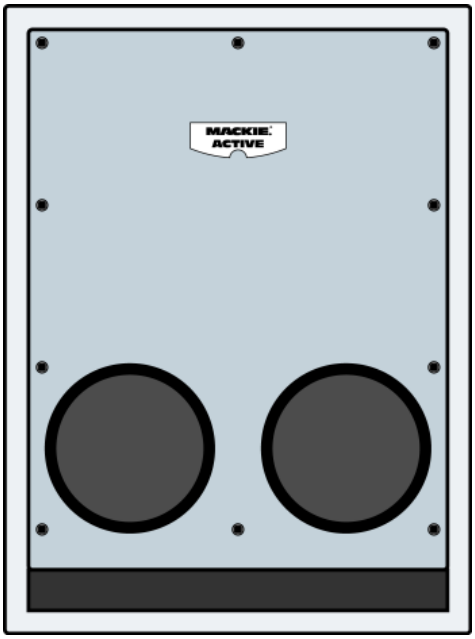
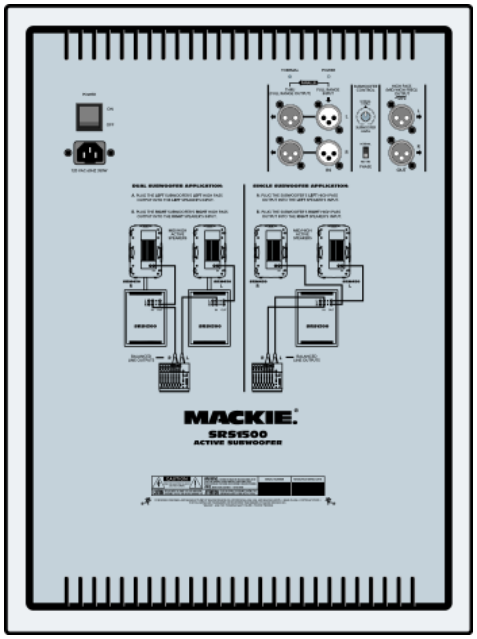
MACKIE®

# SRS1500

Active Subwoofer




# SERVICE MANUAL



HOME

SERVICE ON THIS EQUIPMENT IS TO BE PERFORMED BY EXPERIENCED REPAIR TECHNICIANS ONLY

*CONFIER L'ENTRETIEN AU PERSONNEL QUALIFIE*

# CAUTION *AVIS*

RISK OF ELECTRIC SHOCK
DO NOT OPEN
*RISQUE DE CHOC ELECTRIQUE*
*NE PAS OUVRIR*

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE THE COVER (OR BACK)
NO USER SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED PERSONNEL

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

*ATTENTION: POUR EVITER LES RISQUES DE CHOC ELECTRIQUE, NE PAS ENLEVER LE COUVERCLE. AUCUN ENTRETIEN DE PIECES INTERIEURES PAR L'USAGER. CONFIER L'ENTRETIEN AU PERSONNEL QUALIFIE.*

*AVIS:POUR EVITER LES RISQUES D'INCENDIE OU D'ELECTROCUTION, N'EXPOSEZ PAS CET ARTICLE A LA PLUIE OU A L'HUMIDITE.*

*POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR, UN PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS LAISSER AUCUNE PARTIE A DECOUVERT.*

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This apparatus does not exceed the Class A/Class B (whichever is applicable) limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

ATTENTION :Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant las limites applicables aux appareils numériques de class A/de class B (selon le cas) prescrites dans le réglement sur le brouillage radioélectrique édicté par les ministere des communications du Canada.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio energy and, if not installed properly and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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 to persons.

Le symbole éclair avec point de flèche à l'intérieur d'un triangle équilatéral est utilisé pour alerter l'utilisateur de la présence à l'intérieur du coffret de "voltage dangereux" non isolé d'ampleur suffisante pour constituer un risque d'éléctrocution.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Le point d'exclamation à l'intérieur d'un triangle équilatéral est employé pour alerter les utilisateurs de la présence d'instructions importantes pour le fonctionnement et l'entretien (service) dans le livret d'instruction accompagnant l'appareil.

HOME

# CONTENTS





ALL BOARDS

# INTRODUCTION

SERVICE ON THIS EQUIPMENT IS TO BE PERFORMED BY
EXPERIENCED REPAIR TECHNICIANS ONLY
*CONFIER L'ENTRETIEN AU PERSONNEL QUALIFIE*

This manual contains basic service information. It is essential that you have a copy of the user's manual as this contains the complete operating instructions.

## SERVICE TECHNICAL ASSISTANCE

Mackie Designs, Service Technical Assistance, is available 8AM - 5PM PST, Monday through Friday for Authorized Mackie Service Centers, at 1-800-258-6883. Feel free to call with any questions and speak with a carefully-calibrated technician. If one is not available, leave a detailed message and a qualified Mackoid will return your call asap.

## DISCLAIMER

# Overview

The SRS1500 is a high output active subwoofer system. It features a high-precision 15" transducer combined with application specific amplifier technology. The system is composed of a single, compact subwoofer cabinet with built-in control and amplifier electronics.

The SRS1500 accepts a stereo line-level signal via female XLR input jacks. Male XLR Thru jacks are provided for daisy-chaining the signal to additional SRS1500 cabinets. The built-in crossover separates the low frequencies from the high frequencies, and routes the high frequencies to the male XLR high-pass output jacks. Connect these to the inputs of full-range active speakers such as the Mackie Designs SRM450s, or to an amplifier powering a pair of passive speakers such as the Mackie Designs M•1400i and C300s. A Phase switch gives you the option of reversing the phase to the full-range speakers by 180º. A Subwoofer Level control allows you to adjust the balance between the subwoofer and the full-range speakers.

The built-in amplifier produces up to 600 watts of power. The amplifier module sits on a large heatsink that eliminates the need for fans, dramatically extending life expectancy, and eliminating maintenance cycles. A tremendous benefit of having the amplifier located within the subwoofer cabinet is the speed with which power is delivered to the woofer.

The cabinet is constructed with 18mm thick multi-layered birch plywood. Carrying handles are integrated into each side for easy loading and transport.

## POWER Switch

Use this switch to turn the SRS1500 on and off. Make sure the signal source's level control is turned down before you turn it on.

## AC Receptacle

This is where you connect the AC linecord to provide AC power to the SRS1500's built-in power amplifiers. Plug the linecord into an AC socket properly configured for your particular model.

## THERMAL Indicator

The SRS1500 has a thermal protection circuit that monitors the internal temperature of the amplifier and heatsink. If the temperature should exceed a safe operating level, the signal is muted and the THERMAL indicator lights. When the temperature cools to a safe level once again, the thermal protection circuit deactivates and normal operation continues.

Note: Activation of the thermal protection circuit is an indication that you must take steps to avoid continued thermal problems.

## POWER Indicator

When the POWER switch is turned on and the linecord is connected to an active AC power supply, this indicator lights green. The blue LED on the front of the cabinet works in the same way.



HOME

## FULL RANGE INPUT

These are female XLR-type connectors that accept a balanced line-level signal from a mixing console or other signal source.They are wired per AES (Audio Engineering Society) standards:

XLR

Hot (+) Pin 2

Cold (–) Pin 3

Shield (Ground)Pin 1

## THRU (FULL RANGE OUTPUT)

These are male XLR-type connectors that produce exactly the same signal that is connected to the FULL RANGE INPUT jack. Use it to daisy-chain several SRS1500s together off the same signal source.

## HIGH PASS (MID/HIGH FREQ) OUTPUT

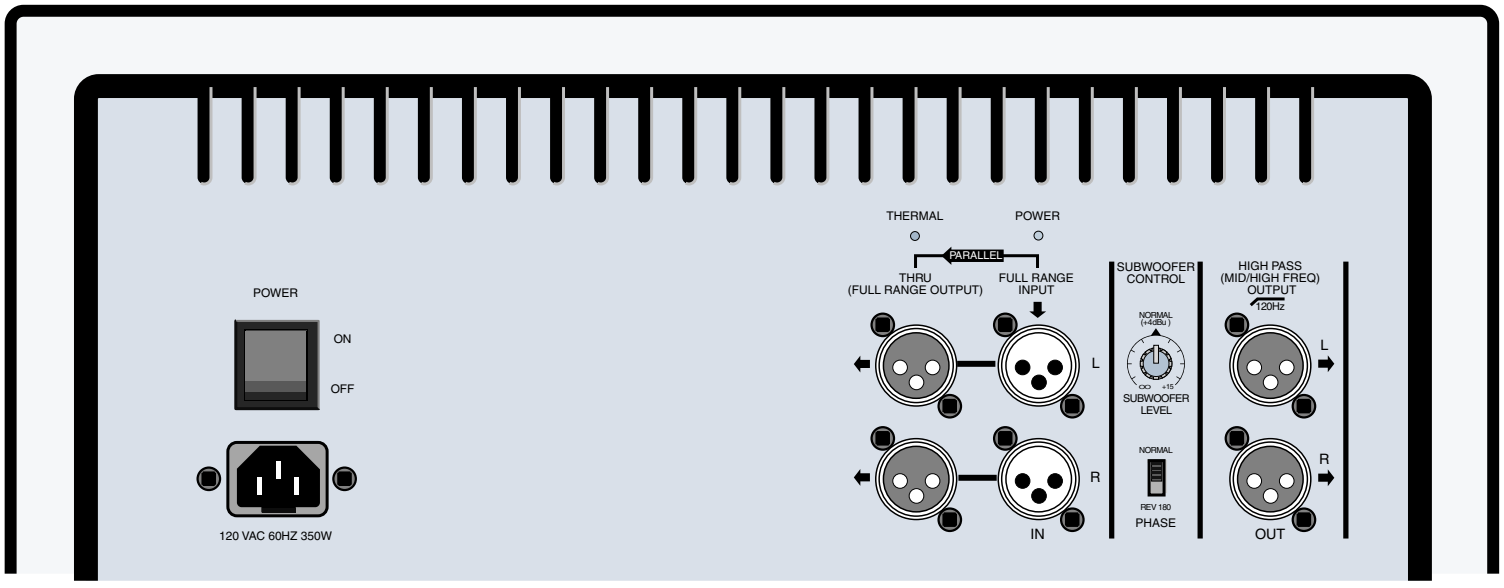
These are male XLR-type connectors that produce the frequencies above 120Hz. Connect these to a pair of full-range active speakers or to an amplifer/passive speaker combination. The SRS1500 reproduces the frequencies below 120Hz.

## SUBWOOFER LEVEL Control

This adjusts the subwoofer level. Use this control to balance the volume between the subwoofer and the full-range speakers. The center detent position is +4 dBu gain, which is the normal position. Unity gain is at the 9 o'clock position.

## PHASE

This switch reverses the phase of the signal at the HIGH PASS OUTPUT jacks. Depending on the placement of the SRS1500 subwoofer relative to the full-range speakers, you may get a better low-frequency response in the room if you reverse the phase of the signal.






HOME

# Specifications

## General Specifications

| | |
|---|---|
| Freq. Range | 40Hz–120Hz |
| Freq. Response | 45Hz–120Hz (–3 dB) |
| Maximum SPL @ 1m | 123 dB |
| Peak Output @ 1m | 126 dB |
| Crossover Freq. | 120Hz (12 dB/octave) |

## Input Type

Balanced differential

| | |
|---|---|
| Input Impedance | 50k ohms |

## Protection

| | |
|---|---|
| Input Protection | Level protected |
| Thermal Protection | Input stage muting, auto-reset |

## Transducer Specifications

Low-Frequency Transducer

| | |
|---|---|
| Diameter | 15” (381mm) |
| Voice Coil Diameter | 3.0” (75mm) |
| Power Handling | 350 watts rms |

## Power Amplifier

Low-Frequency Power Amplifier

| | |
|---|---|
| Burst Capability | 600 watts |
| Rated THD | < 0.05% |
| Cooling | Passive Heatsink |

## Line Input Power

| | |
|---|---|
| US | 120V, 60Hz |
| Europe | 230V, 50Hz |

## Physical Properties

| | |
|---|---|
| Height | 23.25² (590mm) |
| Width | 17.0² (432mm) |
| Depth | 23.5² (597mm) |
| Weight | 100 lbs. (45.4kg) |
| Enclosure | 18mm thick multi-layered baltic birch tree wood |

## Enclosure Geometry

Rectangular

## Mounting Methods

Floor mount only



HOME

# Safety test

You must perform the following leakage test before returning the unit to your customer. Take every safety precaution to protect yourself while doing this test.

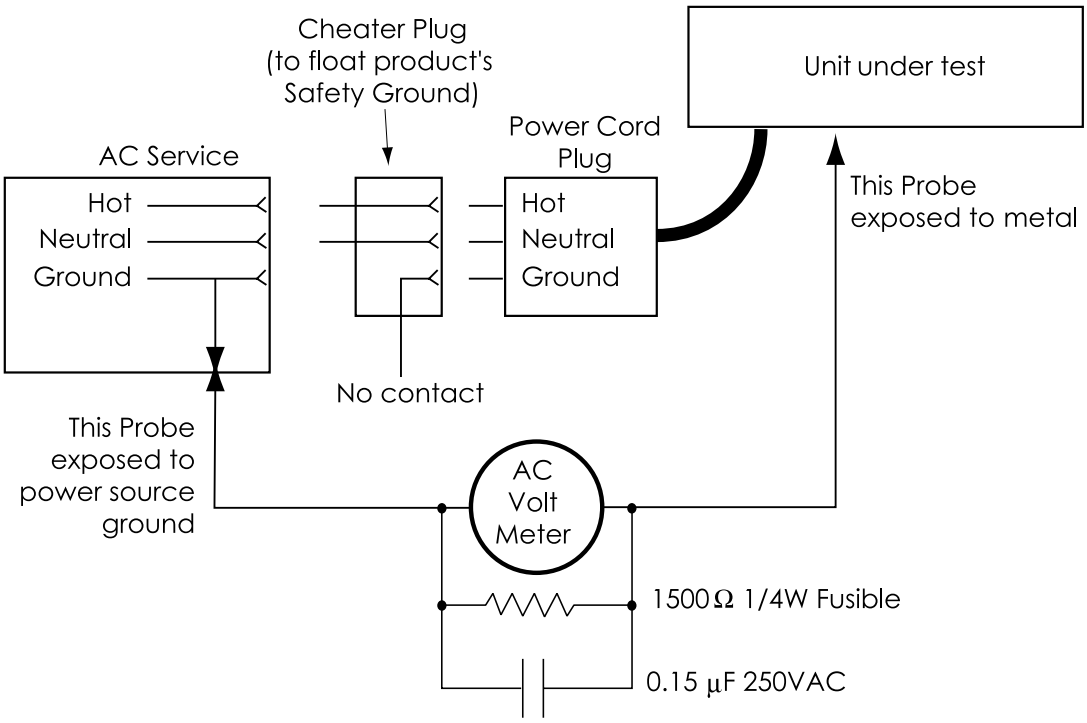
1. Make a small loading RC circuit as shown in the diagram below, and connect the AC volt meter between the AC power source ground and any exposed metal on the unit under test.

2. Connect the unit under test to an AC power source using a ground-lift adaptor, leaving the unit's safety ground floating. Turn the unit on.

3. The meter reading should be less than 750mVAC (note: this is equivalent to 0.5mA of leakage current).

4. Flip the plug over in the receptical so the hot and neutral are swapped. Verify that the reading is still less then 750mVAC.

5. If either reading is greater than 750mVAC, then you must investigate and repair the unit before returning it to your customer.






HOME

# SRS1500 PARTS LIST



# MASTER PARTS LIST

## 090-104-00 SRS1500 120V MODEL

| PART NUMBER | DESCRIPTION | REV | QPA | NOTES |
|---|---|---|---|---|
| 055-313-00 | PCB ASSY LED SRS1500 | A | 1 | |
| 092-903-00 | LC IEC SJT 1250W 10A/125V | A | 1 | LINECORD 120VAC |
| 080-101-00 | SA AMP | A | 1 | AMPLIFIER SUBASSEMBLY |
| 490-022-00 | WOOFER 15IN SPKR | A | 1 | |
| 490-045-00 | CABINET HOUSING SRS-1500 | A | 1 | |
| 490-051-00 | POLE MOUNT CUP SRS1500 | A | 1 | |
| 550-476-00 | HANDLE HOUSING SPKR | A | 2 | |
| 550-529-00 | FAB BRKT POLE SRS1500 | A | 1 | |
| 550-530-00 | FAB BRKT HANDLE SRS1500 | B | 4 | |
| 551-507-00 | CAST HANDLE SPKR | A | 2 | |
| 700-035-04 | TF 6-32X3/8 PHP CLRZC | A | 4 | SCREWS |
| 700-038-00 | MCH 10-32X1-1/4 SS SKTCAP | A | 8 | SCREWS |
| 700-051-10 | MCH 8-32X7/8 PHP BLKZC | A | 8 | SCREWS |
| 700-130-15 | MCH 10-32X1 1/2 BTNSK BLK | A | 10 | SCREWS |
| 700-131-00 | 10-32X1.25 FL 82D HEX BLK | A | 8 | SCREWS |
| 701-022-00 | #4X1/4 PHP II TYP B BLK | B | 1 | SCREWS |
| 701-025-00 | WOOD #10 X 3/4 PHP BLK | A | 12 | WOOD SCREWS |
| 701-030-00 | WOOD #6X1/2 RND HD PH BLK | A | 12 | WOOD SCREWS |
| 705-021-01 | NUT PALNUT 7/16OD STLZC | A | 2 | AHH NUTS! |
| 710-057-00 | WASH FLT ID .195 SS BLK | A | 10 | WASHER |
| 760-115-00 | SIDE HANDLE GRIP SRM450 | A | 2 | |
| 760-142-00 | PORT SUB WOOFER SRS1500 | A | 2 | |
| 790-002-00 | BAG POLY 12 X 18 2MIL | A | 1 | |
| 790-019-00 | P/FOAM 48X28X1/32 P/F SHT | A | 0.01 | |
| 800-144-00 | BOX SRS1500 | A | 1 | |
| 800-162-00 | BOX BOTTOM TRAY SRS1500 | A | 1 | |
| 810-100-00 | INSERT TOP/BTM SRS1500 | A | 2 | |
| 810-101-00 | INSERT CRN RAILS SRS1500 | A | 4 | |
| 820-187-00 | OWNERS MANUAL SRS1500 | A | 1 | |
| 840-227-00 | LOGO MACKIE LDSKR SERIES | D | 1 | |
| 840-273-00 | LOGO SRS1500 ACTIVE | C | 1 | |



HOME

# 080-101-00 AMPLIFIER SUBASSEMBLY

| PART NUMBER | DESCRIPTION | REV | QPA | |
|---|---|---|---|---|
| 040-406-00 | DIS 16GA WHT 4.5 IN QDX2 | A | 2 | |
| 040-407-00 | DIS 16GA BLK 4.5 IN QDX2 | A | 2 | |
| 040-408-00 | CBL ASY 2P 22G 45IN SPOX | B | 1 | |
| 055-269-00 | PCB ASSY AMP SRS1500 | A | 1 | SEE PAGE 10 |
| 055-270-00 | PCB ASSY INPUT SRS1500 | A1 | 1 | SEE PAGE 12 |
| 055-271-00 | PCB ASSY AC INPUT SRS1500 | A | 1 | SEE PAGE 13 |
| 080-155-00 | SA XFMR SRS1500 W/FERRITE | A | 1 | TRANSFORMER SUBASSEMBLY |
| 080-184-00 | SA 040-409-00/601-039-00 | A | 1 | |
| 080-185-00 | SA 040-404/405/601-040-00 | A | 1 | |
| 410-018-00 | SILPAD 4 C SRS1500 4.46" | C | 1 | |
| 410-019-00 | SILPAD 6C SRS1500 6.56" | C | 1 | |
| 410-020-00 | SILPAD DIGI SRS1500 5.02" | A | 1 | |
| 410-022-00 | MICA 1.08x.90x.002 SRS150 | A | 2 | |
| 410-023-00 | MICA .90x.70x.002 SRS1500 | A | 2 | |
| 500-055-00 | SW PWR RCKR QD SRS1500 | A | 1 | POWER SWITCH |
| 550-249-00 | PLATE XFMR .335IDX4.528OD | A | 1 | |
| 550-477-00 | SCR PANEL REAR SRS-1500 | A | 1 | |
| 550-492-00 | PNT SUPP AMP SRS1500 | A | 2 | |
| 550-493-00 | FAB SUB HTSINK SRS1500 | A | 1 | |
| 550-509-00 | FAB SUB HTSK LFT SRS1500 | A | 1 | |
| 550-510-00 | FAB SUB HTSK RGT SRS1500 | A | 1 | |
| 550-513-00 | GEORGES SPRING CLIP SRS | A | 7 | |
| 550-569-00 | PLATE XFMER SRS1500 | A | 1 | |
| 700-028-00 | SEMS 6-32X1/4 PHP BLKZC | B | 8 | |
| 700-028-03 | SEMS 6-32X1/2 PHP BLKZC | A | 4 | |
| 700-055-00 | MCH 4-24X3/8 PHP BLK HILO | A | 12 | |
| 700-113-01 | BOLT CAR 5/16-18 2.5I STL | A | 1 | TRANSFORMER CARRIAGE BOLT |
| 705-001-00 | KEPNUT 6-32 | A | 19 | |
| 705-008-00 | NUT LOCK 8-32 | A | 4 | |
| 705-011-00 | NUT LOCK 10-32 | A | 4 | |
| 705-018-00 | NUT HEX 5/16-18 (GD-5) | A | 1 | TRANSFORMER MOUNTINIG NUT |
| 706-080-00 | MOUNT VIBRATION 1.0 DIA | A | 4 | |
| 706-084-00 | STDF 1/4 HEX 6-32 .187 FF | A | 7 | |
| 710-017-00 | WASH SPLTLCK 5/16 HEAVY | A | 1 | |
| 710-024-00 | WASH FLAT 5/16 HARD (USS) | A | 1 | |
| 710-054-00 | WASH FLT .312 OD | A | 7 | |
| 710-056-00 | WASH SHLD #6 .36 OD NYLON | A | 2 | |
| 712-061-00 | NO4 VINYL COAT WIRE CLAMP | A | 1 | |
| 720-006-00 | TAPE DS 60M .50W VYNL BLK | A | AR | |
| 730-001-00 | THERMAL JOINT COMPOUND | A | AR | |
| 730-025-00 | LOCTITE 222 | A | AR | |
| 730-026-00 | ADHESIVE RTV162 | A | AR | |
| 740-001-00 | TYRAP 3-1/4L | A | 2 | |
| 740-002-00 | TYRAP MOUNT .75 X .75 | B | 1 | |
| 760-081-00 | KNOB TRIM W/PNTR | A | 1 | |
| 780-111-00 | WASH RUB (W/TRANSFORMER) | A | 2 | |
| 780-150-00 | SHIELD AMP PCB SRS1500 | A | 1 | |
| 790-001-00 | BAG POLY 20 X 30 4MIL | A | 1 | |
| 800-166-00 | BOX SET SA AMP SRS1500 | | 0.25 | |



HOME

# AMP PCB ASSEMBLY 055-269-00 REV:A

| PART NUMBER | DESCRIPTION | VALUE | | REFERENCE DESIGNATORS |
|---|---|---|---|---|
| 110-001-00 | RES CF .25W 5% 10 OHM | 10 | 5% | R1 R3 R43 R45 R65 R68 |
| 110-018-00 | RES CF .25W 5% 51 OHM | 51 | 5% | R26 R38 |
| 110-025-00 | RES CF .25W 5% 100 OHM | 100 | 5% | R50 R59 |
| 110-033-00 | RES CF .25W 5% 220 OHM | 220 | 5% | R47 R64 |
| 110-039-00 | RES CF .25W 5% 390 OHM | 390R | | R57 R74 |
| 110-041-00 | RES CF .25W 5% 470 OHM | 470 | 5% | R29 R35 |
| 110-049-00 | RES CF .25W 5% 1K OHM | 1K | 5% | R25 R37 R48-49 R54-55 R60-61 R71-72 |
| 110-051-00 | RES CF .25W 5% 1K2 OHM | 1k2 | | R51 R56 R58 |
| 110-057-00 | RES CF .25W 5% 2K2 OHM | 2K2 | | R6 R12-15 R19 R27 R39 R46 R66 R73 R76 |
| 110-080-00 | RES CF .25W 5% 20K OHM | 20K | 5% | R70 R77 |
| 110-083-00 | RES CF .25W 5% 27K OHM | 27K | 5% | R75 |
| 120-025-00 | RES MO .5W 5% 1 OHM | 1R | | R17 R24 |
| 120-064-00 | RES MO .5W 5% 43 OHM | 43 | 5% | R34 |
| 120-081-00 | RES MO .5W 5% 2K2 OHM | 2K2 | 5% | R30 R33 |
| 120-090-00 | RES MO .5W 5% 5.1K OHM | 5.1K | 5% | R16 R18 R20 R23 R28 R40 |
| 121-025-00 | RES MO 1W 5% 1 OHM | 1R | | R7-8 R22 R41 |
| 121-085-00 | RES MO 1W 5% 3K3 OHM | 3k3 | | R44 R67 |
| 123-033-00 | RES MO 3W 5% 2.2 OHM | 2.2 | 5% | R5 R10-11 |
| 125-034-00 | RES WW 5W 0.15 OHM | 0.15R | | R9 R21 R31 R36 |
| 125-035-00 | RES WW 5W 5% 1k OHM | 1k | | R32 R42 R52-53 R62-63 |
| 125-036-00 | RES WW 5W 5% 1K5 OHM | 1k5 | | R4 |
| 125-037-00 | RES WW 5W 5% 2K2 OHM | 2k2 | | R2 |
| 125-038-00 | RES WW 5W 5% 470 OHM | 470 | | R69 R78 |
| 200-007-02 | PLY .01UF 10% 100V TR | 0.01 | | C28-29 |
| 200-036-02 | PLY/BX .1UF 10% 250V TR | .1uF | 10% | C10 C15 C30 |
| 200-042-02 | PLY/BX .22UF 10%250V TR | 0.22 | 10% | C4 C7 C20 C22-24 C32-38 |
| 200-049-00 | PLY BOX LW IND 22UF SPL | 22UF | | C5-6 |
| 200-062-00 | PLY FILM 6.8UF 10% 100V | 6.8UF | | C1-2 C14 |
| 205-006-02 | MICA 30PF 5% 500V T/A | 30pF | 5% | C31 |
| 220-007-00 | LYT 100UF 20% 100V RAD | 100UF | 10% | C17-18 |
| 220-011-02 | LYT 100UF 20% 25V RAD | 100UF | 10% | C3 C8 C16 C19 C26-27 |
| 220-016-00 | LYT 1000UF 20% 25V RAD | 1000UF | 10% | C12-13 |
| 220-027-02 | LYT 10UF 20% 50V RAD TR | 10UF | 10% | C21 C25 |
| 220-033-00 | LYT 10000UF 20% 80V RAD | 10,000uF | 20% | C9 C11 |
| NOT USED | | | | C39-40 |
| 300-007-00 | DIO SW 1SS244-SUB 1SS245 | 1SS244 | | D13 D15 D17 D19 D22-23 D25 D28 D30 D35 D37-40 |
| 301-019-00 | DIO PWR BRDG 25A 400V SIP | 25A | | D10 |
| 301-059-00 | FAST DIO 600V/4A MUR460 | MUR460 | | D6-7 D18 D20 |
| 301-060-00 | FAST DIO 400V/1A MUR140 | MUR140 | | D11 D16 |
| 301-061-00 | FAST DIO 400V/15A MUR1540 | MUR1540 | | D2-3 |
| 301-062-00 | DIO BRDG 400V/1A DF04M | DF04M | | D9 |
| 302-002-00 | DIO ZEN 1N5230B 4.7V | 1N5230 | | D29 D31 |
| 302-026-00 | DIO ZEN 1N4744A 15V 1W | 1N4744 | | D1 D4-5 D8 D27 D33 |
| 302-030-00 | DIO ZEN 1N4746A 18V 1W | 1N4746 | | D21 D34 |
| 304-041-02 | LED GRN T-1 TRANS W/TIE | GRN | | D12 D14 D24 D26 D32 D36 |
| 310-001-02 | TRANSISTOR NPN 2N3904 | 2N3904 | | Q7 Q12 |
| 310-018-00 | XSTR NPN TIP122 | TIP122 | | Q4 |
| 310-023-02 | XSTR NPN 2SC2362K TR | 2SC2362K | | Q20-23 Q25 |
| 310-032-02 | TRANSISTOR PNP T&R | 2SA1016K | | Q18-19 Q28-30 |
| 310-035-00 | TRANSISTOR PNP | 2SA1478 | | Q24 Q26-27 |
| 310-036-00 | TRANSISTOR NPN | 2SC3788 | | Q15-17 |
| 310-042-00 | XSTR NPN MJE15032 | MJE15032 | | Q14 |
| 310-043-00 | XSTR PNP MJE15033 | MJE15033 | | Q10 |
| 310-062-00 | XSTR NPN 100V/25A TIP35C | TIP35C | | Q8 Q13 |



HOME

| PART NUMBER | DESCRIPTION | VALUE | REFERENCE DESIGNATORS |
|---|---|---|---|
| 310-063-00 | XSTR PNP 100V/25A TIP36C | TIP36C | Q3 Q9 |
| 310-065-00 | XSTR PNP TIP127 | TIP127 | Q5 |
| 310-066-00 | XSTR MOSFET-N MTW32N20E | MTW32N20E | Q1-2 |
| 310-067-00 | XSTR PNP SWITCH PNP 60V/ .2A | 2N3906 | Q6 Q11 |
| 310-068-00 | PC 923 /SHARP, HIGH SPEED PHOTOCOUPLER | PC923 | U1-2 |
| 400-078-00 | HDR 10P .1X2 STR LCK SHRD | | J4 |
| 400-129-00 | FUSE CLIP .25 DIA PC MNT | | FC1-4 |
| 400-173-00 | TERM .25 QKDS PCMT STABLE | | J2-3 |
| 400-373-00 | HDR 6P .084 DIA 11A | | J1 |
| 450-269-00 | PCB, SRS1500: AMP | | Z4 |
| 500-026-00 | THERMOSTAT 67F070 PCMNT | 67F070 | TH1 |
| 510-028-00 | FUSE SB 10A 3AB 1/4X1-1/4 | 10A | F1-2 |
| 601-006-00 | INDUCTOR AIR COIL 1UH | 1uH 10% | L3 |
| 601-031-00 | INDUCTOR CZECH 5UH 50A SP | 5uH/50A | L1-2 |



HOME

# INPUT PCB ASSEMBLY 055-270-00 REV:A

| PART NUMBER | DESCRIPTION | VALUE | | REFERENCE DESIGNATORS |
|---|---|---|---|---|
| 120-081-00 | RES MO .5W 5% 2K2 OHM | 2K2 | 5% | R72 R74 |
| 121-049-00 | RES MO 1W 5% 10 OHM | 10 OHM | 5% | R96-97 |
| 130-037-02 | POT RTY 10KC 9MM TN | 10KC | . | R80 |
| 140-009-00 | RES TF SM .1W 5% 2.2 OHM | 2.2 | 5% | R65 R69 |
| 140-049-00 | RES TF SM .1W 5% 100 OHM | 100 | 5% | R28-29 R54-55 R71 R88 |
| 140-057-00 | RES TF SM .1W 5% 220 OHM | 220 | 5% | R23-24 R49 R53 R79 |
| 140-065-00 | RES TF SM .1W 5% 470 OHM | 470 | 5% | R89 |
| 140-073-00 | RES TF SM .1W 5% 1K0 OHM | 1K0 | 5% | R3-4 R36-37 R87 |
| 140-077-00 | RES TF SM .1W 5% 1K5 OHM | 1K5 | 5% | R94-95 |
| 140-081-00 | RES TF SM .1W 5% 2K2 OHM | 2K2 | 5% | R75 R85 R90 |
| 140-083-00 | RES TF SM .1W 5% 2K7 OHM | 2K7 | 5% | R83 |
| 140-089-00 | RES TF SM .1W 5% 4K7 OHM | 4K7 | 5% | R5 R19 R60-61 R64 R76 |
| 140-090-00 | RES TF SM .1W 5% 5K1 OHM | 5K1 | 5% | R70 |
| 140-091-00 | RES TF SM .1W 5% 5K6 OHM | 5K6 | 5% | R68 |
| 140-093-00 | RES TF SM .1W 5% 6K8 OHM | 6K8 | 5% | R12 R45 |
| 140-097-00 | RES TF SM .1W 5% 10K OHM | 10K | 5% | R20 R26 R46 R51 R66-67 R73 |
| 140-101-00 | RES TF SM .1W 5% 15K OHM | 15K | 5% | R11 R44 |
| 140-105-00 | RES TF SM .1W 5% 22K OHM | 22K | 5% | R18 R77-78 |
| 140-114-00 | RES TF SM .1W 5% 47K OHM | 47K | 5% | R1-2 R16-17 R30-35 R56-59 R93 |
| 140-123-00 | RES TF SM .1W 5% 100K OHM | 100K | 5% | R14-15 R84 R86 |
| 140-131-00 | RES TF SM .1W 5% 220K OHM | 220K | 5% | R63 |
| 140-135-00 | RES TF SM .1W 5% 330K OHM | 330K | 5% | R92 |
| 145-266-00 | RES MF SM .1W 1% 576 OHM | 576 | 1% | R13 R91 |
| 145-326-00 | RES MF SM .1W 1% 2K21 OHM | 2K21 | 1% | R21-22 R25 R27 R47-48 R50 R52 R81-82 |
| 145-367-00 | RES MF SM .1W 1% 5K90 OHM | 5K90 | 1% | R9-10 R42-43 |
| 145-389-00 | RES MF SM .1W 1% 10K0 OHM | 10K0 | 1% | R7-8 R40-41 |
| 200-022-02 | PLY .47UF 5% 50V TR | 0.47 | 10% | C37 |
| 210-002-00 | CER 100PF 10% 50V RAD | 100PF | 10% | C35 |
| 212-001-00 | CER .01UF 10% 50V X7R SM | 0.01 | 10% | C49 |
| 212-015-00 | CER 33PF 5% 50V NPO SM | 33PF | 5% | C5-7 C23-25 C39 |
| 212-018-00 | CER 10PF 5% 50V NPO SM | 10PF | 5% | C15-16 C28-29 |
| 212-020-00 | CER 750PF 5% 50V NPO SM | 750PF | 5% | C3-4 C21-22 |
| 212-024-00 | CER 1UF 25V Y5V 1206 | 1UF | +80/-20% | C1-2 C10-11 C19-20 |
| 212-025-00 | CAP CER .1UF 50V 10% X7R | .1UF | 10% | C45-48 |
| 220-001-02 | LYT 22UF 20% 25V RAD TR | 22UF | 10% | C38 C43 |
| 220-002-02 | LYT 47UF 20% 25V RAD TR | 47UF | 20% | C17-18 C30-31 |
| 220-011-02 | LYT 100UF 20% 25V RAD | 100UF | 10% | C32 C34 C36 C40 |
| 220-012-02 | LYT 4.7UF 20% 63V RAD TR | 4.7UF | 10% | C33 |
| 224-010-00 | PLY .1UF 2% 50V SM | 0.1 | 2.00% | C8-9 C12-13 C26-27 C42 C44 |
| 224-015-00 | PLY .047UF 2% 50V SM | 0.047 | 2.00% | C14 C41 |
| 300-003-00 | DIO SW DL4148 100V SM | DL4148 | | D1-2 D5-6 D10 D12-14 |
| 302-002-03 | DIO ZEN 1N5230B 4.7V SM | DL5230B | | D16 |
| 302-013-03 | DIO ZEN DL5242 12V SM | DL5242B | | D3-4 D7-8 |
| 302-025-03 | DIO ZEN DL5245B 15V SMT | DL5245B | | D11 |
| 304-001-00 | LED RED T-1 | RED | | D15 |
| 304-004-00 | LED GREEN T-1 | GRN | | D9 |
| 310-005-02 | TRANSISTOR JFET J112 | J112 | | Q1-4 Q10 |
| 310-035-00 | TRANSISTOR PNP | 2SA1478 | | Q12 |
| 310-036-00 | TRANSISTOR NPN | 2SC3788 | | Q11 |
| 311-005-00 | XSTR NPN MMBTA06 SMT | IMBTA06 | | Q5 Q7-8 |
| 311-006-00 | XSTR PNP IMBTA56 SMT | IMBTA56 | | Q6 Q9 |
| 320-017-03 | OPAMP NE5532 SMD | NE5532 | | U1-7 |
| 329-012-00 | VTL5C10 OPTOCOUPLER | VTL5C10 | | U9 |
| 400-078-00 | HDR 10P .1X2 STR LCK SHRD | | | J5 |
| 400-141-00 | XLR 3P F VERT A-SERIES | | | J1 J3 |
| 400-142-00 | XLR 3P M VERT A-SERIES | | | J2 J4 J6-7 |



HOME

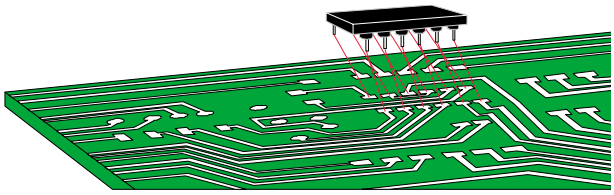
| PART NUMBER | DESCRIPTION | VALUE | REFERENCE DESIGNATORS |
|---|---|---|---|
| 400-243-00 | HDR 2P .098X1 SHRD | | J8 |
| 410-004-00 | INSL SILPAD TO-126 | | Z103-104 |
| 450-270-00 | PCB, SRS1500: INPUT | | Z100 |
| 500-024-00 | SW SLIDE DPDT MINI | | DPDT SW1 |
| 550-573-00 | HEATSINK 270 PCB SRS1500 | | HS1 |
| 700-087-00 | TF 4-40X5/8 TORX 1/4 WASH | | Z101-102 |
| 706-095-00 | SPCR PVC .905"" T1 LED | | Z105-106 |

# AC INPUT PCB ASSEMBLY 055-271-00 Rev.A

| PART NUMBER | DESCRIPTION | VALUE | | REFERENCE DESIGNATORS | |
|---|---|---|---|---|---|
| 040-135-00 | CBL ASSY 18GA 1010 GRN/YEL 9" | GRN/YEL | | P1 | |
| 200-023-00 | PLY/BX .001UF 20% 250V Y2 | .001uF | 20% | C1-2 | |
| 200-024-00 | PLY/BX .01UF 20% 250V Y2 | .01uF | 20% | C3 | |
| 200-050-00 | PLYBOX .47UF 20% 275V X2 | .47 | 20% | C4-5 | |
| 400-060-00 | FUSE CLIP PCMT 5MM DIA | | | Z2-3 | |
| 400-132-00 | IEC MALE RTA PCMT | | | J1 | |
| 400-173-00 | TERM .25 QKDS PCMT STABLE | | | J2-7 | |
| 450-271-00 | PCB, SRS1500: AC INPUT | | | Z1 | |
| 712-020-00 | BRKT ANG 6-32X.037THK STL | | | BK1 | |
| 712-021-01 | RVT CL END .125X.062-.125 | | | Z4-5 | |
| 510-045-00 | 10 AMP, SLO BLO, 5 x 20mm | | | F1 | NOTE: Some early models have 7A fuses which should be replaced with 10A. |



HOME



MACKIE.®

THE MACKIE FIXER • MACKIE DESIGNS SERVICE NEWS

# SRS1500 active speaker modification

## Models affected:

All SRS1500 120Volt and 100Volt active speakers. The 230Volt and 220Volt models are not affected. Add this as part of your normal repair procedures.

## Symptom:

No power, no LED

## Possible Cause:

Blown AC fuse

## Solution:

Increase the fuse size from 7 amps to 10 amps, to overcome the possibility of the fuse blowing under certain turn-on and transient conditions.

---

## Safety Warning:

⚠ Caution! These instructions are for use by qualified personnel only. To avoid electric shock, do not perform any servicing unless you are qualified to do so. Refer all service to qualified personnel.

## Tools Required:

Phillips screwdriver.

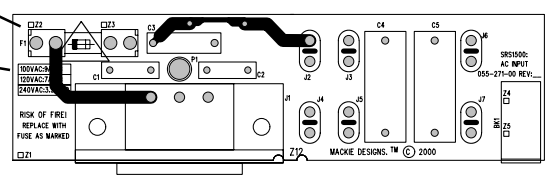
## Parts Required:

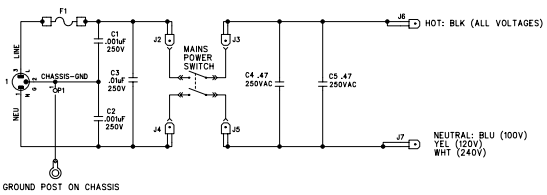
| | | |
|---|---|---|
| Fuse | 510-045-00 | 10 Amp, Slo Blo, 5 x 20mm |
| Fuse label | 840-430-00 | |

---

## Procedure:

1. Remove all cords (including the power cable and input cable) from the speaker.
2. Lay the speaker on its front on a soft carpet or surface.
3. Take off the amplifier panel assembly by removing the two screws along the rear edge of the top of the speaker cabinet, and the two screws in the bottom. Take care to undo the LED wires and the speaker connector before removing the amplifier panel.
4. Locate the AC input board and replace the fuse F1 with the new 10A fuse.
5. Add the fuse label over the silkscreen markings next to the fuse.
6. Reconnect the speaker connector and the LED connector.
7. Secure the amplifier panel back into the cabinet.
8. Reconnect the power cord and turn on the speaker.
9. Perform a complete specification and safety test before returning the speaker to the customer.



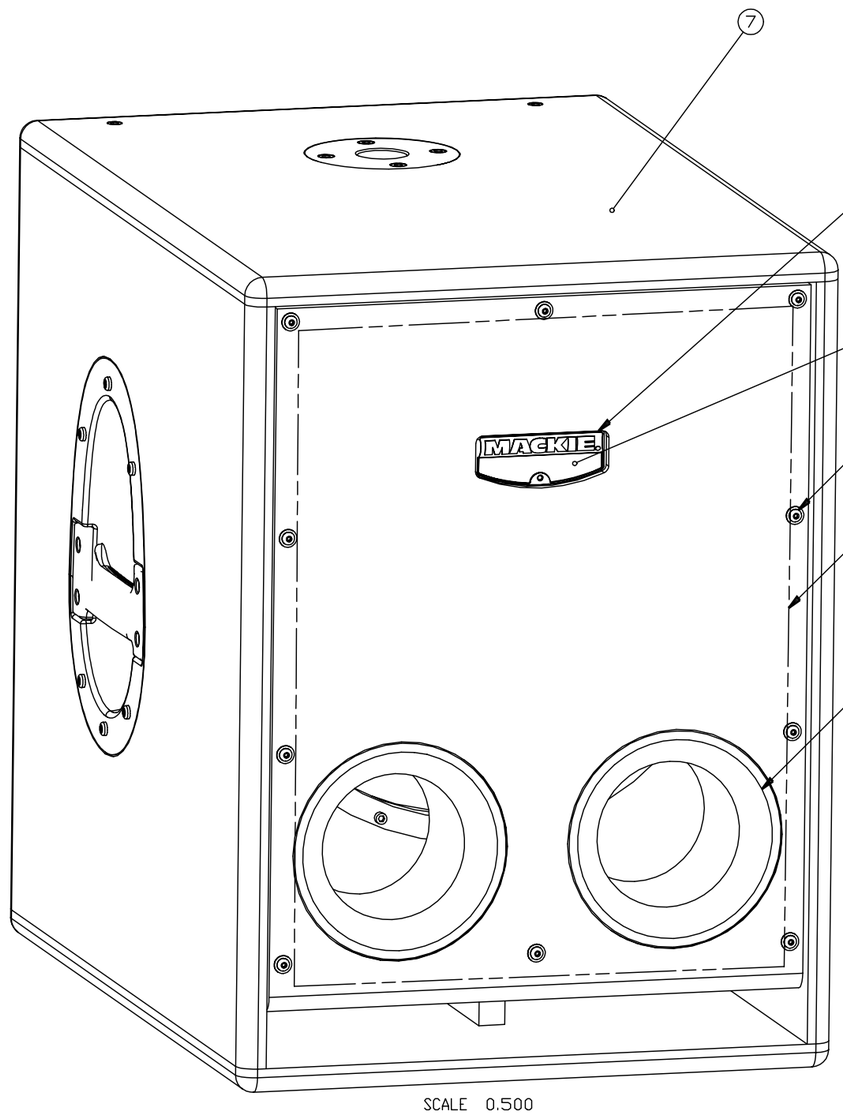
| DWG. NO. | SHT | REV. |
|---|---|---|
| 090-104-00 | 1 | B |

REVISIONS

| ECO# | REV. | DESCRIPTION | REV. BY: | APP. BY: | DATE |
|---|---|---|---|---|---|
| | A | PRODUCTION RELEASE | | | |
| 2701 | B | CHANGE HANDLE SCREW AND ADD GASKETING NOTES. | | | |

CABLE CONNECTIONS (NOT SHOWN)

| ITEM | FROM | REF DES | TO | REF DES | |
|---|---|---|---|---|---|
| — | 055-269-00 (ON 080-101-00 SUBASSY) | J2 BLK J3 RED | SPEAKER SPEAKER | BLK RED | 1 |
| — | 055-270-00 (ON 080-101-00 SUBASSY) | J8 | 055-313-00 | CONN | 1 |




SCALE 0.500

NOTES; UNLESS OTHERWISE SPECIFIED

1 SEAL HOLES IN BULKHEADS FOR AIR LEAKS AFTER ROUTING WIRES.

2 NO SILICONE OR GASKETING MATERIAL TO BE VISIBLE FROM EXTERIOR OF FINISHED CABINET.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
ALL ANGLES ARE 90°
TOLERANCES ARE:
FRACTIONS: ± /  DECIMALS: .XX± .XXX±  ANGLES: ±

DIMENSION AND TOLERANCES ARE IN ACCORDANCE WITH ASME Y14.5-1994

THE INFORMATION CONTAINED HEREIN IS PROPRIETARY AND CONFIDENTIAL PROPERTY OF MACKIE DESIGNS INC.

DO NOT SCALE DRAWING

MATERIAL: ———

FINISH: ———

| APPROVALS | DATE |
|---|---|
| DRAWN: JH | 12.13.99 |
| CHECKED: | |
| NP ENGINEERING: JEFF H. | 3.7.00 |
| MATERIAL: MIKE B. | 3.9.00 |
| MANUFACTURING: | |
| MFG ENGINEERING: MIKE G. | 3.8.00 |
| ISSUED: PATTI C | 3.9.00 |

MACKIE.™ Mackie Designs Inc. Woodinville, Wa

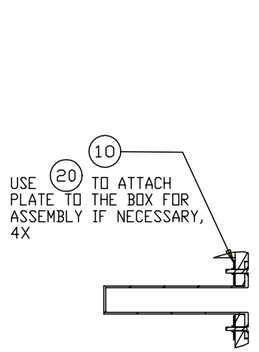
FINAL ASSY, SRS1500

| SIZE | SCALE: | DWG. NO. | REV. |
|---|---|---|---|
| D | 1/4 | 090-104-00 | B |

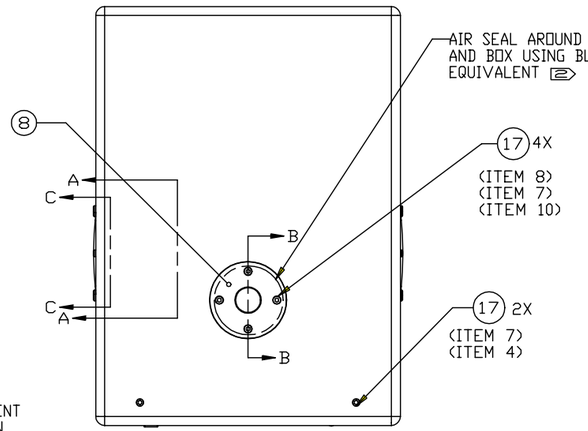
DWG FILE 090-104-00 SHEET 1 OF 2

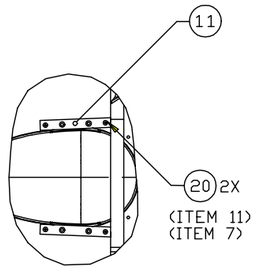


BACK

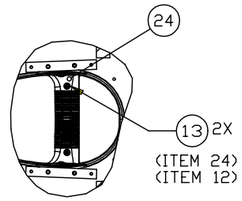



SECTION B-B
MTG POLE REINFORCEMENT PLATE INSTALLATION

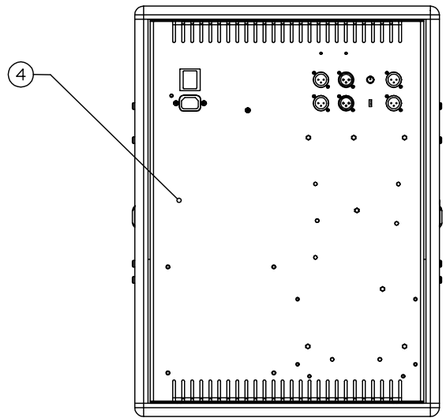


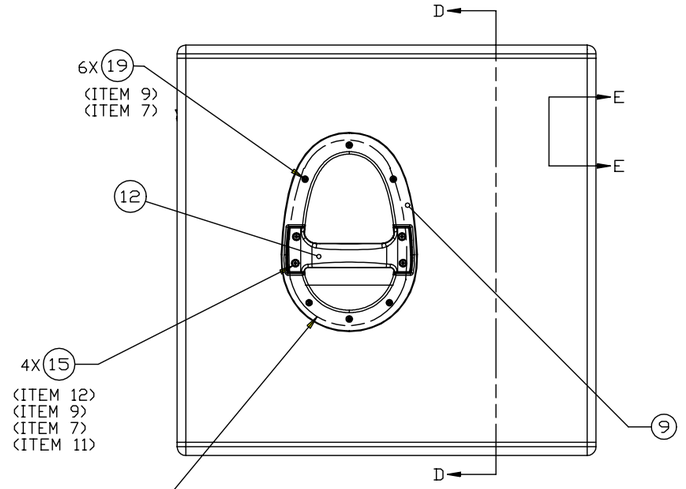




SECTION A-A
INSTALLATION OF HANDLE REINFORCEMENT BRACKET, 4X

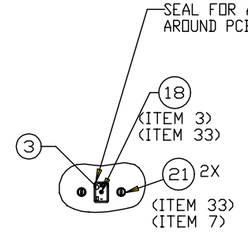



SECTION C-C
INSTALLATION OF HANDLE BACKING, 2X

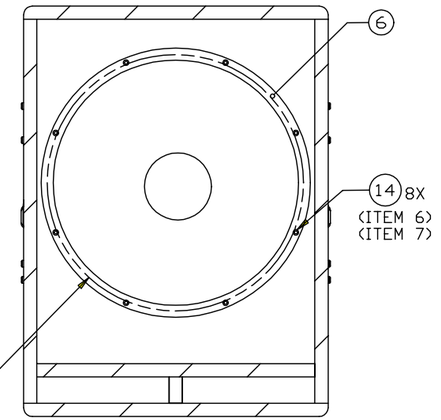


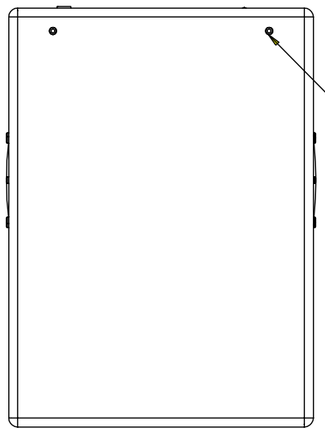

OPPOSITE SIDE IS MIRROR IMAGE




SECTION E-E
INSTALLATION OF FRONT BADGE AND PCB




SECTION D-D
INSTALLATION OF SPEAKER




| SIZE | SCALE: | DWG. NO. | REV. |
|---|---|---|---|
| D | 1/4 | 090-104-00 | B |
| DWG FILE: | | SHEET 2 OF 2 | |

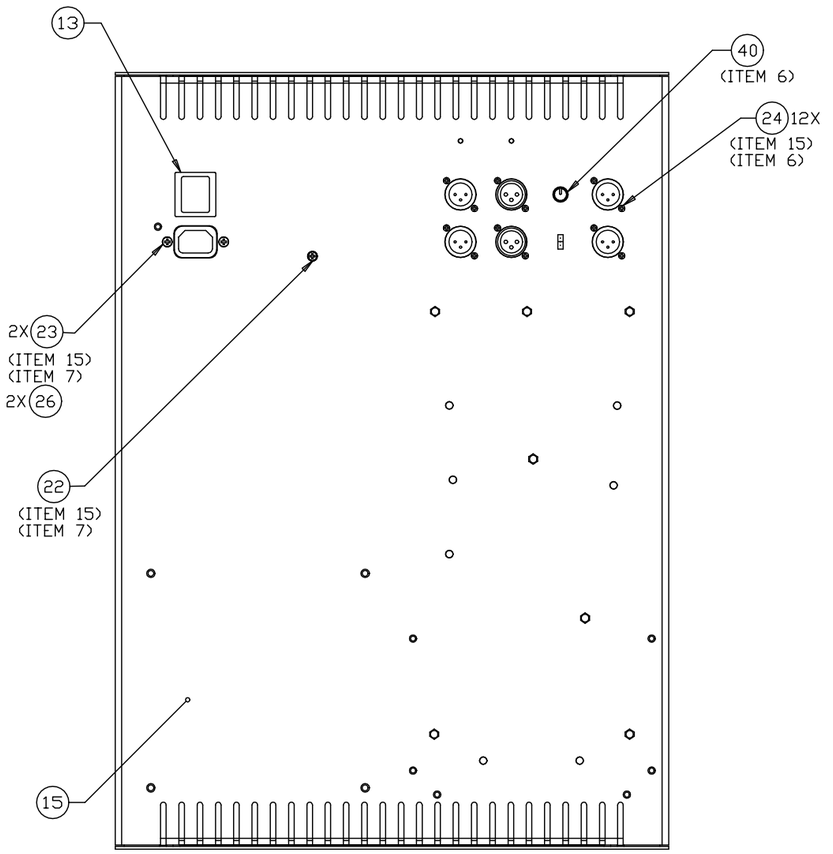
| DWG. NO. | SHT | REV. |
|---|---|---|
| 080-101-00 | 1 | A |

REVISIONS

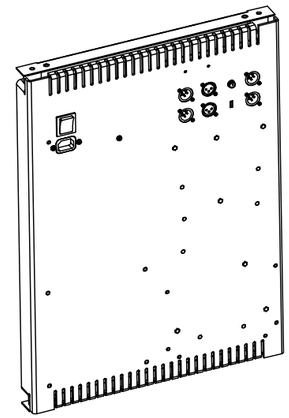
| ECO# | REV. | DESCRIPTION | REV. BY: | APP. BY: | DATE |
|---|---|---|---|---|---|
| | A | PRODUCTION RELEASE | | | |

CABLE CONNECTIONS (NOT SHOWN)

| ITEM | FROM REF DES | TO REF DES | |
|---|---|---|---|
| (1) | 055-271-00 J2 | PWR SWITCH WHT | |
| (2) | 055-271-00 J4 | PWR SWITCH BLK | |
| (1) | 055-271-00 J3 | PWR SWITCH WHT | SAME COLOR WIRES ARE INTERCHANGEABLE. SEE SH2 FOR COLOR TERMINATION LUGS ON SWITCH |
| (2) | 055-271-00 J5 | PWR SWITCH BLK | |
| — | 055-271-00 P1 | CHASSIS GND | |
| (3) | 055-270-00 J8 | (FINAL ASSY-LEDS) | |
| (4) | 055-269-00 J4 | 055-270-00 J5 | |
| — | 080-155-00 8pin | 055-269-00 J1 | <3> |
| — | 080-155-00 WHT | 055-271-00 J6 | |
| — | 080-155-00 BLK | 055-271-00 J7 | |
| (47) | 055-269-00 J2 - BLK J3 + RED | (FINAL ASSY-SPKR) | SECURE FERRITE BEAD PER MFG INSTR. |
| | | | |




SCALE 0.500



SCALE 0.250

NOTES, UNLESS OTHERWISE SPECIFIED

<1> COAT BOTH SIDES OF INSULATOR USING (43) .

<2> COAT BOTTOM SIDE OF HEATSINK USING (43) .

<3> USE (38) TO SECURE WIRING PER MANUFACTURING INSTRUCTIONS.

<4> USE (45) TO LOCK ITEM 4 INTO PCB CONNECTOR.

<5> USE (46) TO LOCK NUT TO THREADS.

DIMENSION AND TOLERANCES ARE IN ACCORDANCE WITH ASME Y14.5-1994

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DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
ALL ANGLES ARE 90°
TOLERANCES ARE:
FRACTIONS: ± /
DECIMALS: .XX± .XXX±
ANGLES: ±

MATERIAL:

FINISH:

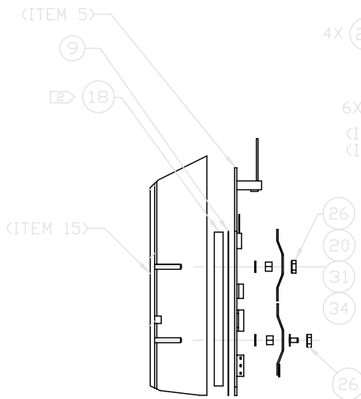
| APPROVALS | DATE |
|---|---|
| DRAWN: JH | 3.7.00 |
| CHECKED: | |
| NP ENGINEERING: | |
| MATERIAL: | |
| MANUFACTURING: | |
| MFG ENGINEERING: | |
| ISSUED: | |

MACKIE.™ Mackie Designs Inc. Woodinville, Wa

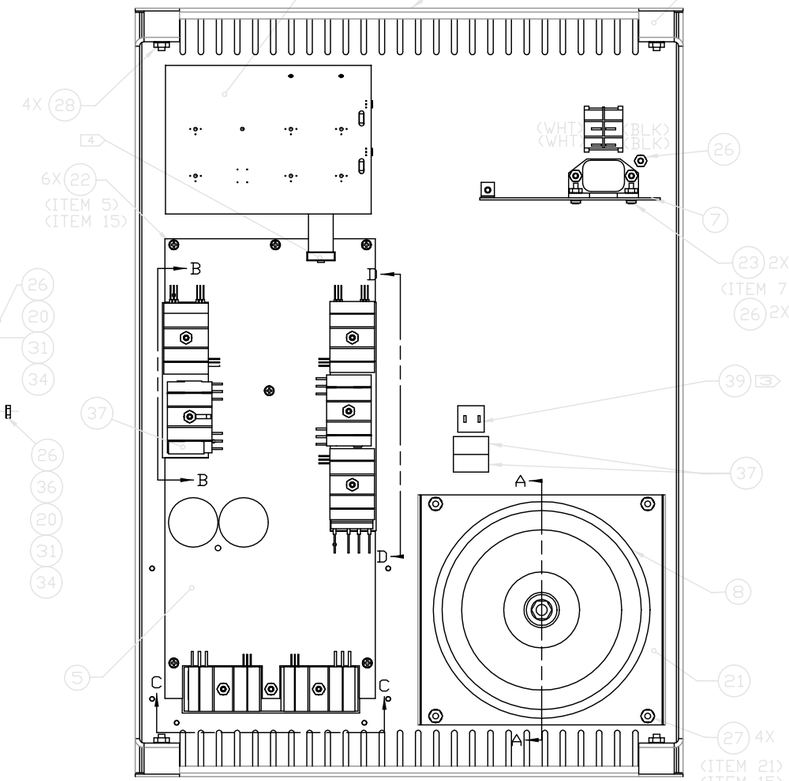
SUBASSEMBLY, AMPLIFIER, SRS1500

| SIZE | SCALE: | DWG. NO. | REV. |
|---|---|---|---|
| D | 1/2 | 080-101-00 | A |

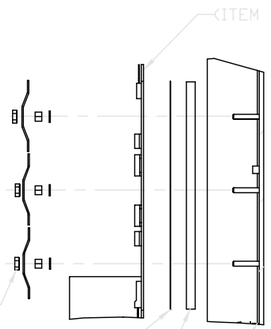
DWG FILE: 080-101-00 SHEET 1 OF 2



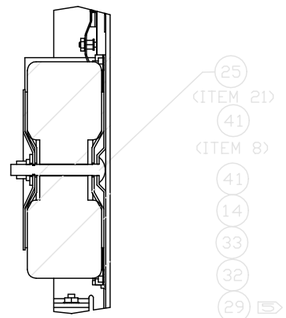

SECTION B-B
EXPLODED RIGHT SIDE
HEATSINK ASSY



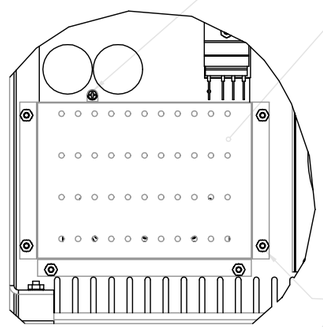

AMP ASSY
SHIELD REMOVED
SCALE 0.500



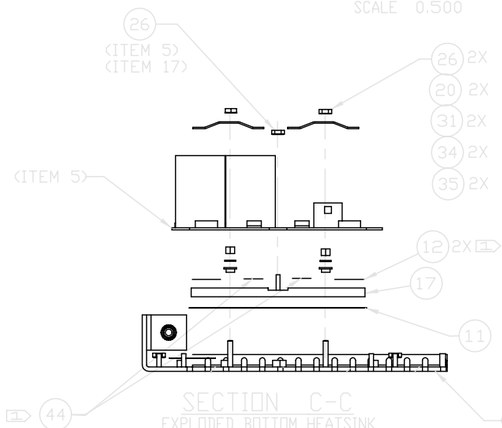

SECTION D-D
RIGHT SIDE
HEATSINK ASSY




SECTION A-A
TORROID ASSY




ADDITION OF SHIELD
OVER INSTALLED AMP PCB
SCALE 0.500




SECTION C-C
EXPLODED BOTTOM HEATSINK
ASSY

| SIZE | SCALE: | DWG. NO. | REV. |
|---|---|---|---|
| D | 1/2 | 080-101-00 | A |
| DWG FILE: 080-101-00 | | SHEET 2 OF 2 | |



BACK