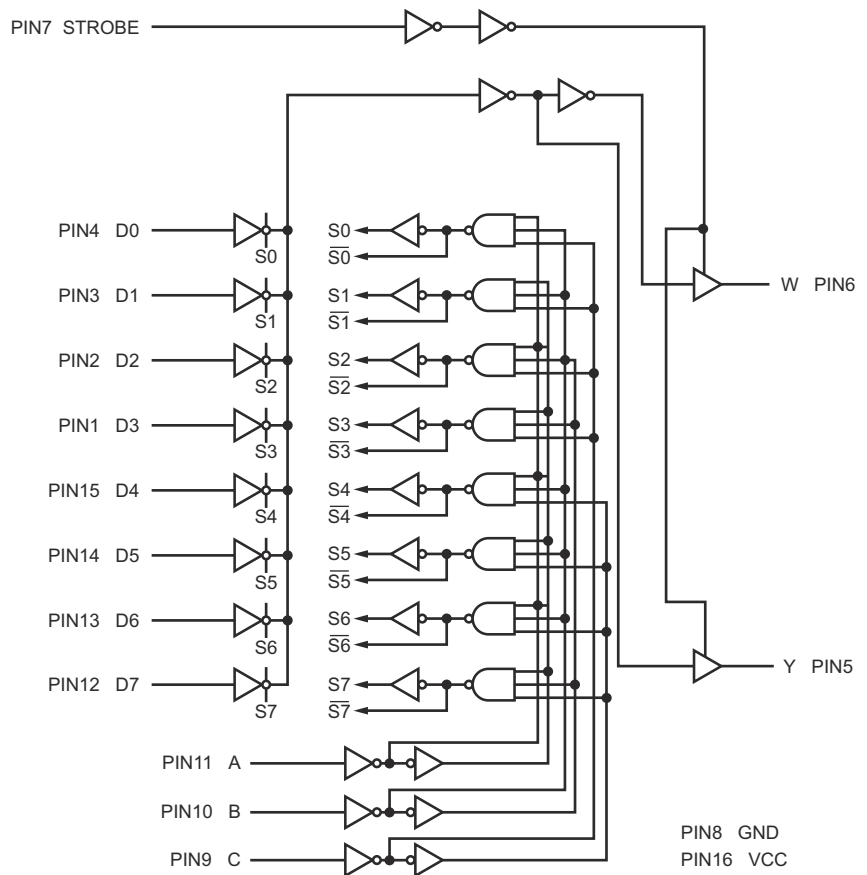
**CS8415A**  
**DSP BOARD: U1005**



**74HCU04**  
DIGITAL BOARD: U1201 & U1202

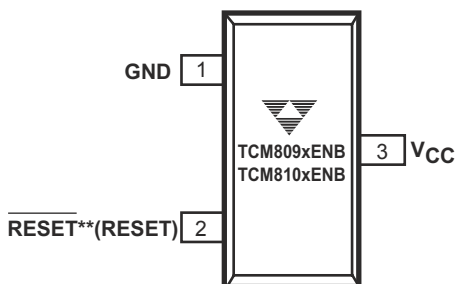


**74HC251**  
DIGITAL BOARD: U1203

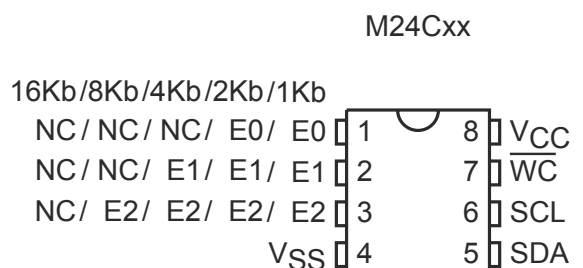


**TCM810**  
KEYBOARD: U214

\*3-Pin SOT-23B

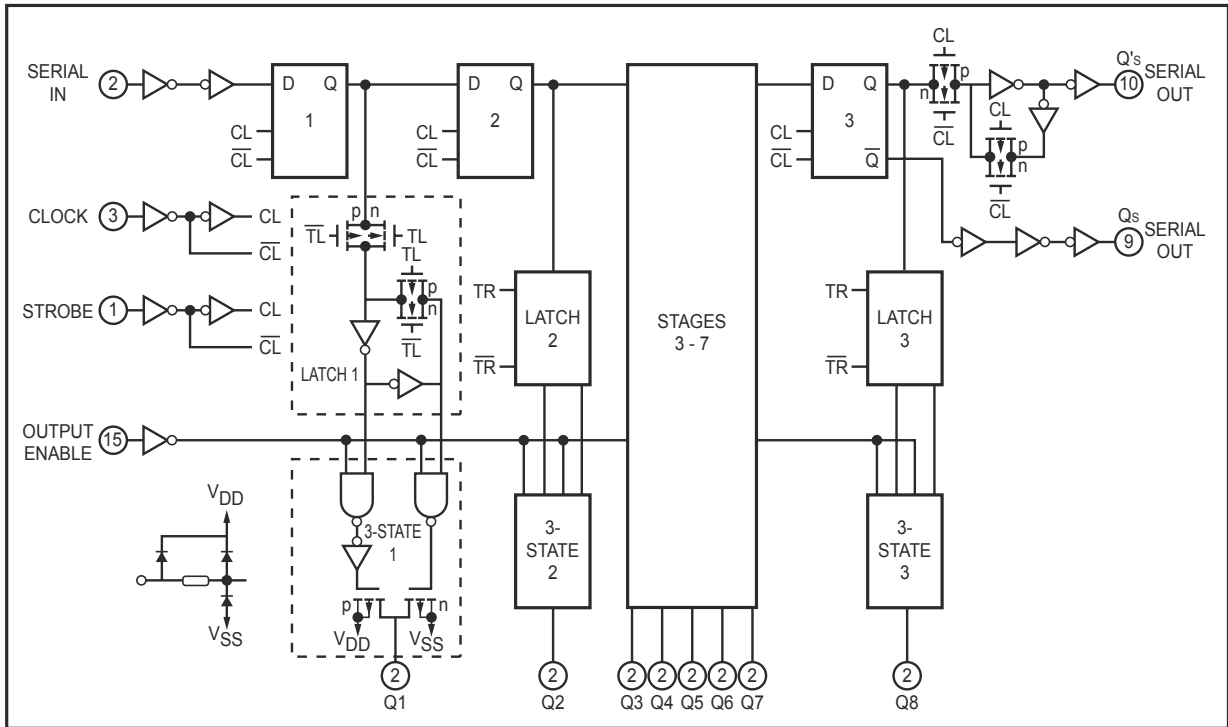


**AT24C16**  
KEYBOARD: U210

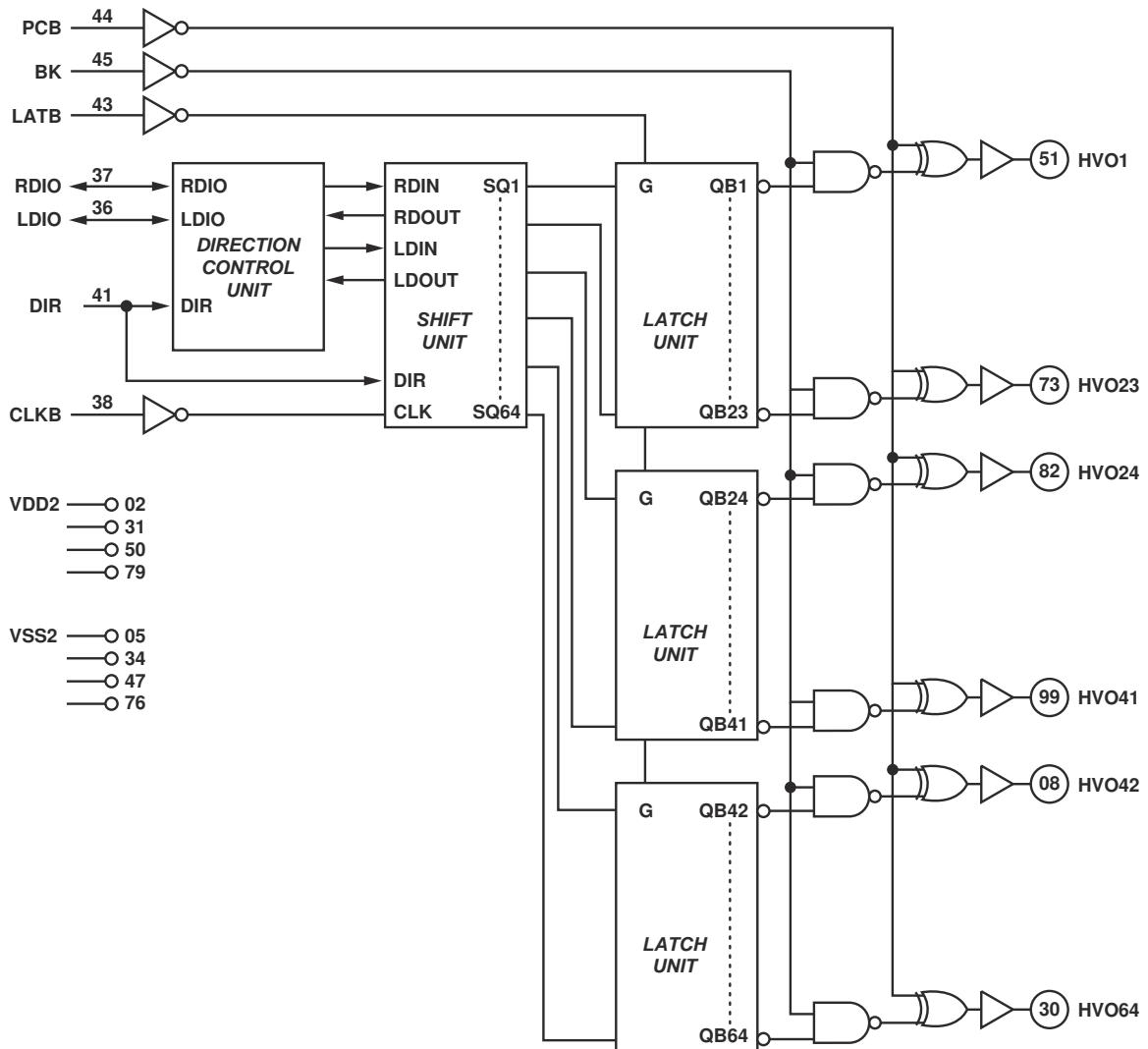


NOTE: \*3-Pin SOT-23B is equivalent to JEDEC TO-236  
\*\* ( ) is for TCM810

**HCF4094B**  
**KEYBOARD: U204~U207 & U211**

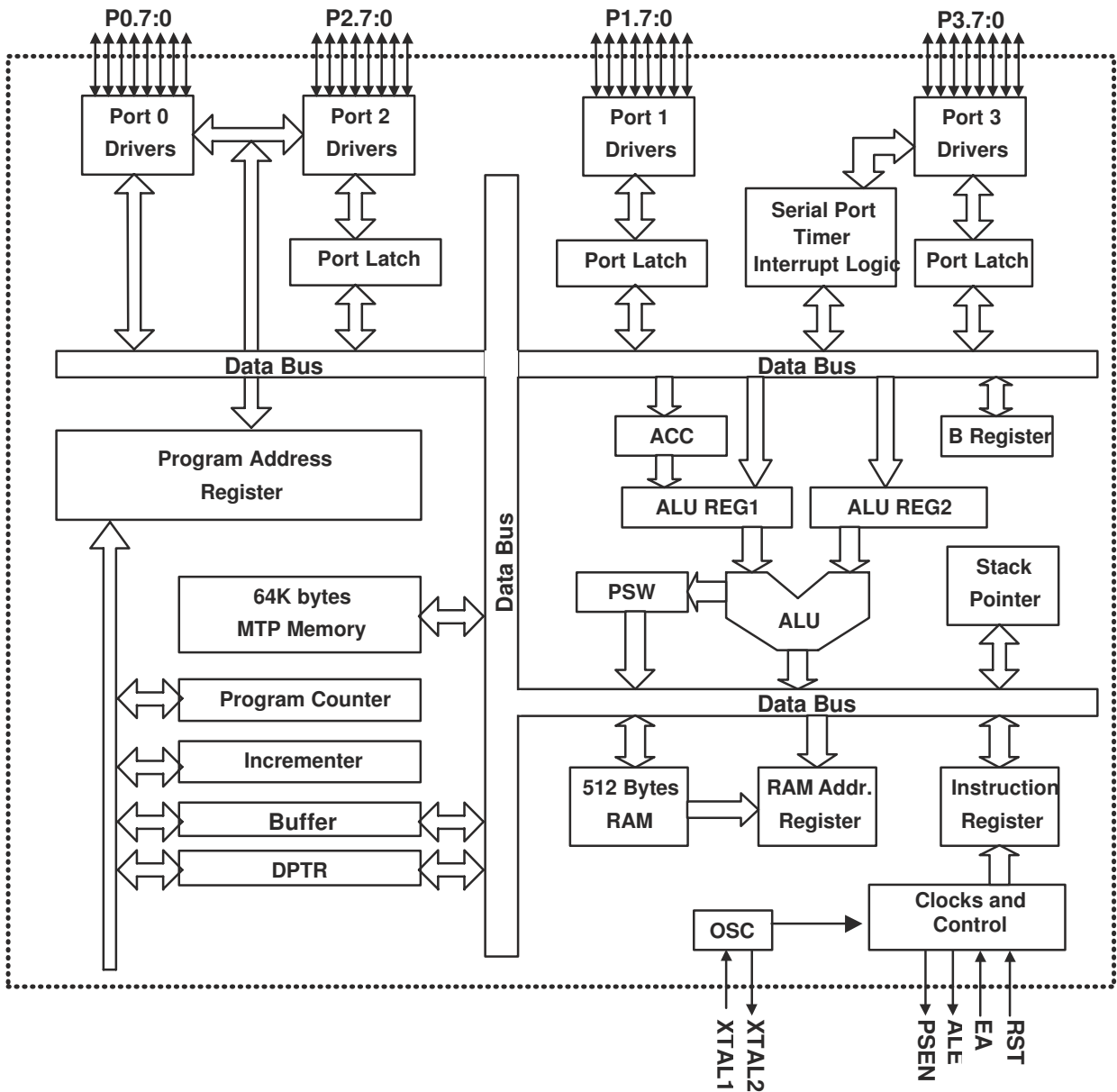


**PT6306**  
**KEYBOARD: U203**



**M6759**

KEYBOARD: U201 & U202

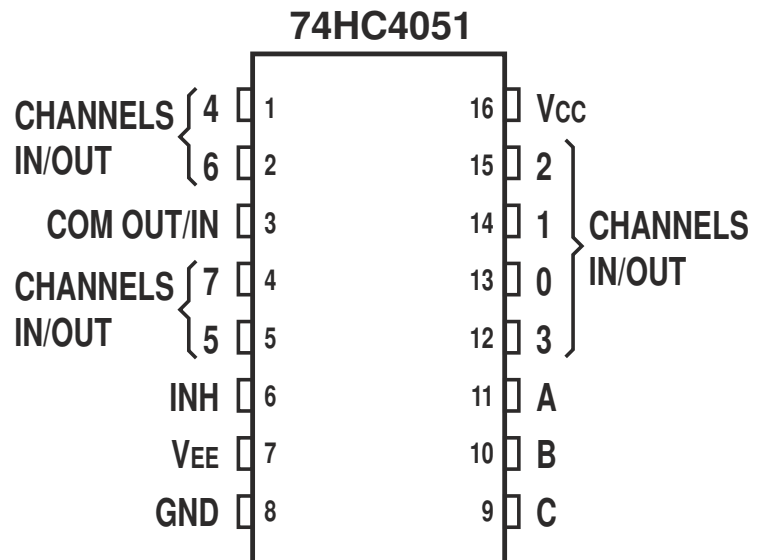


**74HC4051**

KEYBOARD: U208

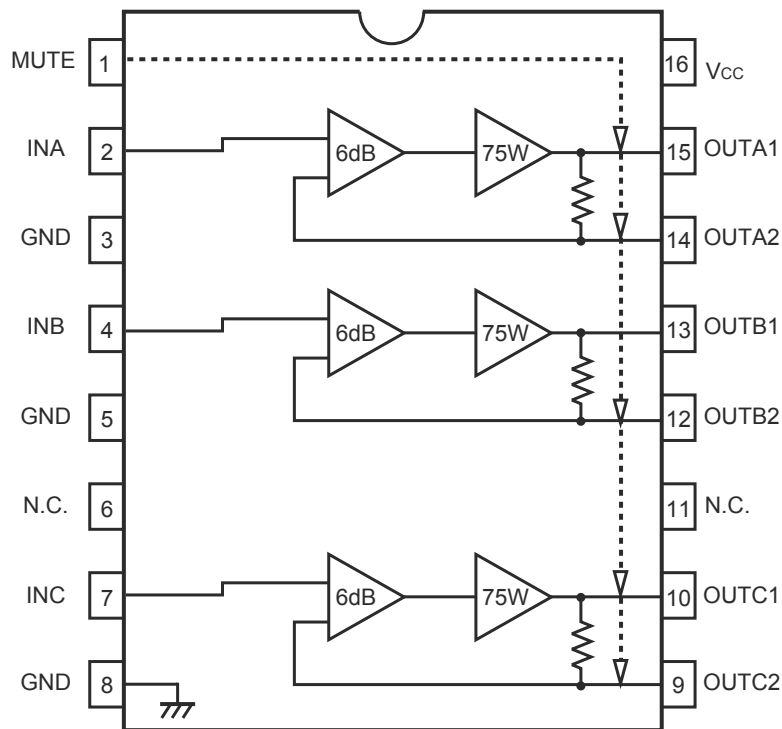
S-VIDEO BOARD: U4102 & U4103

COMPOSITE VIDEO BOARD: U4201

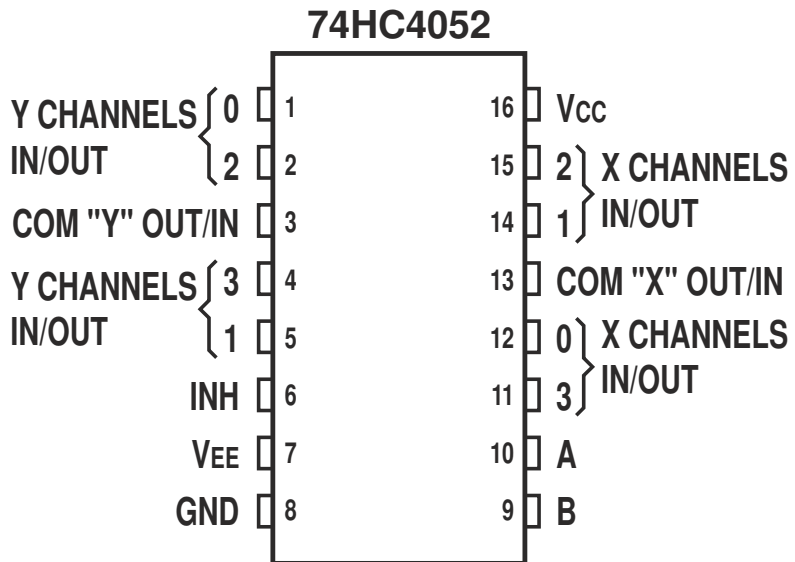




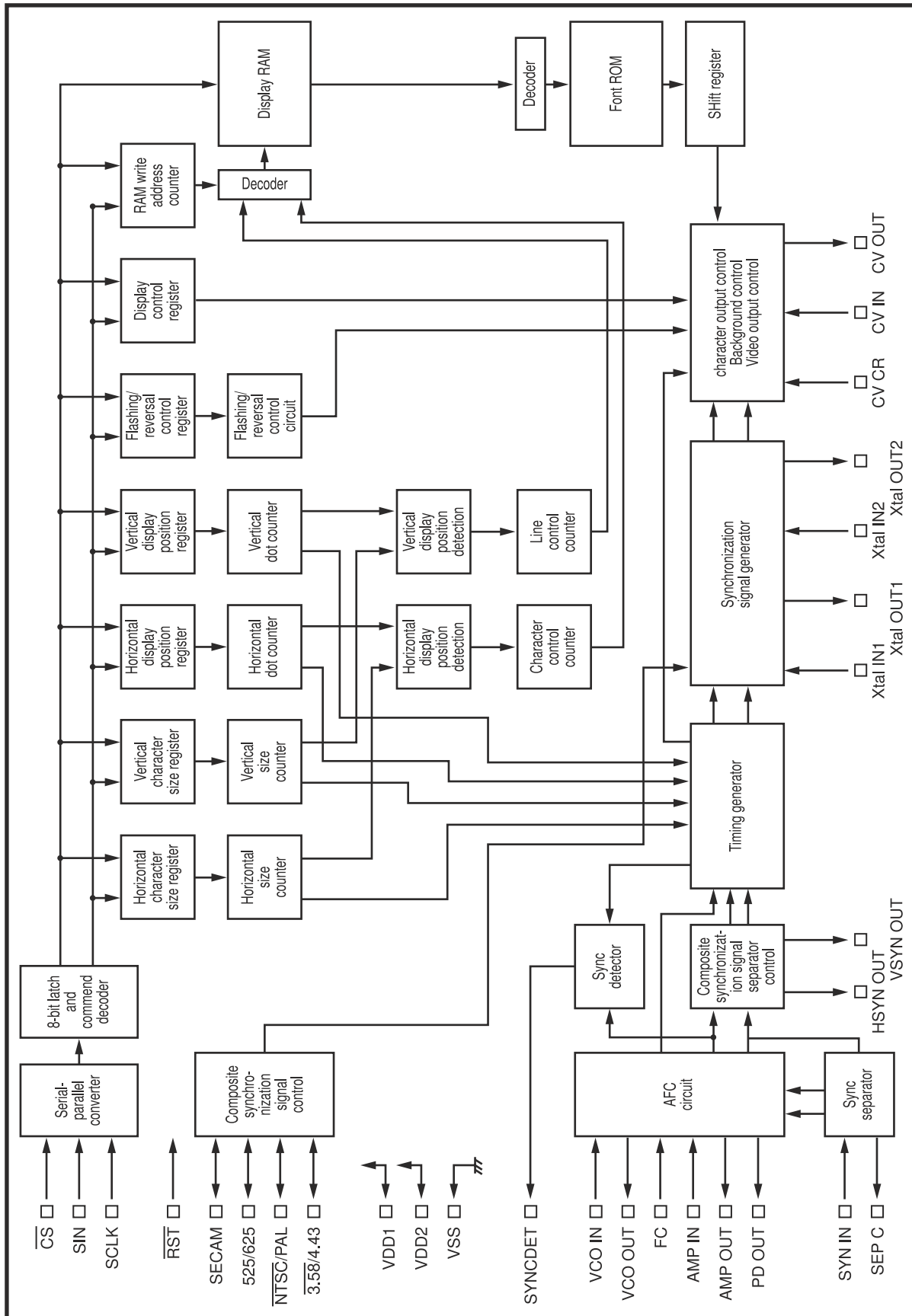
**BA7660FS**  
**COMPONENT VIDEO BOARD: U4301**



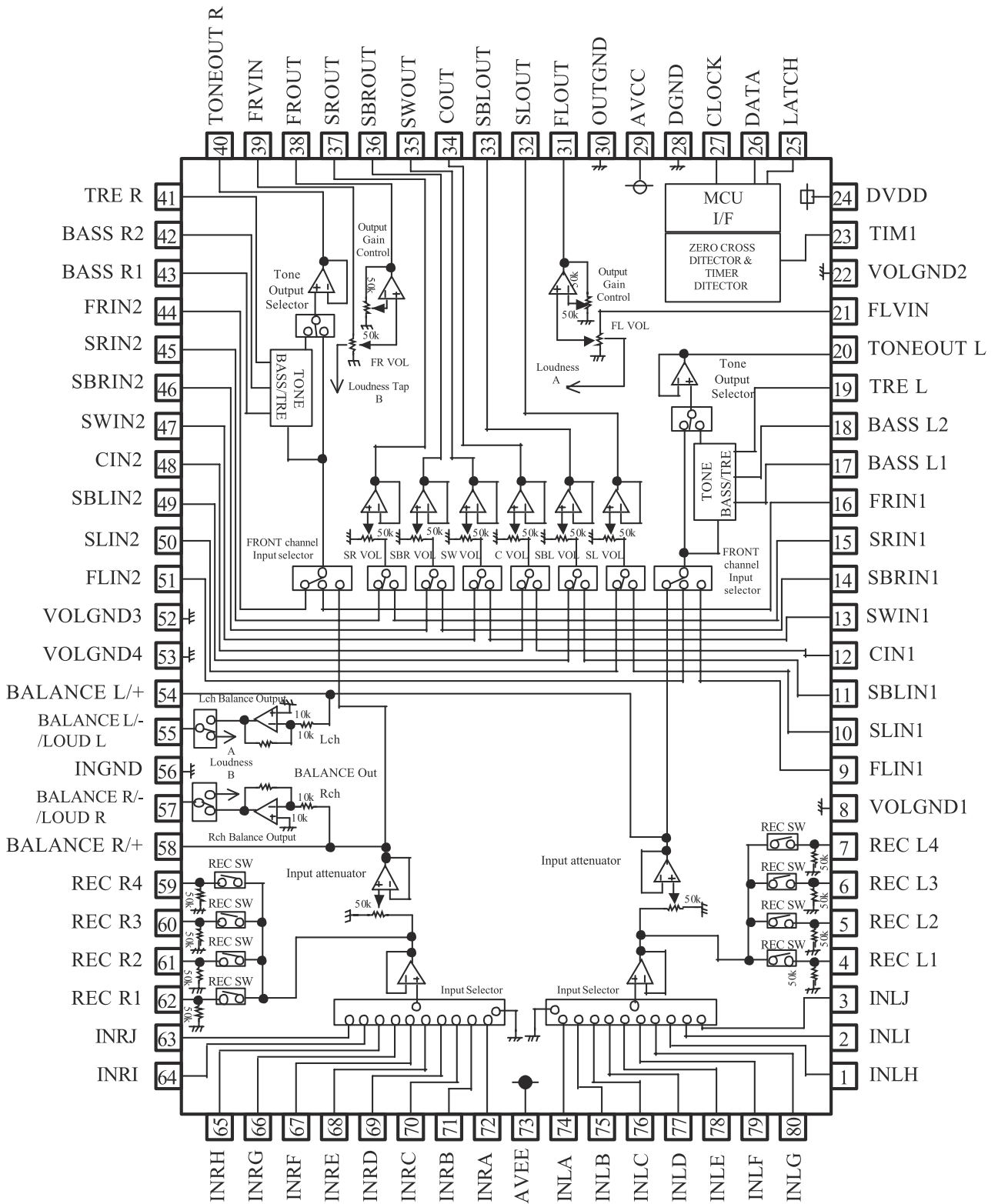
**74HC4052**  
**COMPONENT VIDEO BOARD: U4302 & U4303**

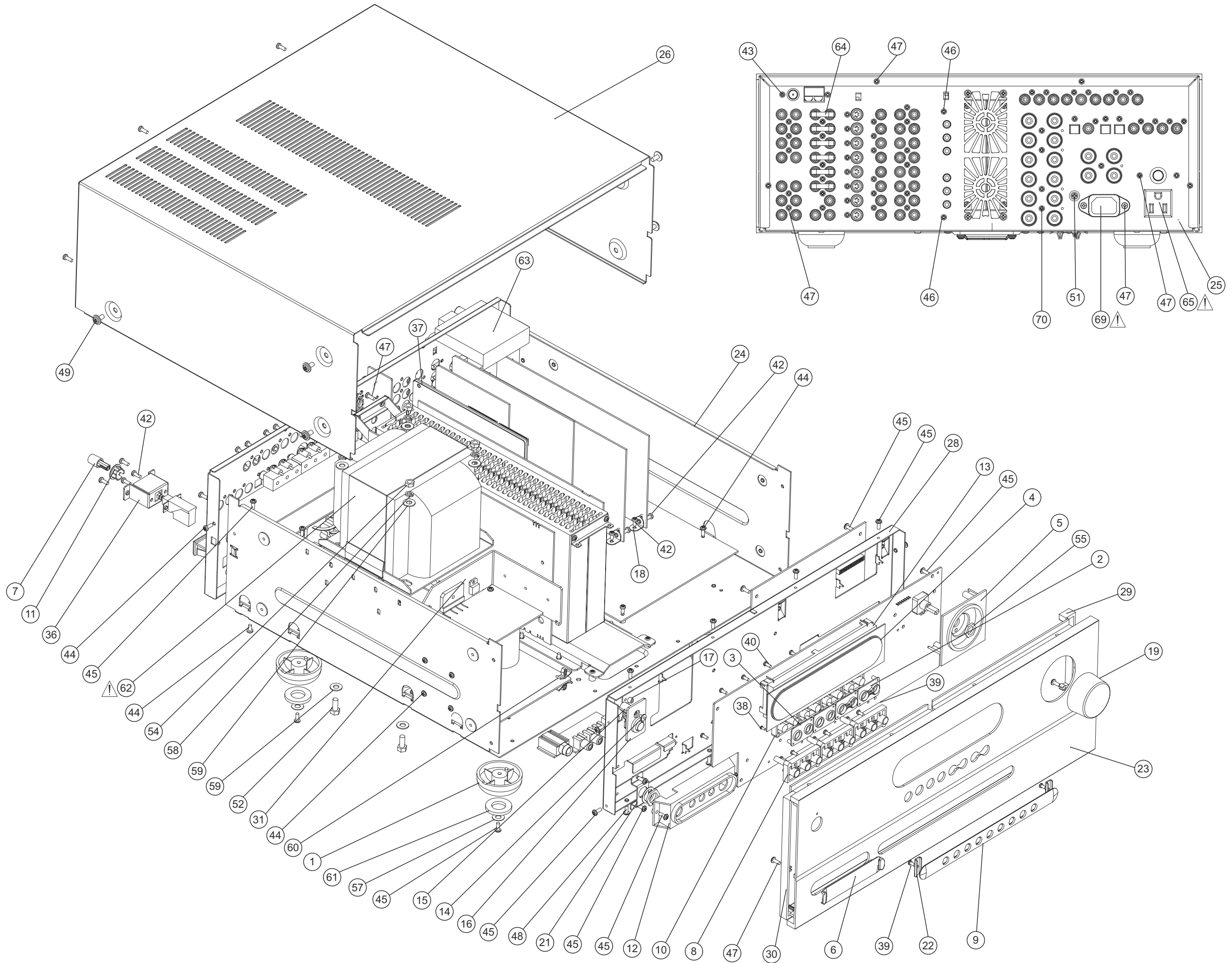


**LC74763**  
**S-VIDEO BOARD:**  
**U4101**

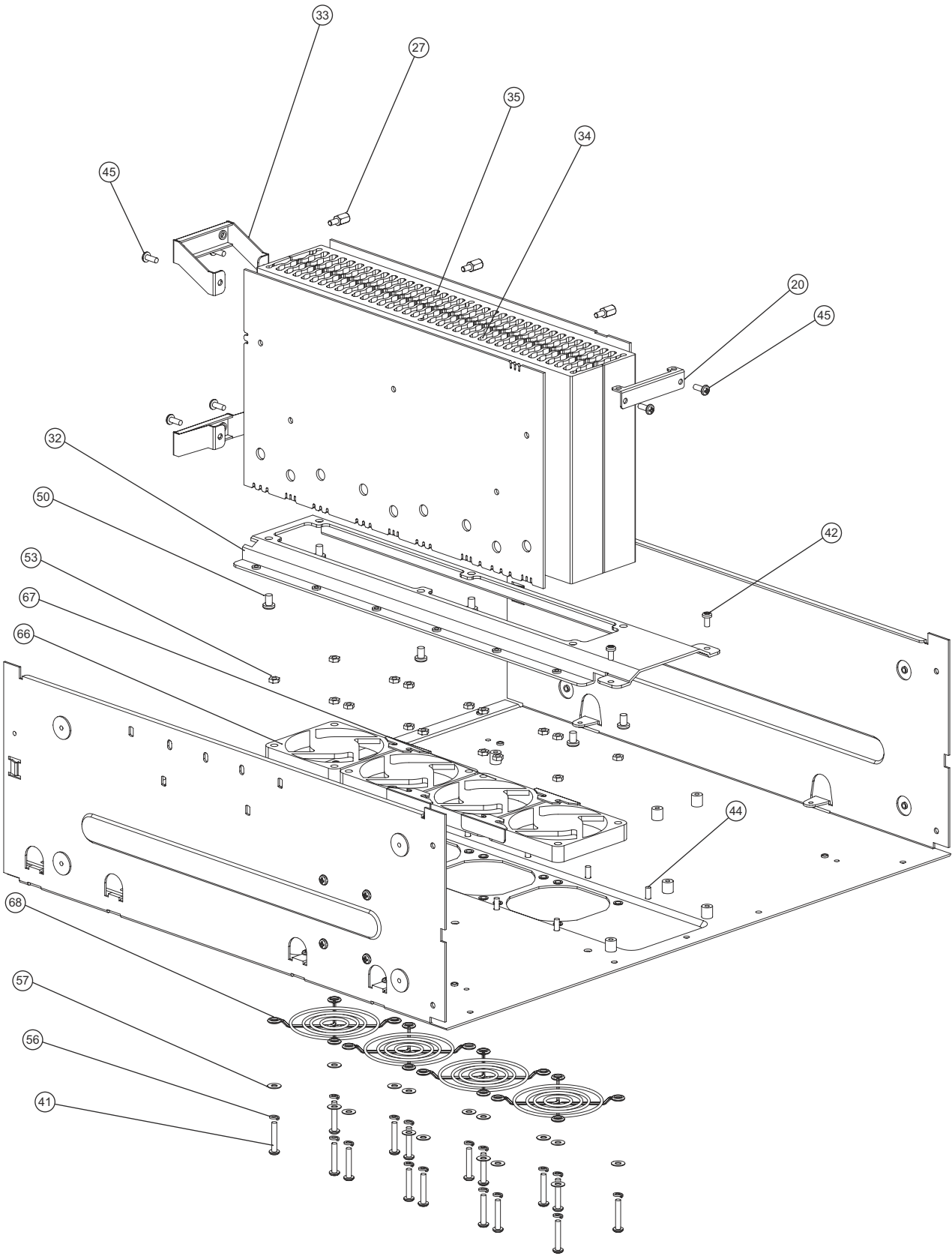


**M61516FP**  
**MULTI-CHANNEL BOARD: U6101 & U6102**









EXPLODED VIEW



## EXPLODED VIEW PARTS LIST

| <u>Item</u> | <u>Part No.</u>  | <u>Description</u>                     | <u>Qty.</u> |
|-------------|------------------|--|-------------|
| 1           | 10-0163017-01-00 | PLASTIC FOOT DOME SHAPE                | 4           |
| 2*AH,*C     | 10-0163045-72-00 | LINKED GOGGLE BEZEL (GREY)             | 2           |
| 2*T         | 10-0163045-73-00 | LINKED GOGGLE BEZEL (TITANIUM)         | 2           |
| 3*AH,*C     | 10-0163055-72-01 | DUO GOGGLE BEZEL (GREY)                | 2           |
| 3*T         | 10-0163055-73-01 | DUO GOGGLE BEZEL (TITANIUM)            | 2           |
| 4           | 10-0752001-00-10 | WINDOW LENS                            | 1           |
| 5*AH,*C     | 10-0752005-72-00 | VOLUME BEZEL (GREY)                    | 1           |
| 5*T         | 10-0752005-73-00 | VOLUME BEZEL (TITANIUM)                | 1           |
| 6*AH,*C     | 10-0752007-72-00 | VIDEO COVER (GREY)                     | 1           |
| 6*T         | 10-0752007-73-00 | VIDEO COVER (TITANIUM)                 | 1           |
| 7           | 10-0752022-02-00 | POWER BUTTON BLACK                     | 1           |
| 8*AH,*C     | 10-0752032-72-01 | INPUT BUTTON (GREY)                    | 3           |
| 8*T         | 10-0752032-73-01 | INPUT BUTTON (TITANIUM)                | 3           |
| 9*AH,*C     | 10-0752035-71-00 | INPUT BUTTON LOZENGE                   | 1           |
| 9*T         | 10-0752035-73-00 | INPUT BUTTON LOZENGE (TITANIUM)        | 1           |
| 10*AH,*C    | 10-0752042-72-01 | DUO BUTTON (GREY)                      | 4           |
| 10*T        | 10-0752042-73-01 | DUO BUTTON (TITANIUM)                  | 4           |
| 11          | 10-0752045-01-00 | POWER BUTTON BEZEL                     | 1           |
| 12          | 10-0752065-01-00 | VIDEO HOUSING                          | 1           |
| 13          | 10-0752075-00-00 | DISPLAY BRACKET                        | 1           |
| 14          | 10-0772011-00-00 | LED LENS ROUND                         | 1           |
| 15*AH,*C    | 10-0772022-72-01 | POWER BUTTON TACT ACTIVATE (GREY)      | 1           |
| 15*T        | 10-0772022-73-01 | POWEER BUTTON TACT ACTIVATE (TITANIUM) | 1           |
| 16*AH,*C    | 10-0772045-72-01 | POWER BUTTON BEZEL (GREY)              | 1           |
| 16*T        | 10-0772045-73-01 | POWER BUTTON BEZEL (TITANIUM)          | 1           |
| 17          | 11-0163035-80-00 | METAL SPACER OD6 X ID3.2 X 4.5mm       | 2           |
| 18          | 11-0570075-80-01 | L BRACKET                              | 2           |
| 19*AH,C     | 11-0752002-72-00 | VOLUME KNOB ASSY (GREY)                | 1           |
| 19*T        | 11-0752002-73-00 | VOLUME KNOB ASSY (TITANIUM)            | 1           |
| 20          | 11-0752045-80-00 | HEATSINK MOUNTING BRACKET              | 1           |
| 21          | 11-0752065-80-00 | PHONE BRACKET                          | 1           |
| 22          | 11-0752075-80-00 | DUMMY BRACKET                          | 2           |
| 23*AH,*C    | 11-0753000-95-12 | FASCIA (GREY)                          | 1           |
| 23*T        | 11-0753000-94-12 | FASCIA (TITANIUM)                      | 1           |
| 24          | 11-0753004-80-07 | BOTTOM CHASSIS                         | 1           |
| 25*AH       | 11-0753006-94-14 | REAR PANEL                             | 1           |
| 25*C,*T     | 11-0753016-94-10 | REAR PANEL                             | 1           |
| 26*AH       | 11-0753003-95-16 | TOP COVER (GREY)                       | 1           |
| 26*C        | 11-0753013-95-16 | TOP COVER (GREY)                       | 1           |
| 26*T        | 11-0753013-97-16 | TOP COVER (SILVER)                     | 1           |
| 27          | 11-0762005-80-00 | HEX SPACER AF5.5 H8+6                  | 10          |
| 28          | 11-0762025-80-02 | SUBFASCIA                              | 1           |
| 29*AH,*C    | 11-0762028-95-00 | SIDE CAP L (GREY)                      | 1           |
| 29*T        | 11-0762028-94-00 | SIDE CAP L (TITANIUM)                  | 1           |
| 30*AH,*C    | 11-0762038-95-00 | SIDE CAP R (GREY)                      | 1           |
| 30*T        | 11-0762038-94-00 | SIDE CAP R (TITANIUM)                  | 1           |
| 31          | 11-0762048-80-01 | HEATSINK- RECTIFIER                    | 1           |
| 32          | 11-0762085-80-01 | LARGE FAN MOUNTING BRACKET             | 1           |
| 33          | 11-0762095-14-00 | HTSK SUPPORT BRACKET (BLACK)           | 2           |
| 34          | 11-0762098-94-02 | NEW EXTRUDED HTSK LEFT                 | 1           |
| 35          | 11-0762108-94-00 | NEW EXTRUDED HTSK RIGHT                | 1           |

| <u>Item</u>   | <u>Part No.</u>  | <u>Description</u>                            | <u>Qty.</u> |
|---|------------------|---|-------------|
| 36  | 11-0772065-80-00 | POWER BUTTON BRACKET                          | 1           |
| 37  | 12-0763001-70-00 | FIBER PAPER 133 X 150 X 0.8mm                 | 1           |
| 38  | 13-0200502-22-00 | SELF TAP SCREW 2X5 TYPE-B NI PLT              | 8           |
| 39  | 13-0260600-02-00 | SELF TAP SCREW 2.6 X 6 P/H TYPE-A NI PLT      | 6           |
| 40  | 13-0260803-02-00 | SELF TAP SCREW 2.6 X 8 B/H TYPE-A NI PLT      | 16          |
| 41  | 14-0300180-02-00 | MACHINE SCREW M3 X 18 P/H NI PLT              | 16          |
| 42  | 14-0300600-02-00 | MACHINE SCREW M3 X 6 P/H NI PLT               | 17          |
| 43  | 14-0300600-04-00 | MACHINE SCREW M3 X 6 P/H BLK                  | 2           |
| 44  | 14-0300600-52-00 | SELF TAP SCREW 3 X 6 P/H NI-PLT TYPE-B        | 20          |
| 45  | 14-0300800-53-00 | SELF TAP SCREW 3 X 8 B/B ZINC PLATED          | 34          |
| 46  | 14-0300803-04-00 | MACHINE SCREW M3 X 8 B/H BLACK                | 2           |
| 47  | 14-0300803-54-00 | TAPTITE SCREW 3 X 8 B/H TYPE-B BLK PLT        | 60          |
| 48  | 14-0350803-52-00 | TAPTITE SCREW 3.5 X 8.0 B/H TYPE-B NI PLT     | 5           |
| 49  | 14-0400802-04-00 | MACHINE SCREW M4 X 8 WASHER HEAD BLK          | 6           |
| 50  | 14-0400808-54-00 | TAPTITE SCREW 4 X 8 C/H TYPE -B BLK           | 6           |
| 51  | 14-0401402-04-00 | MACHINE SCREW M4 X 14 WAHER HEAD BLK          | 1           |
| 52  | 14-0501205-02-02 | HEX HEAD SCREW M5 X 12 NI PLT                 | 4           |
| 53  | 15-0300240-05-20 | NUT M3 X 2.4mm                                | 16          |
| 54  | 15-0500340-08-20 | NUT M5X3.4 NI PLT                             | 4           |
| 55  | 15-0900220-11-30 | NUT ZINC PLATED M9.0 X 2.2mm 11p              | 1           |
| 56  | 16-0320560-09-20 | SPRING WASHER I/D 3.2 X O/D 5.6 0.9mm THK     | 35          |
| 57  | 16-0350080-04-35 | STEEL WASHER I/D 3.5 X O/D 8.0 0.4mm ZINC PLT | 22          |
| 58  | 16-0520080-12-30 | SPRING WASHER I/D 5.2 X O/D 8 X 1.2 ZINC PLT  | 4           |
| 59  | 16-0561200-10-20 | STEEL WASHER I/D 5.6 X O/D 12 X 1 NI PLT      | 8           |
| 60  | 17-0500960-00-01 | PCB SUPPORTER H=9.6mm PCB HOLE 4mm            | 3           |
| 61  | 17-1402603-30-22 | RUBBER FOOT I/D14 X O/D26 X 3                 | 4           |
| 62       | 25-0220057-30-18 | XFORMER PW EI-114 115V/230V T06675A           | 1           |
| 63*AH   | 29-4000004-00-38 | AM/FM TUNER MODULE KST-MB114MA0-23            | 1           |
| 63*C,*T   | 29-4000002-00-38 | AM/FM TUNER MODULE KST-MB114MA1-23            | 1           |
| 64  | 34-0061030-00-67 | JUMPER PLUG PITCH 14mm                        | 6           |
| 65*AH    | 34-0101003-00-63 | AC OUTLET 3 PINS US POLARIZED<br>SS-6B-1-NY   | 1           |
| 65*C,*T  | 34-0100002-00-78 | AC OUTLET EURO CEE 7 2.5A/250V<br>A302D0060P  | 1           |
| 66  | 37-2011230-00-63 | FAN DC 12V 0.09A 3000RPM W/450mm<br>CONNECTOR | 2           |
| 67  | 37-2011230-01-63 | FAN DC 12V 0.09A 3000RPM W/350mm<br>CONNECTOR | 2           |
| 68  | 39-0000008-00-63 | FAN GUARD 60mm DFG-60                         | 4           |
| 69       | 34-0101000-00-67 | AC SOCKET IEC 15A/250V                        | 1           |
| 70  | 14-0301000-54-00 | TAPTITE SCREW 3 X 10 P/H TYPE-B BLK           | 7           |

**NOTE:**


THE COMPONENTS IDENTIFIED BY  MARK ARE CRITICAL FOR RISK OF FIRE AND ELECTRICAL SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

<\*AH > : USA, CANADIAN MODEL ONLY.

<\*C > : EUROPEAN MODEL ONLY.

<\*T > : EUROPEAN MODEL WITH TATANIUM COLOUR ONLY,  
ALL ELECTRICAL ARE SAME AS \*C VERSION.

# ELECTRICAL PARTS LIST (refer to schematic diagram for non critical component values)

| <u>Reference No.</u>   | <u>Part No.</u>  | <u>Description</u>                            |
|--|------------------|---|
| <b><u>POWER AMP MODULE</u></b>   | 95-0907535-12-01 | POWER AMPLIFIER MODULE                        |
| <b><u>FRONT &amp; CENTER AMP BOARD<br/>PCB ASSEMBLY</u></b>                              | 80-0907530-40-00 | FRONT AND CENTER AMP ASSEMBLY                 |
| <b><u>CAPACITORS</u></b>   |                  |   |
| C501,C513,C525   | 22-3476052-00-43 | CAP ELEC SS 4.7uF 50V 20%                     |
| C503,C515,C527   | 22-4110203-10-28 | CAP MYLAR MCC-R 1000P 100V 10%                |
| C505,C517,C529   | 22-3471022-00-28 | CAP ELEC GR 470uF 16V 20%                     |
| C508,C519,C531   | 22-4115403-10-10 | CAP MYLAR KT-G 150nF 100V 10%                 |
| C510,C511,C521,C522,C534,C535  | 22-3101082-00-28 | CAP ELEC GR 100uF 100V 20%                    |
| C537-C539  | 22-4210402-00-31 | CAP MPF 0.1uF 63V 5%                          |
| C565,C566  | 22-3470022-00-43 | CAP ELEC SS 47uF 16V 20%                      |
| <b><u>DIODES</u></b>   |                  |   |
| D501-D503,D505-D507,D509-D514,<br>D522-D528,D531-D536                                    | 20-0000000-00-13 | DIODE SW 4NS DO35 1N4148                      |
| D529,D530  | 20-3222002-02-01 | DIODE ZENER BZX55 22V 1/2W 5%                 |
| <b><u>COILS</u></b>  |                  |   |
| L501-L503  | 24-1000001-00-28 | AIR COIL 0.2uH 10%                            |
| <b><u>RELAY</u></b>  |                  |   |
| M501,M502,M505   | 32-3124051-03-40 | RELAY POWER DC24V 5A/250V 2P1T                |
| <b><u>THERMISTORS</u></b>  |                  |   |
| M504,M507  | 23-6110100-00-08 | PTC 100 OHM PTH9MO4BH471TS2F333               |
| <b><u>THERMAL PROTECTOR</u></b>  |                  |   |
| M506  | 39-0000007-00-15 | THERMAL CUT OFF SWITCH 90C UP72               |
| <b><u>TRANSISTORS</u></b>  |                  |   |
| Q501-Q503,Q511,Q513-Q515,Q523,<br>Q525-Q527,Q535   | 21-0000410-00-12 | XTR SS NPN HFE160-320 130MHZ<br>2SC2362KF     |
| Q504,Q506,Q516,Q518,Q529,Q530,<br>Q562,Q565,Q568   | 21-1011210-50-12 | XTR PW PNP 1A/100V TO-126<br>2SD600KE         |
| Q505,Q508,Q517,Q520,Q528,Q532  | 21-1011611-30-12 | XTR PW PNP 1.5A/160V TO-220ML<br>2SA1606E     |
| Q507,Q519,Q531   | 21-1011610-30-12 | XTR PW NPN 1.5A/160V TO-220ML<br>2SC4159E     |
| Q509,Q521,Q534   | 21-1152311-10-12 | XTR PW PNP 15A/230V TO-3PB<br>2SA2031         |
| Q510,Q522,Q533   | 21-1152310-10-12 | XTR PW NPN 15A/230V TO-3PB<br>2SC5669         |
| Q543-Q545  | 21-0000380-70-14 | XTR SS NPN HFE20 250MHZ<br>DTC-123ESA         |
| Q550,Q551,Q553,Q554,Q556,Q557,<br>Q561,Q564,Q567   | 21-0100410-00-12 | XTR SS PNP HFE 280-560 110MHZ<br>2SA1016KG-AA |
| Q563,Q566,Q569   | 21-1011211-50-12 | XTR PW PNP 1A/100V TO-126<br>2SB631KE         |
| <b><u>RESISTORS</u></b>  |                  |   |
| R522,R545,R571   | 30-0102106-01-64 | VR SEMI-FIX RES CF 1K OHM B 30%               |
| R523,R547,R574   | 23-4228280-08-20 | RES RN 0.22 OHM 5% 5W SIL 3 PIN               |



| <b>Reference No.</b>  | <b>Part No.</b>                      | <b>Description</b>                            |
|---|--------------------------------------|---|
| R527,R528,R548,R556,R575,R576<br>R589-R591                        | 23-2100230-00-00<br>23-2100250-00-01 | RES MO 10 OHM 5% 1/2W<br>RES MO 10 OHM 5% 2W  |
| <b><u>SURROUND LEFT/RIGHT/BACK AMP BOARD<br/>PCB ASSEMBLY</u></b> | 80-0907530-18-00                     | SURROUND LEFT/RIGHT/BACK AMP<br>ASSEMBLY      |
| <b><u>CAPACITORS</u></b>  |                                      |   |
| C554  | 22-3220022-00-43                     | CAP ELEC GS 22uF 16V 20%                      |
| C801,C802,C835  | 22-3476052-00-43                     | CAP ELEC SS 4.7uF 50V 20%                     |
| C805,C806,C836  | 22-4110203-10-28                     | CAP MYLAR MCC-R 1000P 100V 10%                |
| C809,C810,C837,C874,C875  | 22-3471022-00-28                     | CAP ELEC GR 470uF 16V 20%                     |
| C815,C816,C840  | 22-4115403-10-10                     | CAP MYLAR KT-G 150nF 100V 10%                 |
| C819-C822,C842,C843   | 22-3101082-00-28                     | CAP ELEC GR 100uF 100V 20%                    |
| C823,C824,C844  | 22-4210402-00-31                     | CAP MPF 0.1uF 63V 5%                          |
| C871,C873   | 22-3470052-00-43                     | CAP ELEC SS 47uF 50V 20%                      |
| C872  | 22-3100052-00-43                     | CAP ELEC SS 10uF 50V 20%                      |
| <b><u>DIODES</u></b>  |                                      |   |
| D801-D809,D814-D818,D820-D825,<br>D871-D874,D880-D883             | 20-0000000-00-13                     | DIODE SW 4NS DO35 1N4148                      |
| D879,D878   | 20-3133912-20-36                     | DIODE ZENER BZX85 3.3V 1W 5%                  |
| <b><u>COILS</u></b>   |                                      |   |
| L801,L802,L803  | 24-1000001-00-28                     | AIR COIL 0.2uH 10%                            |
| <b><u>RELAYS</u></b>  |                                      |   |
| M801,M802   | 32-3124081-02-40                     | RELAY POWER DC24V 8A/250V 2P1T                |
| <b><u>TRANSISTORS</u></b>   |                                      |   |
| Q512,Q807,Q808,Q823,Q824,Q826,<br>Q827,Q834,Q835,Q837             | 21-0100410-00-12                     | XTR SS PNP HFE 280-560 110MHZ<br>2SA1016KG-AA |
| Q545,Q546,Q801-Q806,Q821,Q822,<br>Q838-Q840,Q847                  | 21-0000410-00-12                     | XTR SS NPN HFE160-320 130MHZ<br>2SC2362KF     |
| Q809-Q812,Q841,Q842,Q854,Q856,Q858                                | 21-1011210-50-12                     | XTR PW PNP 1A/100V TO-126<br>2SD600KE         |
| Q813,Q814,Q843  | 21-1011610-30-12                     | XTR PW NPN 1.5A/160V TO-220ML<br>2SC4159E     |
| Q815,Q816,Q844,Q850-Q852  | 21-1011611-30-12                     | XTR PW PNP 1.5A/160V TO-220ML<br>2SA1606E     |
| Q817,Q818,Q845  | 21-1152310-10-12                     | XTR PW NPN 15A/230V TO-3PB<br>2SC5669         |
| Q819,Q820,Q846  | 21-1152311-10-12                     | XTR PW PNP 15A/230V TO-3PB<br>2SA2031         |
| Q829,Q848   | 21-0000380-70-14                     | XTR SS NPN HFE20 250MHZ<br>DTC-123ESA         |
| Q855,Q857,Q859  | 21-1011211-50-12                     | XTR PW PNP 1A/100V TO-126<br>2SB631KE         |
| Q871  | 21-1036003-50-06                     | XTR PW 3A/60V TO-126 2SB772Q                  |
| Q872  | 21-0000390-70-14                     | XTR SS NPN HFE270-560 180MHZ<br>2SC1740S      |
| <b><u>RESISTORS</u></b>   |                                      |   |
| R8103,R843,R844   | 23-4228280-08-20                     | RES RN 0.22 OHM 5% 5W SIL 3 PIN               |

| <u>Reference No.</u>  | <u>Part No.</u>  | <u>Description</u>                        |
|---|------------------|---|
| R8110,R857,R858   | 23-2100250-00-01 | RES MO 10 OHM 5% 2W                       |
| R829,R830,R837,R838,R894,R898   | 23-2100230-00-00 | RES MO 10 OHM 5% 1/2W                     |
| R835,R836,R897  | 30-0102106-01-64 | VR SEMI-FIX RES CF 1K OHM<br>B 30% 6mm    |
| <b>ICs</b>  |                  |   |
| U871  | 27-3001201-17-14 | I.C. VOLT REG 12V 1A NJM7812              |
| U872  | 27-3000501-17-14 | I.C. VOLT REG 5V 1A NJM7805FA             |
| <b>DSP BOARD</b>  |                  |   |
| <b>PCB ASSEMBLY</b>   | 80-0907530-65-00 | DSP ASSEMBLY                              |
| <b>CAPACITORS</b>   |                  |   |
| C1137-C1140,C1079,C1080,C1092   | 22-3100022-00-43 | CAP ELEC SS 10uF 16V 20%                  |
| C1012,C1072,C1117   | 22-3101022-00-43 | CAP ELEC SS 100uF 16V 20%                 |
| C1119,C1133,C1157   | 22-3102022-00-28 | CAP ELEC GR 1000uF 16V 20%                |
| C1002,C1004,C1083,C1096,C1098,C1100   | 22-3106052-00-43 | CAP ELEC SS 1uF 50V 20%                   |
| C1011   | 22-3107052-00-43 | CAP ELEC. SS 0.1uF 50V 20%                |
| C1145-C1148   | 22-3220022-00-43 | CAP ELEC GS 22uF 16V 20%                  |
| C1005   | 22-3226052-00-43 | CAP ELEC SS 2.2uF 50V 20%                 |
| C1020,C1021,C1030,C1031,C1040,<br>C1041,C1050,C1051   | 22-3336052-00-43 | CAP ELEC SS 3.3uF 50V 20%                 |
| C1109-C1113   | 22-3470022-00-43 | CAP ELEC SS 47uF 16V 20%                  |
| C1060,C1073   | 22-3471022-00-28 | CAP ELEC GR 470uF 16V 20%                 |
| C1101-C1108   | 45-0101055-55-57 | CAP CER SMD 100pF 50V 10%                 |
| C1132   | 45-0102055-55-57 | CAP CER SMD 1nF 50V 10%                   |
| C1007,C1010   | 45-0103055-55-57 | CAP CER SMD 10nF 50V 10%                  |
| C1003,C1001,C1017-C1019,C1074-<br>C1076,C1078,C1081,C1095,C1097,<br>C1099,C1123-C1128,C1115,C1141,C1142 | 45-0104056-57-57 | CAP CER SMD 0.1uF 50V 20%                 |
| C1121   | 45-0221055-55-57 | CAP CER SMD 220pF 50V 10%                 |
| C1006,C1022,C1026,C1032,C1036,<br>C1042,C1046,C1052,C1056,C1130,<br>C1131,C1134-C1136,C1143,C1144       | 45-0222055-55-57 | CAP CER SMD 2.2nF 50V 10%                 |
| C1151   | 45-0331055-55-57 | CAP CER SMD 330pF 50V 10%                 |
| C1025,C1029,C1035,C1039,C1045,<br>C1049,C1055,C1059,C1114   | 45-0472055-55-57 | CAP CER SMD 4.7nF 50V 10%                 |
| C1024,C1028,C1034,C1038,C1044,<br>C1048,C1054,C1058,  | 45-0561055-55-57 | CAP CER SMD 560pF 50v 10%                 |
| <b>INDUCTORS</b>  |                  |   |
| L1001-L1007   | 24-0100127-00-28 | IND CHOKE 10uH 10%                        |
| <b>TRANSISTORS</b>  |                  |   |
| Q1001-Q1003   | 21-0000010-00-46 | XTR SS NPN HEF 100 200MHz<br>TO-92 C1815Y |
| <b>RESISTORS</b>  |                  |   |
| R1001,R1002,R1079,R1083,1097,<br>R1098,R1101  | 44-0470120-51-00 | RES SMD 4.7K OHM 5% 1/16W 0603            |
| R1003-R1006,R1081   | 44-0330120-51-00 | RES SMD 3.3K OHM 5% 1/16W 0603            |
| R1007   | 44-0330920-51-00 | RES SMD 33 OHM 5% 1/16W 0603              |

| <b>Reference No.</b>  | <b>Part No.</b>  | <b>Description</b>  |
|---|------------------|---|
| R1008,R1020-R1022,R1026,R1036,<br>R1040,R1050,R1054,R1064,R1068,<br>R1095,R1096,R1099,R1100,R1114,<br>R1117-R1120,R1131-R1138,R1230                             | 44-0100220-51-00 | RES SMD 10K OHM 5% 1/16W 0603                                 |
| R1009   | 44-0200320-51-00 | RES SMD 200K OHM 5% 1/16W 0603                                |
| R1010,J1001   | 44-0000020-51-00 | RES SMD 0 OHM 5% 1/16W 0603                                   |
| R1013   | 44-0120120-51-00 | RES SMD 1.2K OHM 5% 1/16W 0603                                |
| R1023,R1027,R1028,R1030,R1033,<br>R1035,R1037,R1041,R1042,R1044,<br>R1047,R1049,R1051,R1055,R1056,<br>R1058,R1061,R1063,R1065,R1069,<br>R1070,R1072,R1075,R1077 | 44-0150120-51-00 | RES SMD 1.5K OHM 5% 1/16W 0603                                |
| R1078,R1080,R1084   | 44-0220120-51-00 | RES SMD 2.2K OHM 5% 1/16W 0603                                |
| R1082   | 44-0180120-51-00 | RES SMD 1.8K OHM 5% 1/16W 0603                                |
| R1090,R1091   | 44-0270120-51-00 | RES SMD 2.7K OHM 5% 1/16W 0603                                |
| R1092-R1094,R1115   | 44-0100020-51-00 | RES SMD 100 OHM 5% 1/16W 0603                                 |
| R1121-R1124   | 44-0150020-51-00 | RES SMD 150 OHM 5% 1/16W 0603                                 |
| R1141-R1148   | 44-0620020-51-00 | RES SMD 620 OHM 5% 1/16W 0603                                 |
| R1151   | 44-0100120-51-00 | RES SMD 1K OHM 5% 1/16W 0603                                  |
| <b>ICs</b>  |                  |   |
| U1001   | 27-9493260-04-70 | I.C. DD DTS & MPEG DECODER PLCC<br>CS49326                    |
| U1002,U1003,U1014   | 27-0324590-24-00 | I.C. OCTAL BIDIRECTIONAL TRANS<br>CEIVER SMD 74LVC245ATTR     |
| U1004   | 27-0115790-25-00 | I.C. QUAD 2-I/P SELECTOR SOIC<br>74HC157MIR                   |
| U1005   | 27-9841500-25-53 | I.C. 96KHz DIGITAL AUDIO INTERFACE<br>RECEIVER SMD CS8415A-CS |
| U1007   | 27-2325607-00-88 | I.C. EEPROM 256 X 8 BYTE 70nS PDIL<br>W27C02-70               |
| U1007   | 34-6032000-00-99 | IC SOCKET DIL 32 PINS FT                                      |
| U1008,U1009   | 27-0657490-18-00 | I.C. OCTAL D-FLIP FLOPS 3-STAGE O/P<br>SMD 74LVQ574M          |
| U1010-U1013,U1023,U1025   | 27-7055320-18-14 | I.C. AUDIO LOW NOISE OP-AMP SMD<br>NJM5532M                   |
| U1015,U1020   | 27-3031710-06-00 | I.C. REG 1A TO-220(T) LM317T                                  |
| U1021   | 27-9422800-24-53 | I.C. 24BIT 96KHz SUR SOUND CODE<br>SSOP CS4228AKS             |
| U1022   | 27-9434000-25-53 | I.C. 24BIT 96KHz STEREO DAC FOR<br>AUDIO SOIC CS4340          |
| <b>OSCILLATOR</b>   |                  |   |
| X1001   | 28-5122200-04-19 | OSCILLATOR 12.288MHz 50ppm                                    |
| <b>AUDIO BOARD<br/>PCB ASSEMBLY</b>   | 80-0907530-11-00 | AUDIO ASSEMBLY  |
| <b>CAPACITORS</b>   |                  |   |
| C3101-C3116   | 22-3220022-00-43 | CAP ELEC GS 22uF 16V 20%                                      |
| <b>RCA JACKS</b>  |                  |   |
| M303  | 34-4040420-00-60 | RCA JACK 4 R-R/W-W PCB MOUNT                                  |
| M301,M302   | 34-4060420-00-60 | RCA JACK 6 R-R/R/W-W-W PCB MOUNT                              |

| <u>Reference No.</u>   | <u>Part No.</u>  | <u>Description</u>  |
|--|--|---|
| <b>RESISTORS</b><br>J3101,J3102  | 44-0000027-11-00   | RES SMD 0 OHM 5% 1/10W 0805   |
| <b>COMPONENT VIDEO BOARD</b><br><b>PCB ASSEMBLY</b>  | 80-0907530-42-00   | COMPONENT VIDEO ASSEMBLY  |
| <b>CAPACITORS</b><br>C4301-C4306<br>C4310,C4311,C4312,C4325<br>C4313-C4315<br>C4316,C4318,C4320<br>C4317,C4319,C4321 | 22-3226052-00-43<br>22-3100022-00-43<br>22-3106052-00-43<br>22-3101022-00-43<br>22-3220022-00-43 | CAP ELEC SS 2.2uF 50V 20%<br>CAP ELEC SS 10uF 16V 20%<br>CAP ELEC SS 1uF 50V 20%<br>CAP ELEC SS 100uF 16V 20%<br>CAP ELEC GS 22uF 16V 20% |
| <b>DIODE</b><br>D4301,D4302  | 20-0000000-00-13   | DIODE SW 4NS DO35 1N4148  |
| <b>RESISTORS</b><br>J4301,J4302,J4303  | 44-0000027-11-00   | RES SMD 0 OHM 5% 1/10W 0805   |
| <b>RCA JACK</b><br>M431,M432,M434  | 34-4032020-00-60   | RCA 3 G-BL-R PCB MOUNT  |
| <b>ICs</b><br>U4301<br>U4302,U4303   | 27-5176600-18-23<br>27-0140520-18-00   | I.C. VIDEO 3-CH75 OHM DRIVER<br>BA7660FS<br>I.C. SINGLE DUAL TRIPLE<br>M74HC4052MIR   |
| <b>DIGITAL BOARD</b><br><b>PCB ASSEMBLY</b>  | 80-0907530-47-00   | DIGITAL ASSEMBLY  |
| <b>CAPACITORS</b><br>C1222,C1223<br>C1213,C1214,C1221<br>C1232-C1235   | 22-3101022-00-43<br>22-3226052-00-43<br>45-0221055-55-57   | CAP ELEC SS 100uF 16V 20%<br>CAP ELEC SS 2.2uF 50V 20%<br>CAP CER SMD 220pF 50V 10%   |
| <b>RCA JACKS</b><br>J1001-J1004,J1007  | 34-4010320-00-60   | RCA JACK 1 BLACK PCB MOUNT  |
| <b>FIBRE OPTICAL</b><br>J1005,J1006<br>J1008   | 26-6701380-01-16<br>26-6691386-00-16   | OPTIC RECEIVING UNIT GP1FA550RZ<br>OPTIC TRANSMITTER GP1FA550TZ   |
| <b>ICs</b><br>U1201,U1202<br>U1203   | 27-0804990-18-00<br>27-0125190-18-00   | I.C. HEX INVERTER M74HCU04MIR<br>I.C. 8-CH MULTIPLEXER 74HC251M1R   |
| <b>ISC BOARD</b><br><b>PCB ASSEMBLY</b>  | 80-0907530-74-00   | ISC ASSEMBLY  |

| <b>Reference No.</b>   | <b>Part No.</b>  | <b>Description</b>  |
|--|--|---|
| <b>CAPACITORS</b><br>C786-C789,C816-C820<br>C811,C829,C830,C832,C833   | 22-4210402-00-31<br>22-3100022-00-43   | CAP MPF 0.1uF 63V 5%<br>CAP ELEC SS 10uF 16V 20%  |
| <b>DIODES</b><br>D810<br>D811,D812<br>D813,D823<br>D821,D822   | 20-5010401-50-47<br>20-1912601-90-45<br>20-0000000-00-13<br>20-3212002-00-36   | DIODE BRI 10A/400V KBK10G<br>DIODE RECT 12A/600V TYN612<br>DIODE SW 4NS DO35 1N4148<br>DIODE ZENER BZX55 12V 1/2W 5%  |
| <b>TRANSISTORS</b><br>Q781,Q782<br><br>Q812,Q831,Q833<br><br>Q832,Q830   | 21-0100410-00-12<br><br>21-0000010-00-46<br><br>21-0100100-00-46   | XTR SS PNP HFE 280-560 110MHZ<br>2SA1016KG-AA<br><br>XTR SS NPN HEF 100 200MHz TO-92<br>C1815Y<br><br>XTR SS PNP HFE 100 200MHz TO-92<br>A1015Y   |
| <b>RESISTORS</b><br>R793,R790,<br>R837-R839<br>R841,R840<br>R881   | 23-4228280-08-20<br>23-5228330-00-00<br>23-2228232-00-00<br>30-0503106-02-22   | RES RN 0.22 OHM 5% 5W SIL 3 PIN<br>RES FUSIBLE 0.22 OHM 10% 1/2W<br>RES MO 0.22 OHM 5% 1/2W<br>VR SEMI-FIXED RESISTOR CF 50K<br>OHM 30% B 6mm   |
| <b>ICs</b><br>U801   | 27-7055320-18-14   | I.C. AUDIO LOW NOISE OP-AMP<br>NJM5532M   |
| <b>KEYBOARD<br/>PCB ASSEMBLY</b>   | 80-0907530-02-00   | KEYBOARD ASSEMBLY   |
| <b>CAPACITORS</b><br>C208-C211<br>C212<br>C214<br>C223<br>C224<br>C255<br>C241,C242<br>C201,C202,C213,C215-C222,C229,C256<br>C251-C254 | 22-3470022-00-43<br>22-3102012-00-28<br>22-3107052-00-43<br>22-1103150-17-39<br>22-3222032-00-34<br>22-3106052-00-43<br>45-0102055-55-57<br>45-0104056-57-57<br>45-0330054-52-57 | CAP ELEC SS 47uF 16V 20%<br>CAP ELEC GR 1000uF 10V 20%<br>CAP ELEC. SS 0.1uF 50V 20%<br>CAP CER KK 10nF 50V 10%<br>CAP ELEC GS 2200uF 25V 20%<br>CAP ELEC SS 1uF 50V 20%<br>CAP CER SMD 1nF 50V 10%<br>CAP CER SMD 0.1uF 50V 20%<br>CAP CER SMD 33pF 50V 5% |
| <b>IR RECEIVER</b><br>D201   | 26-0941380-00-00   | IR RX 940nm 37.9KHz ST FM-7138TE5   |
| <b>DIODES</b><br>D212,D214-D218<br>D220  | 20-0000000-00-13<br>20-3251902-00-01   | DIODE SW 4NS DO35 1N4148<br>DIODE ZENER BZX55 5.1V 1/2W 5%  |
| <b>ENCODER</b><br>M201   | 35-6001219-00-08   | ENCODER ROTATRY L=20mm VER<br>W/O CLICK   |


| <u>Reference No.</u>                                       | <u>Part No.</u>  | <u>Description</u>                                   |
|--|------------------|--|
| <b>TRANSISTORS</b>   |                  |  |
| Q201   | 21-0100100-00-46 | XTR SS PNP HFE 100 200MHz TO-92 A1015Y               |
| Q203-Q206  | 21-0000010-00-46 | XTR SS NPN HEF 100 200MHz TO-92 C1815Y               |
| <b>RESISTORS</b>   |                  |  |
| R201-R207,R213,R219,R223,R224,<br>R226,R227,R229,R231,R232 | 44-0100220-51-00 | RES SMD 10K OHM 5% 1/16W 0603                        |
| R216,R225,R234   | 44-0100120-51-00 | RES SMD 1K OHM 5% 1/16W 0603                         |
| R217,R218  | 44-0150120-51-00 | RES SMD 1.5K OHM 5% 1/16W 0603                       |
| R220   | 44-0470120-51-00 | RES SMD 4.7K OHM 5% 1/16W 0603                       |
| R221,R230  | 44-0220120-51-00 | RES SMD 2.2K OHM 5% 1/16W 0603                       |
| R222   | 44-0220020-51-00 | RES SMD 220 OHM 5% 1/16W 0603                        |
| R233   | 44-0470220-51-00 | RES SMD 47K OHM 5% 1/16W 0603                        |
| R238   | 44-0120220-51-00 | RES SMD 12K OHM 5% 1/16W 0603                        |
| R241,R242  | 44-0100020-51-00 | RES SMD 100 OHM 5% 1/16W 0603                        |
| R251,R252  | 44-0100520-51-00 | RES SMD 10M OHM 5% 1/16W 0603                        |
| R253   | 44-0000020-51-00 | RES SMD 0 OHM 5% 1/16W 0603                          |
| <b>TACT SWITCHES</b>                                       |                  |  |
| S201-S219  | 35-1001117-00-67 | SW TACT NO 1P1T 50mA/12V VER H=7mm                   |
| <b>ICs</b>   |                  |  |
| U201,U202  | 27-1086400-04-87 | I.C. MCU 8 BIT 64KROM 512 BYTE SRAM PLCC M6759-A1F   |
| U203   | 27-9630600-14-62 | I.C. VFD DRIVER SMD QFP PT6306                       |
| U204-U207,U211   | 27-0540940-18-00 | I.C. 8-STAGE SHIFT-AND-STORE BUS REGISTER HCF4094BM1 |
| U208   | 27-0140510-18-00 | I.C. SINGLE 8 CH ANALOG MUX/ DEMUX SMD M74HC4051MIR  |
| U209   | 27-0324591-18-00 | I.C. OCTAL BUS TRANSCEIVER 74VHC245M                 |
| U210   | 27-2300225-00-25 | I.C. EEPROM 2K BYTE 250nS AT24C16                    |
| U214   | 27-9810000-28-36 | I.C. MCU RESET MONITORS TCM810LENB713                |
| <b>VFD</b>   |                  |  |
| VD201  | 41-4340100-00-13 | VFD 16-BT-93GNK                                      |
| <b>CRYSTALS</b>  |                  |  |
| X201,X202  | 28-5400200-06-33 | CRYSTAL 40MHz 30ppm HC-49S                           |
| <b>LED BOARD</b>   |                  |  |
| <b>PCB ASSEMBLY</b>  |                  |  |
|  | 80-0907530-32-00 | LED ASSEMBLY   |
| <b>LED</b>   |                  |  |
| D211   | 26-0012587-01-10 | LED RED-GREEN 5X807mm COMMON ANODE                   |
| <b>TACT SWITCHES</b>                                       |                  |  |
| S220   | 35-1001117-00-67 | SW TACT NO 1P1T 50mA/12V VER H=7mm                   |

| <u>Reference No.</u>          | <u>Part No.</u>  | <u>Description</u>                    |
|-------------------------------|------------------|---------------------------------------|
| <b>MAIN BOARD</b>             |                  |                                       |
| <b>PCB ASSEMBLY</b>           | 80-0907530-00-00 | MAIN ASSEMBLY                         |
| <b>CAPACITORS</b>             |                  |                                       |
| C701,C704                     | 22-3332042-30-35 | CAP ELEC KM 3300uF 35V 20% 105C       |
| C705,C706,C716,C725           | 22-3102032-30-28 | CAP ELEC KM 1000uF 25V 20% 105C       |
| C707                          | 22-3222042-30-49 | CAP ELEC KM 2200uF 35V 20% 105C       |
| C710                          | 22-3470052-00-43 | CAP ELEC SS 47uF 50V 20% 85C          |
| C711-C713                     | 22-3102052-30-28 | CAP ELEC KM 1000uF 50V 20% 105C       |
| C715                          | 22-4210502-00-31 | CAP MPF 1uF 63V 5% DMF 5 SERIES       |
| C719,C723,C702                | 22-3101022-30-13 | CAP ELEC KM 100uF 16V 20% 105C        |
| C721,C724                     | 22-3222032-30-28 | CAP ELEC KM 2200uF 25V 20% 105C       |
| <b>DIODES</b>                 |                  |                                       |
| D701-D710                     | 20-1001401-20-44 | DIODE RECT 1A/400V DO41 1N4004        |
| D711                          | 20-3203102-00-01 | DIODE ZENER BZX55 30V 1/2W 5%         |
| D715                          | 20-5004700-50-02 | DIODE BRI 4A/70V RS402L               |
| D716-D718                     | 20-3951943-50-01 | DIODE ZENER ZY5.1 2W 10%              |
| <b>TRANSISTORS</b>            |                  |                                       |
| Q701                          | 21-1011210-50-12 | XTR PW PNP 1A/100V TO-126<br>2SD600KE |
| <b>ICs</b>                    |                  |                                       |
| U701,U704-U706                | 27-3000501-17-14 | I.C. VOLT REG 5V 1A NJM7805F          |
| U702,U707                     | 27-3001201-17-14 | I.C. VOLT REG 12V 1A NJM7812          |
| U703                          | 27-3101201-13-14 | I.C. VOLT REG TO-220F NJM7912         |
| <b>MULTI-CH BOARD</b>         |                  |                                       |
| <b>PCB ASSEMBLY</b>           | 80-0907530-64-00 | MULTI-CHANNEL ASSEMBLY                |
| <b>CAPACITORS</b>             |                  |                                       |
| C607,C611,C612,C6201-C6218    | 22-3220022-00-43 | CAP ELEC GS 22uF 16V 20%              |
| C626                          | 22-3221022-00-43 | CAP ELEC SS 220uF 16V 20%             |
| C627,C628,C633,C634           | 22-3101022-00-43 | CAP ELEC SS 100uF 16V 20%             |
| C677,C678,C689,C690           | 22-3470022-00-43 | CAP ELEC SS 47uF 16V 20%              |
| C755,C756,C775,C776           | 22-8226052-00-28 | CAP ELEC 2.2uF 50V 20%                |
| C757,C758                     | 22-4282302-00-31 | CAP MPF 0.082uF 63V 5%                |
| C759-C762,C769,C770,C773,C774 | 22-4210402-00-31 | CAP MPF 0.1uF 63V 5%                  |
| C763-C766                     | 22-4247302-00-31 | CAP MPF 0.047uF 63V 5%                |
| C767,C768,C771,C772           | 22-4233202-00-31 | CAP MPF 0.0033uF 63V 5%               |
| C6301-C6304                   | 45-0104056-57-57 | CAP CER SMD 0.1uF 50V 20%             |
| <b>DIODES</b>                 |                  |                                       |
| D601                          | 20-0000000-00-13 | DIODE SW 4NS DO35 1N4148              |
| D602,D604                     | 20-3275902-00-01 | DIODE ZENER BZX55 7.5V 1/2W 5%        |
| <b>INDUCTORS</b>              |                  |                                       |
| L6101,L6102                   | 24-0101108-00-28 | IND CHOKE 100uH 10%                   |

| <u>Reference No.</u>                              | <u>Part No.</u>  | <u>Description</u>                                   |
|---|------------------|--|
| <b>RCA JACKS</b>                                  |                  |  |
| M6101,M6103                                       | 34-4060420-00-60 | RCA JACK 6 R-R-R/W-W-W PCB MOUNT                     |
| M6102   | 34-4020320-00-60 | RCA JACK 2 B/B PCB MOUNT                             |
| <b>TRANSISTORS</b>                                |                  |  |
| Q6101   | 21-0000140-00-11 | XTR SS NPN HFE 120 100MHz TO-92 SS8050C              |
| Q6102   | 21-0100131-00-11 | XTR SS PNP HFE 170 1.5A TO-92 SS8550C                |
| Q6103   | 21-0100390-70-14 | XTR SS PNP HFE 30 250MHz SPT DTA 114ESA              |
| Q6104   | 21-0000400-70-14 | XTR SS NPN HFE30 250MHz SPT DTC114ESA                |
| Q6105,Q6106                                       | 21-0000360-00-00 | XTR SS NPN HFE200-700 30MHz 2SC2878A                 |
| <b>ICs</b>  |                  |  |
| U6101,U6102                                       | 27-7661516-14-01 | I.C. SOUND PROCESSOR 7.1CH VOL+TONE SMD QFP M61516FP |
| U6104-U6107                                       | 27-7055320-18-14 | I.C. AUDIO LOW NOISE OP-AMP NJM5532M                 |
| <b>PRE-OUT BOARD<br/>PCB ASSEMBLY</b>             | 80-0907530-63-00 | PRE-OUT ASSEMBLY                                     |
| <b>CAPACITORS</b>                                 |                  |  |
| C637,C642,C647,C652,C657,C662,C667,C672,C700,C705 | 22-3100022-00-43 | CAP ELEC SS 10uF 16V 20%                             |
| C640,C645,C650,C655,C660,C665,C670,C675,C703,C708 | 22-3220022-00-43 | CAP ELEC GS 22uF 16V 20%                             |
| C679,C680,C691,C692                               | 22-3470022-00-43 | CAP ELEC SS 47uF 16V 20%                             |
| C684-C688,C699                                    | 22-3331022-00-28 | CAP ELEC GR 330uF 16V 20%                            |
| <b>DIODES</b>                                     |                  |  |
| D605-D614   | 20-0000000-00-13 | DIODE SW 4NS DO35 1N4148                             |
| <b>INDUCTORS</b>                                  |                  |  |
| L602,L603,L604,L605,L606,L607,L608,L609           | 24-0100127-00-28 | IND CHOKE 10uH 10%                                   |
| <b>RCA JACKS</b>                                  |                  |  |
| M607,M609   | 34-4040500-00-60 | RCA JACK 4 R-W/R-W PCB MOUNT                         |
| M608,M612   | 34-4020300-00-60 | RCA JACK 2 B/B PCB MOUNT                             |
| M610  | 34-4020200-00-60 | RCA JACK 2 W/W PCB MOUNT                             |
| M611  | 34-4010100-00-60 | RCA JACK 1 RED PCB MOUNT                             |
| <b>TRANSISTORS</b>                                |                  |  |
| Q608-Q615,Q617,Q629,Q630,Q632,Q633                | 21-0000350-70-00 | XTR SS NPN HFE200-700 30MHz SPT RN1241A              |
| Q616,Q618,Q620,Q622,Q624,Q631                     | 21-0100390-70-14 | XTR SS PNP HFE 30 250MHz SPT DTA 114ESA              |



| <b>Reference No.</b>  | <b>Part No.</b>  | <b>Description</b>                                     |
|---|------------------|--|
| <b>RESISTORS</b>  |                  |  |
| R635,R642,R647,R654,R659,R666,<br>R678,R688-R692,R694,R701,R705 | 23-1220102-00-00 | RES MF 2.2K OHM 1% 1/6W                                |
| R636,R643,R648,R655,R660,R667,<br>R672,R679,R695,R702           | 23-1330002-00-00 | RES MF 330 OHM 1% 1/6W                                 |
| <b>ICs</b>  |                  |  |
| U609-U613   | 27-7055320-18-14 | I.C. AUDIO LOW NOISE OP-AMP<br>NJM5532M                |
| <b>PSU BOARD</b>  |                  |  |
| <b>PSU ASSEMBLY*AH</b>  | 80-0907530-01-00 | PSU ASSEMBLY   |
| <b>PSU ASSEMBLY*C</b>   | 80-0907530-01-01 | PSU ASSEMBLY   |
| <b>CAPACITORS</b>   |                  |  |
| C752  | 22-3476052-00-43 | CAP ELEC SS 4.7uF 50V 20%                              |
| C753  | 22-4210202-00-31 | CAP MPF 0.001uF 63V 5%                                 |
| C763  | 22-1103960-37-71 | CAP CER 0.01uF 250VAC 20%                              |
| <b>DIODES</b>   |                  |  |
| D751,D756   | 20-0000000-00-13 | DIODE SW 4NS DO35 1N4148                               |
| D752,D753,D754,D755   | 20-1001401-20-44 | DIODE RECT 1A/400V DO41 1N4004                         |
| <b>FUSES</b>  |                  |  |
| F751*AH   | 33-0191001-00-88 | FUSE 10A/250VAC TIME-LAG 5X20mm<br>UL/CSA 5T           |
| F751*C  | 33-0181006-00-88 | FUSE 6.3A/250VAC TIME-LAG 5X20mm<br>VDE/UL/CSA 5T      |
| F752*AH   | 33-0111006-00-88 | FUSE 1.6A 250V TIME LAG 5x20mm 5T<br>UL/CSA/VDE/SEMKO  |
| F752*C  | 33-0151006-00-88 | FUSE 800mA 250V TIME LAG 5x20mm<br>5T UL/CSA/VDE/SEMKO |
| <b>RELAY</b>  |                  |  |
| M751  | 32-1212100-01-97 | RELAY MINIATURE 2P1T SDT-S-<br>112DMR                  |
| <b>TRANSISTORS</b>  |                  |  |
| Q751  | 21-0000010-00-46 | XTR SS NPN HEF 100 200MHz TO-92<br>C1815Y              |
| <b>RESISTORS</b>  |                  |  |
| R751  | 23-5228330-00-00 | RES FUSIBLE 0.22 OHM 10%                               |
| R754*AH   | 23-8395232-00-25 | COND PATH RESISTOR 3.9M OHM<br>1/2W 5%                 |
| <b>STANDBY TRANSFORMER</b>                                      |                  |  |
| T751  | 25-0040021-31-18 | XFOFMER PW EI-35 100V/220V<br>T05382B                  |
| <b>POWER SWITCH BOARD</b>                                       |                  |  |
| <b>PCB ASSEMBLY</b>   | 80-0907530-48-00 | POWER SWITCHASSEMBLY                                   |
| <b>CAPACITOR</b>  |                  |  |
| C764  | 22-1103960-37-71 | CAP CER 0.01uF 250VAC 20%                              |

| <u>Reference No.</u>  | <u>Part No.</u>  | <u>Description</u>                      |
|---|------------------|---|
| <b>POWER SWITCH</b><br>S751  | 35-0101109-00-67 | SW POWER TV-8 10A 250VAC PS3-22SPA-P7AZ |
| <b>SECONDARY BOARD<br/>PCB ASSEMBLY</b>   | 80-0907530-27-00 | SECONDARY ASSEMBLY                      |
| <b>CAPACITORS</b><br>C801,C802  | 22-3123072-00-41 | CAP ELEC LP 12000uF 80V 20%             |
| <b>BRIDGE RECTIFIER</b><br>D801   | 20-5125401-50-02 | BRIDGE RECTIFIER 25A 400V MP254W BR-25W |
| <b>SPEAKER A BOARD<br/>PCB ASSEMBLY</b>   | 80-0907530-67-00 | SPEAKER A ASSEMBLY                      |
| <b>SPEAKER TERMINAL</b><br>M5101,M8101  | 34-3000021-00-80 | SPEAKER TERMINAL 6P BINDING R/B         |
| <b>SPEAKER B BOARD<br/>PCB ASSEMBLY</b>   | 80-0907530-67-01 | SPEAKER B ASSEMBLY                      |
| <b>SPEAKER TERMINAL</b><br>M5102  | 34-3000022-00-80 | SPEAKER TERMINAL 4P BINDING R/B         |
| <b>S-VIDEO BOARD<br/>PCB ASSEMBLY</b>   | 80-0907530-26-00 | S-VIDEO ASSEMBLY                        |
| <b>CAPACITORS</b><br>C4108,C4112,C4116,C4156,C4170,<br>C4171,C4178,C4179                                      | 22-3471012-00-28 | CAP ELEC GR 470uF 10V 20%               |
| C4133,C4141   | 22-3106052-00-43 | CAP ELEC SS 1uF 50V 20%                 |
| C4134,C4145,C4149,C4101-C4107,<br>C4109-C4111,C4113-C4115,C4158   | 22-3101012-00-43 | CAP ELEC SS 100uF 10V 20%               |
| C4136,C4146   | 22-4247402-00-31 | CAP MPF 0.47uF 63V 5%                   |
| C4137,C4144   | 22-3477052-00-43 | CAP ELEC SS 0.47uF 50 20%               |
| C4150   | 22-3470022-00-43 | CAP ELEC SS 47uF 16V 20%                |
| C4151   | 22-3100022-00-43 | CAP ELEC SS 10uF 16V 20%                |
| C4153,C4157   | 22-3226052-00-43 | CAP ELEC SS 2.2uF 50V 20%               |
| C4160,C4162,C4166,C4167   | 22-3221012-00-43 | CAP ELEC SS 220uF 10V 20%               |
| C4186   | 22-4247302-00-31 | CAP MPF 0.047uF 63V 5%                  |
| C4138   | 22-7200210-00-09 | CAP TRIMMER 20pF 20%                    |
| <b>DIODES</b><br>D4101-D4111  | 20-0000000-00-13 | DIODE SW 4NS DO35 1N4148                |
| <b>INDUCTORS</b><br>L4101   | 24-0569107-00-28 | IND CHOKE 5.6uH 10%                     |
| L4102   | 24-0220107-00-28 | IND CHOKE 22uH 10%                      |

| <b>Reference No.</b>   | <b>Part No.</b>  | <b>Description</b>  |
|--|--|---|
| <b>DIN JACK</b><br>M4101-M4108   | 34-4110300-00-60   | DIN JACK 1 BLACK PCB MOUNT  |
| <b>TRANSISTORS</b><br>Q4108,Q4116-Q4119,Q4136,Q4137,<br>Q4140,Q4141,Q4151-Q4155<br>Q4113,Q4114,Q4121,Q4124,Q4125,<br>Q4128,Q4130,Q4133,Q4142-Q4145<br>Q4115,Q4126,Q4127<br><br>Q4120,Q4123,Q4146,Q4147<br><br>Q4122,Q4131<br><br>Q4132 | 21-0100370-70-14<br>21-0000360-00-00<br>21-0000390-70-14<br>21-0000380-70-14<br>21-0000120-70-14<br>21-0000010-00-46 | XTR SS PNP HFE 270-560 140MHz<br>2SA933AS<br>XTR SS NPN HFE200-700 30MHz<br>2SC2878A<br>XTR SS NPN HFE270-560 180MHz<br>2SC1740S<br>XTR SS NPN HFE20 250MHz<br>DTC-123ESA<br>XTR SS NPN HFE 68 30MHz SPT<br>DTC144ES<br>XTR SS NPN HEF 100 200MHz TO-92<br>C1815Y |
| <b>SLIDE SWITCH</b><br>S4101   | 35-4102209-00-67   | SW SLIDE 2P2T RIGHT L=9   |
| <b>ICs</b><br>U4101<br>U4102,U4103   | 27-5574763-21-02<br>27-0140510-18-00   | I.C. OSD DIP30SD LC74763-9012<br>I.C. SINGLE 8 CH ANALOG MUX/<br>DEMUX SMD M74HC4051MIR   |
| <b>CRYSTALS</b><br>X4101<br>X4102  | 28-5143200-06-19<br>28-5177200-06-19   | CRYSTAL 14.318MHz 30ppm HC-49S<br>CRYSTAL 17.73447MHz 30ppm HC-49S  |
| <b>TRIGGER BOARD<br/>PCB ASSEMBLY</b>  | 80-0907530-68-00   | TRIGGER ASSEMBLY  |
| <b>DIODES</b><br>D351,D352,D353<br>D354,D355,D357,D358,D3501,D3502   | 20-3251902-00-01<br>20-0000000-00-13   | DIODE ZENER BZX55 5.1V 1/2W 5%<br>DIODE SW 4NS DO35 1N4148  |
| <b>JACKS</b><br>M351-M355,M357   | 34-4310300-00-60   | PHONE JACK 1 BLACK PCB<br>MOUNT 3.5mm   |
| <b>TRANSISTOR</b><br>Q351  | 21-0000380-70-14   | XTR SS NPN HFE20 250MHz<br>DTC-123ESA   |
| <b>RESISTORS</b><br>R358-R360  | 23-2121250-00-00   | RES MO 120 OHM 5%   |
| <b>SLIDE SWITCH</b><br>S351  | 35-4102209-00-67   | SW SLIDE 2P2T RIGHT L=9   |
| <b>REGULATORS</b><br>U3501<br>U352   | 27-3001201-17-14<br>27-3001201-07-85   | I.C. VOLT REG 12V 1A NJM7812<br>I.C. VOLT REG 12V 0.1A LM78L12  |

| <b>Reference No.</b>   | <b>Part No.</b>  | <b>Description</b>  |
|--|--|---|
| <b>VIDEO-6 BOARD<br/>PCB ASSEMBLY</b>  | 80-0907530-45-00   | VIDEO-6 BOARD   |
| <b>CAPACITORS</b><br>C4401-C4403   | 22-3101022-00-43   | CAP ELEC SS 100uF 16V 20%   |
| <b>JACKS</b><br>M4401<br>M4404<br>M4403<br>M4402<br>J4401                                    | 34-4010000-01-60<br>34-4010100-01-60<br>34-4010200-01-60<br>34-4110300-00-60<br>34-4510302-01-80 | RCA JACK 1 YELLOW PCB MOUNT<br>RCA JACK 1 RED PCB MOUNT<br>RCA 1 WHITE PCB MOUNT<br>DIN JACK 1 BLACK PCB MOUNT<br>PHONE JACK D6.3 1 PCB MOUNT |
| <b>COMPOSITE VIDEO BOARD<br/>PCB ASSEMBLY</b>  | 80-0907530-66-00   | COMPOSITE VIDEO ASSEMBLY  |
| <b>CAPACITORS</b><br>C4201-C4203,C4205,C4207<br>C4204,C4206,C4208,C4214,C4220<br>C4211,C4225 | 22-3101022-00-43<br>22-3471022-00-28<br>22-3221012-00-43   | CAP ELEC SS 100uF 16V 20%<br>CAP ELEC GR 470uF 16V 20%<br>CAP ELEC SS 220uF 10V 20%   |
| <b>DIODES</b><br>D4201,D4202   | 20-0000000-00-13   | DIODE SW 4NS DO35 1N4148  |
| <b>RESISTORS</b><br>J4201,J4202  | 44-0000027-11-00   | RES SMD 0 OHM 5% 1/10W 0805   |
| <b>RCA JACKS</b><br>M4201,M4202  | 34-4040020-00-60   | RCA JACK 4 Y-Y/Y-Y PCB MOUNT  |
| <b>TRANSISTORS</b><br>Q4201,Q4202<br>Q4203,Q4204<br>Q4207,Q4210,Q4501-Q4503                  | 21-0000360-00-00<br>21-0000380-70-14<br>21-0100370-70-14   | XTR SS NPN HFE200-700 30MHZ<br>2SC2878A<br>XTR SS NPN HFE20 250MHZ<br>DTC-123ESA<br>XTR SS PNP HFE 270-560 140MHZ<br>2SA933AS                 |
| <b>ICs</b><br>U4201  | 27-0140510-18-00   | I.C. SINGLE 8 CH ANALOG<br>MUX/DEMUX SMD M74HC4051MIR   |

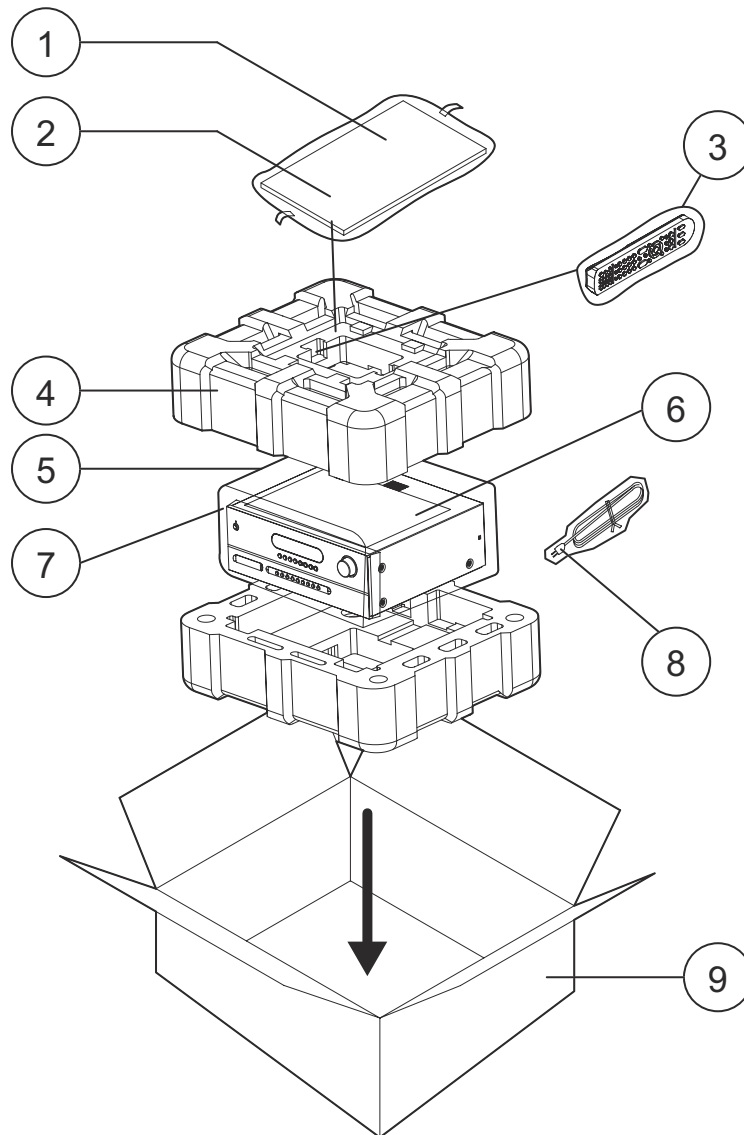
**NOTE: THE COMPONENTS IDENTIFIED BY ⚠ MARK ARE CRITICAL FOR RISK OF FIRE AND ELECTRICAL SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.**



<\*AH > : USA, CANADIAN MODEL ONLY.

<\*C > : EUROPEAN MODEL ONLY.

RESISTORS: MO-METAL OXIDE, RN-CERAMIC CASE, MF-METAL FILM.

# PACKING DIAGRAM & PARTS LIST



| Item  | Part No.         | Description                           | Qty. |
|---|------------------|---------------------------------------|------|
| 1   | 64-020001-01-00  | POLYBAG MANUAL                        | 1    |
| 2   | 31-6407520-00-98 | FM WIRE ANTENNA                       | 1    |
|   | 31-6472801-00-28 | AM LOOP ANTENNA W/STAND               | 1    |
|   | 34-0081004-00-67 | 300 TO 75 OHM ADAPTER                 | 1    |
|   | 37-0240300-00-81 | LITHIUM BUTTON CELL CR2025            | 1    |
|   | 61-0753004-40-99 | OWNERIS MANUAL T753 GB/F/D/NL         | 1    |
|   | 61-0753004-41-99 | OWNERIS MANUAL T753 E//P/S            | 1    |
|   | 83-0762000-00-04 | REMOTE CONTROLLER NAD ZR-2            | 1    |
|   | 37-0020200-00-79 | BATTERY AAA 1.5V ER03X                | 4    |
|   | 65-0752000-00-98 | WARRANTY CARD                         | 1    |
| 3   | 83-0752000-01-04 | REMOTE CONTROLLER NAD HTR-2           | 1    |
| 4   | 63-0763001-00-01 | POLYFOAM TOP / BOTTOM                 | 2    |
| 5   | 64-0762001-00-00 | POLYBAG MAIN UNIT                     | 1    |
| 6   | 65-0752070-00-99 | A3 WHITE PAPER                        | 1    |
| 7   | 64-0762000-00-00 | EPE PROTECTIVE COVER                  | 1    |
| 8 *AH  | 36-2881010-07-97 | POWER CORD 110V 3PINS 15A/125V UL/CSA | 1    |
| *C     | 36-2983110-07-97 | POWER CORD CE 3 PINS 10A/16A 250V     | 1    |
| 9   | 67-0753000-10-99 | MASTER CARTON BOX T753                | 1    |

## VERSION HISTORY

| SERIAL NUMBER             | SOFTWARE VER. | PCB ASSEMBLY VERSION  |
|---------------------------|---------------|---|
| R39T75300001-R39T75300500 | V1.27         | ALL ARE ISSUE 3   |
| R3YT75300501-R3YT75301500 | V1.27         | ONLY KEYBOARD/LED/S-VIDEO/DIGITAL/COMPOSITE/POWER SUPPLY/POWER AMP BOARDS ISSUE 3, ALL OTHER ISSUE 4. |
| R3YT75301501-R3YT75302100 | V1.27         | ONLY MAIN/TRIGEER/VD6/SPEAKER/POWER SWITCH BOARDS ISSUE 5, ALL OTHER ISSUE 4.                         |
| R3YT75302101-R3YT75303100 | V1.27         | ONLY KEYBOARD/LED/S-VIDEO/DIGITAL/COMPOSITE/POWER SUPPLY/POWER AMP BOARDS ISSUE 3, ALL OTHER ISSUE 4. |
| R3YT75303101-R3YT75304100 | V1.27         | ONLY MAIN/TRIGEER/VD6/SPEAKER/POWER SWITCH BOARDS ISSUE 5, ALL OTHER ISSUE 4.                         |
| R3YT75304101-R3YT75306036 | V1.27         | ONLY MAIN/TRIGEER/VD6/SPEAKER/POWER SWITCH BOARDS ISSUE 5, ALL OTHER ISSUE 4.                         |

**REMARK:** PCB Number 55-0753XXX-XX-00 = ISSUE 3,  
 PCB Number 55-0753XXX-XX-01 = ISSUE 4,  
 PCB Number 55-0753XXX-XX-02 = ISSUE 5,  
 PCB Number 55-0753XXX-XX-03 = ISSUE 6.

# SERVICE MANUAL

**T 753**

**Surround Sound Receiver**