

CARY AUDIO DESIGN, INC.

SLA - 70A  
SIGNATURE

OPERATING MANUAL

**NOTE:**

Before installing your new SLA-70A Signature, please read this manual carefully. This manual will inform you of the SLA-70A's specifications, proper installation procedures and operation procedures. Also included in this manual are guidelines on how to properly service and care for your new SLA-70A Signature.

**SLA-70A SIGNATURE  
STEREO AMPLIFIER**

**INTRODUCTION**

The Cary Audio Design SLA-70A Signature is a compact 35 watt per channel vacuum tube stereo audio power amplifier. The SLA-70A Signature is constructed to the highest commercial standards utilizing a grain oriented stainless steel chassis. All resistors are 1% metal-film and the audio coupling capacitors are made of polypropylene. Each SLA-70A amplifier is hand wired point to point. The high voltage DC power supply contains two 1100 MFD electrolytic capacitors for a total of 2200 MFD. The SLA uses a pair of EL-34 output tubes per channel driven by the famous 6SL7GT dual triode input tube. The SLA utilizes two 5V4/CV729 tubes in the full wave rectifier power supply. This brings the total to: 4-EL-34's, 2-6SL7GT's AND 2-5V4/CV729's vacuum tubes to power your new SLA-70A. Every SLA-70A amplifier is tested at its specified power input and output levels and should require a minimum of maintenance through years of operations. All SLA-70A's are burned in at the factory for a 48 hour period. This burn-in period will assure you of a trouble free amplifier, right out of the box.

The most exciting feature of the SLA-70A Signature, 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-70A is its incredible transparency and resolution of detail in the music. The SLA's sensual nature is best revealed in the sense of life it displays in female vocalists. This amp 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 discernable cross-over notch at low levels, and also contributes to the freedom from listening fatigue. The SLA-70A will draw you in even further as you realize how lucid and utterly uncolored neutrality reveals delicate nuances in the sound stage.

## SPECIFICATIONS

Operating the SLA-70A Signature stereo amplifier is a simple procedure since each unit is designed 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-70A Signature in operation.

The following definitions are applicable to this manual. These definitions 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

### 1.2 Specifications

The following section describes the SLA-70A's basic specs. Specifications are subject to change without notice or obligation.

DIMENSIONS: 6"H x 13"W x 12"D

WEIGHT: 38 Lbs.

CIRCUIT TYPE: Push-Pull Amplification in Class A

POWER OUTPUT: 1KHz sign wave single channel driven  
12 volts RMS across 4 ohms=36 watts  
16.5 volts RMS across 8 ohms=34 watts

INPUT SENSITIVITY: 1.5 volts for full output

INPUT IMPEDANCE: 100,000 ohms

NOISE AND HUM: 80dB below rated output

FREQUENCY RESPONSE (at 31 watt output): 20Hz to 30,000Hz + 0 - 0.75dB

DAMPING FACTOR: Greater than 35

TUBES: 2-6SL7 pre-driver phase inverter  
4-EL-34 push-pull output circuit  
2-5V4 OR CV729 high voltage rectifiers

TRANSFORMERS: 1-EI laminated core power transformer  
2-Ultralinear Cary special design output transformers  
100% duty cycle on all transformers

RESISTORS: 1% metal film

CAPACITORS: Polystyrene and polypropylene

POWER SUPPLY CAPACITORS: 2-1100MFD @ 450VDC  
Total 2200MFD-223 joules

AC CORD: 3 conductor shielded

AC POWER REQUIREMENTS: 117 volts AC 50/60 Hz  
220 watts operate  
90 watts in stand by (option)  
234 volts AC 50/60 Hz  
220 watts operate  
90 watts in stand by (option)

WARM-UP TIME: 3 minutes

BREAK-IN PERIOD: 100 hours of music playing time

FINISH: Gloss black epoxy painted stainless steel

### 1.3 Front Panel Features

AC-ON ROCKER SWITCH: Turns AC power on in the "up" position.

LED: Indicates high voltage DC on (with stand-by switch the Red LED will not light with unit in stand-by).

### 1.4 Rear Apron Features

INPUT: Signal input connection via shielded interconnect cable

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

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

<p><b>CAUTION</b> EQUIPMENT DAMAGE MAY OCCUR WITH IMPROPER FUSES</p>
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TUBE FUSE: This is an overcurrent protection fuse for the output tubes. Never replace with any other valve than 1/2 AMP FAST BLOW! 250 VOLT!

AC: 3 conductor shielded power cord to AC power mains

**CAUTION**

USE OF ANY OTHER PROTECTION FUSE CAN DAMAGE UNIT

FUSE: AC power fuse. Never replace with any other valve than 2 AMP  
SLOW BLOW! 250 VOLT!

STAND-BY: This is an option - in the "up" position, the SLA-70A is in  
the operate mode. In the "down" position, the high voltage  
B+ power supply is turned off and the front panel Red LED  
will not light.

**CAUTION**

NEVER REMOVE/INSERT AC LINE CORD WHEN THE UNIT IS ON

## INSTALLATION

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

**WARNING**  
**MAKE NO ATTEMPT TO PUT THE SLA-70A AMPLIFIER IN SERVICE**  
**WITHOUT THE BOTTOM PLATE ATTACHED - CONTACT WITH VOLTAGE**  
**IN THE SLA-70A CAN BE FATAL!!!**

### 2.2 Unpacking

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

Carefully remove your new SLA-70A amplifier from its packing carton, and examine it closely for signs of shipping damage. It is recommended to save all original packing cartons to protect your amplifier from damage should you wish to store it or ship it for after-sales service.

### 2.3 Warranty Card

Fill out the enclosed warranty registration card and return to Cary Audio Design, Inc. within 10 days of original purchase. Keep your original sales slip with the packing cartons should you ever need it for reference. **Failure to register warranty will limit the warranty to one year.**

### 2.4 Amplifier Placement

In general, the location of your new SLA-70A amplifier is not critical. The best placement in your system is near the speaker system with short lengths of speaker cables. Certain precautions must be taken to ensure optimum performance. Avoid extremely hot locations such as near radiators or other heating units. Keep the top of the SLA-70A clear of books, paper or other equipment to protect against overheating.

## 2.5 Power Requirements

The SLA-70A is designed to operate from house current mains. The design voltage is 117VAC at 50/60Hz. (Foreign units 234 VAC at 50/60Hz).

## 2.6 Cables

The speaker cables from the output posts of the SLA-70A 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-70A. 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.

## OPERATION

Signal input connection is made via the input jack on the rear of the SLA-70A 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-70A is ready for operation after the speaker and interconnect cables have been installed.

### 3.2 AC On Power Switch

Simply push the AC rocker switch up to the ON position. The RED LED on the front panel will light after about 30 seconds as the B+ high voltage comes up. Observe that all 8 tubes are lit (filaments).

### 3.3 Stand-By Switch (Optional)

This is a most convenient feature on the SLA-70A amplifier. This switch is located on the rear apron of the 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-70A amp turned on in the stand-by mode 24 hours a day. When you wish to listen to music, simply flip the stand-by switch in the "up" position. Under these conditions the SLA-70A is always warmed up and ready for peak performance.

### 3.4 Break In Period

The tubes, capacitors and output transformers take approximately 100 hours of music playing to fully settle in for peak performance. The SLA-70A will 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 style="text-align: center;"><b>WARNING</b> <b>MAKE SURE AMPLIFIER IS UNPLUGGED FROM AC MAINS</b></p>
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## SERVICE AND CARE

### 4.1 SLA-70A Care and Cleaning

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

### 4.2 Tube Replacement

If it becomes necessary to replace the tubes in the SLA-70A amplifier, a matched quad set of output tubes of the same brand should be used. A new tube kit is available from Cary Audio Design, Inc. You should get a year or more from the output tubes with everyday usage and many, many years of use from the 6SL7 input tubes and 5V4/CV729 rectifier tubes.

### 4.3 Factory Service

Careful consideration has been given to the design of your SLA-70A amplifier to keep maintenance problems to a minimum. However, it is possible that some problems may arise which cannot be cured by tube substitution. At this point we suggest that you contact our Customer Service Department, phone number 1-919-481-4494, to describe your problem in detail. Do not return the SLA-70A to the factory without a return authorization number from the Customer Service Department. Cary Audio Design, Inc. will assume no responsibility if the transportation company refuses to pay a damage claim due to your improper packing or lack of insurance should the unit be lost in shipment.

#### **WARNINGS**

**MAKE NO ATTEMPT TO PUT THE SLA-70A IN SERVICE OUTSIDE OF THE CABINET. CONTACT WITH HIGH VOLTAGES FOUND IN THE UNIT CAN BE FATAL!!!**

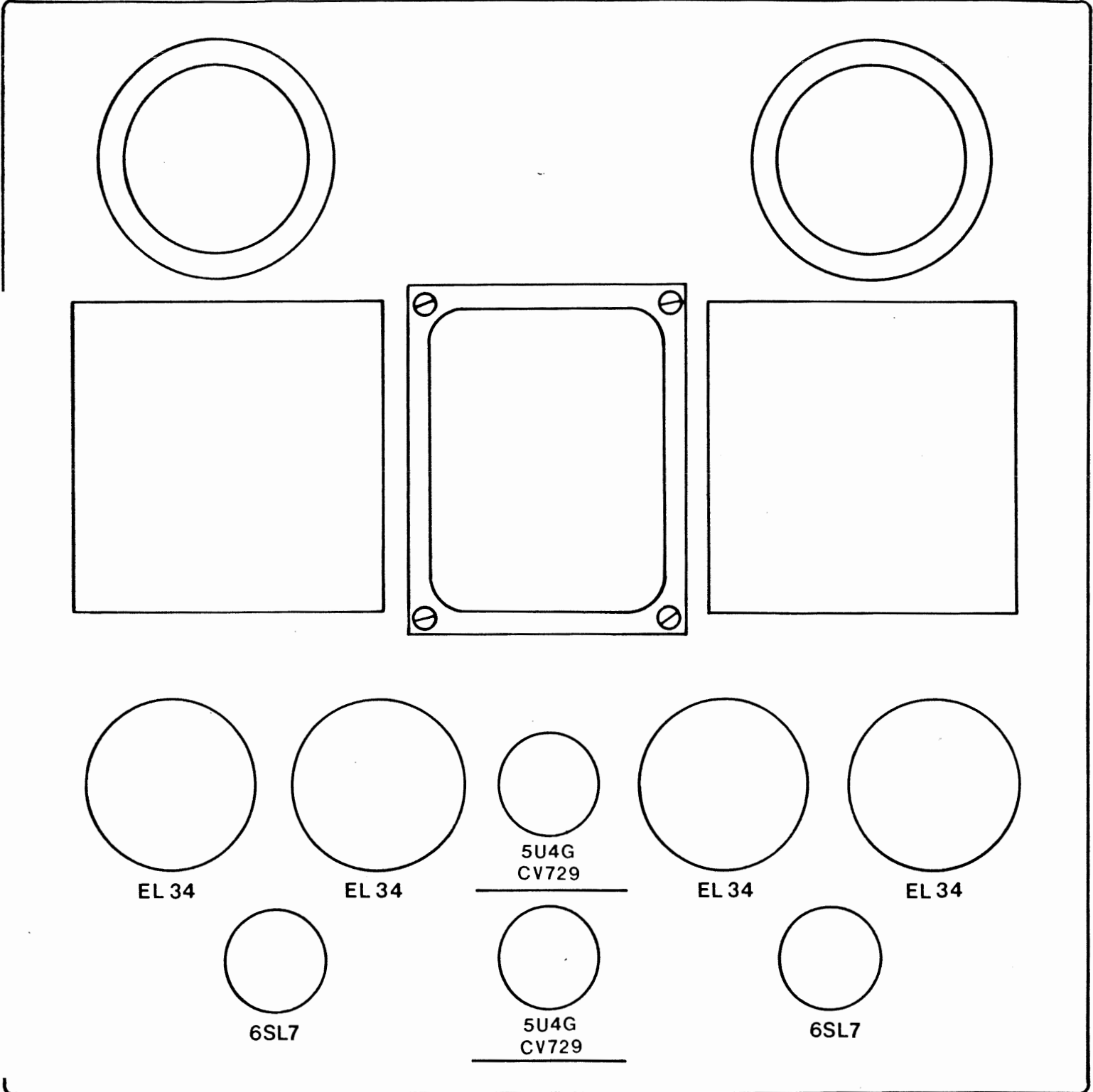
**COMPLETELY REMOVE AC POWER PLUG FROM THE WALL AND ALLOW 30 MINUTES FOR THE HIGH VOLTAGE CAPACITORS TO DISCHARGE THROUGH BLEEDER RESISTORS BEFORE ATTEMPTING TO CHANGE TUBES OR CLEAN THE INSIDE OF THE AMPLIFIER.**

#### **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-70A WILL RESULT IN TUBES OVERHEATING.**

**\*\*\*OBSERVE DIRECTIONS IN THIS MANUAL\*\*\***



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***Notes:***

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***Notes:***

# UNITED STATES LIMITED WARRANTY

Cary Audio Design, Inc. 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 three (3) years from the date of the original purchase.

During the warranty period, Cary Audio Design, Inc. or an authorized Cary Audio Design, Inc. 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 Design, Inc. 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, Inc. 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, Inc. in its sole discretion determines is due:

- (1) Improper maintenance or repair, including the installation of parts or accessories that does 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 Design, Inc. 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, Inc. 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 the original purchase.

## Foreign Purchasers

Cary Audio Design, Inc. 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, Inc.'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.

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