

C 355BEE

**STEREO
AMPLIFIER**

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AMPLIFIER**

SERVICE MANUAL

NAD

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PRODUCT SAFETY SERVICING GUIDELINES

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

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

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

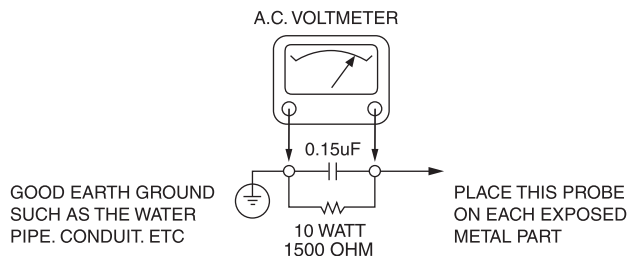
SAFETY CHECKS

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

SUBJECT : FIRE & SHOCK HAZARD

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

VOLTAGE MEASURE MUST NOT EXCEED 75 VOLTS R.M.S. THIS CORRESPONDS TO 0.5 MILLIAMP AC ANY VALUE EXCEEDING THIS LIMIT CONSTITUTES A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED IMMEDIATELY.



SUBJECT : GRAPHIC SYMBOLS



THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK.



THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

SUBJECT : TIPS ON PROPER INSTALLATION

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

SERVICING PRECAUTIONS

CAUTION : Before servicing the A/V Receiver covered by this service data and its supplements and addends, read and follow the **SAFETY PRECAUTIONS**. **NOTE** : if unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions in this publication, always follow the safety precautions.

Remember Safety First:

General Servicing Precautions

1. Always unplug the A/V Receiver AC power cord from the AC power source before:
 - (1) Removing or reinstalling any component, circuit board, module, or any other assembly.
 - (2) Disconnecting or reconnecting any internal electrical plug or other electrical connection.
 - (3) Connecting a test substitute in parallel with an electrolytic capacitor.**Caution** : A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.
2. Do not spray chemicals on or near this A/V Receiver or any of its assemblies.
3. Unless specified otherwise in this service data, clean electrical contacts by applying an appropriate contact cleaning solution to the contacts with a pipe cleaner, cottontipped swab, or comparable soft applicator.
Unless specified otherwise in this service data, lubrication of contacts is not required.
4. Do not defeat any plug/socket B+ voltage interlocks with which instruments covered by this service manual might be equipped.
5. Do not apply AC power to this A/V Receiver and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.
6. Always connect test instrument ground lead to the appropriate ground before connecting the test instrument positive lead. Always remove the test instrument ground lead last.

Insulation Checking Procedure

Disconnect the attachment plug from the AC outlet and turn the power on. Connect an insulation resistance meter(500V) to the blades of the attachment plug. The insulation resistance between each blade of the attachment plug and accessible conductive parts (Note 1) should be more than 1M-ohm.

Note 1 : Accessible Conductive Parts including Metal panels, Input terminals, Earphone jacks, etc.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical Es devices are integrated circuits and some field effect transistors and semiconductor chip components.

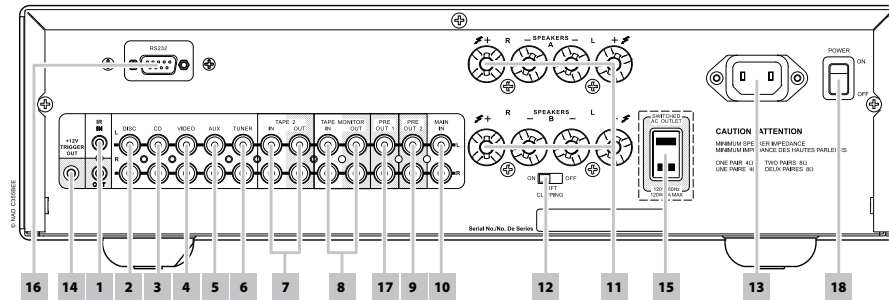
The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an antistatic solder removal device. Some solder removal devices not classified a "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freonpropelled chemicals. These can generate electrical charge sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil, or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

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

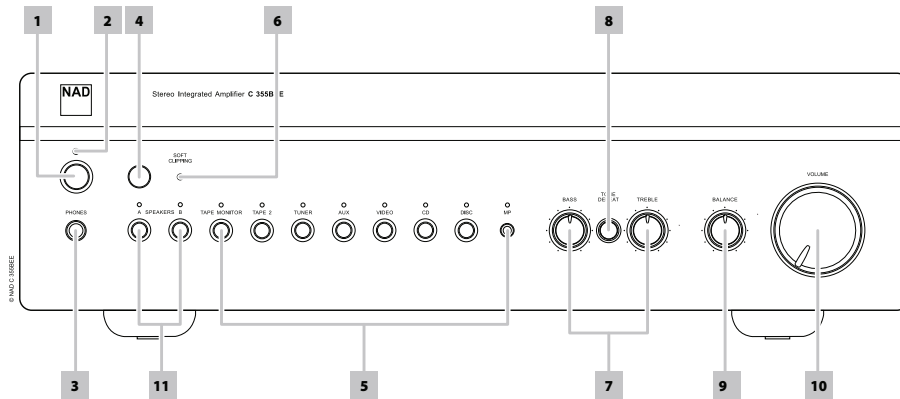
8. Minimize bodily motions when handing unpackaged replacement ES devices. (Normally harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

REAR PANEL CONNECTIONS



- | | |
|---------------------------------|--------------------------------------|
| 1. IR INPUT/OUTPUT | 10. MAIN IN |
| 2. DISC INPUT | 11. SPEAKER OUT |
| 3. CD INPUT | 12. SOFT CLIPPING |
| 4. VIDEO INPUT | 13. AC LINE CORD |
| 5. AUX INPUT | 14. +12V TRIGGER OUT |
| 6. TUNER INPUT | 15. SWITCHED AC OUTLET (ONLY FOR AH) |
| 7. TAPE 2 IN/OUT | 16. RS-232 INPUT |
| 8. TAPE 1 IN/OUT (TAPE MONITOR) | 17. PRE OUT 1 |
| 9. PRE-OUT (2) | 18. ON OFF POWER (AC) SWITCH |

FRONT PANEL CONTROLS



- | | |
|---------------------------------|----------------------|
| 1. POWER | 6. SOFT CLIPPING LED |
| 2. POWER/STANDBY/PROTECTION LED | 7. TONE CONTROLS |
| 3. HEADPHONE | 8. TONE DEFEAT |
| 4. IR RECEIVER | 9. BALANCE |
| 5. INPUT SELECTOR | 10. VOLUME |
| | 11. SPEAKERS A & B |

PREAMPLIFIER SECTION

LINE LEVEL INPUTS

(Disk, CD, Video, Auxiliary, Tuner, Tape 1, Tape 2)

Input impedance (R and C)	200 kohms + 100 pF
Input sensitivity (ref. rated power)	310 mV
Maximum input signal	6 V
Signal / Noise ratio, A-weighted (from CD Input to Speakers Output, Volume Setting for 500mV in , 8ohms 1W out)	97.0 dB ref. 1W
Signal to noise ratio preamp out, IHF "A" weighted	110 dB re 500mV
Frequency response, 20 Hz – 20 kHz	< +/-0.1 dB (tone defeat on) < +/-0.2 dB (tone defeat off)
THD + Noise, SMPTE IM	< 0.01% at 5 V out

LINE LEVEL OUTPUTS

Pre-amp output impedance	80 ohms
Tape output impedance	Source Z + 1kohms
Maximum output level	pre-amp out : > 11 V Tape-out : > 10 V

CONTROLS

Treble	+/- 5 dB at 10 kHz
Bass	+/- 8 dB at 100 Hz

IR IN and OUT

Input Resistance	> 10 kohms
Input Voltage	Min 5 V
Output Resistance	< 30 ohms

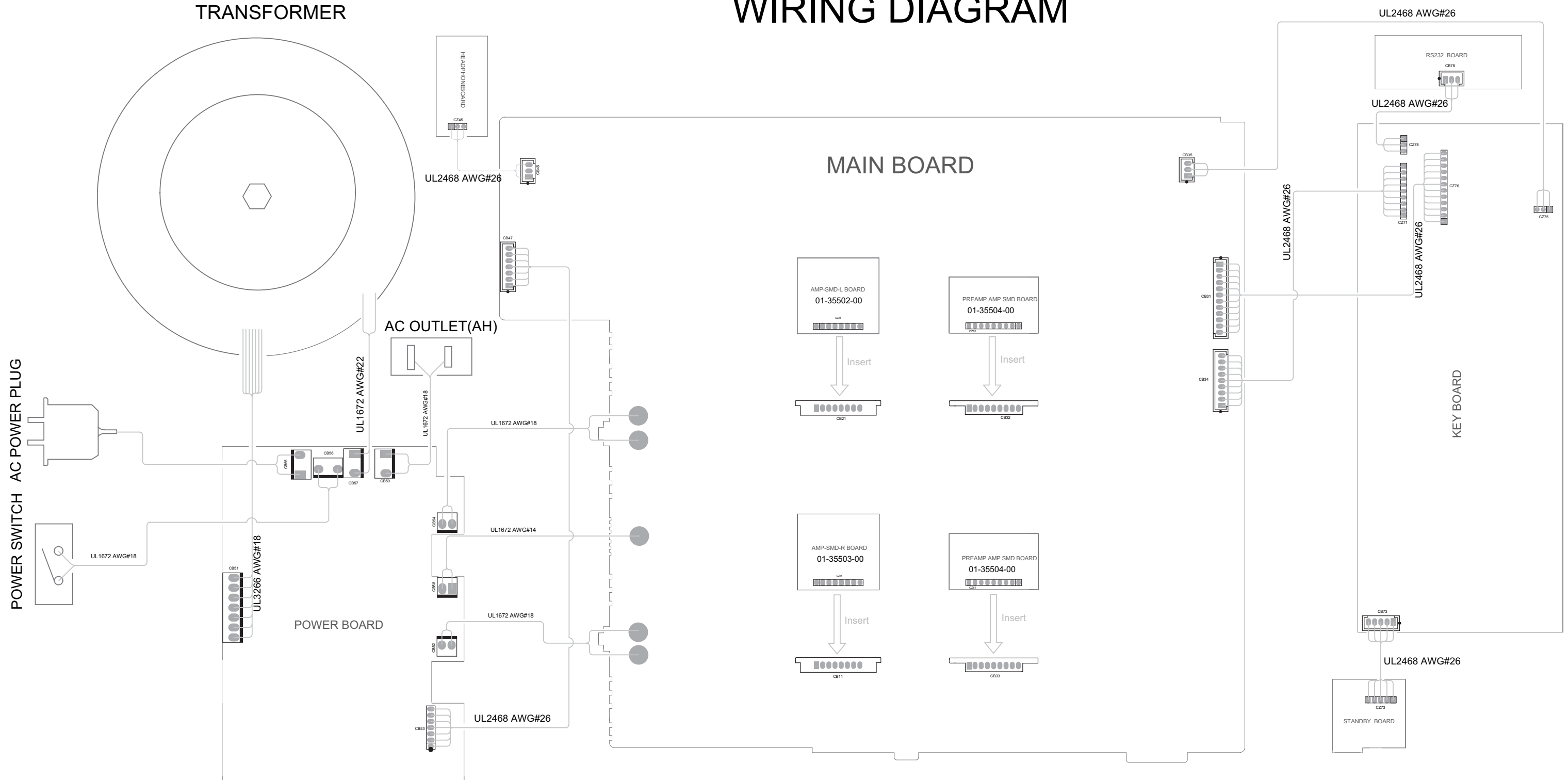
TRIGGER Out

Output Current	50 mA
Output Voltage	12 V

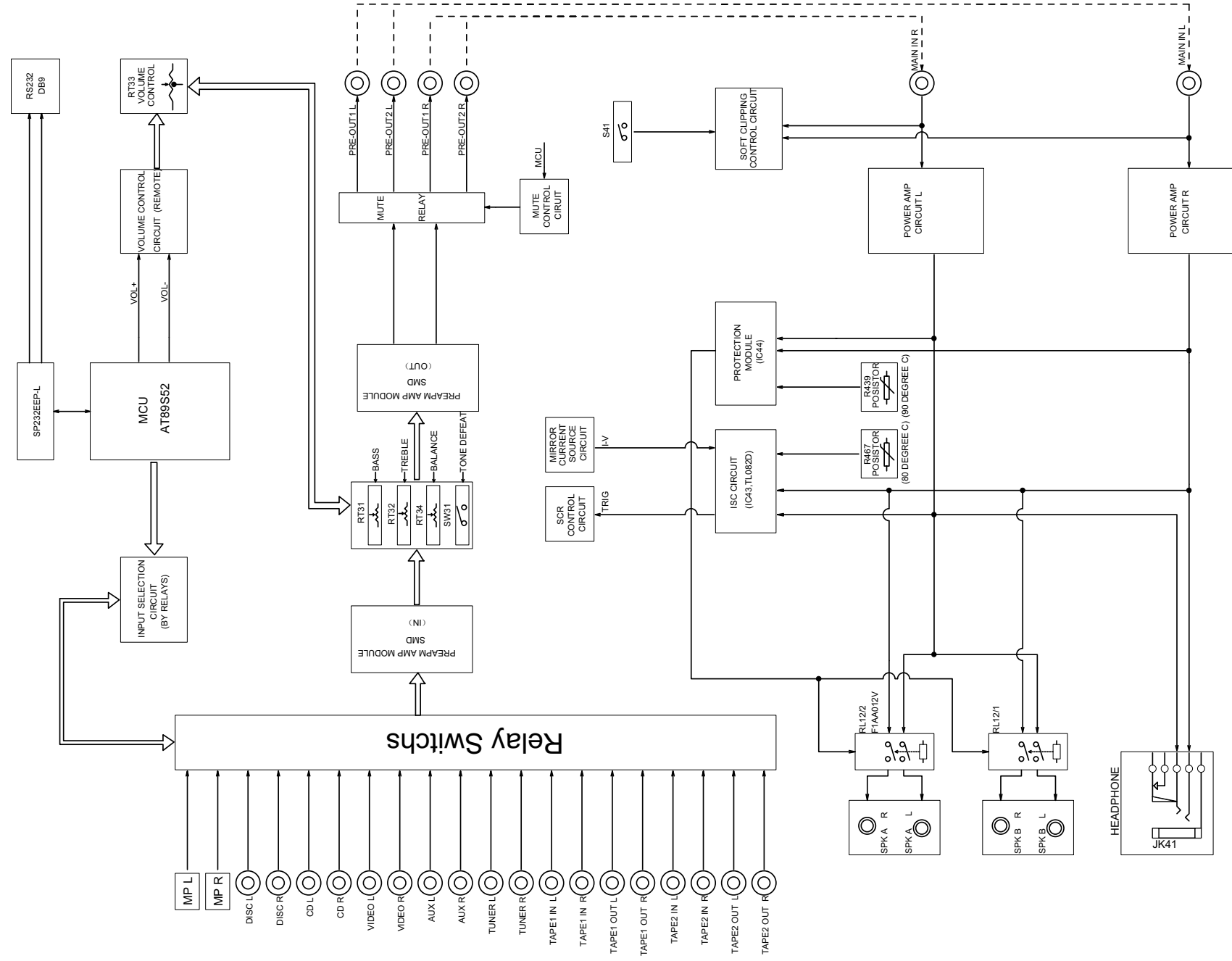
DIMENSIONS AND WEIGHTS

Net Weight	6.5 kg (14.3 lb)
Shipping Weight	8 kg (17.6 lb)
DIMENSION (W×H×D)	435 × 116 × 292MM

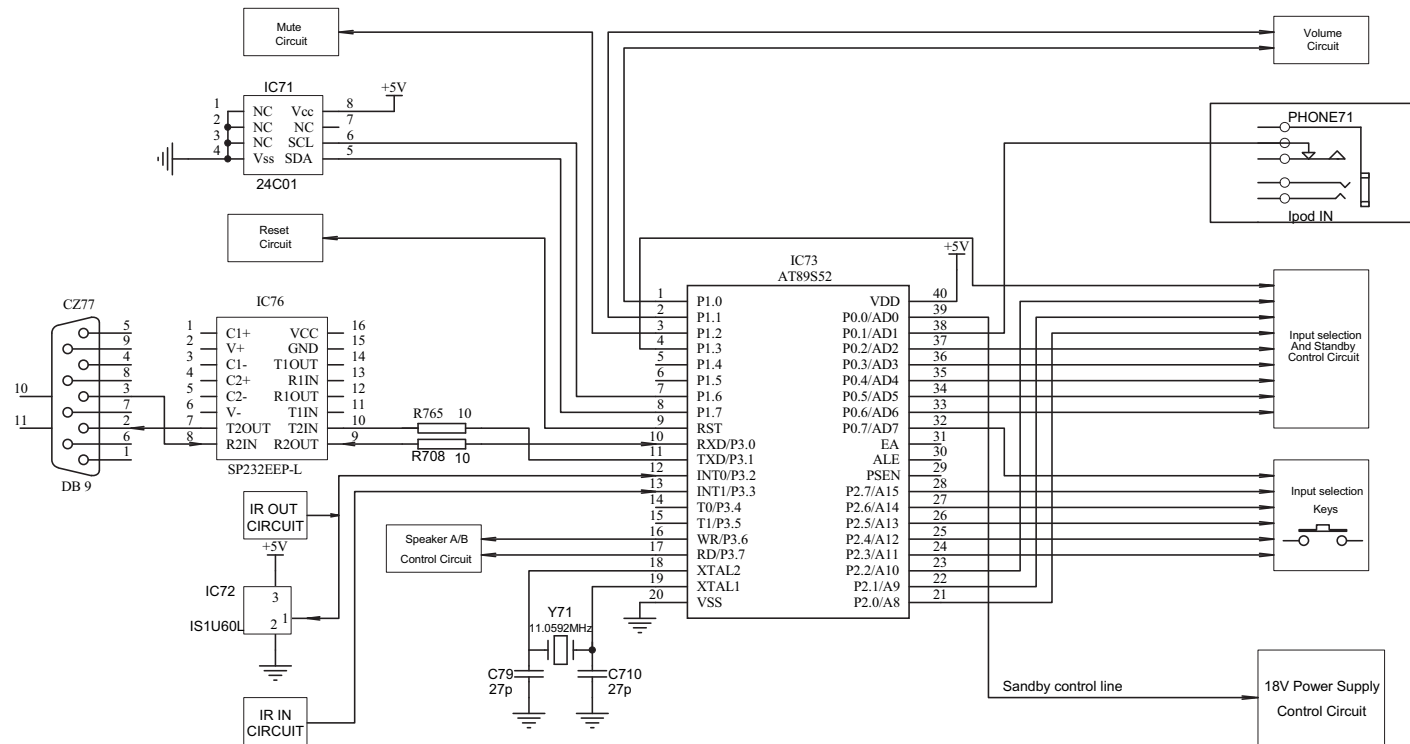
WIRING DIAGRAM



BLOCK DIAGRAM

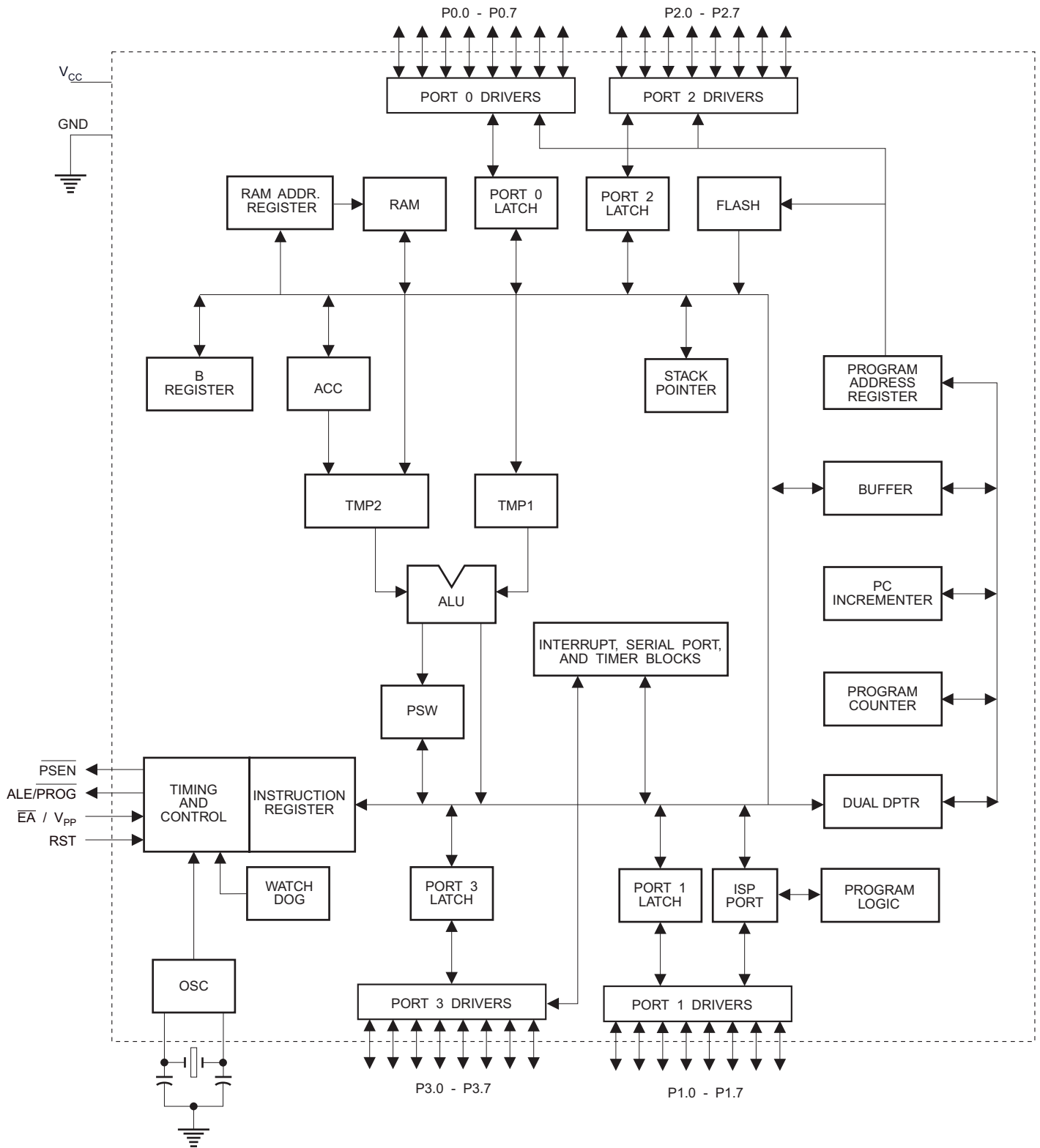


MICROPROCESSOR CONNECTION DIAGRAM

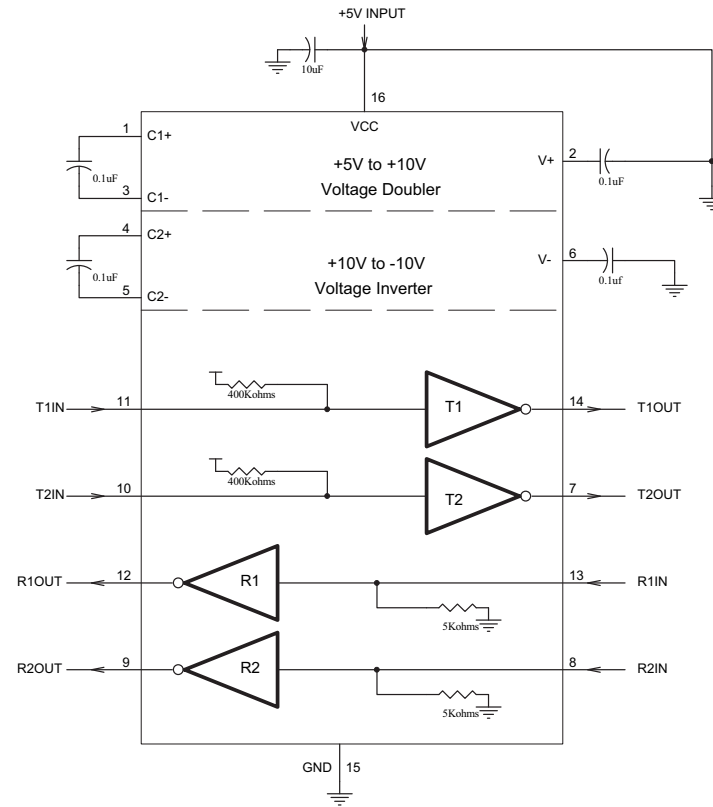
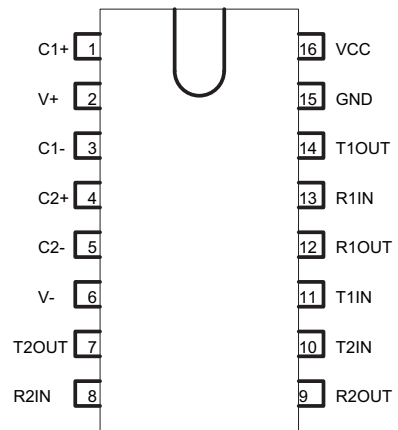


AT89S52

KEY BOARD IC73



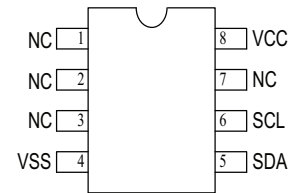
SP232EEP
 KEYBOARD: IC76



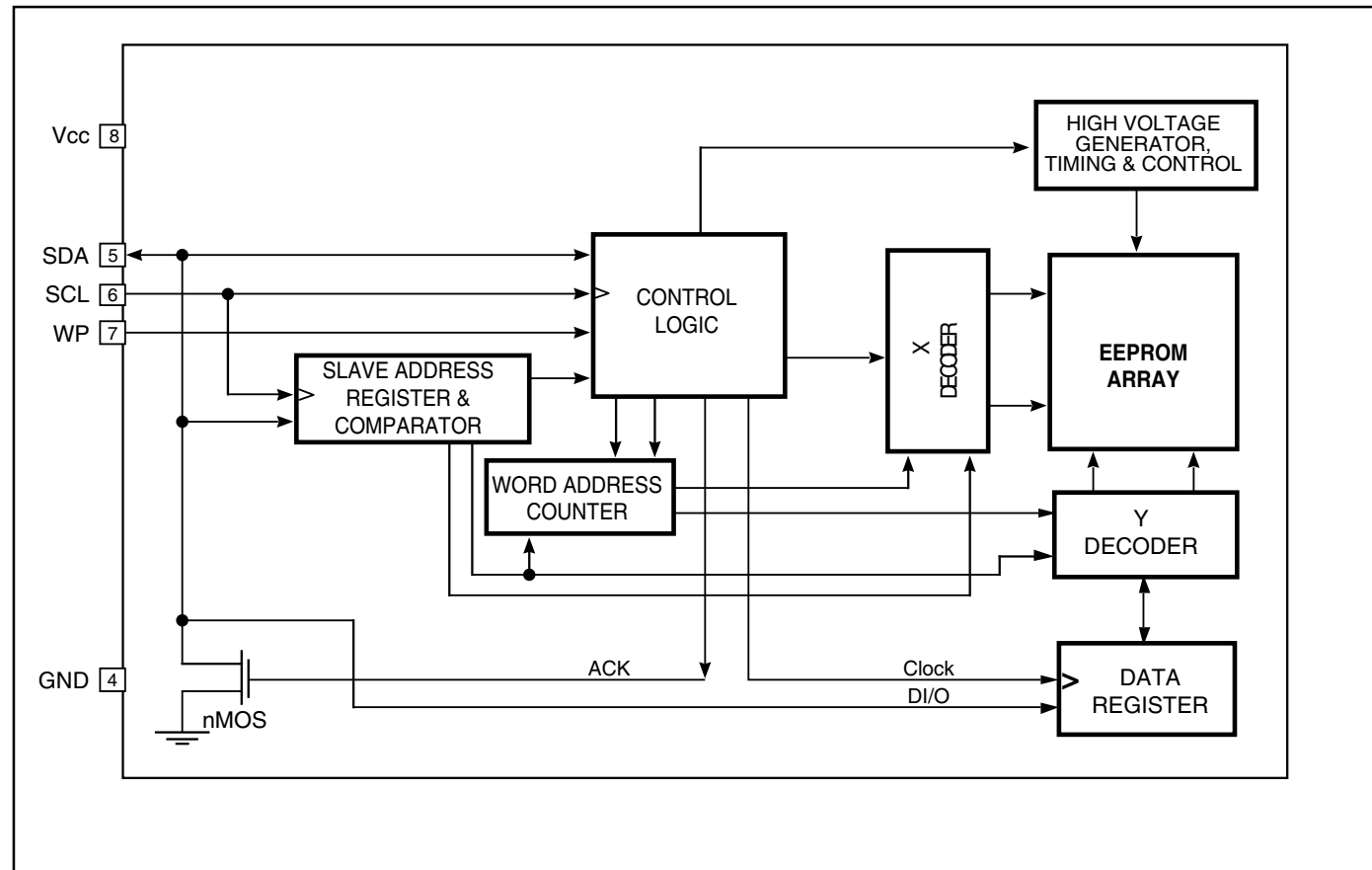
24C01

KEY BOARD: IC71

PIN CONFIGURATION



FUNCTIONAL BLOCK DIAGRAM



ALIGNMENT PROCEDURES

I. INITIAL

A. LOWEST VOLUME ADJUSTMENT

1. Tune the volume pot to lowest state.
2. Input a high voltage signal such as 5V from CD input.
3. Connect a oscilloscope to L channel binding posts.
4. Observing the oscilloscope,adjust VR301,make the output of speakers become to the lowest level.
5. Adjusting VR302,make R channel output become to the lowest level by same way.

B. IDLING CURRENT

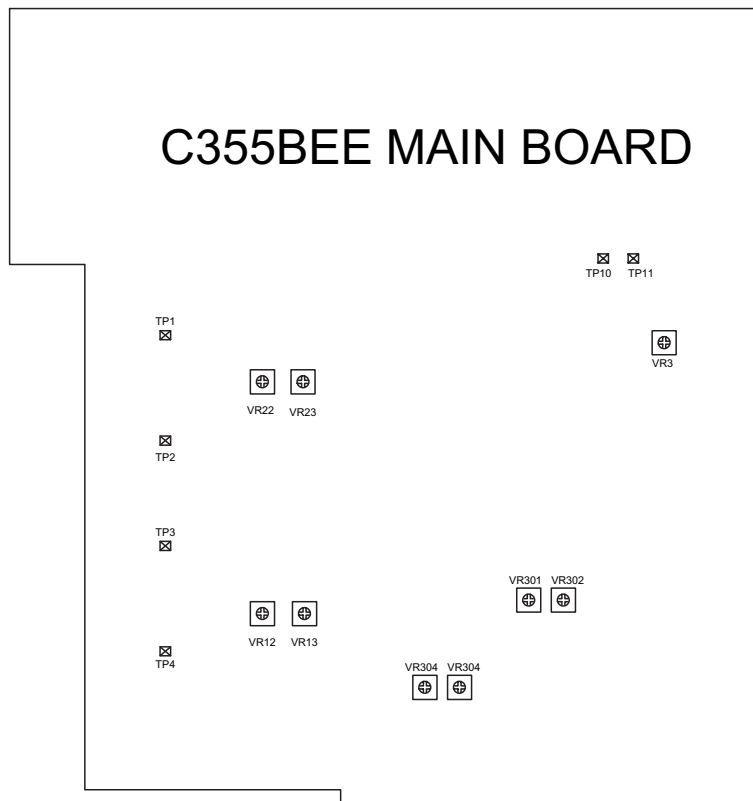
1. Power on
2. Running 5 minutes with no signal
3. Connect a DC voltmeter to TP1 and TP2 ,adjust VR22/VR23 for 6mV reading on voltmeter.
4. Connect a DC voltmeter to TP3 and TP4 ,adjust VR12/VR13 for 6mV reading on voltmeter.

C.ISC CIRCUIT ORIGINAL ADJUSTING

Adjust the pot VR3 to make the DC voltage of the point of TP10 to the same as TP11

II. FINAL ADJUSTMENT

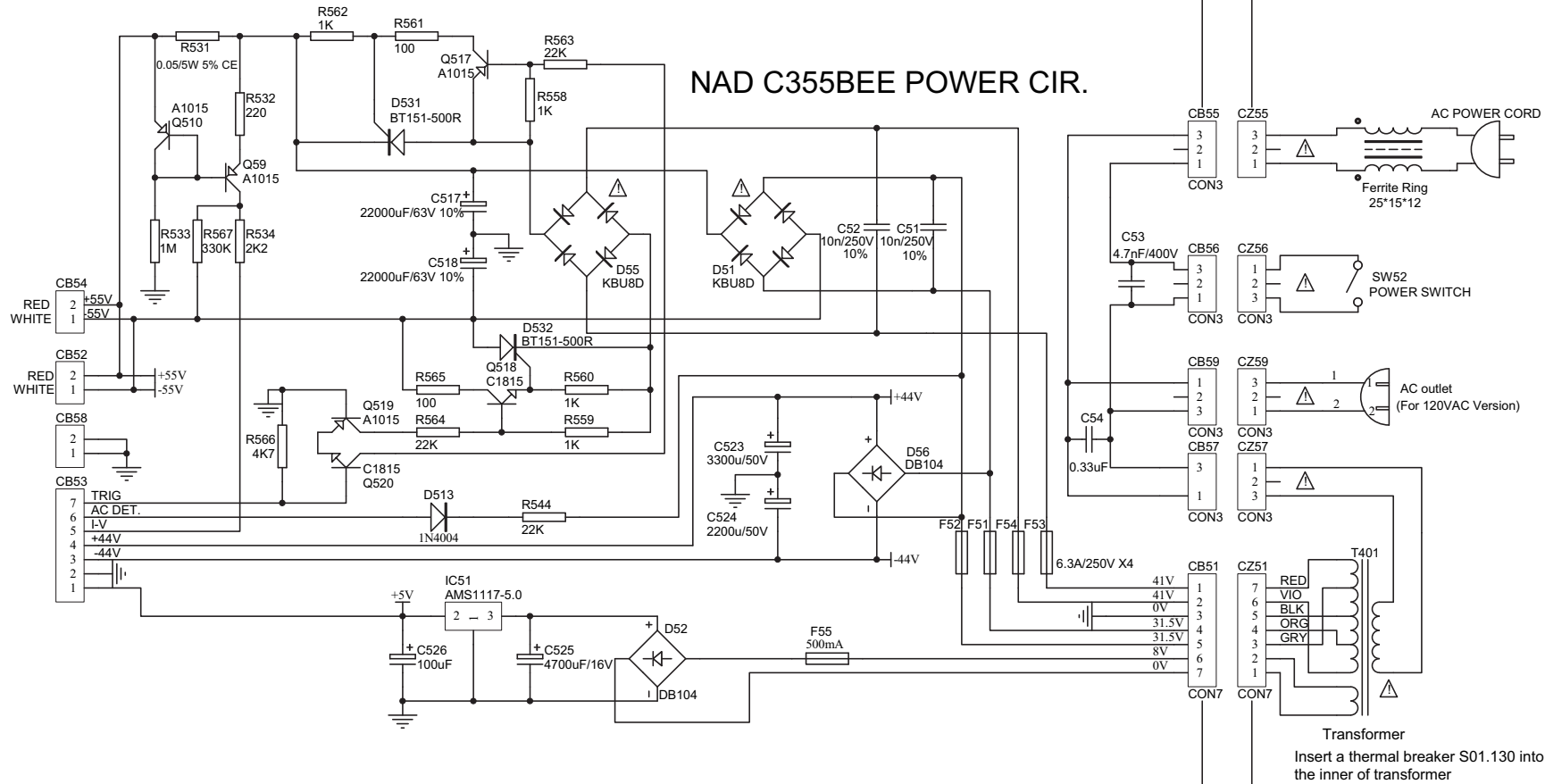
Repeat procedure A,B and C for the lowest volume level, idling current alignment and ISC original level respectively.



SCHMATICS DIAGRAM(1/4)

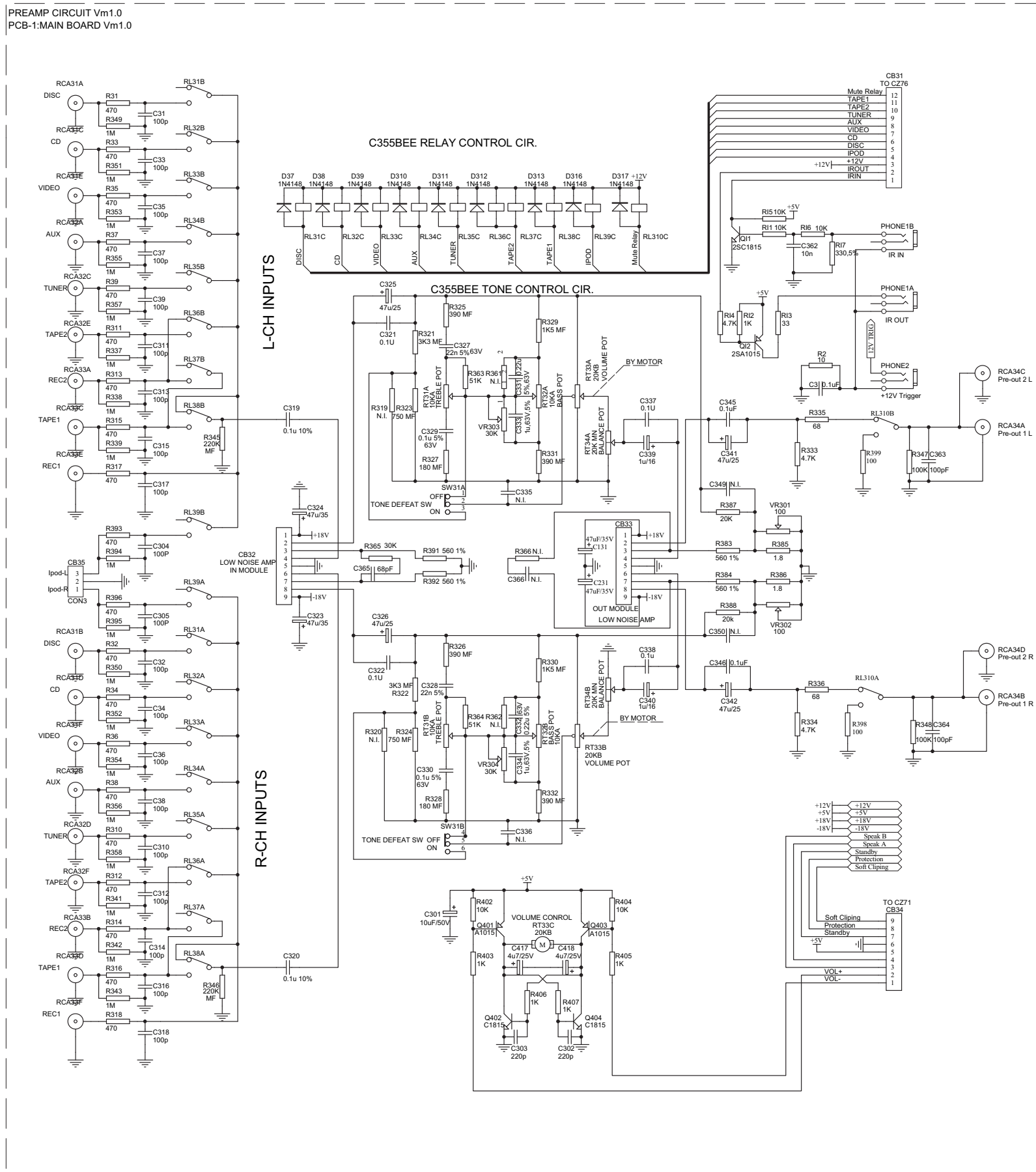
POWER SUPPLY CIRCUIT Vm1.0
PCB-2:POWER BOARD Vm1.0

NAD C355BEE POWER CIR.

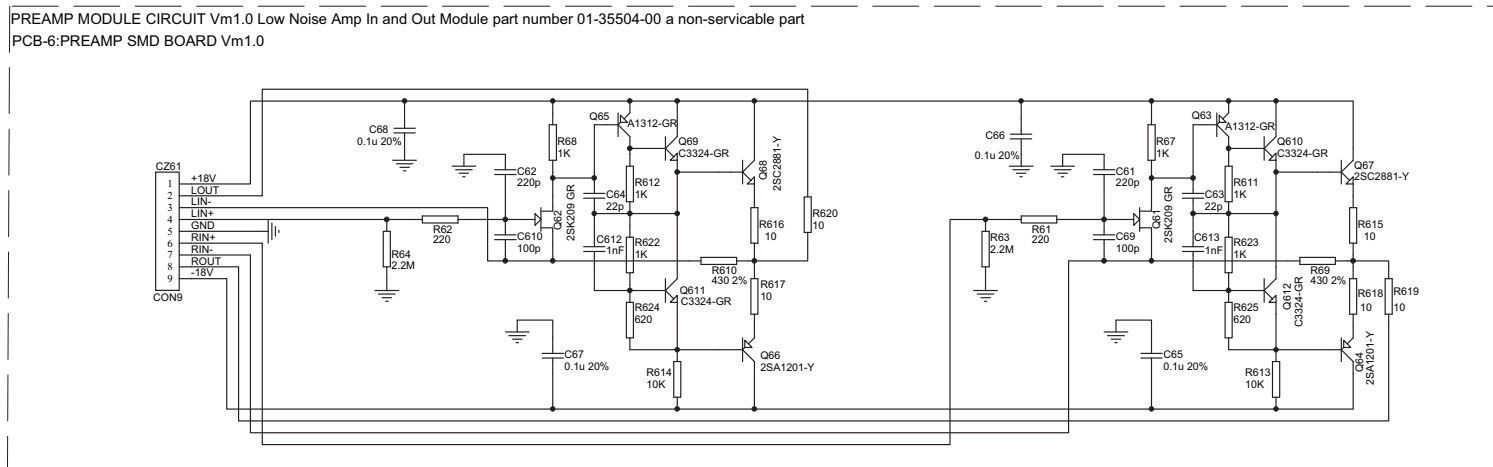


SCHEMATIC DIAGRAM(2/4)

PREAMP CIRCUIT Vm1.0
PCB-1:MAIN BOARD Vm1.0

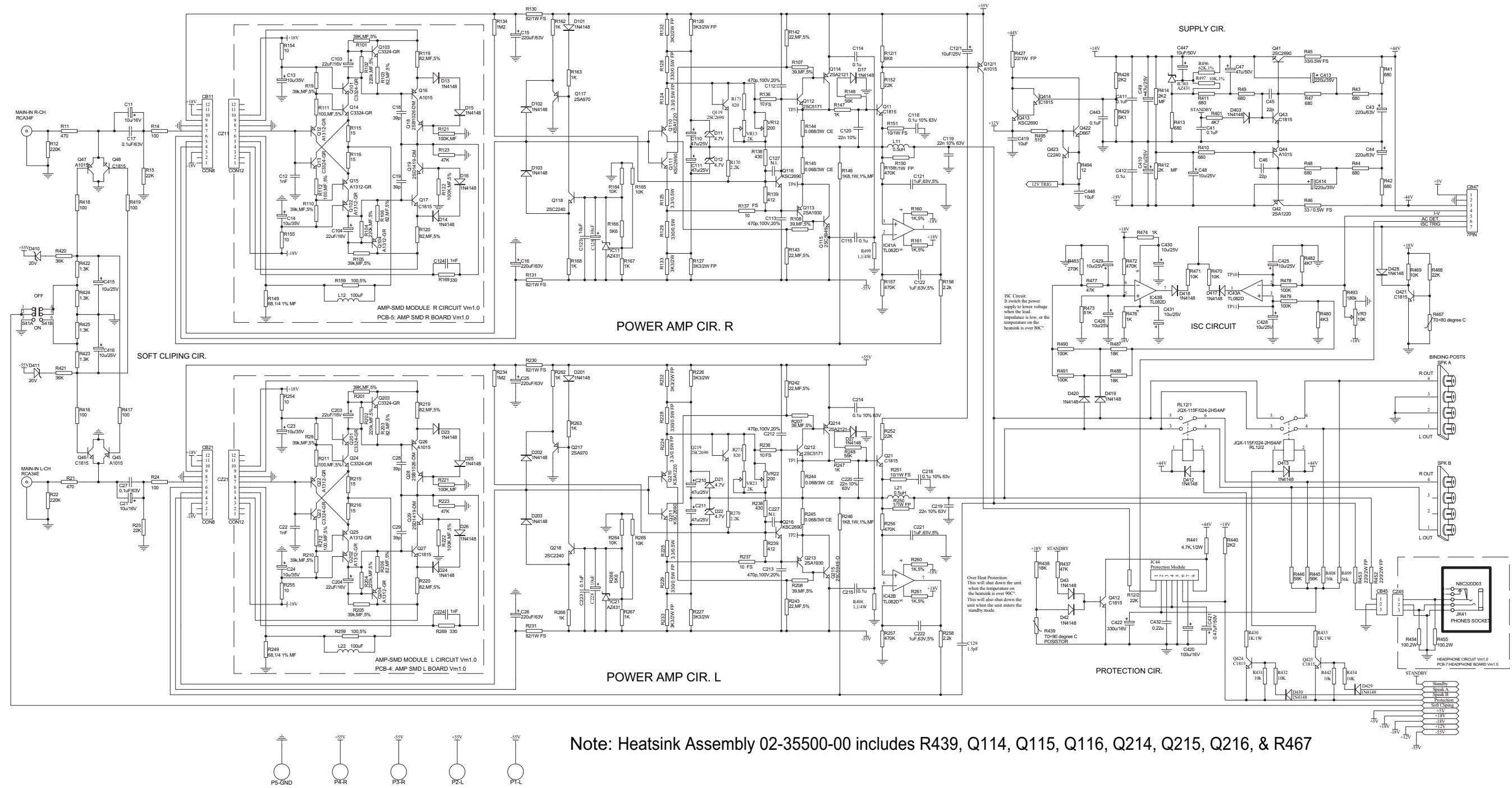


PREAMP MODULE CIRCUIT Vm1.0 Low Noise Amp In and Out Module part number 01-35504-00 a non-servicable part
PCB-6:PREAMP SMD BOARD Vm1.0

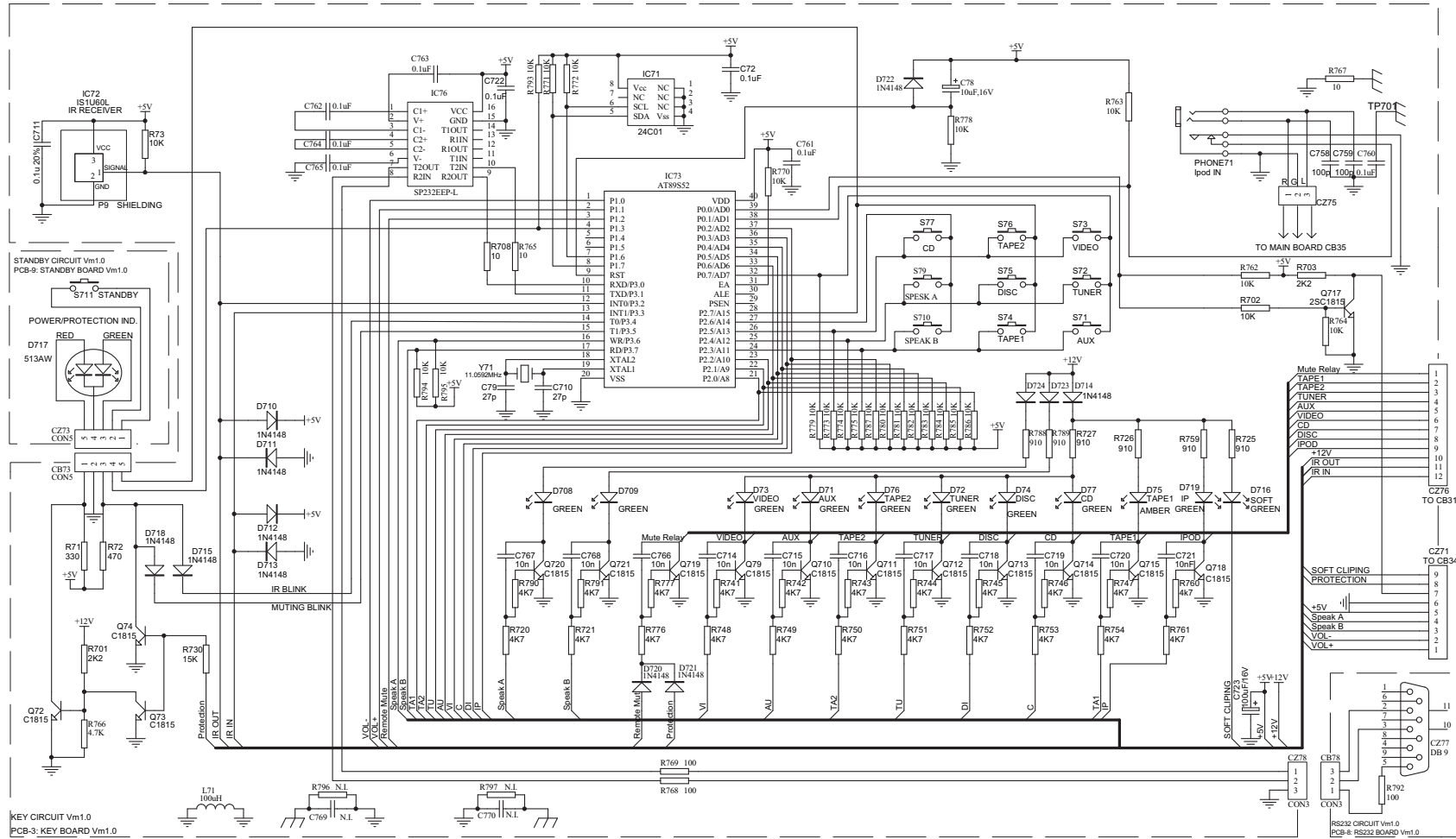


SCHEMATIC DIAGRAM(3/4)

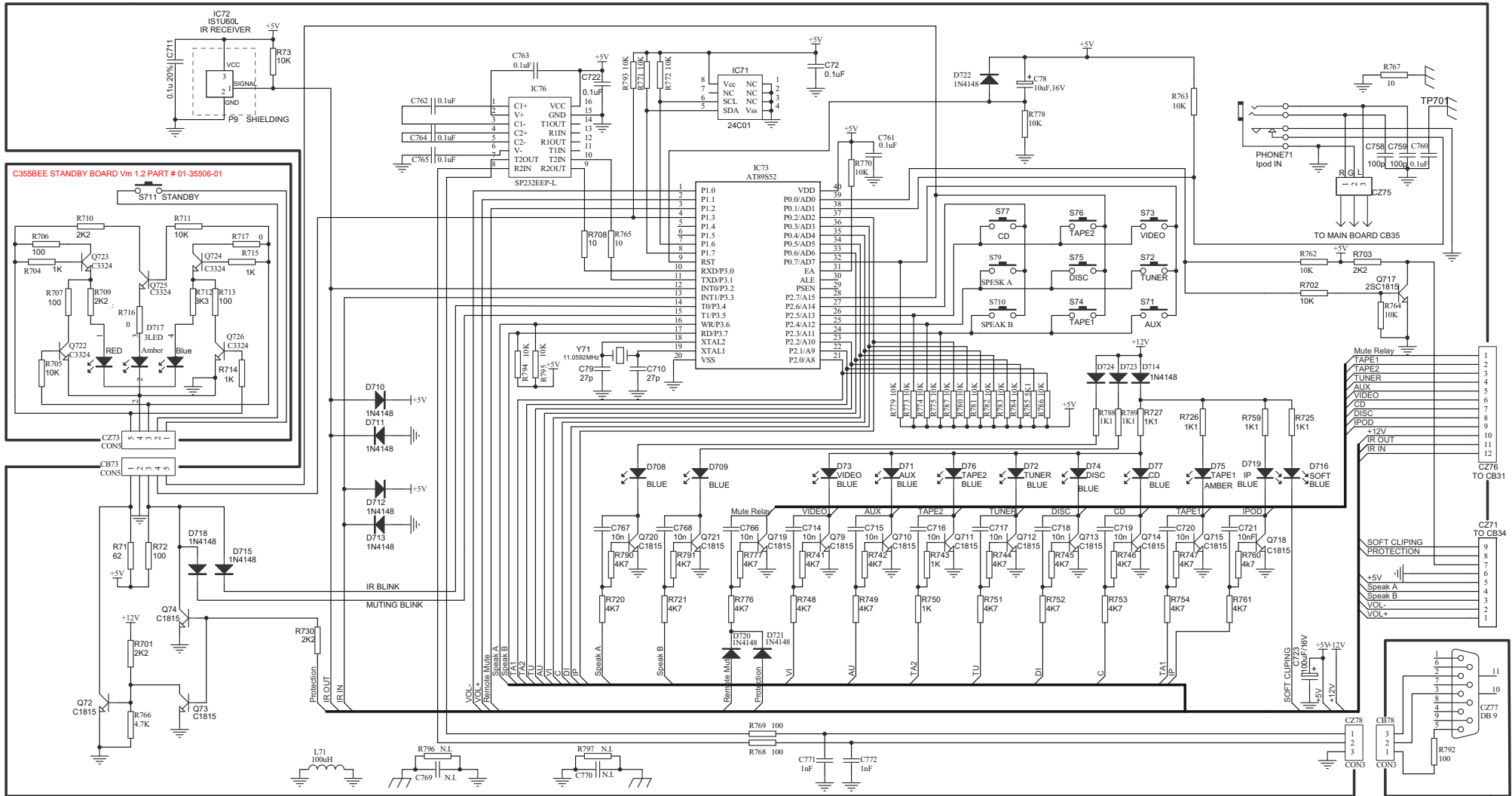
AMP CIRCUIT Vm1.0
PCB-1: MAIN BOARD Vm1.0



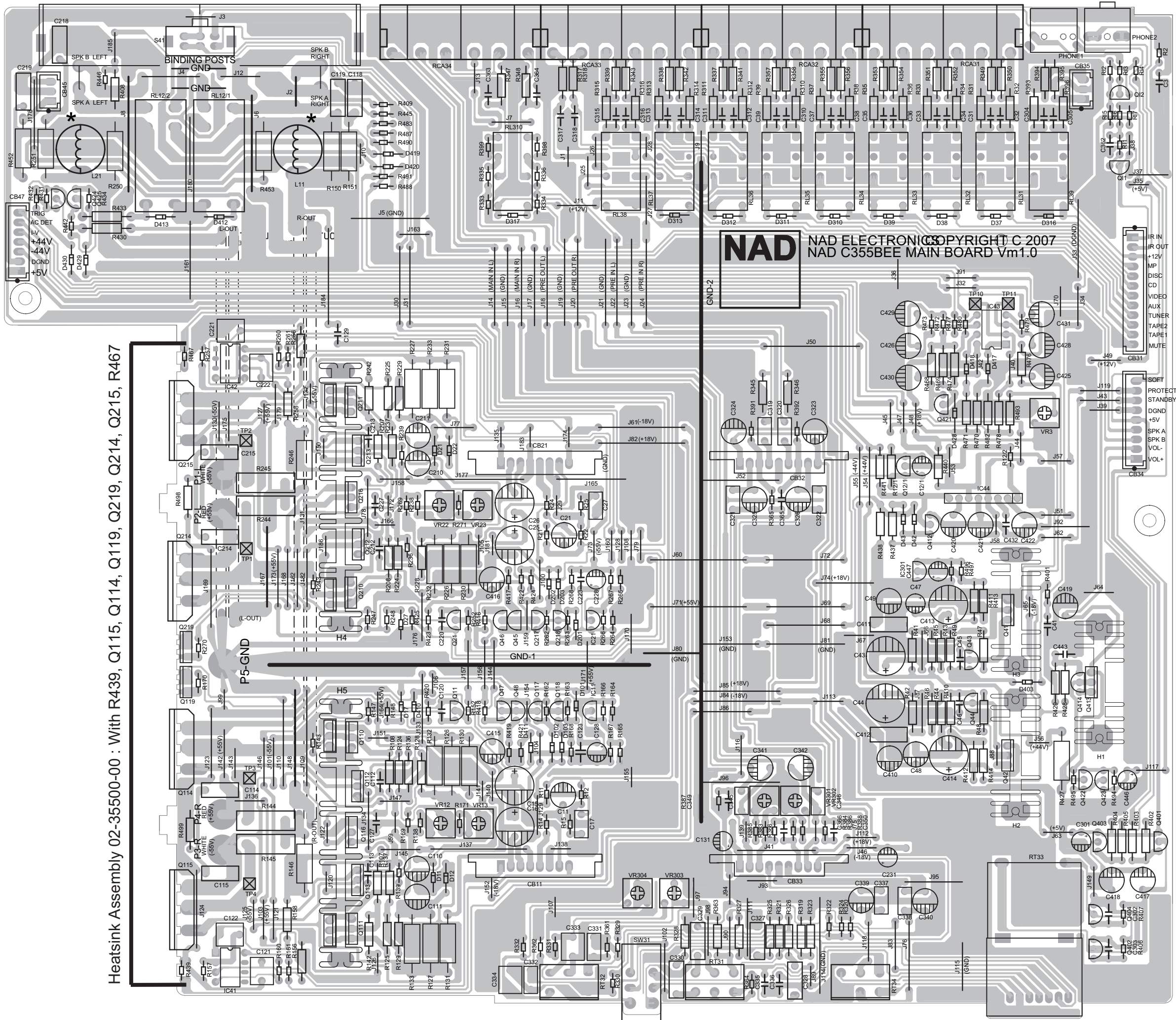
SCHEMATIC DIAGRAM GREEN LED KEYBOARD AND GREEN LED STANDBY LED BOARD ASSEMBLY PART # 01-35599-00 BEFORE SERIAL NUMBER H95C355BEEG12811



SCHEMATIC DIAGRAM BLUE LED KEYBOARD AND BLUE LED STANDBY LED BOARD ASSEMBLY PART # 01-35599-01 FROM SERIAL NUMBER H95C355BEEG12811 ONWARD



REV	ECN NO.	DESCRIPTION	Date	APPRO	NAD ELECTRONICS INTERNATIONAL			
		Add Q722---Q726,R704---R707,R709---R717	090416		THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF NAD ELECTRONICS INTERNATIONAL. ANY REPRODUCTION IN PART OF WHOLE WITHOUT THE WRITTEN PERMISSION OF NAD ELECTRONICS INTERNATIONAL IS PROHIBITED.			
		Change D717 to tri-color	090416					
		Change R71 to 62ohms,R72 to 100ohms,R730 to 2K2	090416					
		Change R743,R750 to 1K,R785 to 5K1	090416					
		Change R725 R726,R727,R759,R788,R789to 1K1	090416					
		Change LED on D71-D77, D708, D709, D716, D719 from green L-314GD to blue LJR3BD045.	090416					
		Blue LED Keyboard Assembly 01-35599-01			Document Number:	Sheet:		
					Project: C355BEE	State:		
					Date:	Date:	Date:	Date:

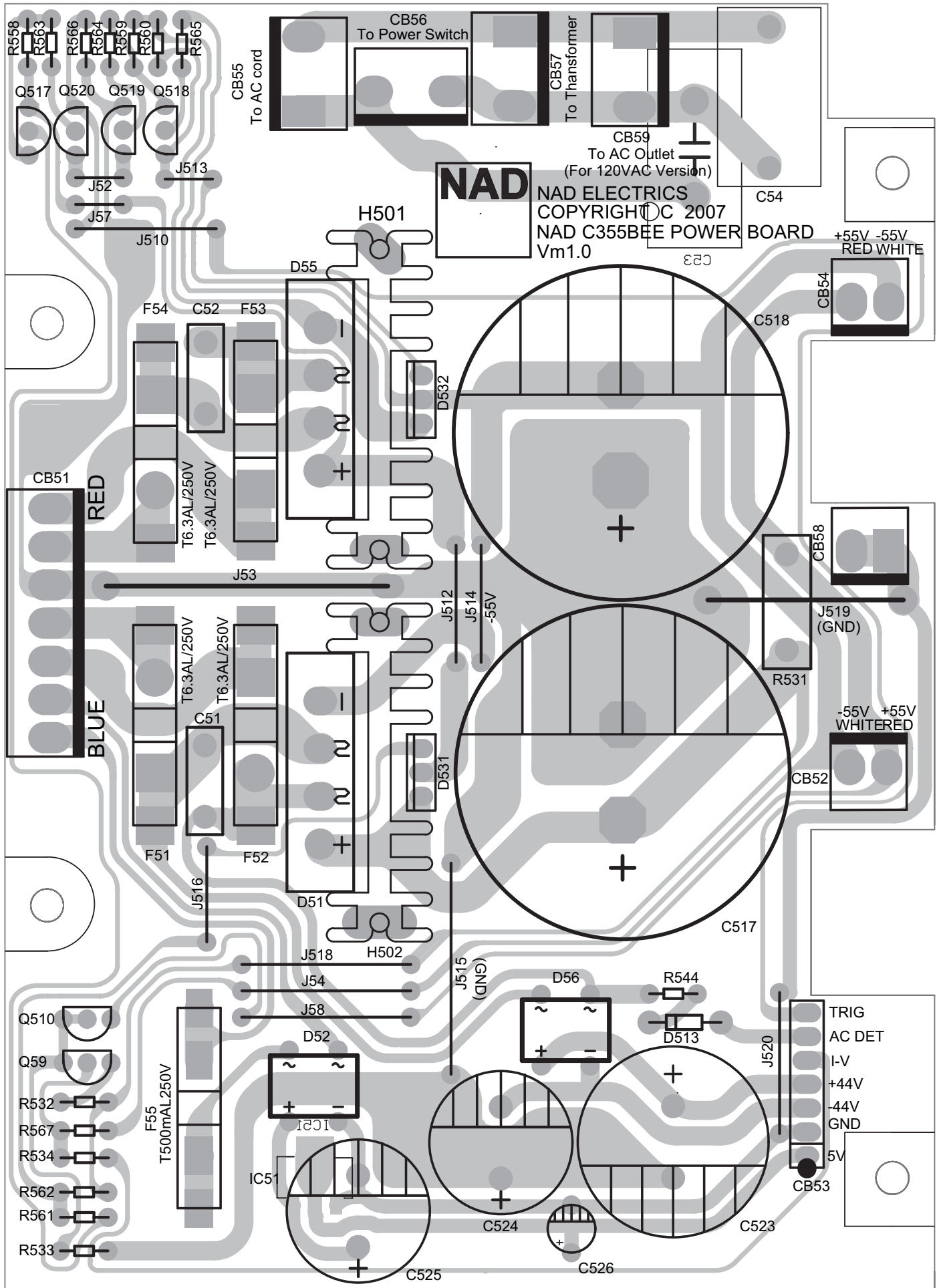


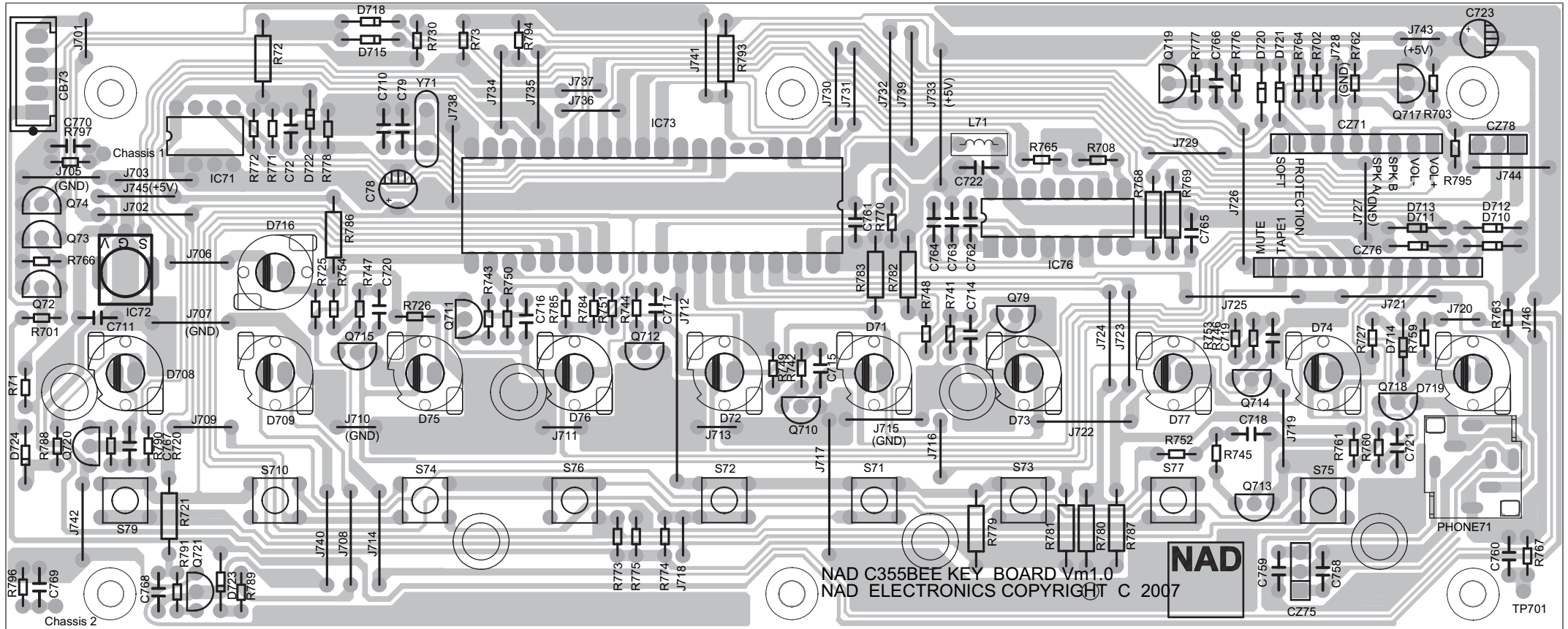
Heatsink Assembly 02-35500-00 : With R439, Q115, Q114, Q119, Q219, Q215, R467

NAD NAD ELECTRONICS COPYRIGHT C 2007
NAD C355BEE MAIN BOARD Vm1.0

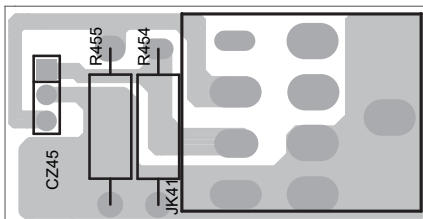
- IR IN
- IR OUT
- +12V
- MP
- DISC
- CD
- VIDEO
- AUX
- TUNER
- TAPE2
- TAPE1
- MUTE
- SOFT
- STANDBY
- DGND
- +5V
- SPK A
- SPK B
- VOL-
- VOL+

PCB-2: POWER BOARD Vm1.0

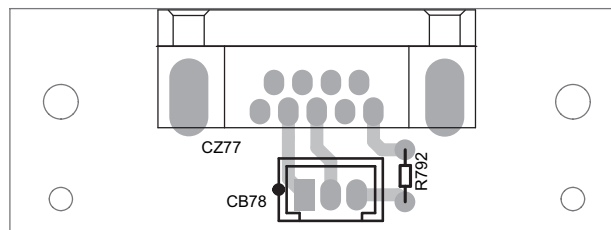




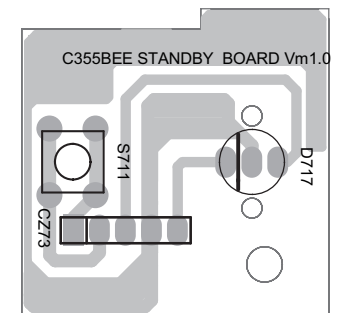
PCB-7: HEADPHONE BOARD Vm1.0



PCB-8: RS232 BOARD Vm1.0

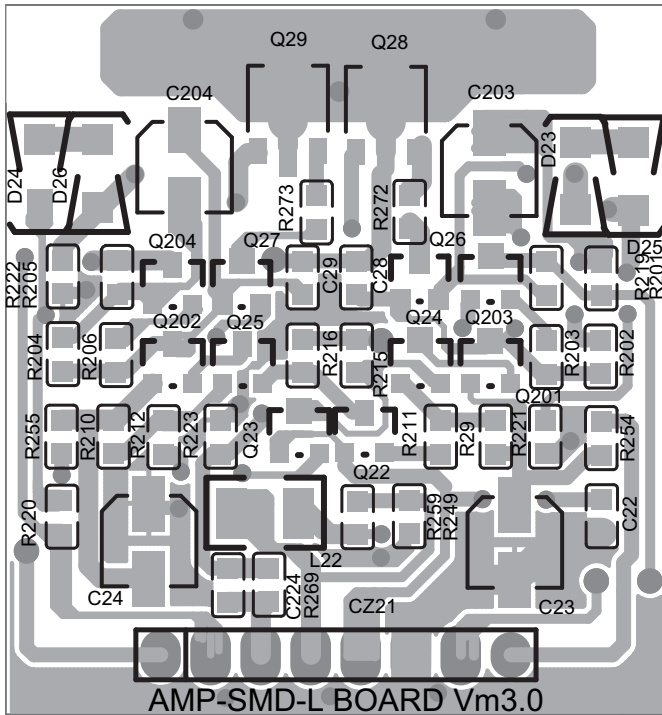


PCB-9: STANDBY BOARD Vm1.0

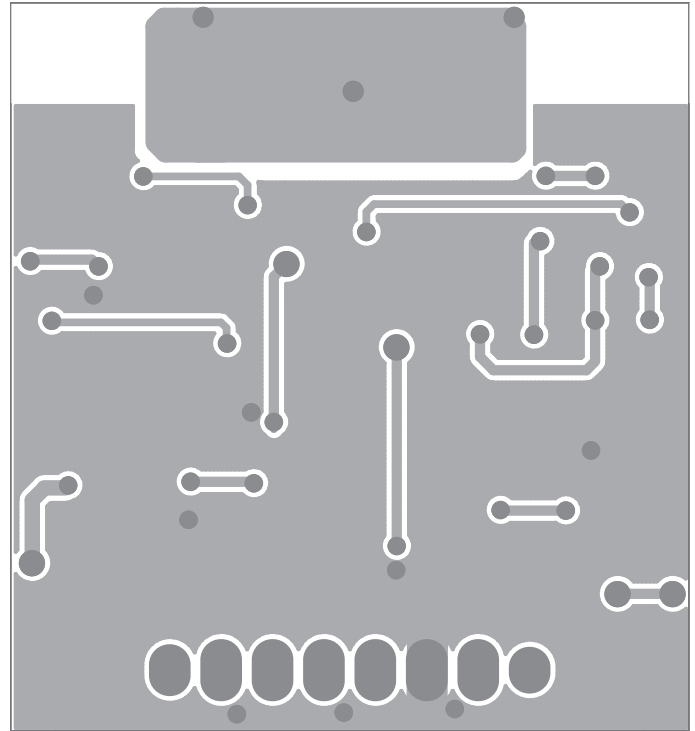


PCB-4 AMP-SMD-L & PCB-5 AMP-SMD-R ARE NON-SERVICEABLE PARTS

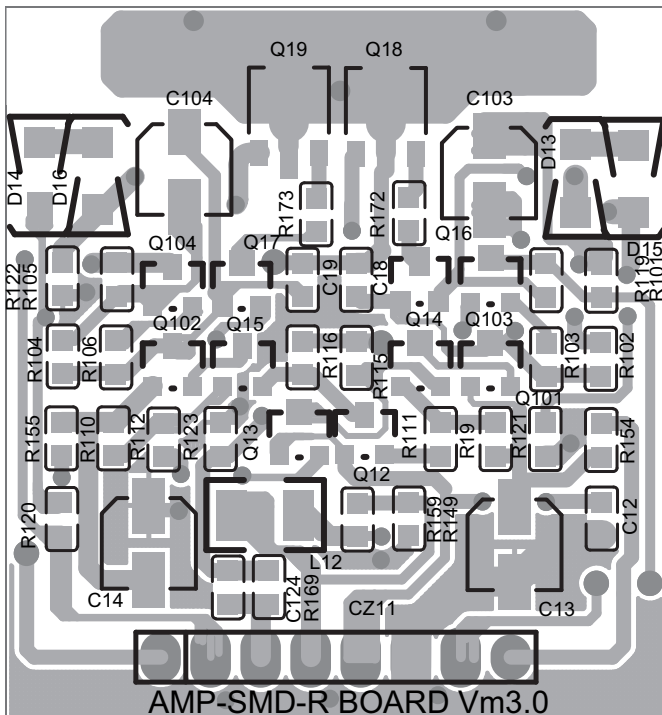
PCB-4:AMP-SMD-L BOARD VM3.0 TOP VIEW



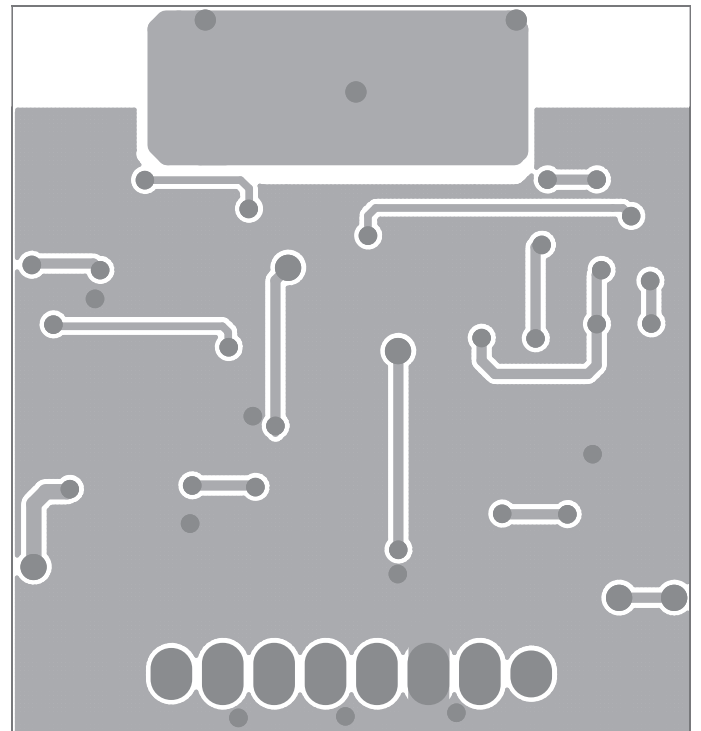
PCB-4:AMP-SMD-L BOARD VM3.0 BOTTOM VIEW



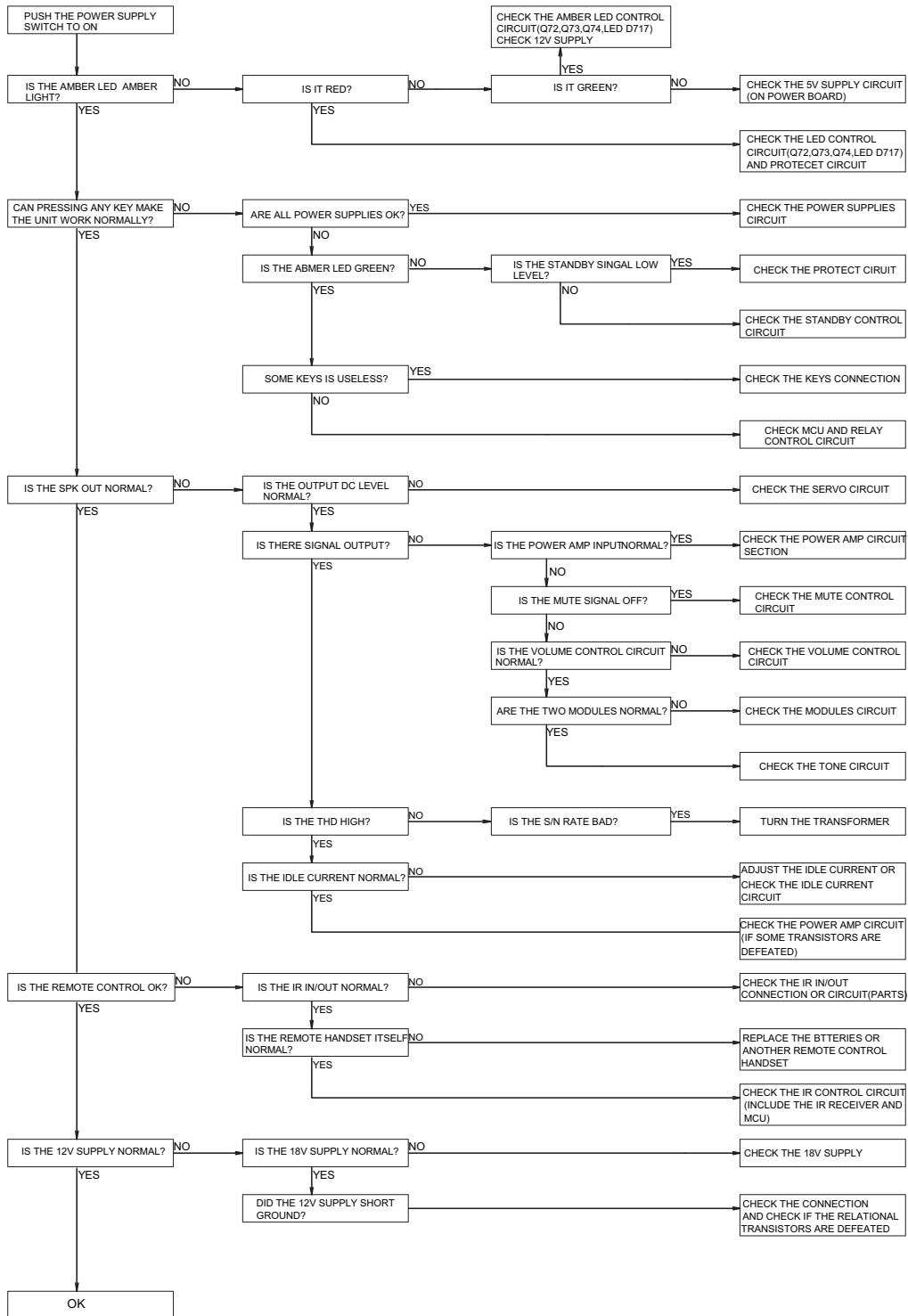
PCB-5:AMP-SMD-R BOARD VM3.0 TOP VIEW



PCB-5:AMP-SMD-R BOARD VM3.0 BOTTOM VIEW



TROUBLESHOOTING GUIDE



ELECTRIAL PARTS LIST

PCB-1: MAIN BOARD PART NUMBER 01-35501-10 C355 AH & 01-35501-20 C355 C-Version

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICS	
IC41, IC 42, IC43	03-00082-40	TL082CP/CN/D
IC44	02-01237-10	PROTECTION MODULE
IC11, IC21, IC301	03-00431-03	AZ431BZ-B
	DIODES	
D17, D27, D101, D102, D103, D201, D202, D203, D37, D38, D39, D310, D311, D312, D313, D316, D317, D42, D43, D403, D412, D413, D417, D418, D419, D420, D429, D430	33-44148-00	1N4148
D428	33-44148-00	1N4148
D11, D12, D21, D22	33-14709-00	DZ4.7
D410, D411	33-12000-00	DZ20
	TRANSISTORS	
Q12, Q12/1, Q44, Q45, Q47, Q401, Q403	31-01015-00	2SA1015 GR
Q11, Q11, Q21, Q43, Q46, Q48, Q402, Q404, Q412, Q414, Q421, Q424, Q425	31-01815-00	2SC1815
Q117, Q217	31-00970-00	2SA970 GR
Q423, Q118, Q218	31-02240-00	2SC2240
Q422	31-00667-00	2SD667A
Q413, Q41, Q216, Q211, Q116, Q111, Q119 on 02-35500-00, Q219 on 02-35500-00	31-02690-00	KSC2690AYSTU
Q42, Q210, Q110	31-01220-00	KSA1220AYSTU
Q112, Q212	31-05171-00	2SC5171
Q113, Q213	31-01930-00	2SA1930
	CAPACITORS	
C129	N05-62913-00	6.2p, 1KV, ±10%
C45, C46	05-22013-02	22p, 1KV, ±5%
C365	05-68013-00	68p, 1KV, ±10%
C31, C32, C33, C34, C35, C36, C37, C38, C39, C304, C305, C310, C311, C312, C313, C314, C315, C316, C317, C318, C363, C364	05-10113-01	100p, 1KV, ±10%
C302, C303	05-22113-01	220p, 1KV, ±10%
C112, C113, C212, C213	05-47113-00	470p, 1KV, ±10%
C362	24-10312-00	10n, 100V, ±20%
C120, C220	24-22312-04	22n, 100V, ±10%
C123, C223, C3, C41 C443	24-10412-01	0.1uF, 100V, ±20%
C432	24-22412-00	0.22uF, 63V, ±20%
C327, C328, C119, C219	25-22361-01	22n, 63V, ±5%
C329, C330	25-10461-05	0.1uF, 63V, ±5%
C114, C115, C118, C214, C215, C218, C411, C412	25-10461-01	0.1uF, 63V, ±10%
C17, C27, C322, C321, C345, C346, C337, C338, C319, C320	25-10461-06	0.1uF, 63V, ±10%
C331, C332	25-22461-02	0.22uF, 63V, ±5%
C121, C122, C221, C222, C333, C334	25-10561-02	1u, 63V ±5%
C339, C340	06-10951-08	1uF, 50V, ±20%
C417, C418	06-47951-00	4.7uF, 50V, ±20%
C421	06-47851-02	0.47uF, 50V, ±20%
C301, C48, C415, C416, C419, C425, C426, C428, C429, C430, C431, C446, C447, C12/1, C128 C228	06-10051-00	10uF, 50V, ±20%
C11, C21	06-10051-08	10uF, 50V, ±20%

C131, C231, C110, C111, C210, C211, C323, C324, C49, C410	N06-47031-03	47uF, 35V, ±20%
C325, C326, C341, C342	06-47021-09	47uF, 25V, ±20%
C47	06-47051-02	47uF, 50V, ±20%
C420	06-10111-00	100uF, 16V, ±20%
C413, C414	06-22161-00	220uF, 63V, ±20%
C15, C16, C25, C26, C43, C44	06-22161-00	220uF, 63V, ±20%
C422	06-33111-01	330uF, 16V, ±20%
RESISTORS		
R498, R499	07-10109-51	1R, 1/4W, ±5%
R385, R386	07-10189-50	1R8, 1/6W, ±5%
R2	07-10100-50	10R, 1/6W, ±5%
R494	07-10120-50	12R, 1/6W, ±5%
R143, R243	07-10220-50	22R, 1/6W, ±5%
R142, R242	07-10220-51	22R, 1/4W, ±5%
R13	07-10330-50	33R, 1/6W, ±5%
R107, R108, R207, R208	07-10390-51	39R, 1/4W, ±5%
R335, R336	07-10680-50	68R, 1/6W, ±5%
R14, R24, R398, R399, R416, R417, R418, R419	07-10101-50	100R, 1/6W, ±5%
R17	07-10331-50	330R, 1/6W, ±5%
R138, R238	07-10431-50	430R, 1/6W, ±5%
R11, R21	07-10471-50	470R, 1/6W, ±5%
R31, R32, R33, R34, R35, R36, R37, R38, R39, R310, R311, R312, R313, R314, R315, R316, R317, R318, R393, R396	07-10471-51	470R, 1/4W, ±5%
R495	07-10511-50	510R, 1/6W, ±5%
R41, R42, R43, R44, R47, R48, R49, R410, R411, R413,	07-10681-51	680R, 1/4W, ±5%
R171, R271	07-10821-50	820R, 1/6W, ±5%
R12, R147, R160, R161, R162, R163, R167, R168, R247, R260, R261, R262, R263, R267, R268, R406, R407	07-10102-50	1K, 1/6W, ±5%
R403, R405, R474, R476	07-10102-51	1K, 1/4W, ±5%
R422, R423, R424, R425	07-10132-50	1K3, 1/6W, ±5%
R428, R440, R158, R258	07-10222-51	2K2, 1/4W, ±5%
R170, R270	07-10222-50	2K2, 1/6W, ±5%
R480	N07-10432-50	4K3, 1/6W, ±5%
R482	07-10472-51	4K7, 1/4W, ±5%
R14, R333, R334, R401	07-10472-50	4K7, 1/6W, ±5%
R429	07-10512-51	5K1, 1/4W, ±5%
R166, R266	07-10562-50	5K6, 1/6W, ±5%
R12/1	07-10682-51	6K8, 1/4W, ±5%
R11, R15, R16, R164, R264, R165, R265, R431, R432, R434, R442	07-10103-50	10K, 1/6W, ±5%
R470, R471, R469, R402, R404	07-10103-51	10K, 1/4W, ±5%
R438	07-10183-51	18K, 1/4W, ±5%
R487, R488	N07-10183-50	18K, 1/6W, ±5%
R387, R388	07-10203-50	20K, 1/6W, ±5%
R15, R25, R152, R252, R12/2	07-10223-50	22K, 1/6W, ±5%
R468	07-10223-51	22K, 1/4W, ±5%
R365	07-10303-50	30K, 1/6W, ±5%
R420, R421	07-10363-50	36K, 1/6W, ±5%
R477	07-10473-50	47K, 1/6W, ±5%
R437	07-10473-51	47K, 1/4W, ±5%
R473	N07-10513-50	51K, 1/6W, ±5%
R148, R248, R409, R445, R446	07-10563-50	56K, 1/6W, ±5%
R408	07-10563-51	56K, 1/4W, ±5%
R479, R490, R491	07-10104-50	100K, 1/6W, ±5%
R347, R348, R478	07-10104-51	100K, 1/4W, ±5%
R493	07-10184-51	180K, 1/4W, ±5%
R12, R22	07-10224-50	220K, 1/6W, ±5%
R345, R346	07-10224-51	220K, 1/4W, ±5%

R483	07-10274-50	270K, 1/6W, ±5%
R157, R257,R472	07-10474-50	470K, 1/6W, ±5%
R156, R256	07-10474-51	470K, 1/4W, ±5%
R337, R338, R339, R341, R342, R343, R349, R350, R351, R352, R353, R354, R355, R356, R357, R358, R394, R395	07-10105-51	1M, 1/4W, ±5%
R134, R234	N07-10125-50	1M2, 1/6W, ±5%
R327, R328	07-20181-51	180R, 1/4W, ±5%
R325, R326	07-23900-51	390R, 1/4W, ±1%
R331, R332	07-23900-50	390R, 1/6W, ±1%
R139, R239	07-24120-50	412R, 1/6W, ±1%
R383, R384, R391, R392	07-25600-50	560R, 1/6W, ±1%
R324	07-27500-50	750R, 1/6W, ±1%
R323	07-27500-51	750R, 1/4W, ±1%
R329, R330	07-21501-50	1K5, 1/6W, ±1%
R412	07-20202-51	2K, 1/4W, ±5%
R414	07-20222-51	2K2, 1/4W, ±5%
R322	07-20332-50	3K3, 1/6W, ±5%
R321	07-20332-51	3K3, 1/4W, ±5%
R441	07-20472-20	4.7K, 1/2W, ±5%
R497	07-21002-50	10K, 1/6W, ±1%
R364	07-20513-50	51K, 1/6W, ±5%
R363	07-20513-51	51K, 1/4W, ±5%
R496	07-26202-50	62K, 1/6W, ±1%
R150, R250	07-30109-01	1R, 1W, ±5%
R124, R125, R224, R225	07-30339-00	3R3, 1/2W, ±5%
R427	07-30220-01	22Ω, 1W ±5%
R452, R453	07-30221-03	220Ω/2W 5%
R128, R129, R228, R229	07-30331-00	330R, 1/2W, ±5%
R430, R433	07-30102-01	1K, 1W, ±5%
R146, R246	07-30182-02	1K8, 2W, FP, ±5%
R126, R127, R132, R133 R226, R227, R232, R233	07-30332-12	3K3, 2W, FP, ±5%
R236	N07-50100-20	10Ω, 1/4W, ±5%
R136, R137, R237	07-50100-10	10Ω, 1/4W, FS, ±5%
R151, R251	07-50100-01	10R, 1W, FS, ±5%
R45, R46	07-50330-00	33R, 1/2W, ±5%, FS
R130, R131, R230, R231	07-50820-02	82R, 1W, FS, ±5%
R144, R145, R244, R245	07-40687-03	0.068R, 3W, CE, ±5%
INDUCTORS		
L11, L21	08-01005-00	0.5uH
POTS		
VR301, VR302	09-02101-00	100R
VR12, VR22	09-02201-02	200R
VR13, VR23	09-02202-01	2KΩ
VR3	09-02103-00	10K
VR304, VR303	09-02303-00	30K
RT31, RT32	09-01103-07	10KA
RT33	09-01203-05	20KB
RT34	09-01203-06	20K MN
SWITCHES		
S41	11-05202-02	SK-22F03G7
SW31	11-02202-02	SPUN190700
RELAYS		
RL31, RL32, RL33, RL34, RL35, RL36, RL37, RL38,RL39	12-02101-02	JRC-27F/012/S
RL12/1, RL12/2	12-03102-00	JQX-115F/0242HS4AF
CONNECTERS		
MAIN BOARD--CB58	14-32501-00	VH 3.96A-2Y plug, 16AWG, UL1015#,black,130mm length.
MAIN BOARD--CB52 CB54	14-32502-00	VH 3.96A-2Y plug, 16AWG, UL1015# red and white,130mm length.
R-OUT	14-32502-01	UL 2468 , 16AWG, blue and white. 155mm length.
L-OUT	14-32502-02	UL 2468 , 16AWG, blue and red 。 100mm length

TP1, TP2, TP3, TP4, TP10, TP11	13-10001-00	Test-1@
CB35, CB45	13-22503-00	XHB2.5A-3A
CB47	13-22507-00	XHB2.5A-7A
CB34	13-22509-00	XHB2.5A-9A
CB31	N13-22512-03	XHB2.5A-10A
RCA31,RCA32,RCA33 RCA34	17-01006-00	6 holes red and white, gilt
PHONE2	17-02001-04	ST-323B-04 CKK-3.5-02-3P
PHONE1	17-02002-00	PHONEJACK2
Binding Post(Red)	17-03002-01	C VERSION
Binding Post(Black)	17-03002-02	C VERSION
Binding Post(Black)	17-03002-12	AH VERSION
Binding Post(Red)	73-001003-0	HS4-C320-B009V1-P003
BDP CAP(Red)	73-001005-0	HS4-C320-B009V1-P007
Shaft	69-001001-0	HS4-C320-B009V1-M024
Binding Post	69-001002-0	HS4-C320-B009V1-M025
Binding Post(Black)	73-001004-0	HS4-C320-B009V1-P004
BDP Cap(Black)	73-001006-0	HS4-C320-B009V1-P008
Shaft	69-001001-0	HS4-C320-B009V1-M024
Binding Post	69-001002-0	HS4-C320-B009V1-M025
Binding Post	71-001001-1	HS4-C320-B009V1-P002 B
BDP Support	N66-091003-1	HS4-C355-B009V2-M009
BDP Pin	N69-091001-1	HS4-C355-B009V1-M010
Pin(BDP)	N69-091003-0	HS4-C355-B009V1-M012
ASSEMBLY HEATSINK		
Self Taping Screw	61-023208-0	
Self Taping Screw	61-023208-0	
Hexagon Socket Head Screw	61-224516-1	ICT-40160-1LE
Plain Washer	63-010408-0	
Spring Washer	63-020411-0	
CLAMPER	66-001009-0	HS4-C320-B009V1-M012
SECC	81-001004-0	
Heatsink with transistors and posistors	02-35500-00	COMPLETE ASSEMBLY
Heat Conductive Pad	78-001004-0	Berquist Sil-Pad K06-122 NSP
Posistor R467	07-70471-08	PTH9M04BF471TS2F333 NSP
Posistor R438	07-70471-09	PTH9M04BE471TS2F333 NSP
Transistor	31-02690-00	KSC2690AYSTU NSP use 02-35500-00
TRANSISTOR	31-02121-00	2SA2121-O NSP use 02-35500-00
TRANSISTOR	31-05949-00	2SC5949-O NSP use 02-35500-00
METAL PARTS		
Busbar	69-019001-0	
Busbar	69-019003-0	HS4-C320-B009V1-M022
Heatsink	70-065001-0	HS40-C325BEEB009V1M005
Heatsink	70-019003-1	HS4-C352-B009V1-M011 D
Machine Screw	61-022510-5	IB-25100-1HE
Machine Screw	61-022106-6	STB2.6x6
Machine Screw	61-023106-0	STB3x6
Nut	62-010202-5	M2.5
RIVET	61-382003-5	GB975-86-2.5x3
LINKS		
J1, J10, J28, J29, J35, J38, J42 J56, J58, J59, J65, J75, J88, J89 J99, J106, J107, J120, J122, J126, J127, J132, J135, J138, J139, J141, J150, J151, J152, J154, J155, J166, J172, J174, J181, J183, J186	21-06000-00	L=5mm
J3, J9, J13, J25, J26, J32, J36 J39, J40, J44, J45, J46, J47, J48 J49, J51, J53, J57, J62, J63 J64, J67, J70, J73, J79, J91, J93 J94, J104, J105, J108, J112, J113, J117, J125, J128, J131, J136, J140, J143, J147, J149, J158 J159 J160 J163 J164	21-06000-00	L=7.5mm

J7, J11, J12, J34, J37, J43 J66, J77, J87, J90, J97, J98, J100, J103, J116, J118, J119, J121, J129, J130, J145, J170, J179	21-06000-00	L=10mm
J27, J83, J92, J101, J102, J115 J142, J144, J146, J156, J157 J171, J176	21-06000-00	L=12.5mm
J4, J54, J55, J74, J78, J86, J95 J111, J134, J153, J162, J168 J173, J180, J182	21-06000-00	L=15mm
J76, J123, J133, J165, J178	21-06000-00	L=18mm
J5, J14, J15, J16, J17, J18, J30 J31, J33, J41, J52, J68, J69 J72, J81, J96, J124, J161, J169	21-06000-00	L=20mm
J19, J20, J21, J22, J23, J24 J61, J82, J84, J85, J110	21-06221-01	L=22.5mm
J50, J60, J71, J109, J114, J137, J177, J184	21-06251-00	L=25mm
J2	21-10750-00	L=7.5 (thick links)
J80	21-10151-00	L=15 (thick links)
J167	21-10201-00	L=20 (thick links)
J6, J148	21-10251-00	L=25 (thick links)
J8	21-10301-00	L=30 (thick links)
PCB-6:PREAMP MODULE BOARD PART NUMBER 01-35504-00 (replace only, do not service) CB32 & CB33		
CIRCUIT NO.	PART NO.	DESCRIPTIONS
TRANSISTORS		
Q61, Q62	31-00209-00	2SK209-GR
Q63, Q65	31-01312-00	2SA1312-GR
Q69, Q610, Q611, Q612	31-03324-00	2SC3324GR
Q64, Q66	31-01201-01	2SA1201-Y
Q67, Q68	N31-02881-01	2SC2881-Y
DIODES		
D61, D62, D63, D64	33-44148-11	LL4148
CAPACITORS		
C63, C64,	26-22051-00	22pF, 50V, ±5%,NPO
C69, C610	26-10151-00	100p, 50V, ±5%,NPO
C61, C62	26-22151-00	220p, 50V, ±5%,NPO
C613, C612	26-10251-00	1nF, 50V, ±5%,X7R
C65, C66, C67, C68	26-10451-00	0.1uF, 50V, ±10%,Y5V
RESISTORS		
R615, R616, R617, R618, R619, R620	07-90100-00	10Ω, ±5%
R61, R62	07-90221-00	220Ω, ±5%
R69, R610	N07-94300-00	430Ω, 1%
R624, R625	N07-90621-00	620Ω, ±5%
R67, R68, R611, R612, R622R623	07-90102-00	1KΩ, ±5%
R613, R614	07-90103-00	10KΩ, ±5%
R63, R64	07-90225-00	2.2MΩ, ±5%
CONNECTER		
S006	13-12509-01	SIP9
PCB-4: AMP MODULE L SMD PART NUMBER 01-35502-00 (replace only, do not service)		
CIRCUIT NO.	PART NO.	DESCRIPTION
TRANSISTORS		
Q26	31-01015-01	2SA1015
Q27	31-01815-01	2SC1815
Q22, Q25, R202, Q204	31-01312-00	2SA1312-GR
Q23, Q24, Q201, Q203	31-03324-00	2SC3324-GR
Q28	N31-01026-00	2SB1026-DM
Q29	N31-01419-00	2SD1419-DM
DIODES		
D23, D24, D25, D26	33-44148-11	LL4148
07-90100-00		
R254, R255	07-90100-00	10 Ω, ±5%
R215, R216	07-91509-00	15 Ω, ±1%
R249	N07-96809-00	68 Ω, ±1%
R203, R206, R219, R220	07-98209-00	82 Ω, ±1%

R211, R212, R259	07-91000-00	100 Ω, ±1%
R269	07-93300-00	330 Ω, ±1%
R29, R201, R205, R210	N07-93902-00	39K Ω, ±1%
R223	N07-94702-10	47K Ω, ±1%
R221, R222	07-91003-00	100K Ω, ±1%
R202, R204	N07-92203-00	220K Ω, ±1%
CAPACITORS		
C28, C29	26-39051-00	39pF, 50V, ±5%
C22, C224	26-10251-10	1nF, 50V, ±5%
C23, C24	06-10031-02	VSS, 10uF, 35V, ±20%
C203, C204	06-22011-05	VSS, 22uF, 16V, ±20%
INDUCTORS		
L22	08-04101-00	100uH
CONNECTER		
S006	13-12508-11	CZ21
PCB-5: AMP MODULE R SMD PART NUMBER 01-35503-00 (replace only, do not service)		
CIRCUIT NO.	PART NO.	DESCRIPTION
TRANSISTORS		
Q16	31-01015-01	2SA1015
Q17	31-01815-01	2SC1815
Q12, Q15, Q102, Q104	31-01312-00	2SA1312-GR
Q13, Q14, Q101, Q103	31-03324-00	2SC3324-GR
Q18	N31-01026-00	2SB1026-DM
Q19	N31-01419-00	2SD1419-DM
DIODES		
D13, D14, D15, D16	33-44148-11	LL4148
RESISTORS		
R154, R155	07-90100-00	10 Ω, ±5%
R115, R116	07-91509-00	15 Ω, ±1%
R149	N07-96809-00	68 Ω, ±1%
R103, R106, R119, R120	07-98209-00	82 Ω, ±1%
R111, R112, R159	07-91000-00	100 Ω, ±1%
R169	07-93300-00	330 Ω, ±1%
R19, R101, R105, R110	N07-93902-00	39K Ω, ±1%
R123	N07-94702-10	47K Ω, ±1%
R121, R122	07-91003-00	100K Ω, ±1%
R102, R104	N07-92203-00	220K Ω, ±1%
CAPACITORS		
C18, C19	26-39051-00	39pF, 50V, ±5%
C12, C124	26-10251-10	1nF, 50V, ±5%
C13, C14	06-10031-02	VSS, 10uF, 35V, ±20%
C103, C104	06-22011-05	VSS, 22uF, 16V, ±20%
INDUCTORS		
L12	08-04101-00	100uH
CONNECTER		
CZ11	13-12508-11	S006
PCB-8: STANDBY BOARD BEFORE SN H95C355BEEG12811 NLA PART # 01-35506-00		
CIRCUIT NO.	PART NO.	DESCRIPTION
DIODES		
D717	33-50525-00	Φ5 DUAL COLOR
SWITCHES		
S711	11-04101-00	Tact Switch
CONNECTER		
CZ73——CB73	N14-35505-00	26AWG UL2468# white, 50mm length
PCB-2: POWER BOARD PART NUMBER 01-35507-10 AH & 01-35507-20 C-VERSION		
CIRCUIT NO.	PART NO.	DESCRIPTION
ICS		
IC51	03-01117-01	AMS1117-5.0/LM1117MPX-5.0
TRANSISTORS		
Q59, Q510, Q517, Q519	31-01015-00	2SA1015 GR
Q518, Q520	31-01815-00	2SC1815 GR
DIODES		
D513	33-24004-02	1N4004
D52, D56	33-30142-00	DB104
D51, D55	⚠ 33-30822-00	8A/200V
D531, D532	⚠ 33-60116-00	TIC116D/BT151-500R
CAPACITORS		

C53	⚠ 05-47242-00	4n7p, 400V, ±20%
C53	78-001001-0	Shinagawa 811810-23(Sleeve Boot)
C54	⚠ 25-33422-00	MKP62, 275V, 0.33uF 10%
C526	06-10111-00	100uF, 16V, ±20%
C51, C52	25-10322-00	10n/250V 10%
C524	06-22251-00	2200u/50V 20%
C523	06-33251-00	3300u/50V 20%
C525	06-47211-00	4700u, 16V, ±20%
C517, C518	⚠ 06-22361-01	22000uF/63V, 20%, 105℃
RESISTORS		
R561, R565	07-10101-51	100 Ω, ±5%, 1/4W
R532	07-10221-51	220 Ω, ±5%, 1/4W
R558, R559, R560, R562	07-10102-51	1K Ω, ±5%, 1/4W
R534	07-10222-51	2.2K Ω, ±5%, 1/4W
R566	07-10472-51	4.7K Ω, ±5%, 1/4W
R544, R563, R564	07-10223-51	22K Ω, ±5%, 1/4W
R567	07-10334-51	330K Ω, ±5%, 1/4W
R533	07-10105-51	1M Ω, ±5%, 1/4W
R531	07-40507-03	0.05 Ω, 3W, ±5%
FUSES		
F51, F52, F53, F54	⚠ 20-12632-00	T6.3AL250V
F55	20-12501-00	T500mAL/250V
F51, F52, F53, F54	⚠ 20-20000-00	HF-004(Fuse Holder)
CONNECTERS		
CB52, CB54, CB58	13-23902-00	VH 3.96A-2A
CB55, CB56	⚠ 13-23903-01	VH 3.96A-3A(delete the center needle)
CB59(AH)	⚠ 13-23903-01	VH 3.96A-3A(delete the center needle)
CB57	⚠ 13-23903-01/13-23903-11	VH 3.96A-3A(delete the center needle)
CB51	13-23907-10/13-23907-00	VH 3.96A-7A
CB53—CB47	N14-35507-00	SCN 2.5A-7D needles,XHB 2.5A-7Y plug. 26AWG UL2468# white, 230mm length,80mm shrink tube
METAL PARTS		
Heatsink	70-004003-1	HS4-C350-B009V1-M009
SELF TAPING SCREW	61-083515-0	IW-30150-1HE
NUT	62-010302-0	M3
LINKS		
J52, J57, J513	21-06000-00	L=5
J516	21-06000-00	L=10
J514, J512	21-06000-00	L=12.5
J520, J510	21-06000-00	L=15
J54, J58, J518	21-06000-00	L=18
J515	21-06000-00	L=22.5
J519	21-10201-00	L=20
J53	21-10301-00	L=30
PCB-3: KEY BOARD PART NUMBER 01-35505-00 (replace only, do not service) BEFORE SN:H95C355BEEG12811		
CIRCUIT NO.	PARTS NO	DESCRIPTION
ICS		
IC71	03-02402-00	24C01A/24C02(A)/24C04(A)/AT24C02B
IC76	N03-00232-00	SP232EEP-L
IC73	N03-08952-10	AT89S52-24PI(Programmed)
IC73	N03-08952-00	AT89S52-24PI
IC72	03-00038-40	HS0038B4
TRANSISTORS		
Q72, Q73, Q74, Q79, Q710, Q711, Q712, Q713, Q714, Q715, Q717, Q718, Q719, Q720, Q721	31-01815-00	2SC1815
DIODES		
D710, D711, D712, D713, D714, D715, D718, D720, D721, D722 D723, D724	33-44148-00	1N4148

D71 ,D72, D73, D74, D76, D77, D708, D709, D716,D719	33-50350-00	φ 3 GREEN LED
D75	33-50340-00	φ 3 AMBER LED
CRYSTAL		
Y71	04-11102-00	11.0592MHz, CL=15pF
CAPACITORS		
C79, C710	N05-27013-00	27p, 1KV, ±10%
C758, C759	05-10113-01	100p, 1KV, ±10%
C714, C715, C716, C717, C718, C719, C720, C721, C766, C767 C768	24-10312-00	10nF, 100V, ±20%
C72, C711, C722, C760,C761, C762, C763,C764, C765	24-10412-01	100nF, 100V, ±20%
C78	06-10011-00	10uF, 16V, ±20%
C723	06-10111-00	100uF, 16V, ±20%
RESISTORS		
R708, R765, R767	07-10100-50	10Ω, 1/6W, ±5%
R768, R769	07-10101-51	100Ω, 1/4W, ±5%
R71	07-10331-50	330Ω, 1/6W, ±5%
R72	07-10471-51	470Ω, 1/4W, ±5%
R725, R726, R727, R759, R788, R789	07-10911-50	910Ω, 1/6W, ±5%
R701, R703	07-10222-50	2K2Ω, 1/6W, ±5%
R741, R742, R743, R744, R745 R746, R747, R748, R749, R750 R751, R752, R753, R754,R760 R761,R766, R776, R777,R720 R790, R791	07-10472-50	4K7Ω, 1/6W, ±5%
R721	07-10472-51	4K7Ω, 1/4W, ±5%
R702, R73, R762, R763, R764 R770, R771, R772, R773, R774 R775,R778,R784, R785, R794, R795	07-10103-50	10KΩ, 1/6W, ±5%
R779, R780, R781, R782, R783 R786, R787, R793	07-10103-51	10KΩ, 1/4W, ±5%
R730	07-10153-50	15KΩ, 1/6W, ±5%
INDUCTORS		
L71	08-01101-01	100uH,±20%
SWITCHES		
S71, S72, S73, S74, S75, S76, S77,S79,S710	11-04101-05	Tact Switch
CONNECTERS		
PHONE71	17-02001-02	SCJ340R0GBS0B00
CB73	13-22505-00	XHB2.5A-5A
TP701--CHASSIS	14-32501-12	1007#, 24AWG, black 35mm length.
CZ75—CB35	N14-35503-02	SCN 2.5A-3D needle,XHB 2.5A-3Y plug. 26AWG UL1691#, white/red/black , 470mm length
CZ78—CB78	N14-35503-00	SCN 2.5A-3D needle,XHB 2.5A-3Y plug. 26AWG UL2405#, white , 600mm length
CZ71--CB34	N14-35509-00	SCN 2.5A-9D needle,XHB 2.5A-9Y plug. 26AWG UL2468#, white , 440mm length
CZ76--CB31	N14-35512-00	SCN 2.5A-12D needle,XHB 2.5A- 12Y plug. 26AWG UL2468#, white , 470mm length
LINKS		
J701, J710, J711, J713, J718 J720, J728, J737,J743,J746	21-06000-00	L=5
J706, J709, J716, J736	21-06000-00	L=7.5
J703, J705, J707, J715, J719, J727, J729, J730, J731, J734 J735, J738, J741, J742, J744 J745	21-06000-00	L=10

J702, J708, J714, J721, J722, J723, J724, J740	21-06000-00	L=12.5
J725, J739	21-06000-00	L=15
J717, J726, J733	21-06000-00	L=18
J732	21-06000-00	L=20
J712	21-06000-00	L=25
PCB-7: RS232 BOARD PART NUMBER 01-35509-00 (replace only, do not service)		
CIRCUIT NO.	PART NO.	DESCRIPTION
RESISTORS		
R792	07-10101-50	100 Ω , 1/6W, ±5%
CONNECTER		
CZ78	13-22503-00	XHB2.5A-3A
CZ77	17-08009-00	DB9, 7906-9-F-B(With screws)
PCB-9: HEADPHONE BOARD PART NUMBER 01-35508-00 (replace only, do not service)		
CIRCUIT NO.	PART NO.	DESCRIPTION
RESISTORS		
R454, R455	07-30101-04	100 Ω 2W ±5%
CONNECTER		
CZ45--CB45	N14-35503-01	SCN 2.5A-3D needles,XHB 2.5A-3Y plug,26AWG UL2468# white, 410mm length,150mm shrink tube
JK41	17-02001-00	CK-6.35-06, 9P
OTHERS		
CIRCUIT NO.	PART NO.	DESCRIPTION
TRANSFORMER		
C VERSION	⚠ N18-35515-20	TD-230-150F(H)/ ETO07164(C355)
AH VERSION	⚠ N18-35515-10	TD-120-150F(H)/ ETO07165(C355 AH)
METAL PARTS		
FASCIA	N70-091001-2	HS4-C355-B009V1-M001 C
REAR PANEL AH	N67-091002-1	
REAR PANEL AH	N80-091002-1	
REAR PANEL AH	N65-091002-1	HS4-C355-B009V1-M006 B
SECC		
REAR PANEL C	N67-091001-1	
REAR PANEL C	N80-091001-1	
REAR PANEL C	N65-091001-1	HS4-C355-B009V1-M005 B
SECC		
END CAP L	N70-091002-1	HS4-C355-B009V1-M002B
END CAP R	N70-091003-1	HS4-C355-B009V1-M003B
TOP COVER	67-019004-4	HS4-C352-B009V3-M004
CHASSIS	N66-091001-1	HS4-C355-B009V1-M007B
Spacer	N69-091002-0	HS40-M-B009V1-M012
SUBFASCIA	66-091002-0	HS4-C355-B009V1-M008
PCB SUPPORT 2	66-019004-0	HS4-C352-B009V1-M014
SECC		
BASE COVER	66-001004-1	HS4-C320-B009V1-M004 B
TRANS DISC	66-001008-0	HS4-C320-B009V1-M020
SECC		
TRANS BRACKET	66-001010-0	HS4-C320-B009V1-M013
SECC		
SHIELDING BOX	67-003006-0	HS4-C160-B009V1-M008
PHONE BRACKET	N66-091005-0	HS4-C355-B009V1-M013
SECC		
SHORTING PLUG	30-63200-00	HS4-C320-B009V1-M014 HS4-C320-B009V1-P006
PLASTIC PARTS		
LED LENS	76-062001-0	
LED LENS	N76-091001-0	HS4-C355-B009V1-P006
IR LENS	76-076001-0	
TONE KNOB BEZEL	N77-091002-0	HS4-C355-B009V1-P002
TONE BUTTON	77-002002-2	
3P INPUT BUTTON	74-076001-0	HS4-C315BEE_B009V1-P001 B
Power Button	74-076002-1	HS4-C315BEE_B009V1-P004
POWER BUTTON BEZEL	77-062002-1	
TONE KNOB	73-014001-2	HS4-C320BEE-B009V1-P002
VOLUME KNOB	73-014002-2	HS4-C320BEE-B009V1-P003

KNOB BUTTON BEZEL	N77-091003-0	HS4-C355-B009V1-P003
3P INPUT BUTTON BEZEL	N77-091001-0	HS4-C355-B009V1-P001
LED LENS BEZEL	77-062001-1	
LED LENS BEZEL	N77-091004-0	HS4-C355-B009V1-P004
FOOT ASSY	87-010004-0	
FOOT	75-010004-1	HS4-T973-B009V1-P006 B
FOOT PAD	78-001002-0	HS4-C320-B009V1-P010
FASTENERS		
Self Taping Screw	61-023108-0	STB3×8
Self Taping Screw	61-023106-0	STB3×6
Self Taping Screw	61-023106-1	STB3×6-Ni
	61-023506-0	MB3×6
Self Taping Screw	61-084108-0	STPW4×8
Self Taping Screw	61-084106-2	STPW4×6-Ni
Self Taping Screw	61-023208-0	BTB3×8
Self Taping Screw	61-022206-6	BTB2.6×6
Self Taping Screw	61-082204-6	BTPW2.6×4
Self Taping Screw	61-073108-0	STO3×8
Self Taping Screw	61-023206-0	BTB3×6
Bolt	64-108050-0	M8×50
Nut	62-010802-0	M8
Spring Washer	63-020820-0	8mm
CONNECTERS		
14-31502-12	⚠ VH 3.96A-3Y(delete center needle) plug. 18AWG UL1672#, red/blue,190mm length.	CB59——AC OUTLET(AH)
14-31502-12	⚠ VH 3.96A-3Y(delete center needle) plug. 18AWG UL1672#, red/blue,190mm length.	CB56——Power Switch
N14-35502-00	⚠ VH3.96A-3Y(delete center needle) plug,18AWG UL1672# . red,300mm length.	CB56——AC Inlet
AC CORD (C)	⚠ 15-10250-00	
AC CORD (AH)	⚠ 15-10125-00	
AC Inlet	⚠ 17-07002-00	3516-T1C02
AC Outlet(AH)	⚠ 17-07002-10	JY0647A
POWER SWITCH	⚠ 11-01101-03	RF-1003-BB2, 10A 250V, TV-5
Ferrit Ring	19-25012-20	Φ25×Φ15×12

NOTES:	AH	C
TRANSFORMER	N18-35515-10	N18-35515-20
AC CORE	15-10150-00	15-10250-00

C355BEE EXPLODED VIEW PARTS LIST

REF.NO	PART NO.	DESCRIPTION	Qty.	REF.NO	PART NO.	DESCRIPTION	Qty.
C001	66-091001-2	Chassis	1	R003	11-01101-03	Rocker Switch	1
C002	66-001004-1	Base Cover	1	R004	17-07002-00	AC Inlet	1
C003	66-001010-0	THANSBracket	1	R005	17-07002-10	AC Outlet	AH:1
C004	67-091003-0	Shielding Box	1				
C005	A18-35515-30	Transformer	AH:1	T001	67-091004-5	Top cover	1
	A18-35515-40	Transformer	C:1				
C006	66-001008-0	TRANS Disc	1				
C007	94-001004-2	Transformer Label	1	P001	70-004003-1	Heatsink	2
C008	70-091004-0	Heat Sink 1 with transistors	1				
C009	66-001009-0	Clamper	2	M001	70-091005-0	Heatsink	3
C010	78-001004-0	Heat Conduvtive Pad	4	M002	70-019003-1	Heatsink	2
C011	01-35507-10/20	Power Assy 10-AH, 20-C	1	M003	02-03550-10	Binding Post Assy	AH:1
C012	66-019004-0	PCB Support 2	1		02-03550-20	Binding Post Assy	C:1
C013	69-091002-0	Spacer	1				
C014	01-35501-10/20	Main Assy 10-AH, 20-C	1	K001	66-091004-0	IR Bracket	1
C015	75-010004-1	Foot	4	K002	75-062001-0	Sleeve 1P	1
C016	78-001002-0	Foot PAD	4	K003	75-091001-0	Sleeve 1P	10
				K004	75-091002-0	MP Pad	1
F001	67-091001-3	Fascia	1				
F002	73-014002-2	Volume Knob	1	RS01	66-010010-0	Bracket6	2
F003	73-014001-2	Tone Knob	3				
F004	77-002002-2	Tone Button	1				
F005	70-091003-1	End Cap R	1	S001	61-023106-0	STB3×6 Self Taping Screw	46
F006	70-091002-1	End Cap L	1	S002	61-023108-0	STB3X8 Self Taping Screw	4
F007	77-062002-1	Power Button Bezel	1	S003	61-023506-0	MB3X6 Machine Screw	8
F008	77-062001-1	Led Lens Bezel	1	S004	61-084108-0	STPW4X8 Self Taping Screw	8
F009	76-062001-0	Led Lens	2	S005	61-023208-0	BTB3X8 Self Taping Screw	21
F010	74-076002-1	Power Button	1	S006	61-023206-0	BTB3X6 Self Taping Screw	6
F011	76-076001-0	IR Lens	1	S007	61-082204-6	BTPW2.6×4 Self Taping Screw	2
F012	66-091005-0	Phone Bracket	1	S008	61-073108-0	STO3X8 Self Taping Screw	2
F013	01-35506-00	Standby LED Tac Switch green	1	S009	64-108055-0	M8X55 BOLT	1
F014	01-35508-00	Phone Assy	1	S010	63-020820-0	F 8 Spring Washer	2
F015	66-091002-1	Subfascia	1	S011	62-010802-0	M8 Nut	2
F016	01-35505-00	Key Assembly Green LED	1	S012	63-010816-0	F 8 Plain Washer	1
F017	77-091003-1	Volume Knob Bezel	1	S013	61-083515-0	MPW3×15 Machine Screw	2
F018	77-091002-0	Tone Knob Bezel	1	S014	62-010302-0	M3 Nut	2
F019	74-076001-1	3P Input Button	3	S015	61-224516-1	MB4X16 Machine Screw	2
F020	76-091001-0	Led Lens	10	S016	63-010408-0	F 4 Plain Washer	2
F021	77-091004-0	Led Lens Bezel	1	S017	63-020411-0	F 4 Spring Washer	2
F022	77-091001-1	3P Input Button Bezel	3	S018	61-022510-5	MB2.5X10 Machine Screw	3
				S019	62-010202-5	M4 Nut	3
R001	67-091002-2	Rear Panel	AH:1	S020	61-022208-6	BTB2.6X8 Self Taping Screw	6
	67-091001-2	Rear Panel	C:1	A001	02-35500-00	Complete Outputs Assembly	1
R002	01-35509-00	RS232 Assy	1				

SERVICE MANUAL

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STEREO
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