

CARY AUDIO DESIGN, INC.

SLA - 70 B
&
SLA - 70 B SIGNATURE

OPERATING MANUAL

NOTE:

Before installing your new amplifier, please read this manual carefully as it will inform you of the unit'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-70B or SLA-70B Signature.

SLA-70B
Stereo Amplifier

INTRODUCTION

The Cary Audio Design SLA-70B 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% metal film and the audio coupling capacitors are made of 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 - EL-34 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 operations. All SLA-70B amplifiers 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-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'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 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.

SPECIFICATIONS

Operating the SLA-70B 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-70B 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(A) Specifications for SLA-70B

The following section describes the SLA-70B'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 in Class AB

POWER OUTPUT: 1KHz sign wave
14.14 volts RMS across 4 ohms=50 watts
20 volts RMS across 8 ohms=50 watts

INPUT SENSITIVITY: 1.5 volts for full output

INPUT IMPEDANCE: 150,000 ohms

NOISE AND HUM: 80dB below rated output

FREQUENCY RESPONSE (at one watt output): 10Hz to 30,000Hz + 0 - 0.75dB
(at full power output): 21Hz to 19,000Hz + .5 - 0.50dB

TUBES: 2-6SL7 predrivers, 4-EL34 output tubes, 2-CV729 rectifier

TRANSFORMERS: 1-EI laminated core power transformer
2-Tetrode output transformers
100% duty cycle on all transformers

RESISTORS: 1% metal film

CAPACITORS: Polystyrene and polypropylene

POWER SUPPLY CAPACITORS: 2-1200 MFD @ 450VDC, 223 Joules

AC CORD: 3 conductor shielded-detachable

AC POWER REQUIREMENTS: 117 volts AC 50/60 Hz
250 watts operate
90 watts in stand by
220 volts AC 50/60 Hz
250 watts operate
90 watts in stand by

WARM-UP TIME: 3 minutes

BREAK-IN PERIOD: 100 hours of music playing time

FINISH: Textured Black
Optional - Nickel chrome plated stainless steel

1.2(B) Specifications for SLA-70B Signature

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

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

WEIGHT: 48 Lbs.

CIRCUIT TYPE: Push-Pull in Class AB

POWER OUTPUT: 1KHz sign wave
15.5 volts RMS across 4 ohms=60 watts
21.9 volts RMS across 8 ohms=60 watts

INPUT SENSITIVITY: 1.5 volts for full output

INPUT IMPEDANCE: 150,000 ohms

NOISE AND HUM: 80dB below rated output

FREQUENCY RESPONSE (at one watt output): 10Hz to 30,000Hz + 0 - 0.75dB
(at full power output): 21Hz to 19,000Hz + .5 - 0.50dB

TUBES: 2-6SL7 predrivers, 4-6550 output tubes, 2-CV729 rectifier

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

RESISTORS: 1% metal film

CAPACITORS: Polystyrene and polypropylene

POWER SUPPLY CAPACITORS: 2-1200 MFD @ 450VDC, 223 Joules

AC CORD: 3 conductor shielded-detachable

AC POWER REQUIREMENTS: 117 volts AC 50/60 Hz
250 watts operate
90 watts in stand by
220 volts AC 50/60 Hz
250 watts operate
90 watts in stand by

WARM-UP TIME: 3 minutes

BREAK-IN PERIOD: 100 hours of music playing time

FINISH: Textured Black
Optional - Nickel chrome plated stainless steel

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"
(Stand By switch is standard on SLA-70B Signature)

LED'S: RED indicates high voltage DC "on"

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=-

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 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 shortest 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 stereo amplifier.

WARNING

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

2.2 Unpacking

Carefully remove your new SLA-70B 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.

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.

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-70B 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-70B clear of books, paper or other equipment to protect against overheating.

2.5 Power Requirements

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

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.

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 is ready for operation after the speaker, interconnect cables and all the tubes have been installed. Refer to the tube outline drawing inserted in this manual for tube placement.

3.2 AC On Power Switch

Simply push the AC rocker switch up to the ON position. After about 30 seconds as the B+ high voltage comes up the Red LED will light if the stand by switch is in the UP position. Observe that all tubes are lit (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 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-70B Signature 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-70B 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 style="text-align: center;">WARNING MAKE SURE AMPLIFIER IS UNPLUGGED FROM AC MAINS FOR ANY SERVICE OR CLEANING!</p>

SERVICE AND CARE

4.1 SLA-70B Care and Cleaning

The chassis of the SLA-70B 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-70B is operated and by operating environmental cleanliness.

4.2 Tube Replacement

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

4.3 Factory Service

Careful consideration has been given to the design of your SLA-70B 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-70B 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-70B IN SERVICE OUTSIDE OF THE CABINET. CONTACT WITH HIGH VOLTAGES FOUND IN THE UNIT CAN BE FATAL!!!

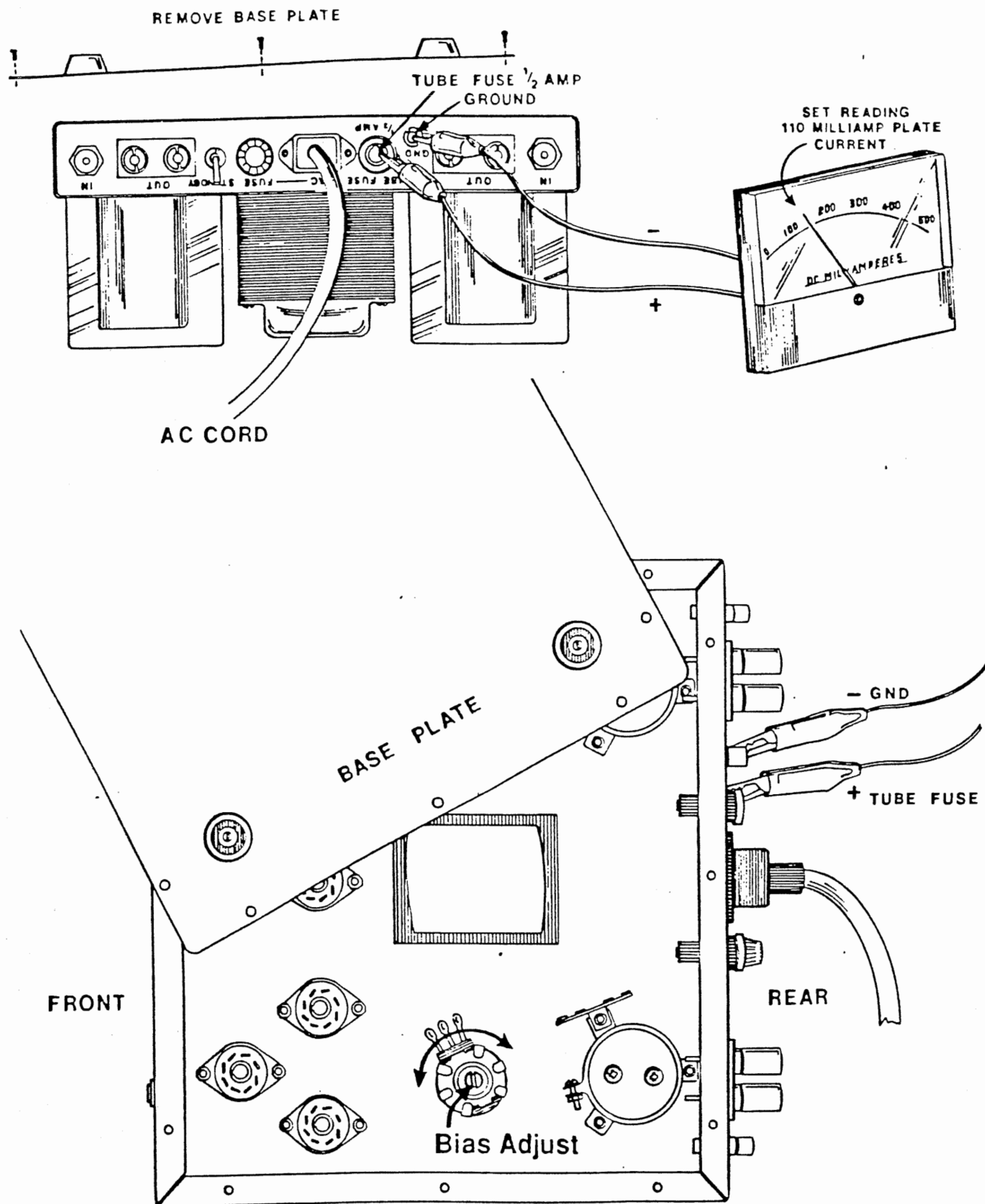
COMPLETELY REMOVE AC POWER PLUG FROM THE WALL AND ALLOW 30 MINUTES FOR THE HIGH VOLTAGE CAPACITORS TO DISCHARGE THROUGH BLEEDER RESISTORS BEFORE ATTEMPTING TO CHANGE TUBES OR CLEAN THE INSIDE OF THE AMPLIFIER.

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-70B WILL RESULT IN TUBES OVERHEATING.

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



SLA-70B Bias Adjustment

Adjust for 110 MA reading on VOM or DC current meter. Readjust to 110 MA after initial setting after SLA-70B is warmed up for ten minutes. Reinstall base plate and replace tube fuse.