



SLA-70B

Signature

OPERATING MANUAL

Note:

Before installing your new SLA-70B Signature amplifier, please read this manual carefully as it will inform you of the specifications, proper installation and operating procedures. Also included are guidelines on how to care for your new SLA-70B Signature amplifier.

SLA-70B

STEREO AMPLIFIER

INTRODUCTION

The Cary Audio Design SLA-70B amplifier is a compact vacuum tube stereo audio power amplifier. The SLA-70B is constructed to the highest commercial standards utilizing a grain-oriented stainless steel chassis. All resistors are 1 percent metal film and the audio coupling capacitors are polypropylene. Each SLA-70B amplifier is hand wired point-to-point. The high voltage DC power supply contains two 1200 MFD electrolytic capacitors for a total of 2400 MFD. The SLA-70B uses a pair of EL34/6550 output tubes per channel driven by the famous 6SL7GT dual triode input tube. The SLA-70B utilizes two 5V4/CV729 tubes in the full wave rectifier power supply. This brings the total to: 4-EL34 or 6550, 2-6SL7GT and 2-5V4/CV729 vacuum tubes to power your new SLA-70B. Every SLA-70B amplifier is tested at its specified power input and output levels and should require a minimum of maintenance through years of operation. All SLA-70B amplifiers are burned-in at the factory for a 48 hour period. This burn-in will assure you of a trouble-free amplifier right out of the box.

The most exciting feature of the SLA-70B, aside from how gorgeous it looks, is the delightful, sensual beauty of the music it recreates. The first thing that strikes you about your new SLA-70B is its incredible transparency and resolution of detail in the music. The SLA-70B's sensual nature is best revealed in the sense of life it displays in female vocalists. This amplifier presents music with such presence and directness, you'll be drawn into the music hour after musically satisfying hour. This is the result of circuit techniques, which eliminate any discernible crossover notch at low levels, and also contributes to the freedom from listening fatigue. The SLA-70B will draw you in even further as you realize how lucid and utterly uncolored neutrality reveals delicate nuances in the sound stage.

4.2 Tube Replacement

If it becomes necessary to replace the tubes in the SLA-70B Signature amplifier, a matched set of tubes of the same brand should be used. Although tube life varies depending on the nature and degree of use, under normal operating conditions for home use, the 6SL7 input tubes and CV729 rectifier tubes in the should last several years or more.

4.3 Factory Service

In the design of the SLA-70B Signature, careful consideration was given to keep maintenance problems to a minimum. However, it is possible that problems may arise which cannot be cured by tube substitution. At this point, contact our Customer Service Department, (919) 481-4494, to describe your problem in detail. Do not return the SLA-70B Signature to the factory without a Return Authorization Number from the Customer Service Department. Cary Audio Design will not assume responsibility for transit damage or loss if problems are due to improper packing or lack of insurance.

WARNINGS

Make no attempt to put the SLA-70B Signature in service outside of the cabinet. Contact with high voltages found in the unit can be fatal!!!

Completely remove AC Power Cord from the wall and allow 30 minutes for the high voltage capacitors to discharge through bleeder resistors before attempting to change tubes or clean the inside of the amplifier.

CAUTIONS

Never remove/insert AC Plug when the unit is on or the AC Power Switch is in the "ON" position.

Obstruction of the top portion of the SLA-70B Signature will result in tubes overheating.

OBSERVE DIRECTIONS IN THIS MANUAL

PROPRIETARY RIGHTS: Cary Audio Design has proprietary right in the design and components of its units. While the purchaser is entitled to use the unit for its intended purpose, use of the unit for copying, imitation, or reverse engineering is a violation of these proprietary rights and is forbidden.

OPERATION

Signal input connections are made via the input jack on the rear of the SLA-70B located next to the output binding posts. The interconnect cables from the output of the preamplifier can be any convenient length your set-up requires. The choice of a high quality interconnect cable is important. Once again, your audio dealer will have the proper cables in stock for this purpose.

3.1 Operation

Your new SLA-70B Signature is ready for operation after the speaker, interconnect cables and all the tubes have been installed. See page 8 for tube positions.

3.2 AC-On Power Switch

Simply push the AC rocker switch to the "ON" position. After about 30 seconds as the B+ high voltage comes up, the red LED will light if the "STANDBY" switch is in the "UP" position. Observe all lit tube filaments.

3.3 Stand-By Switch

This is a most convenient feature on the SLA-70B Signature amplifier. In the "UP" position, the amplifier is ready to operate. In the "DOWN" position (provided the front panel AC switch is in the "ON" position), only the tube filaments are operating. You may wish to leave your SLA-70B Signature amp turned on in the standby mode 24 hours a day. When you wish to listen to music, simply flip the "STANDBY" switch in the "UP" position. Under these conditions, the SLA-70B Signature is always warmed up and ready for peak performance.

3.4 Break In Period

The tubes, capacitors and output transformer take approximately 100 hours of music playing time to operate at peak performance. The SLA-70B Signature may seem sterile or thin sounding right out of the box. After the first couple of hours, you will notice increased depth and tighter bass. This break-in period defies all engineering theory, but is true with most audio amplifiers.

<p>WARNING Make sure amplifier is unplugged from AC mains for any service or cleaning!</p>
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SERVICE AND CARE

4.1 Care and Cleaning

The chassis of the SLA-70B Signature may be cleaned with a soft towel and Windex® (or a similar window cleaner). The frequency of cleaning will be governed by how many hours the SLA-70B Signature is operated and by operating environmental cleanliness.

SPECIFICATIONS

Operating the SLA-70B stereo amplifier is a simple procedure since each unit is designated for long term stability in virtually any home operating situation. Therefore, if the unit is operated outside the parameters outlined in this owner's manual, damage may result. Please read this manual carefully before putting your new Cary Audio Design SLA-70B in operation.

The following definitions are applicable to this manual and must be followed explicitly.

WARNING: HAZARD PRESENTS PERSONAL INJURY OR DEATH

CAUTION: Equipment damage may occur but not personal injury

NOTE: Proper performance of the amplifier cannot be ensured if disregarded

SPECIFICATIONS AND FEATURES

1.2 Specifications

The following section describes the SLA-70B Signature basic specifications. Specifications are subject to change without notice or obligation.

POWER OUTPUT:	1 KHz sign wave 15.5V RMS across 4 Ohms = 60W 21.9V RMS across 8 Ohms = 60W
NOISE AND HUM:	80 dB Below Rated Output
INPUT SENSITIVITY:	1.5V For Full Output
FREQUENCY RESPONSE: (at 1W output)	10 Hz to 30,000 Hz + 0 - 0.75 dB
(at full power output)	21 Hz to 19,000 Hz + .5 - 0.50 dB

RESISTORS:	1% Metal Film
TUBES:	2 - 6SL7 Predrivers, 4- 6550 Output Tubes 2 - CV729 Rectifier
INPUT IMPEDANCE:	150,000 Ohms
INPUT SENSITIVITY:	1.5 Volts for Full Output
AC POWER REQUIREMENTS:	117 Volts AC 50/60 Hz 250 Watts In Operate 90 Watts in Stand By 220 Volts AC 50/60 Hz
DIMENSIONS:	6"H x 13"W x 12"D
FINISH:	Textured Black Optional - Nickel Chrome Plated Stainless Steel
NET WEIGHT:	48 lbs
TRANSFORMER:	1-EI Laminated Core Power Transformer 2-Ultra linear Output Transformers 100 % Duty Cycle On All Transformers
CAPACITORS:	Polystyrene and Polypropylene
POWER SUPPLY CAPACITORS:	2-1200 MFD @ 450 VDC, 223 Joules
AC CORD:	3 Conductor Shielded-Detachable
WARM-UP TIME:	3 Minutes
BREAK-IN PERIOD:	100 Hours of Music Playing Time
CIRCUIT TYPE:	Push-Pull in Class AB

1.3 Front Panel Features

AC-ON SWITCH:	Turns AC power on in the "UP" position.
STAND-BY SWITCH:	Turns B+ high voltage "ON" or "OFF"
LEDs:	RED indicates high voltage DC "ON"

1.4 Rear Apron Features

OUTPUT: The 5-way binding posts provide the output to the speaker system.
Red=+, Black =-

AC: 3 conductor shielded power cord to AC power mains

INPUT: Signal input connection via shielded interconnect cable

CAUTION
Use of any other protection
fuse can damage unit.

FUSE: AC power fuse. Never replace with any other value than 3 AMP. SLOW BLOW!
250 VOLT!

TUBE FUSE: This is an overcurrent protection fuse for the output tubes. Never replace with any other value than 1/2 AMP. FAST BLOW! 250 VOLT!

GND: For "audio purists" this should be connected to an earth ground rod via the shorts lead possible. This is not essential for proper operation. The earth ground will help insure immunity to RF interference and AC ground loops.

CAUTION
Never remove/insert
AC line cord when the
unit is "ON"

INSTALLATION

This section describes the unpacking and installation procedures for the SLA-70B Signature amplifier.

WARNING

Do not attempt operation without the bottom plate attached. Contact with voltage in the SLA-70B Signature can be fatal!!!

2.2 Unpacking

All shipping containers have been specifically designed to protect its contents and special care has been taken to prevent damage under normal shipping conditions. Mishandling should be evident upon inspection. If damage is found, take care not to destroy the evidence. Document any damage with photographs and contact the transport carrier immediately.

Carefully remove the SLA-70B Signature amplifier from its packing carton and examine closely for signs of shipping damage. Save all original packing cartons for future storage for after-sale service.

2.3 Warranty Card

Fill out the enclosed Warranty Registration Card and return to Cary Audio Design within 10 days of the original purchase. Keep your original sales slip and packing cartons for future reference. **Failure to register warranty will limit the warranty to one year.**

2.4 Amplifier Placement

In general, the location of the SLA-70B Signature amplifier is not critical. The best placement of the amplifier is near the speakers with short lengths of speaker cables. Certain precautions must be taken to avoid radiators or other heating units. Keep the top of the SLA-70B Signature clear of books, paper or other equipment to protect against overheating.

2.5 Power Requirements

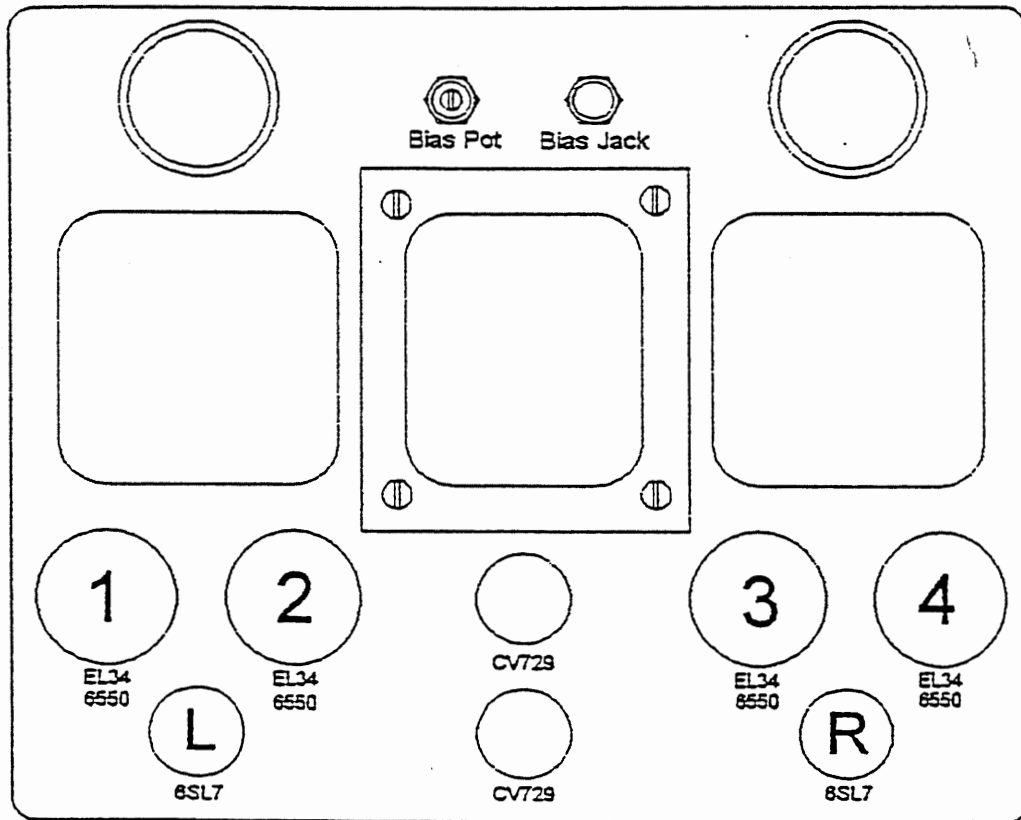
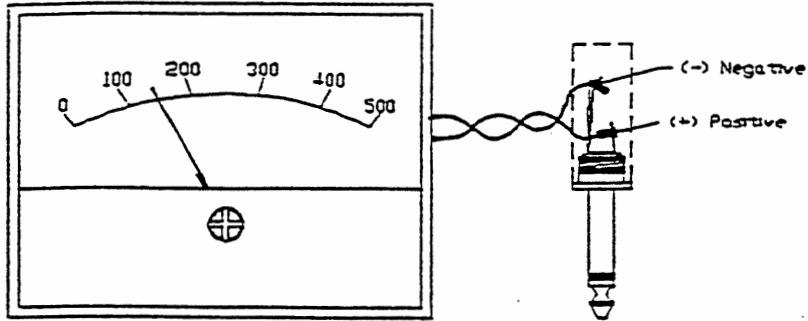
The SLA-70B Signature is designed to operate from house current mains. The design voltage is 117 VAC at 50/60Hz. (Foreign units 220 VAC at 50/60 Hz)

2.6 Cables

The speaker cables from the output posts of the SLA-70B to the speaker system can be any convenient length your set-up requires. Select speaker cables of sufficient size to preserve the outstanding performance capabilities of your SLA-70B. Heavy gauge #16 wire is suitable for distances up to 10 feet, #12 for 25 feet. Most audio dealers will have proper speaker cable in stock for this purpose.

SLA-70B Bias Adjustment & Tube Placement

Adjust bias pot until meter reads 150mA. --



Insert meter plug into bias jack.
Adjust for 140mA reading on VOM or DC current meter.
Readjust to 150mA after after SLA-70B is warmed up for
10 minutes. Remove plug and enjoy the music!

UNITED STATES LIMITED WARRANTY

Cary Audio Design warrants to the original United States purchaser for use in the United States, that this product shall be free from defects in material (except tubes and AF output transistors) or workmanship for five (5) years from the date of the original purchase.

During the warranty period, Cary Audio Design or an authorized Cary Audio Design service facility will provide free of charge both parts (except tubes and AF output transistors) and labor necessary to correct defects in material or workmanship.

To obtain such warranty service, the original purchaser must:

- (1) Complete and send in the warranty Registration Card.
- (2) Notify Cary Audio Designs as soon as possible after the discovery of a possible defect, of:
 - (a) The model number and serial number;
 - (b) The identity of the seller and the approximate date of purchase;
 - (c) A detailed description of the problem, including details on the electrical connection in the associated equipment and the list of such equipment.
- (3) Deliver the product to Cary Audio Design or the nearest authorized service facility, or ship the same in its original container or equivalent, fully insured and the shipping charges prepaid.

Correct maintenance, repair and use are important to obtain performance from this product. Therefore, carefully read the Instruction Manual. This warranty does not apply to any defect that Cary Audio Design in its sole discretion determines is due to:

- (1) Improper maintenance or repair, including the installation of parts or accessories that do not conform to the quality and the specifications of the original parts.
- (2) Misuse, abuse, neglect or improper installation.
- (3) Accidental or incidental damage.

WARRANTY DISCLAIMER

Except for the express warranties stated herein, Cary Audio Designs disclaims all other warranties including, without limitation, all implied warranties of merchantability and fitness for a particular purpose.

EXCLUSIVE REMEDY

Notwithstanding the foregoing, the purchaser's exclusive remedy for any breach of warranty, express or implied, is limited to the repair or replacement of the defective unit or the refund of the purchase price, at the option of Cary Audio Design. Under no circumstances is Cary Audio Design liable for incidental or consequential damages. Any implied warranties imposed by law terminate one (1) year from the date of purchase.

FOREIGN PURCHASERS

Cary Audio Design warrants its merchandise to purchasers in the United States for use in the United States. It provides no other warranties. If you are a foreign purchaser, consult with your dealer to determine whether your dealer provides any warranty.

The foregoing constitutes Cary Audio Design's entire obligation with respect to this product, and the original purchaser and any user or owner shall have no other claim for incidental or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation and exclusion may not apply to you.

This warranty gives legal rights and you may also have other rights which vary from state to state.