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CARY Audio Design INC.

CAD-845 SEI

OPERATING MANUAL

Note:
Before installing your new CAD-845 SEI 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 CAD-845 SEI.

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 three (3) 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 Design 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:

(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 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.

NOTES:

SPECIFICATIONS AND FEATURES

Operating the CAD-845 SEI 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 CAD-845 SEI in operation.

When the cautionary terms are used in this manual, the following apply:

WARNING: Electrical hazard! Misuse or failure to follow instructions properly may result in personal injury or death!

CAUTION: No risk or personal injury; however, misuse or failure to follow instructions may result in damage to equipment.

NOTE: No risk of personal injury or equipment damage; however, misuse or failure to follow instructions may prevent proper performance of the equipment.

1.1 Specifications

DIMENSIONS:	8.5"H x 17"W x 17"D
WEIGHT:	90 lb.
CIRCUIT TYPE:	Single Ended Amplification in Class A
POWER OUTPUT:	4/8 ohms = 25 Watts per channel
INPUT SENSITIVITY:	1.0 volts for full output
INPUT IMPEDANCE:	150,000 ohms
NOISE AND HUM:	90dB below rated output
FREQUENCY RESPONSE:	20 Hz to 20,000Hz +0-0.75dB
TRANSFORMERS:	1-EI laminated core power transformer 2 -Special air gap output transformer 200% duty cycle on all transformers
TUBES:	1-6SN7, 2-6SL7, 2-6BL7, 1-5R4 & 2-845 SEI output tubes & 1-1629 eye tube
RESISTORS:	1% metal film
CAPACITORS:	Oil filled

POWER SUPPLY CAPACITORS:	4-1200 MFD @ 450VDC, 2-800 MFD @ 400VDC
AC CORD:	3 conductor detachable
AC POWER REQUIREMENTS:	117 volts AC 50/60Hz 220 volts AC 50/60Hz
WARM-UP TIME:	3 minutes
BREAK-IN PERIOD:	100 hours of music playing time
FINISH:	Nickel chrome plated stainless steel

1.2 Front Panel Features

AC POWER:	Turn AC power on and off.
SELECTOR:	Select between CD, Aux 1, Aux2
VOLUME:	Dual master volume control.
BALANCE:	Left and right control with center detent.

1.3 Rear Apron Features

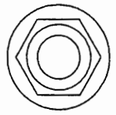
INPUTS:	Signal input connection via shielded interconnect cable CD, Aux 1, Aux 2.
OUTPUTS:	The 5-way binding posts provide the output to the speaker system.
AC:	3 conductor AC connector.
IMPEDANCE SWITCH:	"UP" position for 8 ohm "DOWN" position for 4 ohm
FUSE:	AC power fuse. Never replace with any other fuse than 4 AMP SLOW BLOW! 250 VOLT!
BIAS JACK:	For 1/4" bias plug to measure the 845 SEI bias.(See instructions)
BIAS POT:	Screwdriver adjustment potentiometer to set bias. (See instructions)

CAUTION
Equipment damage may occur with improper fuses.

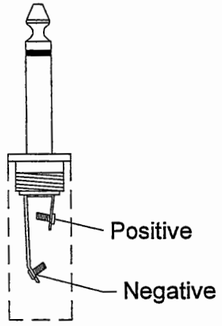
CAUTION
Use of any other protection fuse can damage unit.

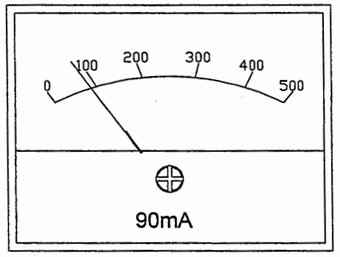
CAD-845-SEI Bias Adjustment

Bias Meter Jack



Bias Adjust

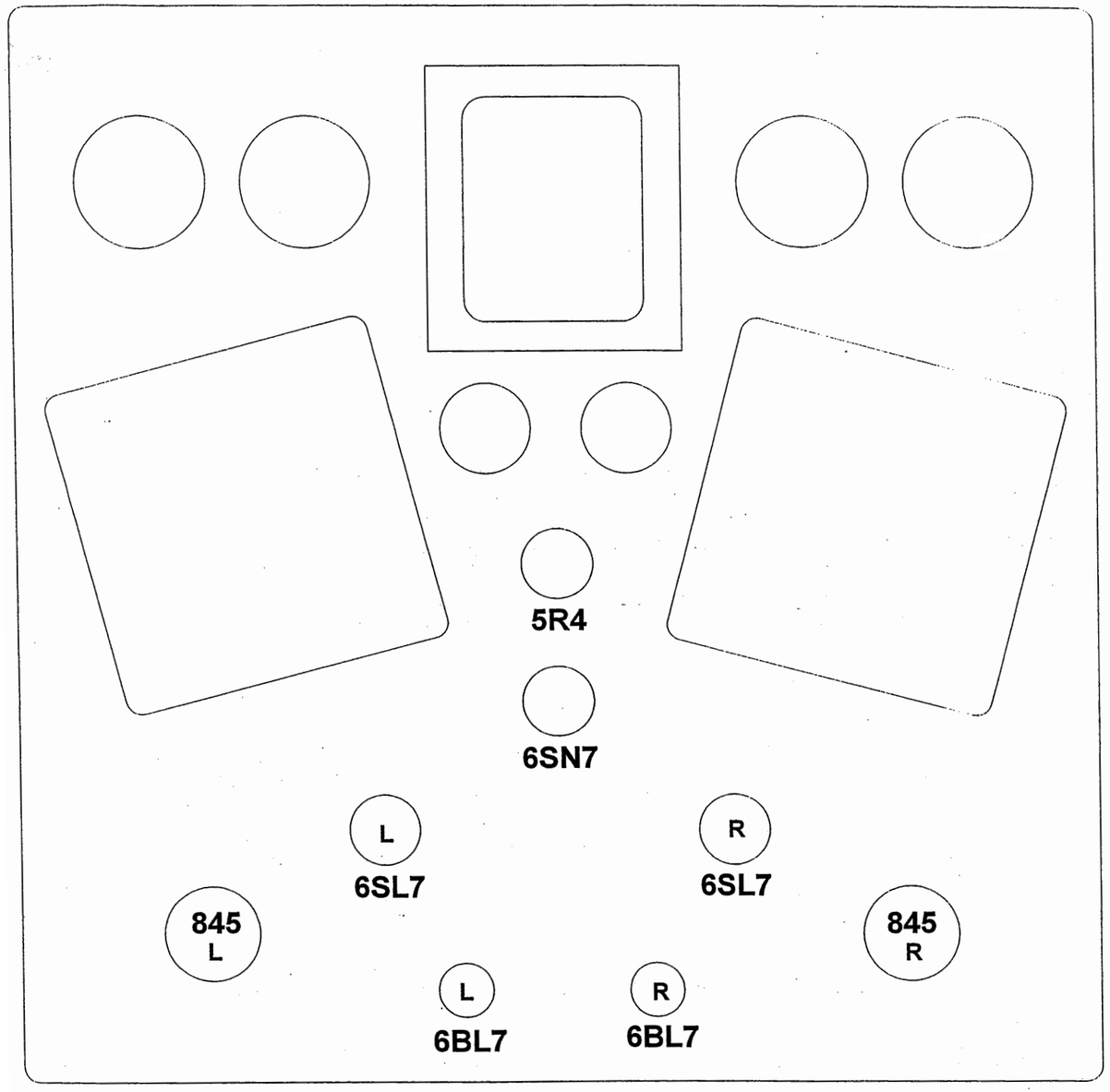




Set bias for both sides of the amplifier to 90mA

Insert meter plug into bias jack.
Adjust for 90mA reading on VOM or DC current meter.
Readjust to 90mA after after 845-sei is warmed up for 10 minutes. Remove plug and enjoy the music!

Note: Bias is factory preset; Bias should be reset when installing replacement 845 tubes.



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

INSTALLATION AND UNPACKING

This section describes the unpacking and installation procedures for the CAD-845 SEI.

2.2 Unpacking

All shipping containers have been specially 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 CAD-845 SEI 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 preamplifier 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 within 10 days of your purchase. Cary Audio Design also suggests that you keep your original packing cartons in case you need to ship the unit. **Failure to register warranty will limit the warranty to one year.**

2.4 Amplifier Placement

In general, the location of your new CAD-845 SEI 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 CAD-845 SEI clear of books, paper or other equipment to protect against overheating.

2.5 Power Requirements

The CAD-845 SEI is designed to operate from house current mains. The design voltage is 117 VAC at 50/60Hz. (Foreign units 234 VAC at 50/60Hz).

2.6 Cables

The speaker cable from the output posts of the CAD-845 SEI 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 CAD-845 SEI. 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 jacks on the rear of the CAD-845 SEI located next to the output binding posts. The interconnect cables from the output of the preamplifier can be any convenient length your

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 CAD-845 SEI is ready for operation after the speaker, interconnect cables and the tubes have been installed. To install the tubes, refer to tube placement sheet section of this manual and read instructions carefully. **FAILURE TO INSTALL TUBES CORRECTLY WILL DAMAGE THE UNIT AND TUBES.**

3.2 AC On Power Switch

Simply turn the AC switch to the "ON" position. Observe that all tube filaments are lit.

3.3 Break In Period

The tubes, capacitors and output transformers take approximately 100 hours of music playing to fully settle in for peak performance. The CAD-845 SEI 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.

3.4 Bias Check

Two individual 1/4" jacks are located on the rear panel labeled "BIAS". These jacks allow the user to check from time to time the operating bias of each of the 845 SEI output tubes. The proper reading should be from 95 to 100MA. depending on your AC line voltage. Remember this is a DC current, not voltage.

SERVICE AND CARE

WARNING
Make sure the amplifier is unplugged from AC mains.

4.1 CAD-845 SEI Care and Cleaning

The chassis of the CAD-845 SEI may be cleaned with a soft towel and Windex® (or similar window cleaner). For heat stains and fingerprints that cannot be removed with a cleaner, use a mild chrome cleaner. The frequency of cleaning will be governed by how many hours the CAD-845 SEI is operated and by operating environmental cleanliness.

4.2 Tube Replacement

If it becomes necessary to replace the tubes in the CAD-845 SEI 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 years of operation from the output tubes with everyday usage.

4.3 Factory Service

Careful consideration has been given to the design of your CAD-845 SEI to keep maintenance problems to a minimum. If there is a problem with your unit, read the Troubleshooting Guide at the end of this manual. It is possible that some problems may arise which cannot be cured by trouble shooting. At this point we suggest that you contact our Customer Service Department at **919-481-4494** to describe your problem in detail. Do not return the CAD-845 SEI 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 improper packing or lack of insurance should the unit be lost in shipment.

WARNINGS
Make no attempt to put the CAD-845 SEI in service outside of the cabinet. Contact with high voltages found in unit can be fatal!!!

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

CAUTION
Never remove/insert AC line cord when the unit is in the "ON" position.
Obstruction of the top portion of the CAD-845 SEI will result in tubes overheating