

# SERVICE MANUAL



pe1mmk

**C275BEE C/AH**  
**STEREO AMPLIFIER**

**C275BEE C/AH**

**STEREO AMPLIFIER**

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## SERVICE SAFETY PRECAUTIONS

### 1. Replacing the Fuses

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

REFERENCE NO.	PART NUMBER	DESCRIPTION
<b>Rear Panel</b>		
AH ▲	A20-12103-00	Littelfuse618 T10AL/250V
C ▲	A20-12702-20	Littelfuse618 T5AL/250V
<b>STANDBY Board</b>		
F401	A20-12102-00	Littelfuse618 T1AL/250V

#### NOTE:

\*AH : North American version only

\*C : European version only

### 2. Safety-check out (North American model only)

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

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

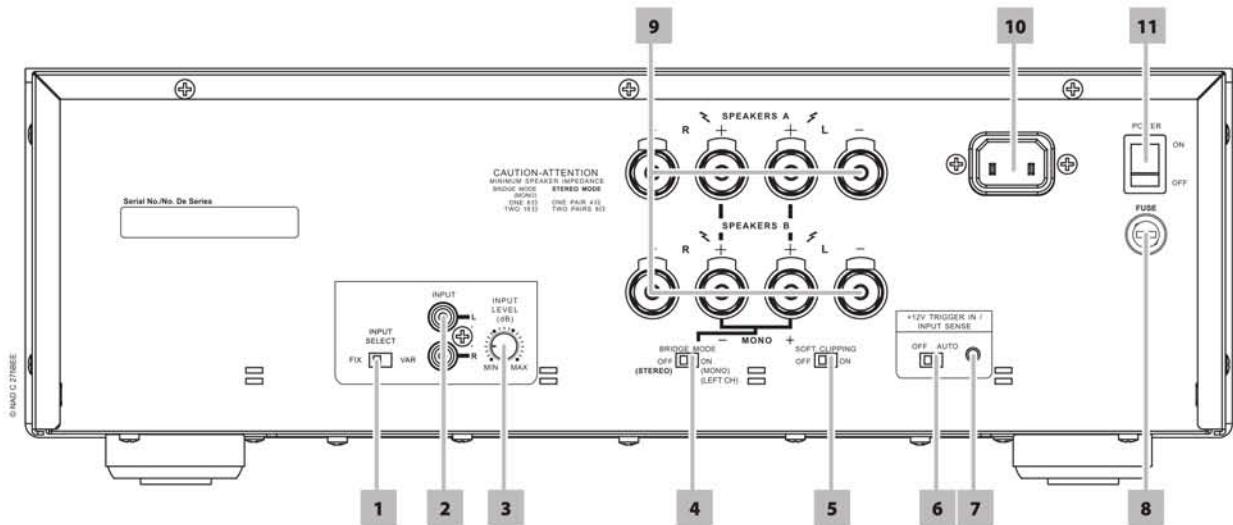
# FRONT PANEL / REAR PANEL VIEW

## FRONT PANEL CONTROLS



- 1 STANDBY BUTTON
- 2 STANDBY LED
- 3 BRIDGE MODE INDICATOR
- 4 SOFT CLIPPING INDICATOR

## REAR PANEL CONTROLS



- |  |                      |
|--|----------------------|
| 1 INPUT SELECT                           | 7 +12V TRIGGER INPUT |
| 2 INPUT                                  | 8 FUSE HOLDER        |
| 3 INPUT LEVEL CONTROL                    | 9 SPEAKERS A, B      |
| 4 BRIDGE MODE                            | 10 AC MAINS INPUT    |
| 5 SOFT CLIPPING™                         | 11 POWER SWITCH      |
| 6 +12V TRIGGER IN/INPUT SENSE - OFF/AUTO |                      |

# SPECIFICATIONS

## FIXED IN, SPEAKER OUT

Continuous average power , stereo,8 and 4 ohms at rated thd ,20-20k	> 150W
Continuous average power 8 ohms , bridge mode	> 330W
Rated thd, 20-20k, SMPTE and CCIF IMD, DIM 100	< 0.009%
Clipping power ( 1% thd at 1kHz)	>170W
IHF dynamic power 8 ohms	>250W
IHF dynamic power 4 ohms	>410W
IHF dynamic power 2 ohms	>600W
IHF dynamic power 8 ohms(Bridge Mode)	>800W
IHF dynamic power 4 ohms(Bridge Mode)	>1200W
Peak output current 1msec, 1 ohm	> 50A
S/N A wtd re 1 W	>102 dB
S/N A Wtd re 150W	>123 dB
Damping factor ( re 8 ohms, 50 Hz and 1kHz)	> 180
Frequency response 20-20k	< +/- 0.1 dB
Frequency response - 3dB	3Hz – 100 kHz
Input impedance ( Fixed In)	10kohms+200pF
Input impedance ( Variable In)	100kohms+200pF
Input sensitivity for rated power	1.2 V
Voltage gain	29dB
Channel separation. 1kHz	> 85 dB
10kHz	> 75 dB
Minimum Input Level for AUTO TRIGGER	1mV at 1KHz
Time to power OFF at no signal in AUTO mode	< 10 minutes
Rated power ( 230 or 120 V AC 50.60 Hz)	312 W
Standby power	<1W
Idle power	<100W
Net weight	14.6 kg
Shipping weight	16.9 kg
Dimensions	435x133x352 mm

# ALIGNMENT PROCEDURE

## A. DC OFFSET VOLTAGE

The DC OFFSET between OFFSET Test Point and AGND must be within 0 $\pm$ 20mV.

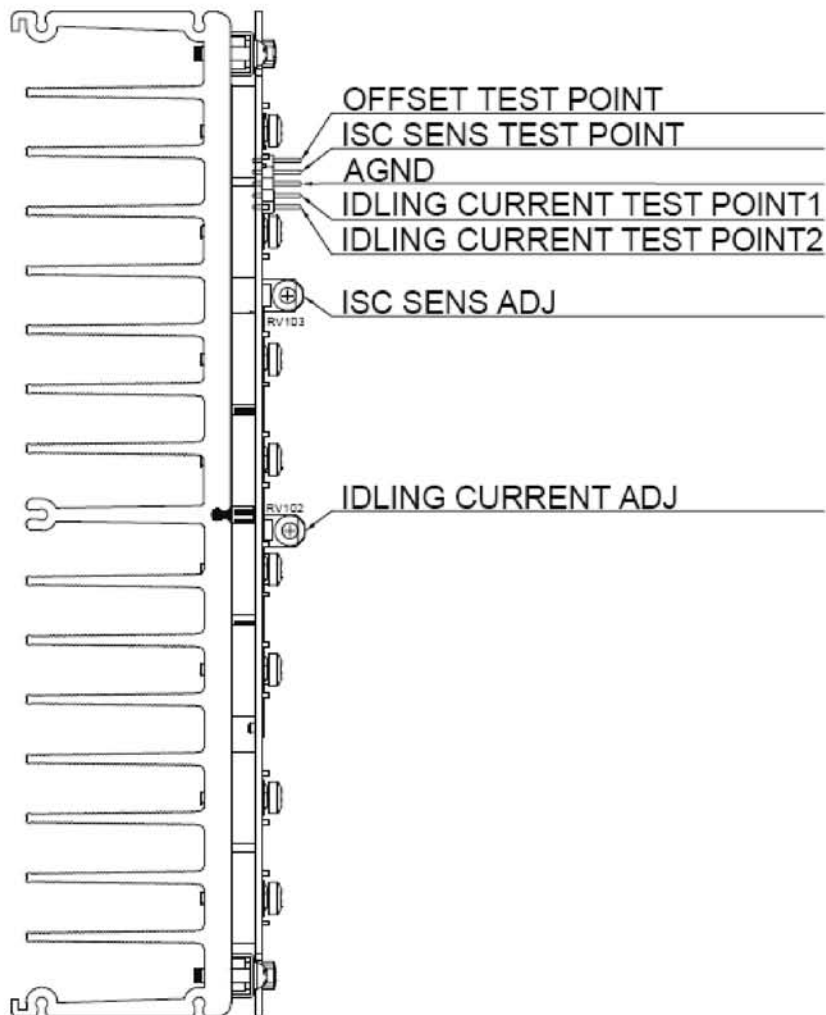
## B. IDLING CURRENT

The idling current in the output stage of the poweramp should be set to 30mA $\pm$ 5mA per pnp-npn transistor pair (This means the mid point voltage is 6.6mV with down limit of 5.5mV and up limit of 7.7mV). The alignment procedure is: At first, adjust RV102 (Marked as "Idling Current ADJ" in the drawing below) for a voltage of 6.6mV  $\pm$  1mV between Test point 1 and 2. Then preheat the unit for 1 minutes, let idling current settled and then readjust to 6.6mV  $\pm$  1mV. This is a no-load adjustment.

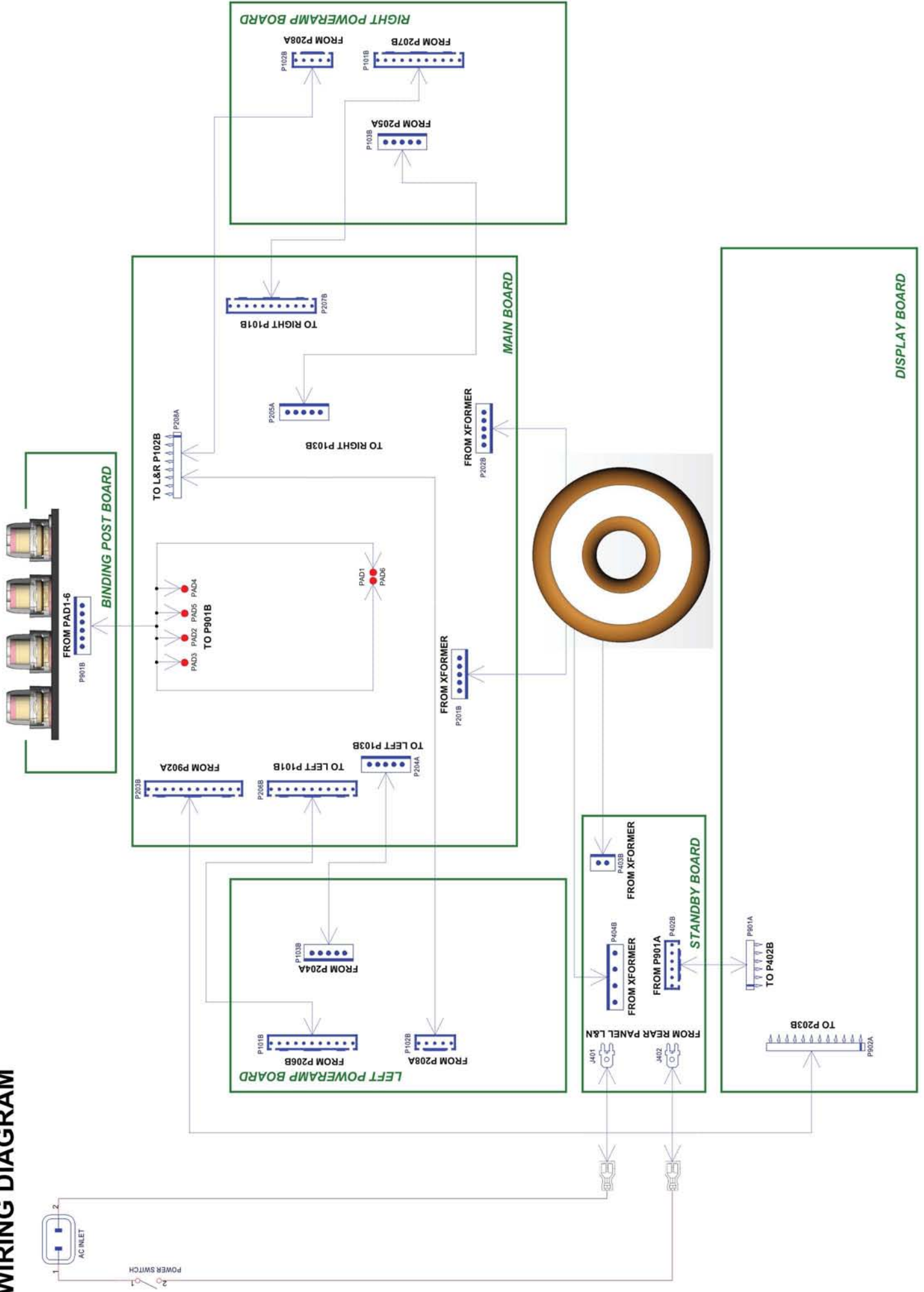
Pls note: Though the idling current is set as 6.6mV  $\pm$ 1mV during the adjustment, due to the influence of varied ambient temperature and mains voltage etc., the idling current will drift after some time. During the normal checking of idling current in the service field, it's acceptable as long as the voltage is in the range of 5.5mV—7.7mV

## C. ISC SENSITIVITY

The ISC sensing voltage can allow 0mV $\pm$ 50mV. But, for the alignment process in our factory, we tighten the limit to 0mV $\pm$ 10mV. That is to adjust Pot RV103 (as marked as "ISC SENS ADJ" in the below drawing) to get a voltage between the "ISC SENSE TEST POINT" and AGND to be 0mV $\pm$ 10mV.

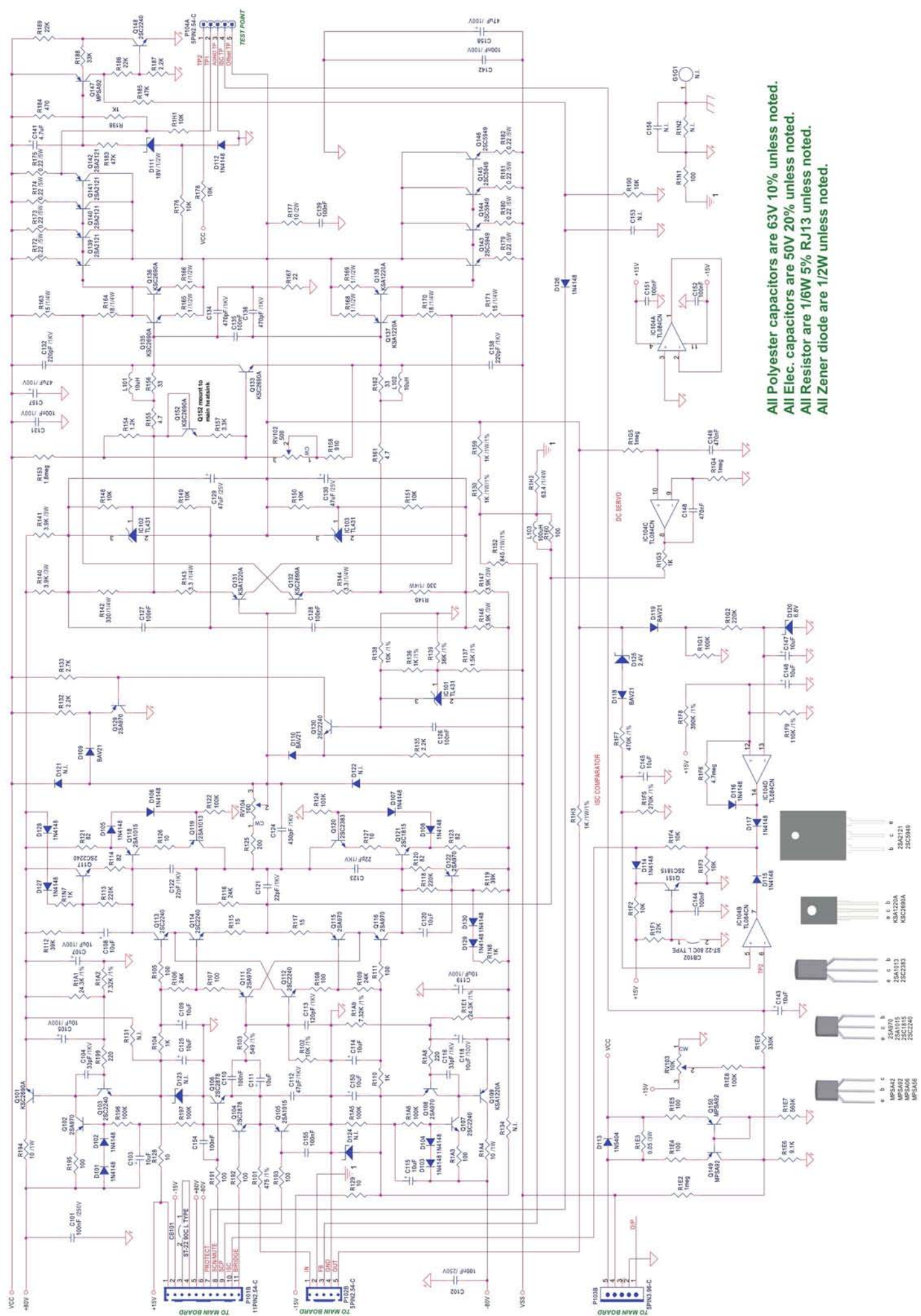


# WIRING DIAGRAM



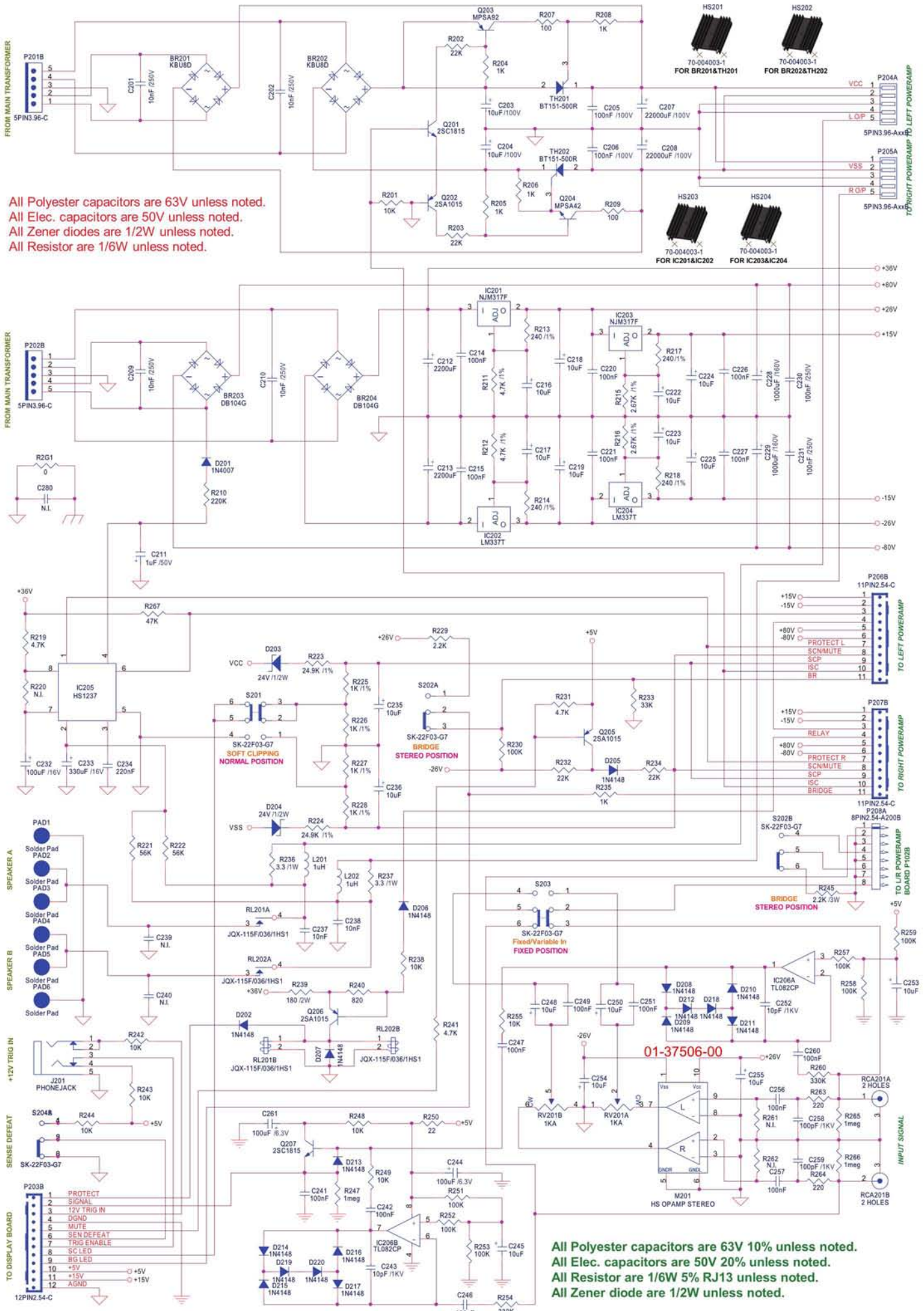


# SCHEMATICS DIAGRAM



All Polyester capacitors are 63V 10% unless noted.  
 All Elec. capacitors are 50V 20% unless noted.  
 All Resistor are 1/6W 5% RJ13 unless noted.  
 All Zener diode are 1/2W unless noted.

# SCHEMATICS DIAGRAM

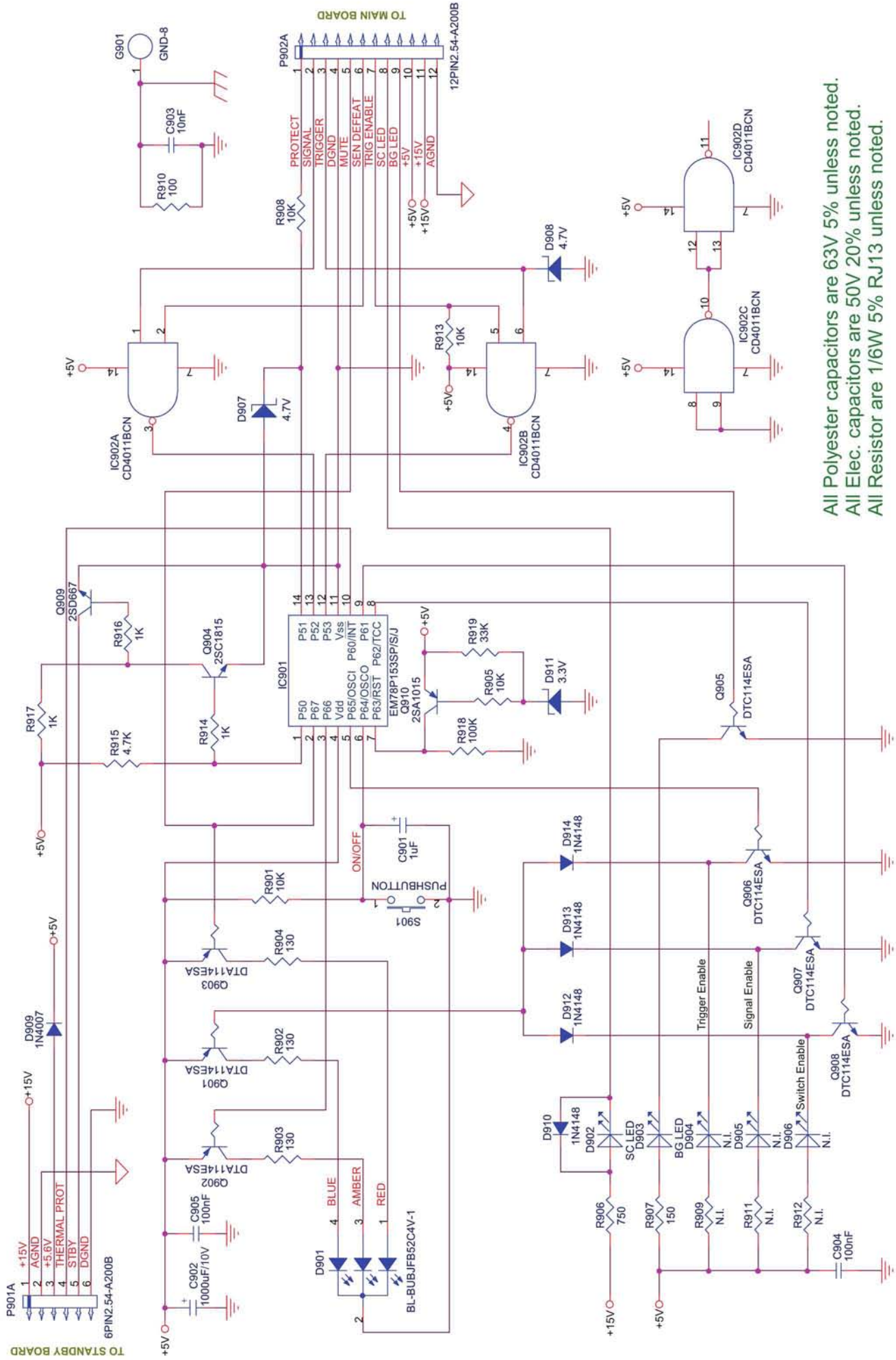


All Polyester capacitors are 63V unless noted.  
 All Elec. capacitors are 50V unless noted.  
 All Zener diodes are 1/2W unless noted.  
 All Resistor are 1/6W unless noted.

All Polyester capacitors are 63V 10% unless noted.  
 All Elec. capacitors are 50V 20% unless noted.  
 All Resistor are 1/6W 5% RJ13 unless noted.  
 All Zener diode are 1/2W unless noted.

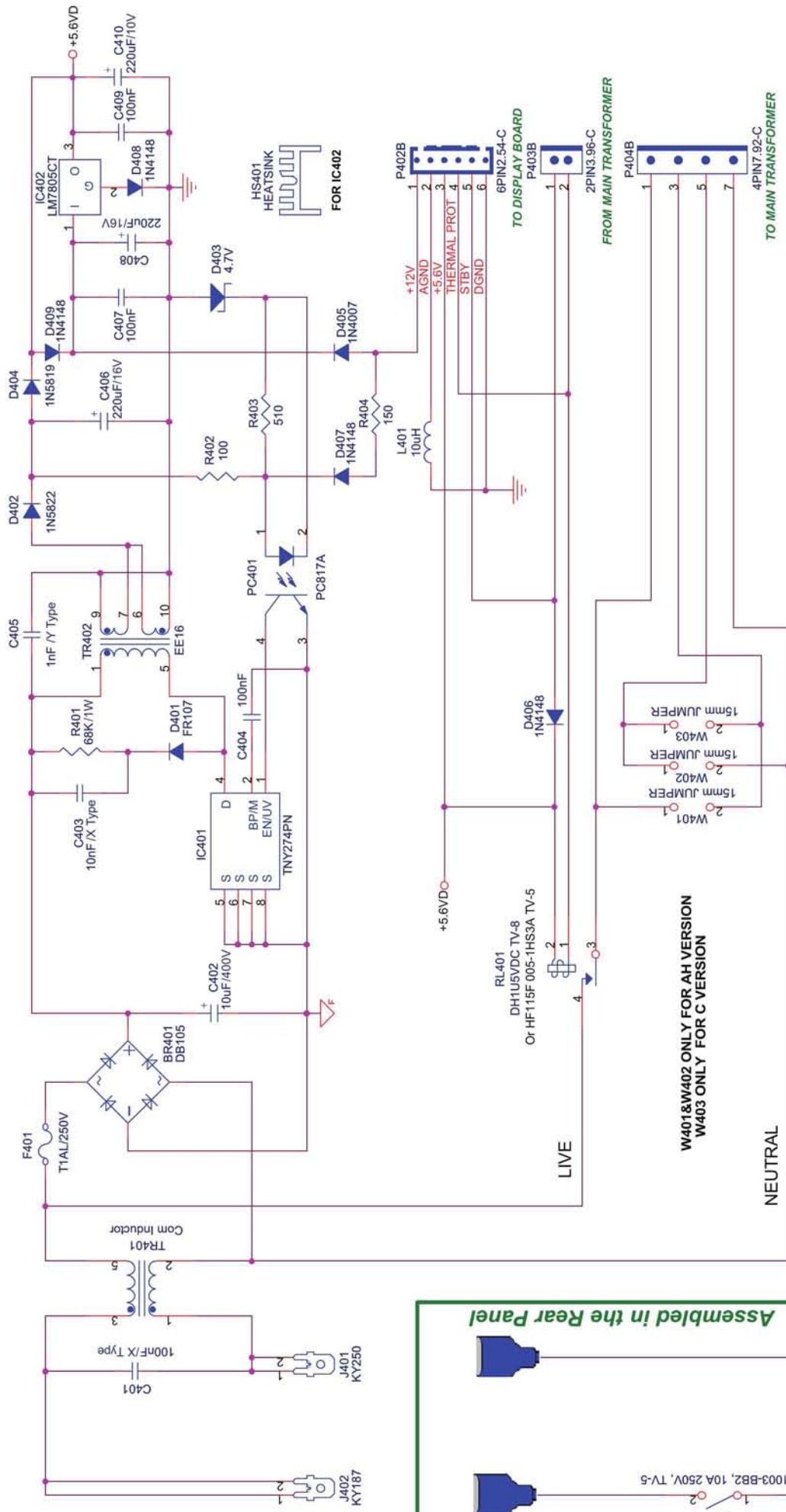


# SCHEMATICS DIAGRAM

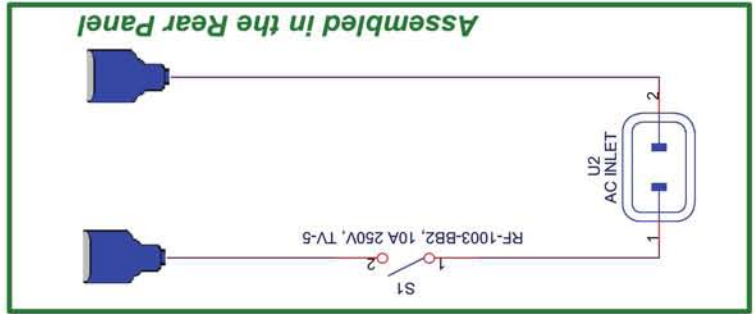


All Polyester capacitors are 63V 5% unless noted.  
 All Elec. capacitors are 50V 20% unless noted.  
 All Resistor are 1/6W 5% RJ13 unless noted.

# SCHEMATICS DIAGRAM

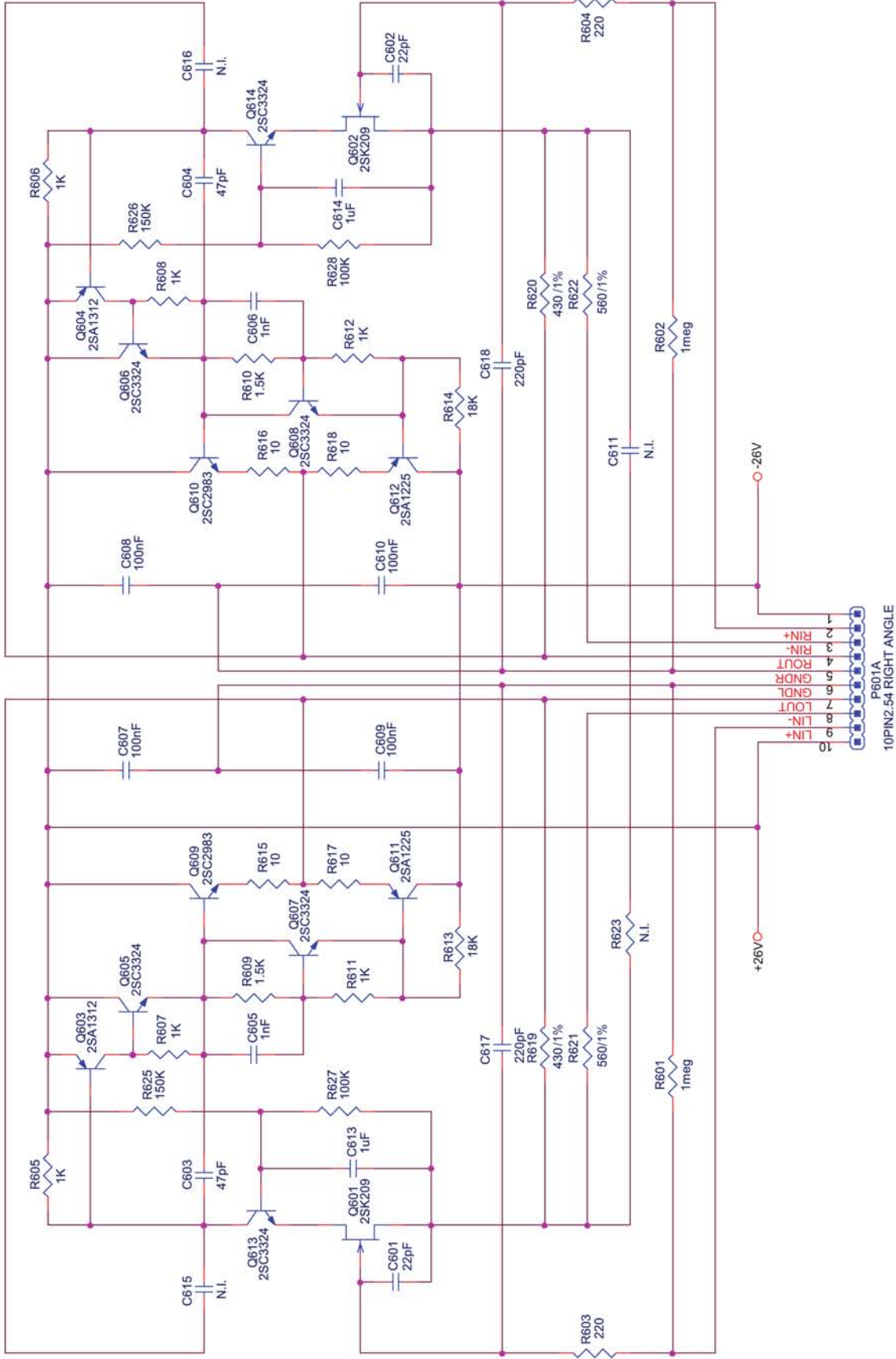


All Polyester capacitors are 63V 5% unless noted.  
 All Elec. capacitors are 50V 20% unless noted.  
 All Resistor are 1/6W 5% RJ13 unless noted.  
 All Zener diode are 1/2W unless noted.



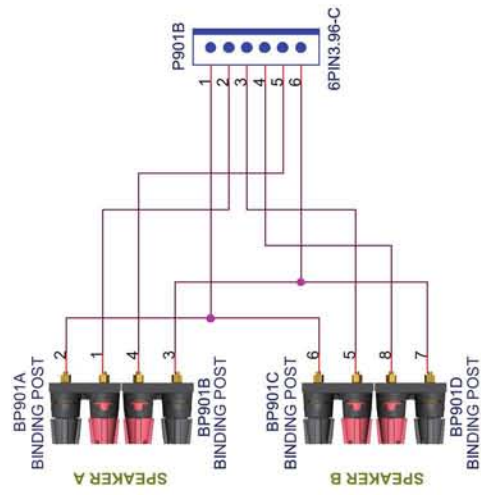
Assembled in the Rear Panel

# SCHEMATICS DIAGRAM (01-37506-00)



All Capacitors are SMD0805 5% unless noted.  
 All Resistor are SMD0805 1/10W 5% unless noted.

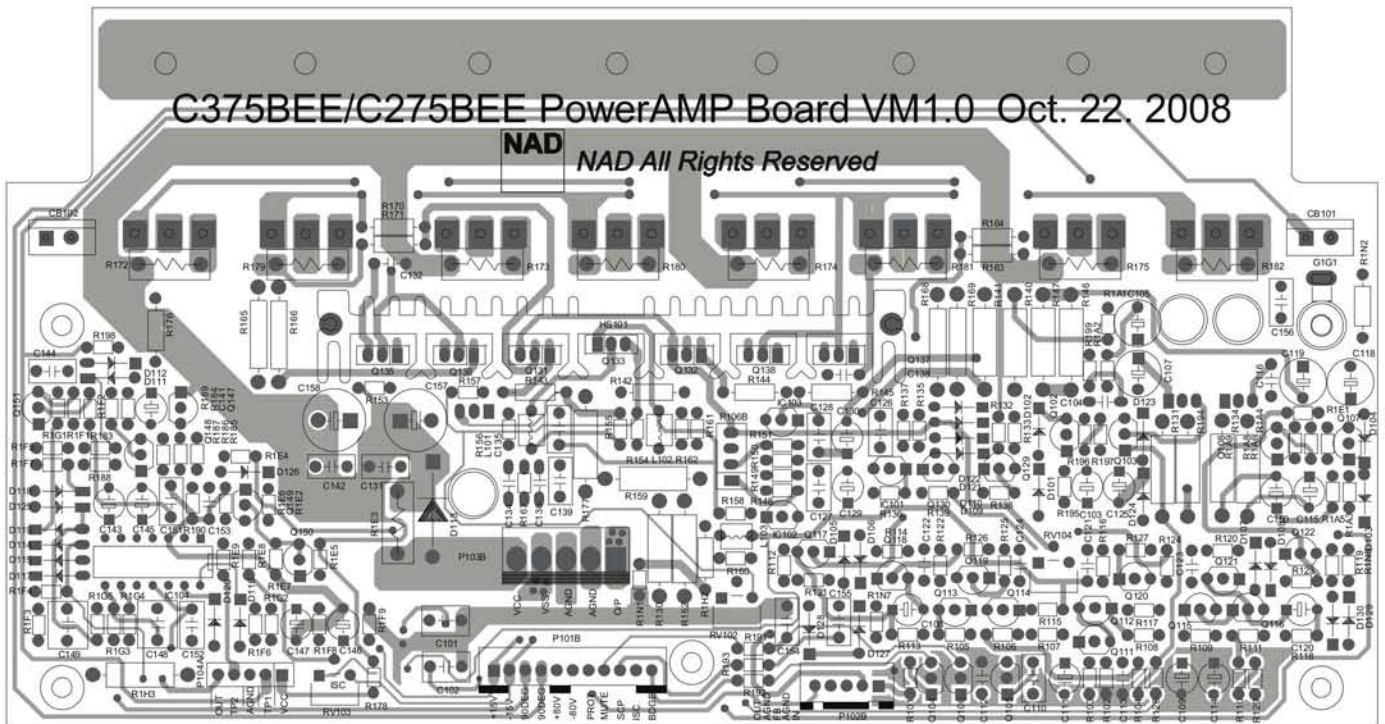
# SCHEMATICS DIAGRAM



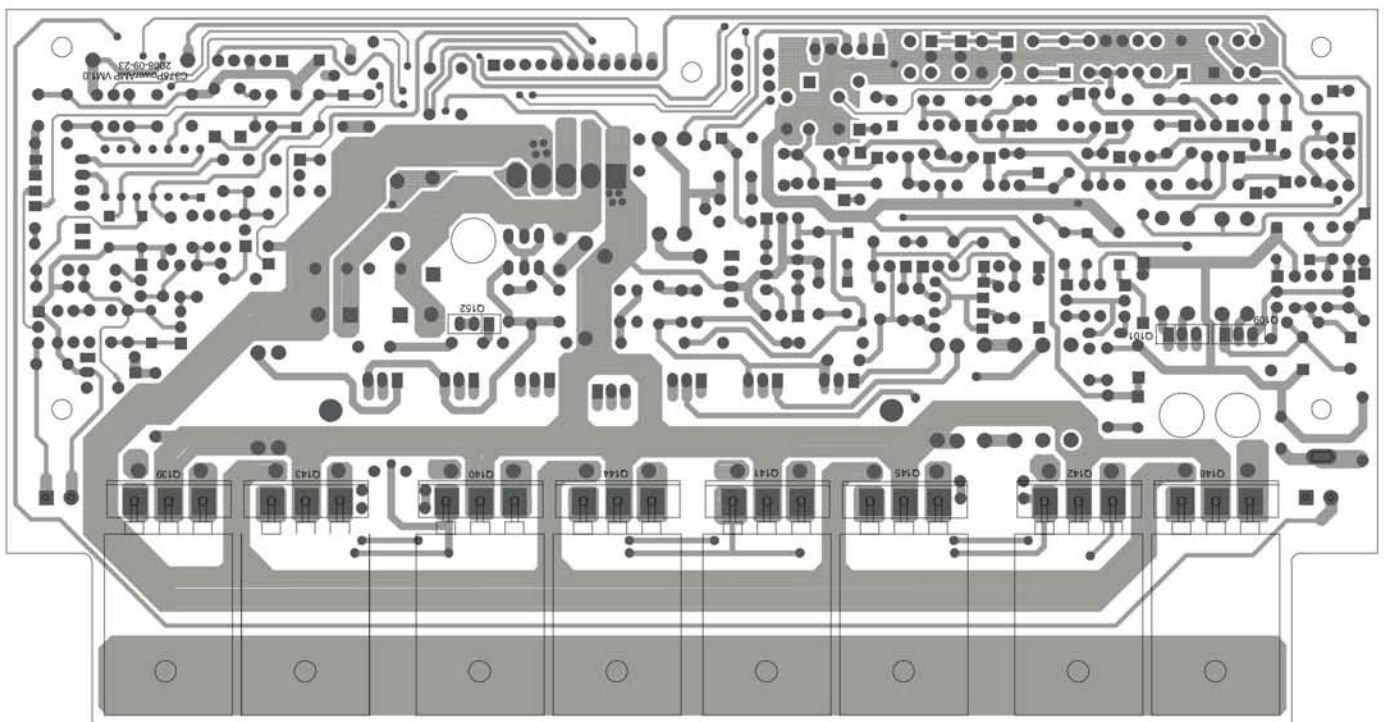


# PCB LAYOUT

## C375BEE/C275BEE AMP BOARD - COMPONENT SIDE

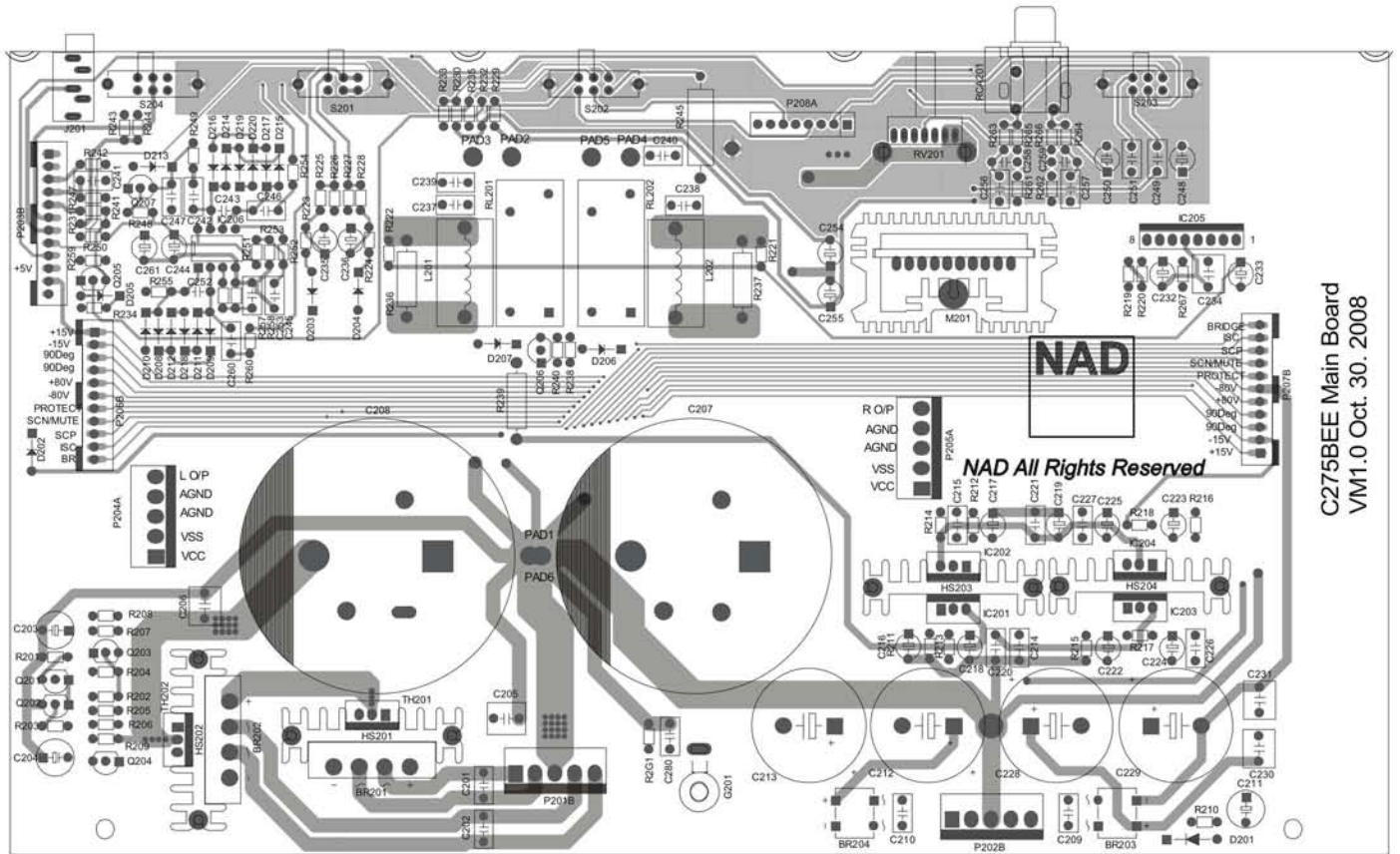


## C375BEE/C275BEE AMP BOARD - SOLDER SIDE



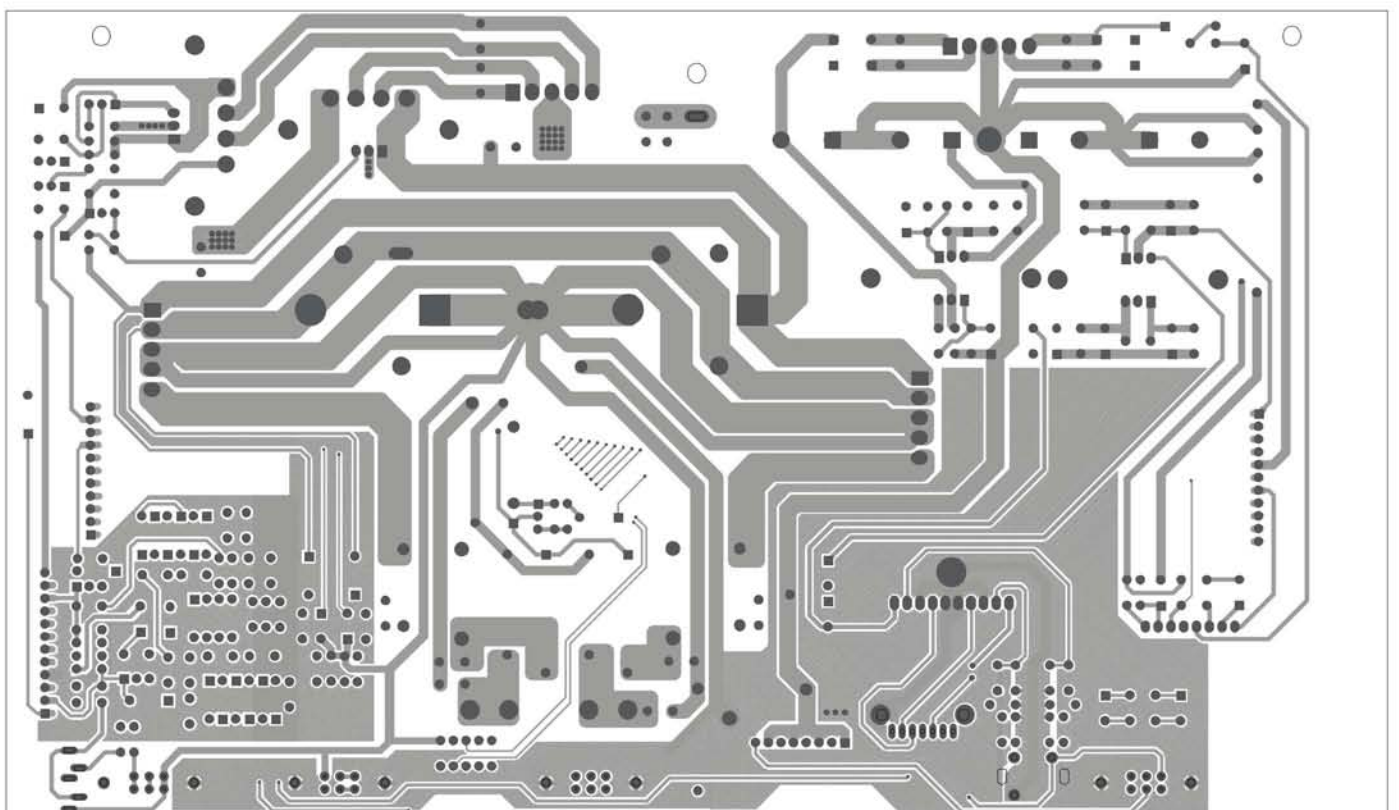
# PCB LAYOUT

## C275BEE MAIN BOARD - COMPONENT SIDE



C275BEE Main Board  
VM1.0 Oct. 30. 2008

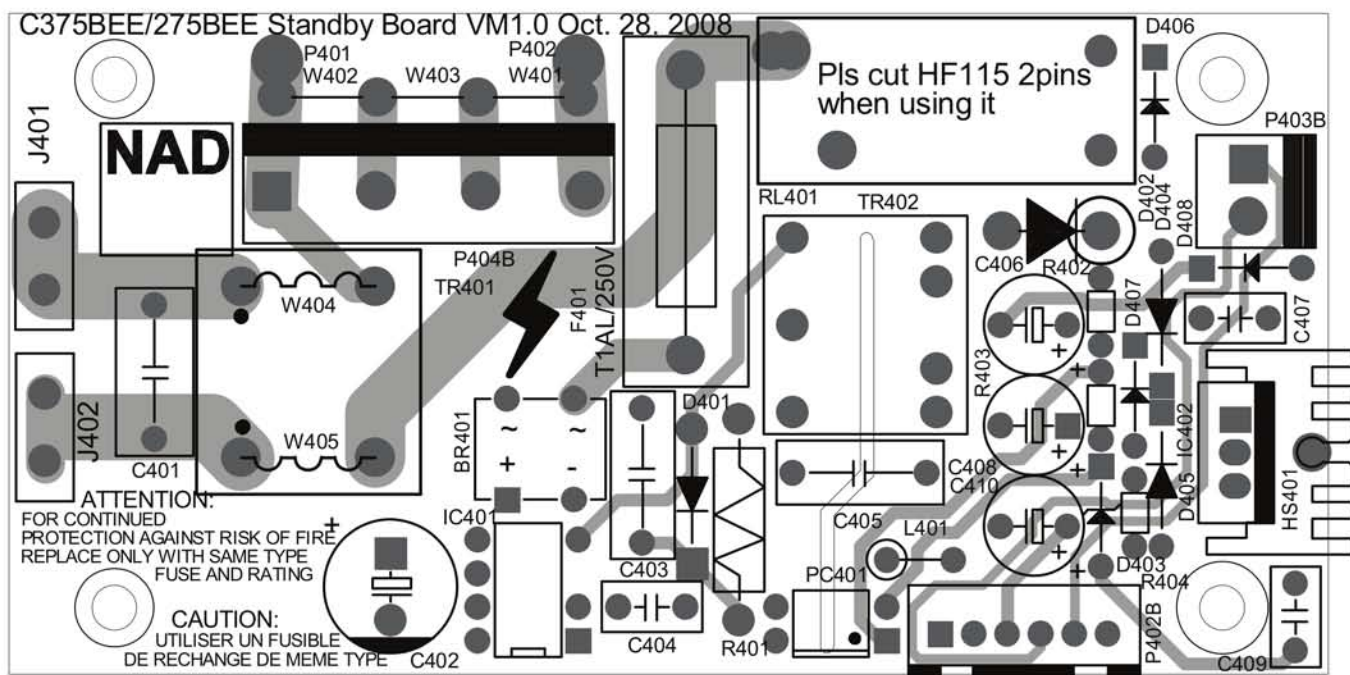
## C275BEE MAIN BOARD - SOLDER SIDE



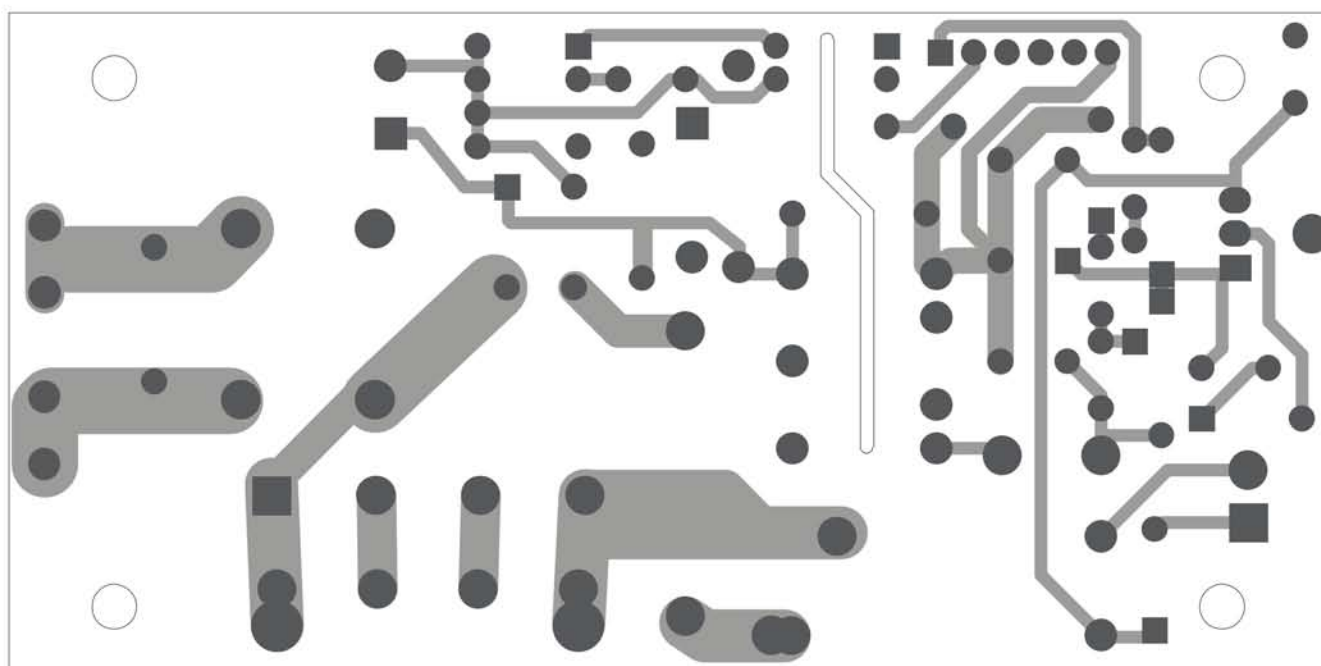


# PCB LAYOUT

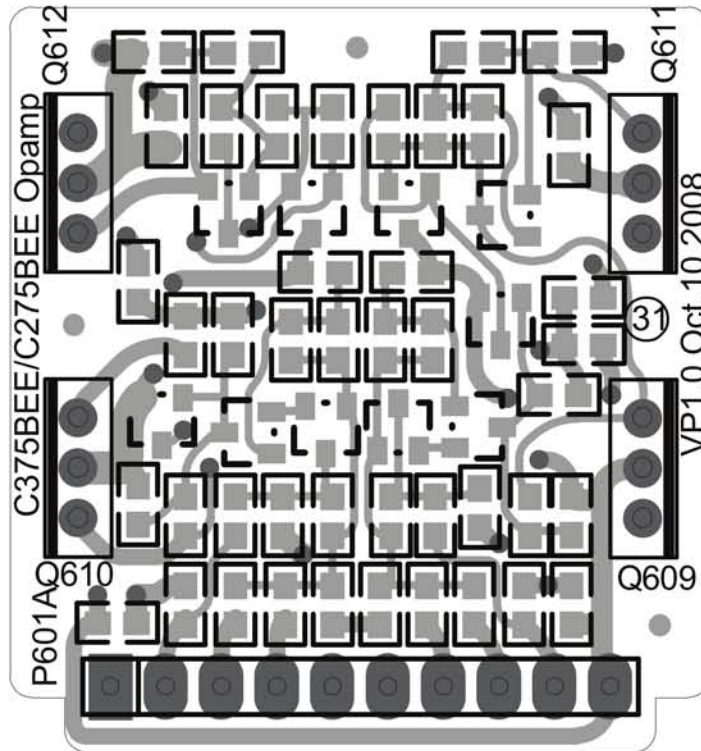
## C375BEE/275BEE STANDBY BOARD - COMPONENT SIDE



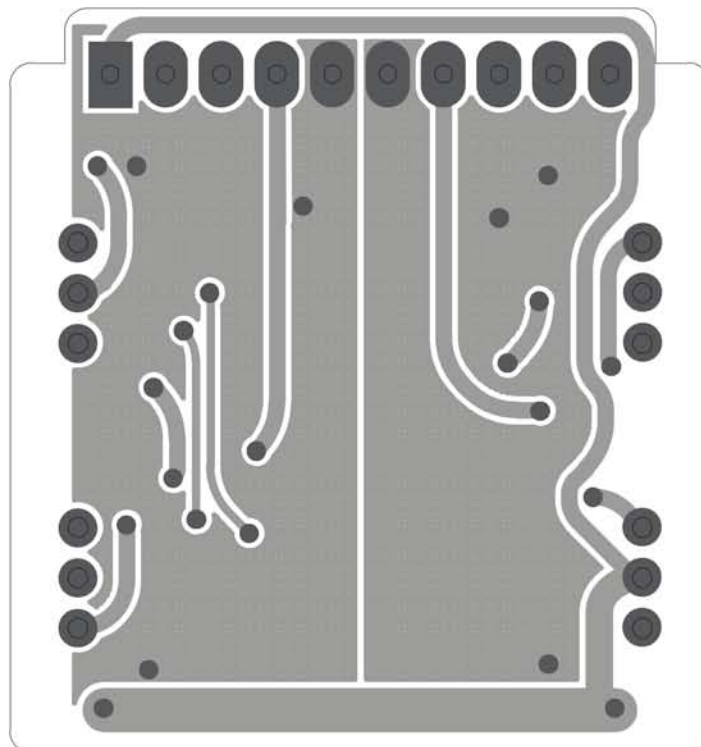
## C375BEE/275BEE STANDBY BOARD - SOLDER SIDE



C375BEE/C275BEE Opamp BOARD - COMPONENT SIDE



C375BEE/C275BEE Opamp BOARD - SOLDER SIDE

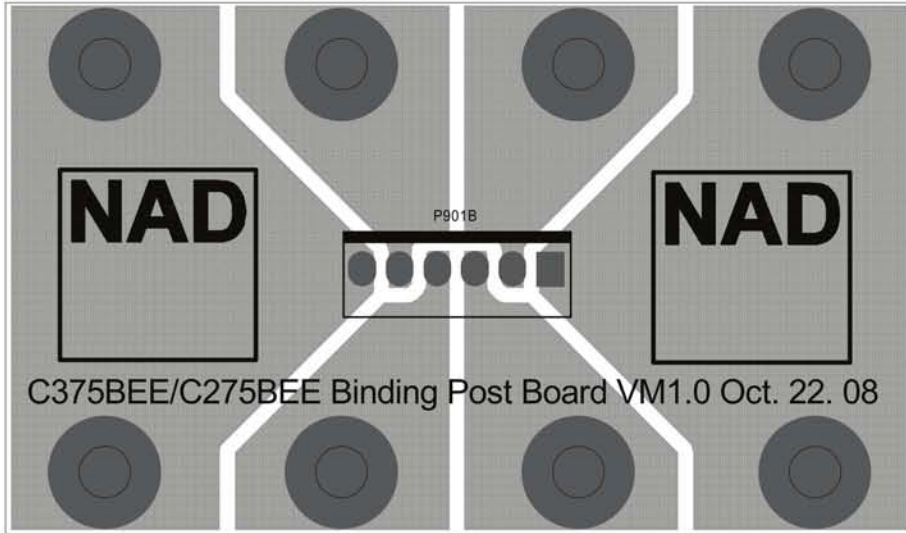




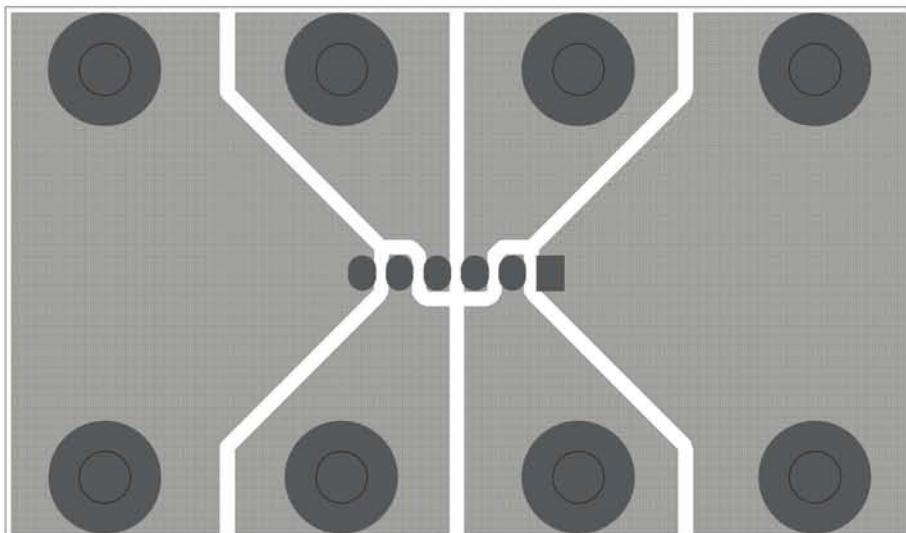


# PCB LAYOUT

C375BEE/C275BEE Binding Post Board - COMPONENT SIDE



C375BEE/C275BEE Binding Post Board - SOLDER SIDE



# ELECTRICAL PARTS LIST

DESIGNATOR	DESCRIPTION	PART TYPE	PART NUMBER	FOOTPRINT
<b>P/N 01-37501-00 PCB1 BOARD (POWERAMP MODULE)</b>				
<b>DIODE</b>				
D101	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D102	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D103	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D104	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D105	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D106	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D107	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D108	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D109	Switch Diode	BAV21	33-40021-00	DAX/.300X.080/.031
D110	Switch Diode	BAV21	33-40021-00	DAX/.300X.080/.031
D111	Switch Diode	18V, 1/2W	33-11800-00	DAX/.300X.080/.031
D112	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D113	Rectifier Diode	1N5404	33-25404-02	DAX/.600X.200/.059
D114	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D115	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D116	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D117	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D118	Switch Diode	BAV21	33-40021-00	DAX/.300X.080/.031
D119	Switch Diode	BAV21	33-40021-00	DAX/.300X.080/.031
D120	Zener Diode	6.8V, 1/2W	33-16809-00	DAX/.300X.080/.031
D125	Switch Diode	2.4V, 1/2W	33-12409-00	DAX/.300X.080/.031
D126	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D127	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D128	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D129	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D130	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
<b>TRANSISTOR</b>				
Q101	Transistor	KSC2690AYSTU	31-02690-00	TO126/90/ECB
Q102	Transistor	2SA970-GR	J31-00970-00	TO92/100/ECB
Q103	Transistor	2SC2240-GR	J31-02240-00	TO92/100/ECB
Q104	Transistor	2SC2878	J31-02878-00	TO92/100/ECB
Q105	Transistor	2SA1015-GR	31-01015-00	TO92/100/ECB
Q106	Transistor	2SC2878	J31-02878-00	TO92/100/ECB
Q107	Transistor	2SC2240-GR	J31-02240-00	TO92/100/ECB
Q108	Transistor	2SA970-GR	J31-00970-00	TO92/100/ECB
Q109	Transistor	KSA1220AYSTU	31-01220-00	TO126/90/ECB
Q111	Transistor	2SA970-GR	J31-00970-00	TO92/100/ECB
Q112	Transistor	2SC2240-GR	J31-02240-00	TO92/100/ECB
Q113	Transistor	2SC2240-GR	J31-02240-00	TO92/100/ECB
Q114	Transistor	2SC2240-GR	J31-02240-00	TO92/100/ECB
Q115	Transistor	2SA970-GR	J31-00970-00	TO92/100/ECB
Q116	Transistor	2SA970-GR	J31-00970-00	TO92/100/ECB
Q117	Transistor	2SC2240-GR	J31-02240-00	TO92/100/ECB
Q118	Transistor	2SA1015-GR	31-01015-00	TO92/100/ECB
Q119	Transistor	2SA1013-O	J31-01013-00	TO92/100/ECB
Q120	Transistor	2SC2383-O	J31-02383-00	TO92/100/ECB
Q121	Transistor	2SC1815-GR	31-01815-00	TO92/100/ECB
Q122	Transistor	2SA970-GR	J31-00970-00	TO92/100/ECB
Q129	Transistor	2SA970-GR	J31-00970-00	TO92/100/ECB
Q130	Transistor	2SC2240-GR	J31-02240-00	TO92/100/ECB
Q131	Transistor	KSA1220AYSTU	31-01220-00	TO126/90/ECB
Q132	Transistor	KSC2690AYSTU	31-02690-00	TO126/90/ECB

# ELECTRICAL PARTS LIST

DESIGNATOR	DESCRIPTION	PART TYPE	PART NUMBER	FOOTPRINT
Q133	Transistor	KSC2690AYSTU	31-02690-00	TO126/90/ECB
Q135	Transistor	KSC2690AYSTU	31-02690-00	TO126/90/ECB
Q136	Transistor	KSC2690AYSTU	31-02690-00	TO126/90/ECB
Q137	Transistor	KSA1220AYSTU	31-01220-00	TO126/90/ECB
Q138	Transistor	KSA1220AYSTU	31-01220-00	TO126/90/ECB
Q139	Transistor	2SA2121-O	J31-02121-00	TO264/215/BCE
Q140	Transistor	2SA2121-O	J31-02121-00	TO264/215/BCE
Q141	Transistor	2SA2121-O	J31-02121-00	TO264/215/BCE
Q142	Transistor	2SA2121-O	J31-02121-00	TO264/215/BCE
Q143	Transistor	2SC5949-O	J31-05949-00	TO264/215/BCE
Q144	Transistor	2SC5949-O	J31-05949-00	TO264/215/BCE
Q145	Transistor	2SC5949-O	J31-05949-00	TO264/215/BCE
Q146	Transistor	2SC5949-O	J31-05949-00	TO264/215/BCE
Q147	Transistor	MPSA92	31-00092-00	TO92/100/EBC
Q148	Transistor	2SC2240-GR	J31-02240-00	TO92/100/ECB
Q149	Transistor	MPSA92	31-00092-00	TO92/100/EBC
Q150	Transistor	MPSA92	31-00092-00	TO92/100/EBC
Q151	Transistor	2SC1815-GR	31-01815-00	TO92/100/ECB
Q152	Transistor	KSC2690AYSTU	31-02690-00	TO126/90/ECB
<b>THERMAL SWITCH</b>				
CB101	THERMAL CIRCUIT BRAKE	ST-22 90C L TYPE	JA07-70022-09	TO220AC/SURFACE
CB102	THERMAL CIRCUIT BRAKE	ST-22 80C L TYPE	JA07-70022-08	TO220AC/SURFACE
<b>IC</b>				
IC101	Shunt Regulator	TL431	03-00431-02	TO-92
IC102	Shunt Regulator	TL431	03-00431-02	TO-92
IC103	Shunt Regulator	TL431	03-00431-02	TO-92
IC104	QUAD OP-AMP	TL084CN	03-00084-00	DIP.100/14/W.300/L.750
<b>RESISTOR</b>				
R101	Metal Film Resistor	475Ω, 1/6W, ±1%	07-24750-50	AXJ.200X.080/.031
R102	Metal Film Resistor	10KΩ, 1/6W, 1%	07-21002-50	AXJ.200X.080/.031
R103	Metal Film Resistor	549Ω, 1/6W, ±1%	07-25490-50	AXJ.200X.080/.031
R104	Metal Film Resistor	1KΩ, 1/6W, 5%	07-20102-50	AXJ.200X.080/.031
R105	Metal Film Resistor	100Ω, 1/6W, 5%	07-20101-50	AXJ.200X.080/.031
R106	Metal Film Resistor	24KΩ, 1/6W, ±5%	07-20243-50	AXJ.200X.080/.031
R107	Metal Film Resistor	100Ω, 1/6W, 5%	07-20101-50	AXJ.200X.080/.031
R108	Metal Film Resistor	100Ω, 1/6W, 5%	07-20101-50	AXJ.200X.080/.031
R109	Metal Film Resistor	24KΩ, 1/6W, ±5%	07-20243-50	AXJ.200X.080/.031
R110	Metal Film Resistor	1KΩ, 1/6W, 5%	07-20102-50	AXJ.200X.080/.031
R111	Metal Film Resistor	100Ω, 1/6W, 5%	07-20101-50	AXJ.200X.080/.031
R112	Metal Film Resistor	39KΩ, 1/6W, ±5%	07-20393-50	AXJ.200X.080/.031
R113	Metal Film Resistor	220KΩ, 1/6W, 5%	07-20224-50	AXJ.200X.080/.031
R114	Metal Film Resistor	82Ω, 1/6W, 5%	07-20820-50	AXJ.200X.080/.031
R115	Metal Film Resistor	15Ω, 1/6W, ±5%	07-20150-50	AXJ.200X.080/.031
R116	Metal Film Resistor	24KΩ, 1/6W, ±5%	07-20243-50	AXJ.200X.080/.031
R117	Metal Film Resistor	15Ω, 1/6W, ±5%	07-20150-50	AXJ.200X.080/.031
R118	Metal Film Resistor	220KΩ, 1/6W, 5%	07-20224-50	AXJ.200X.080/.031
R119	Metal Film Resistor	39KΩ, 1/6W, ±5%	07-20393-50	AXJ.200X.080/.031
R120	Metal Film Resistor	82Ω, 1/6W, 5%	07-20820-50	AXJ.200X.080/.031
R121	Metal Film Resistor	82Ω, 1/6W, 5%	07-20820-50	AXJ.200X.080/.031
R122	Metal Film Resistor	100KΩ, 1/6W, 5%	07-20104-50	AXJ.200X.080/.031
R123	Metal Film Resistor	82Ω, 1/6W, 5%	07-20820-50	AXJ.200X.080/.031
R124	Metal Film Resistor	100KΩ, 1/6W, 5%	07-20104-50	AXJ.200X.080/.031
R125	Metal Film Resistor	200Ω, 1/6W, ±5%	07-20201-50	AXJ.400X.100/.031
R126	Metal Film Resistor	10Ω, 1/6W, 5%	07-20100-50	AXJ.200X.080/.031



# ELECTRICAL PARTS LIST

DESIGNATOR	DESCRIPTION	PART TYPE	PART NUMBER	FOOTPRINT
R127	Metal Film Resistor	10Ω, 1/6W, 5%	07-20100-50	AXJ.200X.080/.031
R128	Metal Film Resistor	10Ω, 1/6W, 5%	07-20100-50	AXJ.200X.080/.031
R129	Metal Film Resistor	10Ω, 1/6W, 5%	07-20100-50	AXJ.200X.080/.031
R130	Metal Film Resistor	1KΩ, 1W, ±1%	07-21001-01	AXJ.600X.125/.039
R132	Metal Film Resistor	2K2Ω, 1/6W, 5%	07-20222-50	AXJ.200X.080/.031
R133	Metal Film Resistor	2.7KΩ, 1/6W, ±5%	07-20272-50	AXJ.200X.080/.031
R135	Metal Film Resistor	2K2Ω, 1/6W, 5%	07-20222-50	AXJ.200X.080/.031
R136	Metal Film Resistor	1KΩ, 1/6W, 1%	07-21001-50	AXJ.200X.080/.031
R137	Metal Film Resistor	1.5KΩ, 1/6W, ±1%	07-21501-50	AXJ.200X.080/.031
R138	Metal Film Resistor	10KΩ, 1/6W, 1%	07-21002-50	AXJ.200X.080/.031
R139	Metal Film Resistor	36KΩ, 1/6W, ±1%	07-23602-50	AXJ.200X.080/.031
R140	Metal Oxide Film Resistor	3.9KΩ, 3W, ±5%	07-30392-03	AXJ.600X.125/.039
R141	Metal Oxide Film Resistor	3.9KΩ, 3W, ±5%	07-30392-03	AXJ.600X.125/.039
R142	Metal Film Resistor	330Ω, 1/4W, ±5%	07-20331-51	AXJ.400X.100/.031
R143	Metal Film Resistor	3.3Ω, 1/4W, ±5%	07-20339-51	AXJ.400X.100/.031
R144	Metal Film Resistor	3.3Ω, 1/4W, ±5%	07-20339-51	AXJ.400X.100/.031
R145	Metal Film Resistor	330Ω, 1/4W, ±5%	07-20331-51	AXJ.400X.100/.031
R146	Metal Oxide Film Resistor	3.9KΩ, 3W, ±5%	07-30392-03	AXJ.600X.125/.039
R147	Metal Oxide Film Resistor	3.9KΩ, 3W, ±5%	07-30392-03	AXJ.600X.125/.039
R148	Metal Film Resistor	10KΩ, 1/6W, 5%	07-20103-50	AXJ.200X.080/.031
R149	Metal Film Resistor	10KΩ, 1/6W, 5%	07-20103-50	AXJ.200X.080/.031
R150	Metal Film Resistor	10KΩ, 1/6W, 5%	07-20103-50	AXJ.200X.080/.031
R151	Metal Film Resistor	10KΩ, 1/6W, 5%	07-20103-50	AXJ.200X.080/.031
R152	Metal Film Resistor	845Ω, 1W, ±1%	07-28450-01	AXJ.600X.125/.039
R153	Metal Film Resistor	1.8MΩ, 1/6W, ±5%	07-20185-50	AXJ.200X.080/.031
R154	Metal Film Resistor	1.2KΩ, 1/6W, ±5%	07-20122-50	AXJ.200X.080/.031
R155	Metal Film Resistor	4.7Ω, 1/6W, ±5%	07-20479-50	AXJ.200X.080/.031
R156	Metal Film Resistor	33Ω, 1/6W, 5%	07-20330-50	AXJ.200X.080/.031
R157	Metal Film Resistor	3K3Ω, 1/6W, 5%	07-20332-50	AXJ.200X.080/.031
R158	Metal Film Resistor	910Ω, 1/6W, ±5%	07-20911-50	AXJ.200X.080/.031
R159	Metal Film Resistor	1KΩ, 1W, ±1%	07-21001-01	AXJ.600X.125/.039
R160	Metal Film Resistor	100Ω, 1/6W, 5%	07-20101-50	AXJ.200X.080/.031
R161	Metal Film Resistor	4.7Ω, 1/6W, ±5%	07-20479-50	AXJ.200X.080/.031
R162	Metal Film Resistor	33Ω, 1/6W, 5%	07-20330-50	AXJ.200X.080/.031
R163	Metal Film Resistor	15Ω, 1/4W, ±5%	07-20150-51	AXJ.400X.100/.031
R164	Metal Film Resistor	18Ω, 1/4W, ±5%	07-20180-51	AXJ.400X.100/.031
R165	Metal Oxide Film Resistor	1Ω, 1/2W, ±5%	07-30109-00	AXJ.600X.125/.039
R166	Metal Oxide Film Resistor	1Ω, 1/2W, ±5%	07-30109-00	AXJ.600X.125/.039
R167	Metal Film Resistor	22Ω, 1/6W, ±5%	07-20220-50	AXJ.200X.080/.031
R168	Metal Oxide Film Resistor	1Ω, 1/2W, ±5%	07-30109-00	AXJ.600X.125/.039
R169	Metal Oxide Film Resistor	1Ω, 1/2W, ±5%	07-30109-00	AXJ.600X.125/.039
R170	Metal Film Resistor	18Ω, 1/4W, ±5%	07-20180-51	AXJ.400X.100/.031
R171	Metal Film Resistor	15Ω, 1/4W, ±5%	07-20150-51	AXJ.400X.100/.031
R172	Cement Resistor	0.22Ω, 5W, ±5%	07-40228-15	RAD/RES/.520X.200/LS.400/.039
R173	Cement Resistor	0.22Ω, 5W, ±5%	07-40228-15	RAD/RES/.520X.200/LS.400/.039
R174	Cement Resistor	0.22Ω, 5W, ±5%	07-40228-15	RAD/RES/.520X.200/LS.400/.039
R175	Cement Resistor	0.22Ω, 5W, ±5%	07-40228-15	RAD/RES/.520X.200/LS.400/.039
R176	Metal Film Resistor	10KΩ, 1/4W, ±5%	07-20103-51	AXJ.400X.100/.031
R177	Metal Oxide Film Resistor	10Ω, 2W, ±5%	07-30100-12	AXJ.600X.125/.039
R178	Metal Film Resistor	10KΩ, 1/6W, 5%	07-20103-50	AXJ.200X.080/.031
R179	Cement Resistor	0.22Ω, 5W, ±5%	07-40228-15	RAD/RES/.520X.200/LS.400/.039
R180	Cement Resistor	0.22Ω, 5W, ±5%	07-40228-15	RAD/RES/.520X.200/LS.400/.039
R181	Cement Resistor	0.22Ω, 5W, ±5%	07-40228-15	RAD/RES/.520X.200/LS.400/.039
R182	Cement Resistor	0.22Ω, 5W, ±5%	07-40228-15	RAD/RES/.520X.200/LS.400/.039
R183	Metal Film Resistor	47KΩ, 1/6W, 5%	07-20473-50	AXJ.200X.080/.031

# ELECTRICAL PARTS LIST

DESIGNATOR	DESCRIPTION	PART TYPE	PART NUMBER	FOOTPRINT
R184	Metal Film Resistor	470Ω, 1/6W, 5%	07-20471-50	AXJ.200X.080/.031
R185	Metal Film Resistor	47KΩ, 1/6W, 5%	07-20473-50	AXJ.200X.080/.031
R186	Metal Film Resistor	22KΩ, 1/6W, 5%	07-20223-50	AXJ.200X.080/.031
R187	Metal Film Resistor	2KΩ, 1/6W, 5%	07-20222-50	AXJ.200X.080/.031
R188	Metal Film Resistor	33KΩ, 1/6W, ±5%	07-20333-50	AXJ.200X.080/.031
R189	Metal Film Resistor	22KΩ, 1/6W, 5%	07-20223-50	AXJ.200X.080/.031
R190	Metal Film Resistor	10KΩ, 1/6W, 5%	07-20103-50	AXJ.200X.080/.031
R191	Metal Film Resistor	100Ω, 1/6W, 5%	07-20101-50	AXJ.200X.080/.031
R192	Metal Film Resistor	100Ω, 1/6W, 5%	07-20101-50	AXJ.200X.080/.031
R193	Metal Film Resistor	100Ω, 1/6W, 5%	07-20101-50	AXJ.200X.080/.031
R194	Fusible Resistor	10Ω, 1W, ±5%	07-50100-01	AXJ.600X.125/.039
R195	Metal Film Resistor	100Ω, 1/6W, 5%	07-20101-50	AXJ.200X.080/.031
R196	Metal Film Resistor	100KΩ, 1/6W, 5%	07-20104-50	AXJ.200X.080/.031
R197	Metal Film Resistor	100KΩ, 1/6W, 5%	07-20104-50	AXJ.200X.080/.031
R198	Metal Film Resistor	1KΩ, 1/6W, 5%	07-20102-50	AXJ.200X.080/.031
R199	Metal Film Resistor	220Ω, 1/6W, 5%	07-20221-50	AXJ.200X.080/.031
R1A1	Metal Film Resistor	24.3KΩ, 1/6W, ±1%	07-22432-50	AXJ.200X.080/.031
R1A2	Metal Film Resistor	7.32KΩ, 1/6W, ±1%	07-27321-50	AXJ.200X.080/.031
R1A3	Metal Film Resistor	100Ω, 1/6W, 5%	07-20101-50	AXJ.200X.080/.031
R1A4	Fusible Resistor	10Ω, 1W, ±5%	07-50100-01	AXJ.600X.125/.039
R1A5	Metal Film Resistor	100KΩ, 1/6W, 5%	07-20104-50	AXJ.200X.080/.031
R1A6	Metal Film Resistor	100KΩ, 1/6W, 5%	07-20104-50	AXJ.200X.080/.031
R1A8	Metal Film Resistor	220Ω, 1/6W, 5%	07-20221-50	AXJ.200X.080/.031
R1A9	Metal Film Resistor	7.32KΩ, 1/6W, ±1%	07-27321-50	AXJ.200X.080/.031
R1E1	Metal Film Resistor	24.3KΩ, 1/6W, ±1%	07-22432-50	AXJ.200X.080/.031
R1E2	Metal Film Resistor	1megΩ, 1/6W, 5%	07-20105-50	AXJ.200X.080/.031
R1E3	Cement Resistor	0.05Ω, 3W, ±5%	07-40507-03	RAD/RES/.520X.200/LS.400/.039
R1E4	Metal Film Resistor	100Ω, 1/6W, 5%	07-20101-50	AXJ.200X.080/.031
R1E5	Metal Film Resistor	100Ω, 1/6W, 5%	07-20101-50	AXJ.200X.080/.031
R1E6	Metal Film Resistor	9.1KΩ, 1/6W, ±5%	07-20912-50	AXJ.200X.080/.031
R1E7	Metal Film Resistor	560KΩ, 1/6W, ±5%	07-20564-50	AXJ.200X.080/.031
R1E8	Metal Film Resistor	100KΩ, 1/6W, 5%	07-20104-50	AXJ.200X.080/.031
R1E9	Metal Film Resistor	330KΩ, 1/6W, ±5%	07-20334-50	AXJ.200X.080/.031
R1F1	Metal Film Resistor	22KΩ, 1/6W, 5%	07-20223-50	AXJ.200X.080/.031
R1F2	Metal Film Resistor	10KΩ, 1/6W, 5%	07-20103-50	AXJ.200X.080/.031
R1F3	Metal Film Resistor	10KΩ, 1/6W, 5%	07-20103-50	AXJ.200X.080/.031
R1F4	Metal Film Resistor	10KΩ, 1/6W, 5%	07-20103-50	AXJ.200X.080/.031
R1F5	Metal Film Resistor	270KΩ, 1/6W, ±1%	07-22703-50	AXJ.200X.080/.031
R1F6	Metal Film Resistor	4.7MΩ, 1/6W, ±5%	07-20475-50	AXJ.200X.080/.031
R1F7	Metal Film Resistor	470KΩ, 1/6W, ±1%	07-24703-50	AXJ.200X.080/.031
R1F8	Metal Film Resistor	390KΩ, 1/6W, ±1%	07-23903-50	AXJ.200X.080/.031
R1F9	Metal Film Resistor	110KΩ, 1/6W, ±1%	07-21103-50	AXJ.200X.080/.031
R1G1	Metal Film Resistor	100KΩ, 1/6W, 5%	07-20104-50	AXJ.200X.080/.031
R1G2	Metal Film Resistor	220KΩ, 1/6W, 5%	07-20224-50	AXJ.200X.080/.031
R1G3	Metal Film Resistor	1KΩ, 1/6W, 5%	07-20102-50	AXJ.200X.080/.031
R1G4	Metal Film Resistor	1megΩ, 1/6W, 5%	07-20105-50	AXJ.200X.080/.031
R1G5	Metal Film Resistor	1megΩ, 1/6W, 5%	07-20105-50	AXJ.200X.080/.031
R1H1	Metal Film Resistor	10KΩ, 1/6W, 5%	07-20103-50	AXJ.200X.080/.031
R1H2	Metal Film Resistor	63.4Ω, 1/4W, ±1%	07-26349-51	AXJ.400X.100/.031
R1H3	Metal Film Resistor	1KΩ, 1W, ±1%	07-21001-01	AXJ.600X.125/.039
R1N1	Metal Film Resistor	100Ω, 1/6W, 5%	07-20101-50	AXJ.200X.080/.031
R1N7	Metal Film Resistor	1KΩ, 1/6W, 5%	07-20102-50	AXJ.200X.080/.031
R1N8	Metal Film Resistor	1KΩ, 1/6W, 5%	07-20102-50	AXJ.200X.080/.031
<b>CAPACITOR</b>				
C101	Polyester capacitor	100nF, ±5%, 250V	25-10422-01	RAD/CAP/.300X.150/LS.200/.031



# ELECTRICAL PARTS LIST

DESIGNATOR	DESCRIPTION	PART TYPE	PART NUMBER	FOOTPRINT
C102	Polyester capacitor	100nF, ±5%, 250V	25-10422-01	RAD/CAP/.300X.150/LS.200/.031
C103	ALU Electrolytic Capacitor	10uF/50V, ±20%, 105°C	06-10051-01	CPCYL1/D.200/LS.200/.031
C104	Ceramic Capacitor	33pF, ±5%, 1KV	05-33013-02	CPAX/.200X.100/.031
C105	ALU Electrolytic Capacitor	10uF/100V, ±20%, 105°C	06-10012-01	CPCYL1/D.300/LS.200/.031
C107	ALU Electrolytic Capacitor	10uF/100V, ±20%, 105°C	06-10012-01	CPCYL1/D.300/LS.200/.031
C108	ALU Electrolytic Capacitor	10uF/50V, ±20%, 105°C	06-10051-01	CPCYL1/D.200/LS.200/.031
C109	ALU Electrolytic Capacitor	10uF/50V, ±20%, 105°C	06-10051-01	CPCYL1/D.200/LS.200/.031
C110	Polyester capacitor	100nF, ±5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C111	ALU Electrolytic Capacitor	10uF/50V, ±20%, 105°C	06-10051-01	CPCYL1/D.200/LS.200/.031
C112	Ceramic Capacitor	47pF, ±5%, 1KV	05-47013-01	CPAX/.200X.100/.031
C113	Ceramic Capacitor	120pF, ±5%, 1KV	05-12113-00	CPAX/.200X.100/.031
C114	ALU Electrolytic Capacitor	10uF/50V, ±20%, 105°C	06-10051-01	CPCYL1/D.200/LS.200/.031
C115	ALU Electrolytic Capacitor	10uF/50V, ±20%, 105°C	06-10051-01	CPCYL1/D.200/LS.200/.031
C116	Ceramic Capacitor	33pF, ±5%, 1KV	05-33013-02	CPAX/.200X.100/.031
C118	ALU Electrolytic Capacitor	10uF/100V, ±20%, 105°C	06-10012-01	CPCYL1/D.300/LS.200/.031
C119	ALU Electrolytic Capacitor	10uF/100V, ±20%, 105°C	06-10012-01	CPCYL1/D.300/LS.200/.031
C120	ALU Electrolytic Capacitor	10uF/50V, ±20%, 105°C	06-10051-01	CPCYL1/D.200/LS.200/.031
C121	Ceramic Capacitor	22pF, ±5%, 1KV	05-22013-02	CPAX/.200X.100/.031
C122	Ceramic Capacitor	22pF, ±5%, 1KV	05-22013-02	CPAX/.200X.100/.031
C123	Ceramic Capacitor	22pF, ±5%, 1KV	05-22013-02	CPAX/.200X.100/.031
C124	Ceramic Capacitor	430pF, ±5%, 1KV	05-43113-01	CPAX/.200X.100/.031
C125	ALU Electrolytic Capacitor	10uF/50V, ±20%, 105°C	06-10051-01	CPCYL1/D.200/LS.200/.031
C126	Polyester capacitor	100nF, ±5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C127	Polyester capacitor	100nF, ±5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C128	Polyester capacitor	100nF, ±5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C129	ALU Electrolytic Capacitor	47uF/25V, ±20%, 105°C	06-47021-01	CPCYL1/D.300/LS.200/.031
C130	ALU Electrolytic Capacitor	47uF/25V, ±20%, 105°C	06-47021-01	CPCYL1/D.300/LS.200/.031
C131	Polyester capacitor	100nF, ±5%, 100V	25-10412-04	RAD/CAP/.300X.150/LS.200/.031
C132	Ceramic Capacitor	220pF, ±10%, 1KV	05-22113-01	CPAX/.200X.100/.031
C134	Ceramic Capacitor	470pF, ±5%, 1KV	05-47113-02	CPAX/.200X.100/.031
C135	Polyester capacitor	100nF, ±5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C136	Ceramic Capacitor	470pF, ±5%, 1KV	05-47113-02	CPAX/.200X.100/.031
C138	Ceramic Capacitor	220pF, ±10%, 1KV	05-22113-01	CPAX/.200X.100/.031
C139	Polyester capacitor	100nF, ±5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C141	ALU Electrolytic Capacitor	4.7uF/50V, ±20%, 105°C	06-47951-05	CPCYL1/D.200/LS.200/.031
C142	Polyester capacitor	100nF, ±5%, 100V	25-10412-04	RAD/CAP/.300X.150/LS.200/.031
C143	ALU Electrolytic Capacitor	10uF/50V, ±20%, 105°C	06-10051-01	CPCYL1/D.200/LS.200/.031
C144	Polyester capacitor	100nF, ±5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C145	ALU Electrolytic Capacitor	10uF/50V, ±20%, 105°C	06-10051-01	CPCYL1/D.200/LS.200/.031
C146	ALU Electrolytic Capacitor	10uF/50V, ±20%, 105°C	06-10051-01	CPCYL1/D.200/LS.200/.031
C147	ALU Electrolytic Capacitor	10uF/50V, ±20%, 105°C	06-10051-01	CPCYL1/D.200/LS.200/.031
C148	Polyester capacitor	470nF, ±5%, 63V	25-47461-00	RAD/.300X.150/LS.200/.031
C149	Polyester capacitor	470nF, ±5%, 63V	25-47461-00	RAD/.300X.150/LS.200/.031
C150	ALU Electrolytic Capacitor	10uF/50V, ±20%, 105°C	06-10051-01	CPCYL1/D.200/LS.200/.031
C151	Polyester capacitor	100nF, ±5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C152	Polyester capacitor	100nF, ±5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C154	Polyester capacitor	100nF, ±5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C155	Polyester capacitor	100nF, ±5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C157	ALU Electrolytic Capacitor	47uF/100V, ±20%, 105°C	06-47012-01	CPCYL1/D.300/LS.200/.031
C158	ALU Electrolytic Capacitor	47uF/100V, ±20%, 105°C	06-47012-01	CPCYL1/D.300/LS.200/.031
<b>INDUCTOR</b>				
L101	INDUCTOR	10uH	08-02100-01	
L102	INDUCTOR	10uH	08-02100-01	
L103	INDUCTOR	100uH, EMC421LTB-121NS	A08-01101-01	

# ELECTRICAL PARTS LIST

DESIGNATOR	DESCRIPTION	PART TYPE	PART NUMBER	FOOTPRINT
<b>POT</b>				
RV102	SEMI POT	500Ω, vertical type	09-02501-02	VRES17
RV103	SEMI POT	10KΩ, vertical type	09-02103-02	VRES17
RV104	SEMI POT	100Ω, vertical type	09-02101-01	VRES17
<b>CONNECTOR</b>				
P101B	HOUSING	11PIN2.54-C	13-22511-01	BLKCON.100/VH/TM1SQS/W.300/11
P102B	HOUSING	5PIN2.54-C	13-22505-00	BLKCON.100/VH/TM1SQS/W.300/5
P103B	HOUSING	5PIN3.96-C	13-23905-00	BLKCON.156/VH/TM1SQB/W.355/5
P104A	CONNECTOR	5PIN2.54-C	13-12505-00	BLKCON.100/VH/TM1SQ/W.200/5
P106B	CONNECTOR	4PIN2.54-C	13-12504-00	
<b>P/N</b>	<b>01-27512-00</b>	<b>PCB2 BOARD (MAIN)</b>		
<b>DIODE</b>				
D201	RECTIFY DIODES	1N4007	33-24007-00	DAX/.400X.100/.039
D202	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D203	Zener Diode	24V, 1/2W	33-12400-00	DAX/.300X.080/.031
D204	Zener Diode	24V, 1/2W	33-12400-00	DAX/.300X.080/.031
D205	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D206	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D207	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D208	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D209	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D210	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D211	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D212	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D213	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D214	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D215	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D216	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D217	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D218	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D219	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D220	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
TH201	Thyristor	BT151-500R	33-60116-00	TO-220
TH202	Thyristor	BT151-500R	33-60116-00	TO-220
<b>BRIDGE</b>				
BR201	Rectifier Bridge	KBU8D	33-30822-03	BRIDGE/1.010X.290/.063
BR202	Rectifier Bridge	KBU8D	33-30822-03	BRIDGE/1.010X.290/.063
BR203	BRIDGE	DB104G	33-30142-00	BRIDGE/.400X.500/.047
BR204	BRIDGE	DB104G	33-30142-00	BRIDGE/.400X.500/.047
<b>TRANSISTOR</b>				
Q201	Transistor	2SC1815-GR	31-01815-00	TO92/100/ECB
Q202	Transistor	2SA1015-GR	31-01015-00	TO92/100/ECB
Q203	Transistor	MPSA92	31-00092-00	TO92/100/EBC
Q204	Transistor	MPSA42	31-00042-00	TO92/100/ECB
Q205	Transistor	2SA1015-GR	31-01015-00	TO92/100/ECB
Q206	Transistor	2SA1015-GR	31-01015-00	TO92/100/ECB
Q207	Transistor	2SC1815-GR	31-01815-00	TO92/100/ECB
<b>IC</b>				
IC201	RAGULATOR	NJM317F	03-00317-04	TO220AB
IC202	RAGULATOR	LM337T	03-00337-00	TO220AB
IC203	RAGULATOR	NJM317F	03-00317-04	TO220AB
IC204	RAGULATOR	LM337T	03-00337-00	TO220AB
IC205	AMP Protector IC	HS1237	01-01237-11	SIP.100/8/W.200/L.825
IC206	Dual OPAMP	TL082CP	03-00082-00	DIP8



# ELECTRICAL PARTS LIST

DESIGNATOR	DESCRIPTION	PART TYPE	PART NUMBER	FOOTPRINT
<b>RESISTOR</b>				
R201	Metal Film Resistor	10K $\Omega$ , 1/6W, 5%	07-20103-50	AXJ.200X.080/.031
R202	Metal Film Resistor	22K $\Omega$ , 1/6W, 5%	07-20223-50	AXJ.200X.080/.031
R203	Metal Film Resistor	22K $\Omega$ , 1/6W, 5%	07-20223-50	AXJ.200X.080/.031
R204	Metal Film Resistor	1K $\Omega$ , 1/6W, 5%	07-20102-50	AXJ.200X.080/.031
R205	Metal Film Resistor	1K $\Omega$ , 1/6W, 5%	07-20102-50	AXJ.200X.080/.031
R206	Metal Film Resistor	1K $\Omega$ , 1/6W, 5%	07-20102-50	AXJ.200X.080/.031
R207	Metal Film Resistor	100 $\Omega$ , 1/6W, 5%	07-20101-50	AXJ.200X.080/.031
R208	Metal Film Resistor	1K $\Omega$ , 1/6W, 5%	07-20102-50	AXJ.200X.080/.031
R209	Metal Film Resistor	100 $\Omega$ , 1/6W, 5%	07-20101-50	AXJ.200X.080/.031
R210	Metal Film Resistor	220K $\Omega$ , 1/6W, 5%	07-20224-50	AXJ.200X.080/.031
R211	Metal Film Resistor	4.7K $\Omega$ , 1/6W, $\pm$ 1%	07-24701-50	AXJ.200X.080/.031
R212	Metal Film Resistor	4.7K $\Omega$ , 1/6W, $\pm$ 1%	07-24701-50	AXJ.200X.080/.031
R213	Metal Film Resistor	240 $\Omega$ , 1/6W, $\pm$ 1%	07-22400-50	AXJ.200X.080/.031
R214	Metal Film Resistor	240 $\Omega$ , 1/6W, $\pm$ 1%	07-22400-50	AXJ.200X.080/.031
R215	Metal Film Resistor	2.67K $\Omega$ , 1/6W, $\pm$ 1%	07-22671-50	AXJ.200X.080/.031
R216	Metal Film Resistor	2.67K $\Omega$ , 1/6W, $\pm$ 1%	07-22671-50	AXJ.200X.080/.031
R217	Metal Film Resistor	240 $\Omega$ , 1/6W, $\pm$ 1%	07-22400-50	AXJ.200X.080/.031
R218	Metal Film Resistor	240 $\Omega$ , 1/6W, $\pm$ 1%	07-22400-50	AXJ.200X.080/.031
R219	Metal Film Resistor	4.7K $\Omega$ , 1/6W, $\pm$ 5%	07-20472-50	AXJ.200X.080/.031
R221	Metal Film Resistor	56K $\Omega$ , 1/6W, $\pm$ 5%	07-20563-50	AXJ.200X.080/.031
R222	Metal Film Resistor	56K $\Omega$ , 1/6W, $\pm$ 5%	07-20563-50	AXJ.200X.080/.031
R223	Metal Film Resistor	24.9K $\Omega$ , 1/6W, $\pm$ 1%	07-22492-50	AXJ.200X.080/.031
R224	Metal Film Resistor	24.9K $\Omega$ , 1/6W, $\pm$ 1%	07-22492-50	AXJ.200X.080/.031
R225	Metal Film Resistor	1K $\Omega$ , 1/6W, 1%	07-21001-50	AXJ.200X.080/.031
R226	Metal Film Resistor	1K $\Omega$ , 1/6W, 1%	07-21001-50	AXJ.200X.080/.031
R227	Metal Film Resistor	1K $\Omega$ , 1/6W, 1%	07-21001-50	AXJ.200X.080/.031
R228	Metal Film Resistor	1K $\Omega$ , 1/6W, 1%	07-21001-50	AXJ.200X.080/.031
R229	Metal Film Resistor	2K2 $\Omega$ , 1/6W, 5%	07-20222-50	AXJ.200X.080/.031
R230	Metal Film Resistor	100K $\Omega$ , 1/6W, 5%	07-20104-50	AXJ.200X.080/.031
R231	Metal Film Resistor	4.7K $\Omega$ , 1/6W, $\pm$ 5%	07-20472-50	AXJ.200X.080/.031
R232	Metal Film Resistor	22K $\Omega$ , 1/6W, 5%	07-20223-50	AXJ.200X.080/.031
R233	Metal Film Resistor	33K $\Omega$ , 1/6W, $\pm$ 5%	07-20333-50	AXJ.200X.080/.031
R234	Metal Film Resistor	100 $\Omega$ , 1/6W, 5%	07-20101-50	AXJ.200X.080/.031
R235	Metal Film Resistor	1K $\Omega$ , 1/6W, 5%	07-20102-50	AXJ.200X.080/.031
R236	Metal Oxide Film Resistor	3.3 $\Omega$ , 1W, $\pm$ 5%	07-30339-04	AXJ.600X.125/.039
R237	Metal Oxide Film Resistor	3.3 $\Omega$ , 1W, $\pm$ 5%	07-30339-04	AXJ.600X.125/.039
R238	Metal Film Resistor	10K $\Omega$ , 1/6W, 5%	07-20103-50	AXJ.200X.080/.031
R239	Metal Oxide Film Resistor	180 $\Omega$ , 2W, $\pm$ 5%	07-30181-02	AXJ.600X.125/.039
R240	Metal Film Resistor	820 $\Omega$ , 1/6W, $\pm$ 5%	07-20821-50	AXJ.200X.080/.031
R241	Metal Film Resistor	4.7K $\Omega$ , 1/6W, $\pm$ 5%	07-20472-50	AXJ.200X.080/.031
R242	Metal Film Resistor	10K $\Omega$ , 1/6W, 5%	07-20103-50	AXJ.200X.080/.031
R243	Metal Film Resistor	10K $\Omega$ , 1/6W, 5%	07-20103-50	AXJ.200X.080/.031
R244	Metal Film Resistor	10K $\Omega$ , 1/6W, 5%	07-20103-50	AXJ.200X.080/.031
R245	Metal Oxide Film Resistor	2.2K $\Omega$ , 2W, 5%	07-30222-12	AXJ.800X.125/.039
R247	Metal Film Resistor	1meg $\Omega$ , 1/6W, 5%	07-20105-50	AXJ.200X.080/.031
R248	Metal Film Resistor	10K $\Omega$ , 1/6W, 5%	07-20103-50	AXJ.200X.080/.031
R249	Metal Film Resistor	10K $\Omega$ , 1/6W, 5%	07-20103-50	AXJ.200X.080/.031
R250	Metal Film Resistor	22 $\Omega$ , 1/6W, $\pm$ 5%	07-20220-50	AXJ.200X.080/.031
R251	Metal Film Resistor	100K $\Omega$ , 1/6W, 5%	07-20104-50	AXJ.200X.080/.031
R252	Metal Film Resistor	100K $\Omega$ , 1/6W, 5%	07-20104-50	AXJ.200X.080/.031
R253	Metal Film Resistor	100K $\Omega$ , 1/6W, 5%	07-20104-50	AXJ.200X.080/.031
R254	Metal Film Resistor	330K $\Omega$ , 1/6W, $\pm$ 5%	07-20334-50	AXJ.200X.080/.031
R255	Metal Film Resistor	10K $\Omega$ , 1/6W, 5%	07-20103-50	AXJ.200X.080/.031
R257	Metal Film Resistor	100K $\Omega$ , 1/6W, 5%	07-20104-50	AXJ.200X.080/.031

# ELECTRICAL PARTS LIST

DESIGNATOR	DESCRIPTION	PART TYPE	PART NUMBER	FOOTPRINT
R258	Metal Film Resistor	100K $\Omega$ , 1/6W, 5%	07-20104-50	AX/.200X.080/.031
R259	Metal Film Resistor	100K $\Omega$ , 1/6W, 5%	07-20104-50	AX/.200X.080/.031
R260	Metal Film Resistor	330K $\Omega$ , 1/6W, $\pm$ 5%	07-20334-50	AX/.200X.080/.031
R263	Metal Film Resistor	220 $\Omega$ , 1/6W, 5%	07-20221-50	AX/.200X.080/.031
R264	Metal Film Resistor	220 $\Omega$ , 1/6W, 5%	07-20221-50	AX/.200X.080/.031
R265	Metal Film Resistor	1meg $\Omega$ , 1/6W, 5%	07-20105-50	AX/.200X.080/.031
R266	Metal Film Resistor	1meg $\Omega$ , 1/6W, 5%	07-20105-50	AX/.200X.080/.031
R267	Metal Film Resistor	47K $\Omega$ , 1/6W, 5%	07-20473-50	AX/.200X.080/.031
<b>CAPACITOR</b>				
C201	Polyester capacitor	10nF, $\pm$ 5%, 250V	25-10322-02	RAD/CAP/.300X.150/LS.200/.031
C202	Polyester capacitor	10nF, $\pm$ 5%, 250V	25-10322-02	RAD/CAP/.300X.150/LS.200/.031
C203	ALU Electrolytic Capacitor	10uF/100V, $\pm$ 20%, 105 $^{\circ}$ C	06-10012-01	CPCYL1/D.200/LS.200/.031
C204	ALU Electrolytic Capacitor	10uF/100V, $\pm$ 20%, 105 $^{\circ}$ C	06-10012-01	CPCYL1/D.200/LS.200/.031
C205	Polyester capacitor	100nF, $\pm$ 5%, 100V	25-10412-04	RAD/CAP/.300X.150/LS.200/.031
C206	Polyester capacitor	100nF, $\pm$ 5%, 100V	25-10412-04	RAD/CAP/.300X.150/LS.200/.031
C207	ALU Electrolytic Capacitor	22000uF, $\pm$ 20%, 100V, 105 $^{\circ}$ C	06-22312-01	CPCYL1/D2.165/LS.965/.079
C208	ALU Electrolytic Capacitor	22000uF, $\pm$ 20%, 100V, 105 $^{\circ}$ C	06-22312-01	CPCYL1/D2.165/LS.965/.079
C209	Polyester capacitor	10nF, $\pm$ 5%, 250V	25-10322-02	RAD/CAP/.300X.150/LS.200/.031
C210	Polyester capacitor	10nF, $\pm$ 5%, 250V	25-10322-02	RAD/CAP/.300X.150/LS.200/.031
C211	ALU Electrolytic Capacitor	1uF/50V, $\pm$ 20%, 105 $^{\circ}$ C	06-10951-03	CPCYL1/D.200/LS.200/.031
C212	ALU Electrolytic Capacitor	2200uF, 63V, $\pm$ 20%, 105 $^{\circ}$ C	06-22261-00	CPCYL1/D.900/LS.400/.062
C213	ALU Electrolytic Capacitor	2200uF, 63V, $\pm$ 20%, 105 $^{\circ}$ C	06-22261-00	CPCYL1/D.900/LS.400/.062
C214	Polyester capacitor	100nF, $\pm$ 5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C215	Polyester capacitor	100nF, $\pm$ 5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C216	ALU Electrolytic Capacitor	10uF/50V, $\pm$ 20%, 105 $^{\circ}$ C	06-10051-01	CPCYL1/D.200/LS.200/.031
C217	ALU Electrolytic Capacitor	10uF/50V, $\pm$ 20%, 105 $^{\circ}$ C	06-10051-01	CPCYL1/D.200/LS.200/.031
C218	ALU Electrolytic Capacitor	10uF/50V, $\pm$ 20%, 105 $^{\circ}$ C	06-10051-01	CPCYL1/D.200/LS.200/.031
C219	ALU Electrolytic Capacitor	10uF/50V, $\pm$ 20%, 105 $^{\circ}$ C	06-10051-01	CPCYL1/D.200/LS.200/.031
C220	Polyester capacitor	100nF, $\pm$ 5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C221	Polyester capacitor	100nF, $\pm$ 5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C222	ALU Electrolytic Capacitor	10uF/50V, $\pm$ 20%, 105 $^{\circ}$ C	06-10051-01	CPCYL1/D.200/LS.200/.031
C223	ALU Electrolytic Capacitor	10uF/50V, $\pm$ 20%, 105 $^{\circ}$ C	06-10051-01	CPCYL1/D.200/LS.200/.031
C224	ALU Electrolytic Capacitor	10uF/50V, $\pm$ 20%, 105 $^{\circ}$ C	06-10051-01	CPCYL1/D.200/LS.200/.031
C225	ALU Electrolytic Capacitor	10uF/50V, $\pm$ 20%, 105 $^{\circ}$ C	06-10051-01	CPCYL1/D.200/LS.200/.031
C226	Polyester capacitor	100nF, $\pm$ 5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C227	Polyester capacitor	100nF, $\pm$ 5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C228	ALU Electrolytic Capacitor	1000uF, $\pm$ 20%, 160V, 105 $^{\circ}$ C	06-10212-04	CPCYL1/D.900/LS.400/.062
C229	ALU Electrolytic Capacitor	1000uF, $\pm$ 20%, 160V, 105 $^{\circ}$ C	06-10212-04	CPCYL1/D.900/LS.400/.062
C230	Polyester capacitor	100nF, $\pm$ 5%, 250V	25-10422-01	RAD/.300X.150/LS.200/.034
C231	Polyester capacitor	100nF, $\pm$ 5%, 250V	25-10422-01	RAD/.300X.150/LS.200/.034
C232	ALU Electrolytic Capacitor	100uF/16V, $\pm$ 20%, 105 $^{\circ}$ C	06-10111-07	CPCYL1/D.200/LS.200/.031
C233	ALU Electrolytic Capacitor	330uF, $\pm$ 20%, 16V, 105 $^{\circ}$ C	06-33111-02	CPCYL1/D.300/LS.200/.031
C234	Polyester capacitor	220nF, $\pm$ 5%, 63V	25-22461-02	RAD/CAP/.300X.250/LS.200/.031
C235	ALU Electrolytic Capacitor	10uF/50V, $\pm$ 20%, 105 $^{\circ}$ C	06-10051-01	CPCYL1/D.200/LS.200/.031
C236	Bi-polarized Alu Electrolytic Capacitor	10uF, $\pm$ 20%, 50V, 105 $^{\circ}$ C	06-10051-11	CPCYL1/D.200/LS.200/.031
C237	Polyester capacitor	10nF, $\pm$ 5%, 63V	25-10361-02	RAD/CAP/.300X.150/LS.200/.031
C238	Polyester capacitor	10nF, $\pm$ 5%, 63V	25-10361-02	RAD/CAP/.300X.150/LS.200/.031
C241	Polyester capacitor	100nF, $\pm$ 5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031



# ELECTRICAL PARTS LIST

DESIGNATOR	DESCRIPTION	PART TYPE	PART NUMBER	FOOTPRINT
C242	Polyester capacitor	100nF, ±5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C243	Ceramic Disc Capacitor	10pF, ±5%, 1KV	05-10013-01	CPAX/.200X.100/.031
C244	ALU Electrolytic Capacitor	100uF, 6.3V, ±20%, 105°C	06-10160-07	CPCYL1/D.200/LS.200/.031
C245	ALU Electrolytic Capacitor	10uF/50V, ±20%, 105°C	06-10051-01	CPCYL1/D.200/LS.200/.031
C246	Polyester capacitor	100nF, ±5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C247	Polyester capacitor	100nF, ±5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C248	ALU Electrolytic Capacitor	10uF/50V, ±20%, 105°C	06-10051-01	CPCYL1/D.200/LS.200/.031
C249	Polyester capacitor	100nF, ±5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C250	ALU Electrolytic Capacitor	10uF/50V, ±20%, 105°C	06-10051-01	CPCYL1/D.200/LS.200/.031
C251	Polyester capacitor	100nF, ±5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C252	Ceramic Disc Capacitor	10pF, ±5%, 1KV	05-10013-01	CPAX/.200X.100/.031
C253	ALU Electrolytic Capacitor	10uF/50V, ±20%, 105°C	06-10051-01	CPCYL1/D.200/LS.200/.031
C254	ALU Electrolytic Capacitor	10uF/50V, ±20%, 105°C	06-10051-01	CPCYL1/D.200/LS.200/.031
C255	ALU Electrolytic Capacitor	10uF/50V, ±20%, 105°C	06-10051-01	CPCYL1/D.200/LS.200/.031
C256	Polyester capacitor	100nF, ±5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C257	Polyester capacitor	100nF, ±5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C258	Ceramic Capacitor	100pF, ±5%, 1KV	05-10113-04	CPAX/.200X.100/.031
C259	Ceramic Capacitor	100pF, ±5%, 1KV	05-10113-04	CPAX/.200X.100/.031
C260	Polyester capacitor	100nF, ±5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C261	ALU Electrolytic Capacitor	100uF, 6.3V, ±20%, 105°C	06-10160-07	CPCYL1/D.200/LS.200/.031
<b>JUMPER</b>				
R2G1	Link	L=5mm	21-06500-00	AX/.200X.080/.031
<b>INDUCTOR</b>				
L201	Inductor	0.7uH, horizontal type	08-01079-01	RAD/.850X.450/LS.700/.059
L202	Inductor	0.7uH, horizontal type	08-01079-01	RAD/.850X.450/LS.700/.059
<b>RELAY</b>				
RL201	RELAYS	JQX-115F/036/1HS1	A12-03101-04	RELAY_1
RL202	RELAYS	JQX-115F/036/1HS1	A12-03101-04	RELAY_1
<b>POT</b>				
RV201	Stereo POT	1kΩB, RV142B-20-25A-B1K	09-02102-00	VRES20
<b>CONNECTOR</b>				
J201	HEADPHONE SOCKET	CKX-3.5-20A / LJE0366DS-5	17-07001-07	
RCA201	RCA	2RCA	17-01002-02	RCA2A
P201B	HOUSING	5PIN3.96-C	13-23905-00	BLKCON.156/VH/TM1SQB/W.355/5
P202B	HOUSING	5PIN3.96-C	13-23905-00	BLKCON.156/VH/TM1SQB/W.355/5
P203B	HOUSING	12PIN2.54-C	13-22512-03	BLKCON.100/VH/TM1SQS/W.300/12
P206B	HOUSING	11PIN2.54-C	13-22511-01	BLKCON.100/VH/TM1SQS/W.300/11
P207B	HOUSING	11PIN2.54-C	13-22511-01	BLKCON.100/VH/TM1SQS/W.300/11
P204A	WIRE	UL1015 or UL1569#18AWG, yellow/black/black/blue/red, One terminal:SDN3.96 5pin, another terminal: VH3.96 5pin, L=130mm	14-27605-00	
P205A	WIRE	UL1015 or UL1569#18AWG, yellow/black/black/blue/red, One terminal:SDN3.96 5pin, another terminal: VH3.96 5pin, L=190mm	14-27605-01	
P208A	WIRE	UL2547#24AWG*3C, L=220mm, UL2547#26AWG*2C, L=300mm, One terminal:SCN2.5 8pin, another terminal: two XHB2.54 5pin	14-27608-00	BLKCON.100/VH/TM1SQW.200/8

# ELECTRICAL PARTS LIST

DESIGNATOR	DESCRIPTION	PART TYPE	PART NUMBER	FOOTPRINT
to P901B	WIRE	UL1015#16AWG, L=120mm(black wire), L=100mm(orange/white/blue/ red wire)	14-27606-00	
G201	Ground Solder Tap	GND-8	32-28042-00	
<b>SWITCH</b>				
S201	SWITCH	SSSU122NA1	J11-05202-10	SLIDESWITCHES/SSSU141500
S202	SWITCH	SSSU122NA1	J11-05202-10	SLIDESWITCHES/SSSU141500
S203	SWITCH	SSSU122NA1	J11-05202-10	SLIDESWITCHES/SSSU141500
S204	SWITCH	SSSU122NA1	J11-05202-10	SLIDESWITCHES/SSSU141500
<b>AH P/N : 01-27514-10 C P/N : 01-27514-20 PCB3 BOARD ( STANDBY)</b>				
<b>DIODE</b>				
D401	Super Fast Recovery Rectifier Diode	FR107	33-20107-00	DAX/.400X.100/.039
D402	Schottky Barrier Rectifier	1N5822	33-25822-00	DAX/.300X.200/.059
D403	Zener Diode	4.7V, 1/2W, ±2%	33-14709-05	DAX/.300X.080/.031
D404	Switch Diode	1N5819	33-25819-00	DAX/.400X.100/.039
D405	RECTIFY DIODES	1N4007	33-24007-00	DAX/.400X.100/.039
D406	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D407	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D408	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D409	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
<b>BRIDGE</b>				
BR401	Rectifier Bridge	DB105	33-30162-00	DIP4
<b>IC</b>				
IC401	Power controller IC	TNY274PN	03-00274-00	DIP-8C
IC402	RAGULATOR	L7805CT	03-07805-00	TO220AB/123
PC401	Photocoupler	PC817A	03-00817-01	DIP4
<b>RESISTOR</b>				
R401	Metal Oxide Film Resistor	68KΩ, 1W, ±5%	07-30683-21	AX/.600X.125/.039
R402	Metal Film Resistor	100Ω, 1/6W, 5%	07-20101-50	AX/.200X.080/.031
R403	Metal Film Resistor	510Ω, 1/6W, 5%	07-20511-50	AX/.200X.080/.031
R404	Metal Film Resistor	150Ω, 1/6W, ±5%	07-20151-50	AX/.200X.080/.031
<b>CAPACITOR</b>				
C401	Interfernece Suppression Cap	0.1uF/275V, ±10%	A25-10422-07	RAD/CAP/.400X.200/LS.400/.031
C402	ALU Electrolytic Capacitor	10uF,400V,±20%, 105°C	06-10042-00	CPCYL1/D.400/LS.200/.031
C403	X Capacitor	10nF/275V, ±10%	A25-10322-05	RAD/CAP/.400X.200/LS.400/.031
C404	Polyester capacitor	100nF, ±5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C405	Y Capacitor	1nF, Y Type	A05-10242-00	RAD/CAP/.400X.200/LS.400/.031
C406	ALU Electrolytic Capacitor	220uF, 16V, ±20%, 105°C	06-22111-21	CPCYL1/D.300/LS.200/.031
C407	Polyester capacitor	100nF, ±5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C408	ALU Electrolytic Capacitor	220uF, 16V, ±20%, 105°C	06-22111-21	CPCYL1/D.300/LS.200/.031
C409	Polyester capacitor	100nF, ±5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C410	ALU Electrolytic Capacitor	220uF, 10V, ±20%, 105°C	06-22111-20	CPCYL1/D.300/LS.200/.031
<b>JUMPER</b>				
W401(AH)	Link(φ1.0)	7.5mm	21-10750-00	7.5mm
W402(AH)	Link(φ1.0)	7.5mm	21-10750-00	7.5mm
W403(C)	Link(φ1.0)	7.5mm	21-10750-00	7.5mm
W404	Link(φ1.0)	10mm	21-10101-00	10mm
W405	Link(φ1.0)	10mm	21-10101-00	10mm
<b>INDUCTOR</b>				
L401	INDUCTOR	10uH	19-35980-00	AX/.400X.100/.031
<b>TRANSFORMER</b>				
TR402	Transformer	EE16 9V 5W	A18-37516-00	TRANS_2



# ELECTRICAL PARTS LIST

DESIGNATOR	DESCRIPTION	PART TYPE	PART NUMBER	FOOTPRINT
<b>RELAY</b>				
RL401	RELAYS	DH1U5VDC TV-8 DH5D1-O	A12-02101-01	
<b>FUSE</b>				
F401	FUSE	T1AL/250V	A20-12102-00	
<b>FUSE HOLDER</b>				
F401	FUSE HOLDER	LS-PTF-78 (CQ-200C)	A20-20000-06	RAD/.1000X.400/LS.850/.066
<b>CONNECTOR</b>				
J401	JACK	HS4-CI9120-B009V1-M032	32-26304-00	
J402	JACK	KY187	32-24804-00	
P402B	HOUSING	6PIN2.54-C	13-22506-00	BLKCON.100/VH/TM1SQS/W.300/6
P403B	HOUSING	2PIN3.96-C	13-23902-00	BLKCON.156/VH/TM1SQB/W.355/2
P404B	HOUSING	4PIN7.92-C	13-23907-01	BLKCON.156/VH/TM1SQS/W.355/7
<b>P/N : 01-27513-00 PCB4 BOARD ( DISPLAY)</b>				
<b>DIODE</b>				
D901	LED (three color)	φ5, Blue/Red/Amber Three color BL-BUBJFB52C4V-1	33-50565-02	
D902	LED BLUE	φ3, BLUE, BL-BB52V1	33-50360-06	LED/D.225/LS.100/.039
D903	LED BLUE	φ3, BLUE, BL-BB52V1	33-50360-06	LED/D.225/LS.100/.039
D907	Zener Diode	4.7V, 1/2W	33-14709-00	DAX/.300X.080/.031
D908	Zener Diode	4.7V, 1/2W	33-14709-00	DAX/.300X.080/.031
D909	RECTIFY DIODES	1N4007	33-24007-00	DAX/.400X.100/.039
D910	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D911	Zener Diode	3.3V, 1/2W	33-13309-00	DAX/.300X.080/.031
D912	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D913	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
D914	Switch Diode	1N4148	33-44148-00	DAX/.300X.080/.031
<b>TRANSISTOR</b>				
Q901	Digital Transistor	DTA114ESA	31-00114-03	TO-92
Q902	Digital Transistor	DTA114ESA	31-00114-03	TO-92
Q903	Digital Transistor	DTA114ESA	31-00114-03	TO-92
Q904	Transistor	2SC1815-GR	31-01815-00	TO92/100/ECB
Q905	Digital Transistor	KRC102M-AT/P	31-00102-00	TO-92
Q906	Digital Transistor	KRC102M-AT/P	31-00102-00	TO-92
Q907	Digital Transistor	KRC102M-AT/P	31-00102-00	TO-92
Q908	Digital Transistor	KRC102M-AT/P	31-00102-00	TO-92
Q909	Transistor	2SD667-D	31-00667-01	TO-92
Q910	Transistor	2SA1015-GR	31-01015-00	TO92/100/ECB
<b>IC</b>				
IC901	8-Bit Microcontroller with OTP ROM	EM78P153SP/S/J	03-78153-10	DIP.100/14/W.300/L.775
IC902	Quad 2-Input NAND Buffered B Series Gate	CD4011BCN	03-04011-00	DIP.100/14/W.300/L.775
<b>RESISTOR</b>				
R901	Metal Film Resistor	10KΩ, 1/6W, 5%	07-20103-50	AX/.200X.080/.031
R902	Metal Film Resistor	130Ω, 1/6W, ±5%	07-20131-50	AX/.200X.080/.031
R903	Metal Film Resistor	130Ω, 1/6W, ±5%	07-20131-50	AX/.200X.080/.031
R904	Metal Film Resistor	130Ω, 1/6W, ±5%	07-20131-50	AX/.200X.080/.031
R905	Metal Film Resistor	10KΩ, 1/6W, 5%	07-20103-50	AX/.200X.080/.031
R906	Metal Film Resistor	750Ω, 1/6W, 1%	07-27500-50	AX/.200X.080/.031
R907	Metal Film Resistor	150Ω, 1/6W, ±5%	07-20151-50	AX/.200X.080/.031
R908	Metal Film Resistor	10KΩ, 1/6W, 5%	07-20103-50	AX/.200X.080/.031
R910	Metal Film Resistor	100Ω, 1/6W, 5%	07-20101-50	AX/.200X.080/.031
R913	Metal Film Resistor	10KΩ, 1/6W, 5%	07-20103-50	AX/.200X.080/.031

# ELECTRICAL PARTS LIST

DESIGNATOR	DESCRIPTION	PART TYPE	PART NUMBER	FOOTPRINT
R914	Metal Film Resistor	1K $\Omega$ , 1/6W, 5%	07-20102-50	AX/.200X.080/.031
R915	Metal Film Resistor	4.7K $\Omega$ , 1/6W, $\pm$ 5%	07-20472-50	AX/.200X.080/.031
R916	Metal Film Resistor	1K $\Omega$ , 1/6W, 5%	07-20102-50	AX/.200X.080/.031
R917	Metal Film Resistor	1K $\Omega$ , 1/6W, 5%	07-20102-50	AX/.200X.080/.031
R918	Metal Film Resistor	100K $\Omega$ , 1/6W, 5%	07-20104-50	AX/.200X.080/.031
R919	Metal Film Resistor	33K $\Omega$ , 1/6W, $\pm$ 5%	07-20333-50	AX/.200X.080/.031
<b>CAPACITOR</b>				
C901	ALU Electrolytic Capacitor	1uF/50V, $\pm$ 20%, 105 $^{\circ}$ C	06-10951-03	CPCYL1/D.200/LS.200/.031
C902	ALU Electrolytic Capacitor	1000uF, 10V, $\pm$ 20%, 105 $^{\circ}$ C	06-10211-05	CPCYL/D.400/LS.200/.031
C903	Polyester capacitor	10nF, $\pm$ 5%, 63V	25-10361-02	RAD/CAP/.300X.150/LS.200/.031
C904	Polyester capacitor	100nF, $\pm$ 5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
C905	Polyester capacitor	100nF, $\pm$ 5%, 63V	25-10461-07	RAD/CAP/.300X.150/LS.200/.031
<b>JUMPER</b>				
J901	Link	L=10mm	21-06101-00	AX/.400X.100/.031
J902	Link	L=10mm	21-06101-00	AX/.400X.100/.031
J903	Link	L=7.5mm	21-06750-00	
J904	Link	L=10mm	21-06101-00	AX/.400X.100/.031
J905	Link	L=7.5mm	21-06750-00	
J906	Link	L=10mm	21-06101-00	AX/.400X.100/.031
J907	Link	L=10mm	21-06101-00	AX/.400X.100/.031
J908	Link	L=10mm	21-06101-00	AX/.400X.100/.031
J909	Link	L=10mm	21-06101-00	AX/.400X.100/.031
J910	Link	L=12.5mm	21-06121-01	AX/.500X.100/.031
J911	Link	L=10mm	21-06101-00	AX/.400X.100/.031
J912	Link	L=10mm	21-06101-00	AX/.400X.100/.031
J913	Link	L=10mm	21-06101-00	AX/.400X.100/.031
J914	Link	L=10mm	21-06101-00	AX/.400X.100/.031
J915	Link	L=5mm	21-06500-00	AX/.200X.080/.031
<b>CONNECTOR</b>				
P901A	WIRE	UL2468#24AWG, L=70mm, 6PIN	14-37506-00	BLKCON.100/VH/TM1SQ/W.200/6
P902A--P203B	WIRE	UL2651#28AWG, One terminal: XHB2.54 12pin, another terminal: JC2.54 12, L=450mm	14-27612-00	BLKCON.100/VH/TM1SQ/W.200/12
G901	Ground Solder Tap	GND-8	32-28042-00	
<b>SWITCH</b>				
S901	Tact Switch	IT-1102A-1160	11-04101-05	
<b>P/N 01-27506-00 PCB5 BOARD (HS OPAMP STEREO)</b>				
<b>TRANSISTOR</b>				
Q601	FET	2SK209	J31-00209-00	SM/SC59_SDG
Q602	FET	2SK209	J31-00209-00	SM/SC59_SDG
Q603	Transistor	2SA1312	J31-01312-00	SM/SC59_BEC
Q604	Transistor	2SA1312	J31-01312-00	SM/SC59_BEC
Q605	Transistor	2SC3324	J31-03324-00	SM/SC59_BEC
Q606	Transistor	2SC3324	J31-03324-00	SM/SC59_BEC
Q607	Transistor	2SC3324	J31-03324-00	SM/SC59_BEC
Q608	Transistor	2SC3324	J31-03324-00	SM/SC59_BEC
Q609	Transistor	2SC2983	J31-02983-00	TO126/90/ECB
Q610	Transistor	2SC2983	J31-02983-00	TO126/90/ECB
Q611	Transistor	2SA1225	J31-01225-00	TO126/90/ECB
Q612	Transistor	2SA1225	J31-01225-00	TO126/90/ECB
Q613	Transistor	2SC3324	J31-03324-00	SM/SC59_BEC
Q614	Transistor	2SC3324	J31-03324-00	SM/SC59_BEC



# ELECTRICAL PARTS LIST

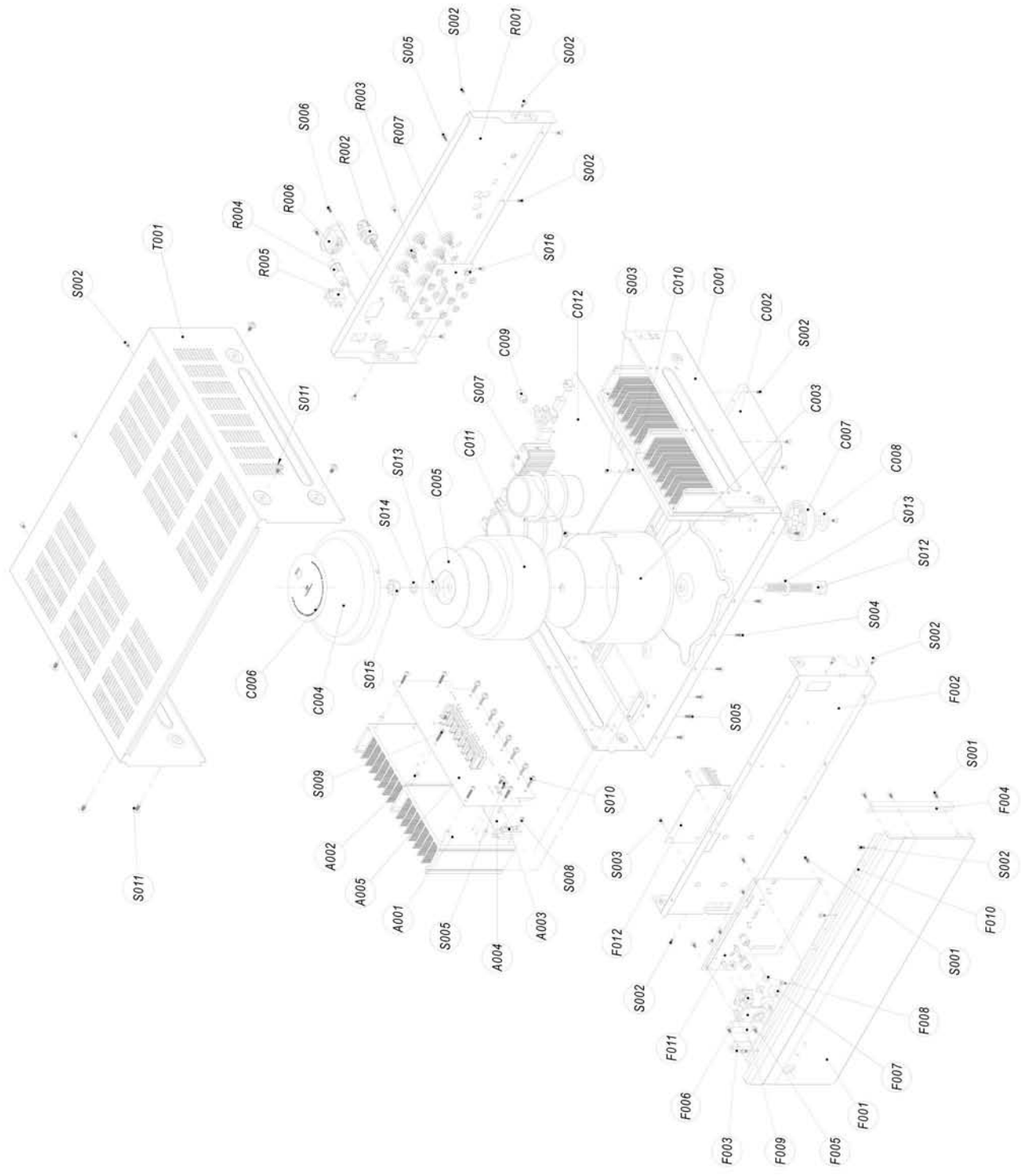
DESIGNATOR	DESCRIPTION	PART TYPE	PART NUMBER	FOOTPRINT
<b>RESISTOR</b>				
R601	Chip Resistor	1meg $\Omega$ ,1/8W, $\pm$ 5%	07-90105-00	SM/R_0603
R602	Chip Resistor	1meg $\Omega$ ,1/8W, $\pm$ 5%	07-90105-00	SM/R_0603
R603	Chip Resistor	220 $\Omega$ ,1/8W, $\pm$ 5%	07-90221-00	SM/R_0603
R604	Chip Resistor	220 $\Omega$ ,1/8W, $\pm$ 5%	07-90221-00	SM/R_0603
R605	Chip Resistor	1K $\Omega$ ,1/8W, $\pm$ 5%	07-90102-00	SM/R_0603
R606	Chip Resistor	1K $\Omega$ ,1/8W, $\pm$ 5%	07-90102-00	SM/R_0603
R607	Chip Resistor	1K $\Omega$ ,1/8W, $\pm$ 5%	07-90102-00	SM/R_0603
R608	Chip Resistor	1K $\Omega$ ,1/8W, $\pm$ 5%	07-90102-00	SM/R_0603
R609	Chip Resistor	1.5K $\Omega$ ,1/8W, $\pm$ 5%	07-90152-00	SM/R_0603
R610	Chip Resistor	1.5K $\Omega$ ,1/8W, $\pm$ 5%	07-90152-00	SM/R_0603
R611	Chip Resistor	1K $\Omega$ ,1/8W, $\pm$ 5%	07-90102-00	SM/R_0603
R612	Chip Resistor	1K $\Omega$ ,1/8W, $\pm$ 5%	07-90102-00	SM/R_0603
R613	Chip Resistor	18K $\Omega$ ,1/8W, $\pm$ 5%	07-90183-00	SM/R_0603
R614	Chip Resistor	18K $\Omega$ ,1/8W, $\pm$ 5%	07-90183-00	SM/R_0603
R615	Chip Resistor	10 $\Omega$ ,1/8W, $\pm$ 5%	07-90100-00	SM/R_0603
R616	Chip Resistor	10 $\Omega$ ,1/8W, $\pm$ 5%	07-90100-00	SM/R_0603
R617	Chip Resistor	10 $\Omega$ ,1/8W, $\pm$ 5%	07-90100-00	SM/R_0603
R618	Chip Resistor	10 $\Omega$ ,1/8W, $\pm$ 5%	07-90100-00	SM/R_0603
R619	Chip Resistor	430 $\Omega$ ,1/8W, $\pm$ 1%	07-94300-00	SM/R_0603
R620	Chip Resistor	430 $\Omega$ ,1/8W, $\pm$ 1%	07-94300-00	SM/R_0603
R621	Chip Resistor	560 $\Omega$ ,1/8W, $\pm$ 1%	07-95600-00	SM/R_0603
R622	Chip Resistor	560 $\Omega$ ,1/8W, $\pm$ 1%	07-95600-00	SM/R_0603
R625	Chip Resistor	150K $\Omega$ ,1/10W, $\pm$ 5%	07-90154-00	SM/R_0603
R626	Chip Resistor	150K $\Omega$ ,1/10W, $\pm$ 5%	07-90154-00	SM/R_0603
R627	Chip Resistor	100K $\Omega$ ,1/10W, $\pm$ 5%	07-90104-00	SM/R_0603
R628	Chip Resistor	100K $\Omega$ ,1/10W, $\pm$ 5%	07-90104-00	SM/R_0603
<b>CAPACITOR</b>				
C601	Ceramic Chip Capacitor	22pF,50V,NPO	26-22051-00	SM/C_0603
C602	Ceramic Chip Capacitor	22pF,50V,NPO	26-22051-00	SM/C_0603
C603	Ceramic Chip Capacitor	47pF,50V,NPO	26-47051-00	SM/C_0603
C604	Ceramic Chip Capacitor	47pF,50V,NPO	26-47051-00	SM/C_0603
C605	Ceramic Chip Capacitor	1nF,50V,NPO	26-10251-10	SM/C_0603
C606	Ceramic Chip Capacitor	1nF,50V,NPO	26-10251-10	SM/C_0603
C607	Ceramic Chip Capacitor	100nF,50V,X7R	26-10451-10	SM/C_0603
C608	Ceramic Chip Capacitor	100nF,50V,X7R	26-10451-10	SM/C_0603
C609	Ceramic Chip Capacitor	100nF,50V,X7R	26-10451-10	SM/C_0603
C610	Ceramic Chip Capacitor	100nF,50V,X7R	26-10451-10	SM/C_0603
C613	Ceramic Chip Capacitor	1uF,25V,Y5V	26-10521-00	SM/C_0603
C614	Ceramic Chip Capacitor	1uF,25V,Y5V	26-10521-00	SM/C_0603
C617	Ceramic Chip Capacitor	220pF,50V,NPO	26-22151-00	SM/C_0603
C618	Ceramic Chip Capacitor	220pF,50V,NPO	26-22151-00	SM/C_0603
<b>CONNECTOR</b>				
P601A	CONNECTOR	10PIN2.54 RIGHT ANGLE	13-12510-01	BLKCON.100/VH/TM1SQ/W.200/10
<b>P/N 01-37512-00 PCB6 BOARD (BP BOARD)</b>				
<b>CONNECTOR</b>				
P901B	CONNECTOR	VH 3.96-6A	13-23906-00	
<b>Assembly Parts</b>				
<b>FUSE</b>				
	FUSE	T10AL/250V (AH)	A20-12103-00	
	FUSE	T5AL/250V (C)	A20-12502-00	
<b>CONNECTOR</b>				
AC INLET to Switch	WIRE	UL1672#16AWG , red, L=100mm	A14-37501-00	

# ELECTRICAL PARTS LIST

DESIGNATOR	DESCRIPTION	PART TYPE	PART NUMBER	FOOTPRINT
Switch to Fuse holder	WIRE	UL1672#16AWG , red, L=100mm	A14-37501-00	
AC INLET to J401	WIRE	UL1672#16AWG,blue, L=460mm	A14-37501-01	
Fuse holder to J402	WIRE	UL1672#16AWG , red, L=380mm	A14-37501-02	
P206B--P101B(L CH)	WIRE	UL2468#24AWG*5C&6C,T wo terminal: XHB2.54 11pin, L=150mm	14-27611-00	
P207B--P101B(R CH)	WIRE	UL2468#24AWG*5C&6C,T wo terminal: XHB2.54 11pin, L=200mm	14-27611-01	



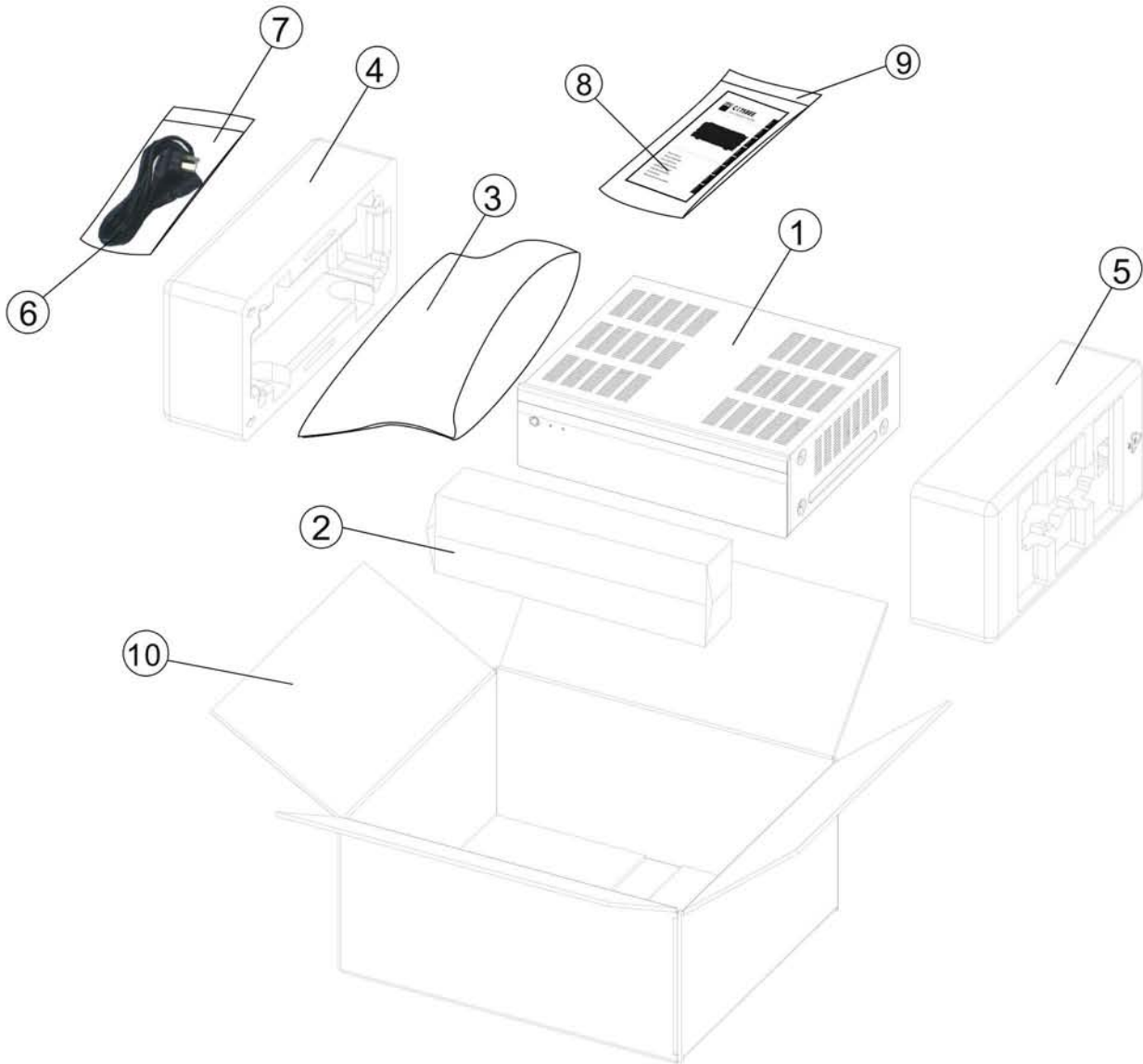
EXPLODED VIEW



# EXPLODED VIEW PARTS LIST

REF.NO	PART NO.	DESCRIPTION	Qty.	REF.NO	PART NO.	DESCRIPTION	Qty.
	01-37501-00	Poweramp Module Board	2	F008	76-062001-1	LED Lens	2
A001	70-124010-1	Main Heatsink	2	F009	79-124003-0	CR Foam C	1
A002	85-010001-0	Spacer	10	F010	79-062001-0	Rubber Pad	4
A003	66-018005-0	Thermal Switch Clamping	4	F011	01-27513-00	Display Board	1
A004	78-124001-0	Insulated Cashion	4	F012	01-27514-10	Standby Board	AH:1
A005	02-37501-00	Power Module Board	2		01-27514-20	Standby Board	C:1
S005	61-023208-0	Self Taping Screws BTB3×8	20				
S008	61-023212-0	Self Taping Screw BTB3×12	4	R001	67-125011-2A	Rear Panel	AH:1
S009	61-023215-0	Self Taping Screw BTB3×15	10		67-125001-2A	Rear Panel	C:1
S010	61-353515-0	Taptite Screw 3×15	16	R002	17-03001-17	Binding Post(Black)	4
				R003	17-03001-16	Binding Post(Red)	4
C001	67-124004-3	New Chassis	1	R004	JA20-20000-10	Fuse Holder	1
C002	67-124010-0	Base Cover	1	R005	A11-01101-03	Rocker Switch	1
C003	67-124011-0	Shielding Box	1	R006	A17-07002-07	AC Inlet	1
C004	67-124012-0	Shielding Box Cover	1	R007	01-37512-00	BP Board	1
C005	66-005007-0	Metal Disc	1				
C006	94-124005-0	Transformer label	1	T001	67-124003-2	Top Cover Graphite	1
C007	75-124001-0	Foot	4		67-124013-2	Top Cover Titanium	Ti:1
C008	J78-001002-0	Foot Pad	4	T001	from S/N greater than: H02C275BEEG02144		
C009	73-003001-0	Rotate Knob	1				
C010	69-005001-0	Copper Spacer	3	S001	61-023206-0	Self Taping Screws BTB3×6	12
C011	A18-37571-01	Main Transformer	1	S002	61-023106-0	Self Taping Screws STB3×6	30+3
C012	01-27512-00	Main Board	1		61-023106-1	Self Taping Screws STB3×6	Ti:3
				S003	61-023506-0	Machine Screws MB3×6	9
F001	J70-125001-2A	Fascia	1	S004	61-023108-0	Self Taping Screws STB3×8	5
	J70-125011-2A	Fascia	Ti:1	S005	61-023208-0	Self Taping Screws BTB3×8	13
F002	67-125002-3	New Subfascia	1	S006	61-073108-0	Self Taping Screws STO3×8	2
F003	J70-124002-	End Cap L	1	S007	61-373506-0	Machine Screw M3×6	1
	J70-124012-0	End Cap L	Ti:1	S011	61-084108-0	Self Taping Screws STPW4X8	6
F004	J70-124003-0	End Cap R	1		61-084106-2	Self Taping Screws STPW4X6	Ti:6
	J70-124013-0	End Cap R	Ti:1	S012	64-110080-1	Bolts,M10×80	1
F005	77-124004-0	Power Button Bezel	1	S013	63-011020-3	Washers	2
	77-123014-1	Power Button Bezel	Ti:1	S014	63-021030-0	Spring Washers	1
F006	J71-124001-0	Power Button	1	S015	62-011002-0	Nut,M10	1
	J71-124011-0	Power Button	Ti:1	S016	63-040506-1	Serrated Lock Washer	8
F007	77-062001-1	LED Lens Bezel	2				
	77-062011-1	LED Lens Bezel	Ti:2				

# PACKING DIAGRAM



REF.N0	Part No.	Description	Qty.
1	00-27510-10	C275Bee AH Version	AH:1
	00-27500-20	C275Bee C Version	C:1
	00-27500-30	C275Bee CT Version	CT:1
2	90-005002-3	Non-Woven Cloth	1
3	90-005001-0	Polybag	1
4	89-005002-5	Polyfoam End Cap(2)	1
5	89-005001-6	Polyfoam End Cap(1)	1
6	JA15-10125-01 or A15-10125-00	AC Cord	AH:1
	JA15-10250-20 or A15-10250-00	AC Cord	C/CT:1
7	90-001013-0	AC Cord Polybag	1
8	30-42751-00	Instruction Manual	1
9	90-001002-0	Manu Polybag	1
10	88-125001-0A	Carton Box	1

