



# PH-301

# MKII

## OPERATING MANUAL

**NOTE:**

Before installing your new PH-301, please read this manual carefully as it will inform you of the PH-301'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 PH-301.

## PH 301 MKII INTRODUCTION

It took over three years of painstaking research, engineering, listening, and refining, before Cary was ready to release the PH-301. But now that it's here, even the most demanding record enthusiasts will realize this exotic unit is dedicated to nothing short of incomparable vinyl playback.

The PH-301 is a vacuum tube design utilizing one 12AU7 and two 12AX7 dual triodes. The RIAA equalization curve is derived from a passive RC circuit located between the two gain stages. The PH-301 is supplied with a separate regulated power supply to ensure an extremely quiet operation. The MC section uses two very high quality step-up transformers. They provide enough gain for use with any MC cartridge and with an extremely low noise floor. It is perfectly matched to any of the high-end Cary integrated amplifiers or pre-amplifiers.

The PH-301 is finished with the beauty and detail that Cary Audio Design is famous for. With its black chassis and black anodized front plate, you know immediately it belongs in the Cary family of high-end audio products.

For the analog lover the PH-301 is a magical blend of art and technology that will add to your music listening enjoyment hour after hour. Experience the PH-301, experience what vacuum tubes can do to low output moving coil playback. We believe it will change the way you listen to music. *Forever.*

## SPECIFICATIONS

DIMENSIONS:	3"H x 7.5"W x 13"D
WEIGHT:	16 lbs.
INPUT IMPEDANCE:	MM - 68 K OHMS MC - 100 OHMS
OUTPUT IMPEDANCE:	450 OHMS
INPUT TERMINATION:	FEMALE RCA TYPE
OUTPUT CONNECTION:	FEMALE RCA TYPE
AC POWER REQUIREMENTS:	117/234 VOLTS 50-60 HZ
POWER CONSUMPTION:	11 WATTS
TUBE COMPLIMENT:	2 - 12AX7 RIAA EQUALIZER 1 - 5814 BUFFER OUTPUT STAGE
HUM AND NOISE:	-76dB
EQUALIZATION CURVE:	RIAA CURVE +/- .5dB
CIRCUIT TYPE:	SINGLE-ENDED CLASS A
RESISTORS:	1% METAL FILM
GAIN MM:	42dB
MC:	62dB
CAPACITORS:	POLYPROPYLENE
POWER TRANSFORMER:	1 EI LAMINATE, 200% DUTY CYCLE
WARM-UP TIME:	3 MINUTES
BREAK-IN TIME:	100 HOURS
FINISH:	Black anodized face plate with chrome plate/stainless steel chassis.

## INSTALLATION

- Step 1** Connect the umbilical cord from the PH-301MKII to the power supply. Line up the key and push in. Thread on collar and tighten. The power pack should be set at least 3 feet away from the PH-301. Install tubes & shields. See end of manual for tube placement.
- Step 2:** Plug turntable output connectors into respective left and right inputs and connect turntable ground wire to the ground post on the rear of the chassis.
- Step 3:** Flip the switch, located on the rear of the PH-301, in the direction of the corresponding input (MM or MC).
- Step 4:** Plug interconnects into respective left and right outputs and route to the auxiliary inputs on the rear of a pre-amp or integrated amplifier.
- Step 5:** After completing steps 1-4, flip the switch on the power pack down. Plug in the AC power cord and then flip the switch up. You are now ready to listen.

### **WARNING**

**DO NOT PLAY YOUR NEW PH-301 WITH THE BOTTOM COVER REMOVED  
BECAUSE VOLTAGES CONTAINED INSIDE MAY BE LETHAL!!!!**

### 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 PH-301 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.

## WARRANTY CARD

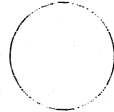
Fill out the enclosed warranty registration card and return it to Cary Audio Design, Inc. within 10 days of original purchase. Keep your original sales slip with the packing cartons should you ever need it for reference. Failure to register warranty will limit the warranty to one year.

## BREAK-IN PERIOD

The tubes and capacitors take approximately 100 hours of music playing to fully settle in for peak performance. The PH-301 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.

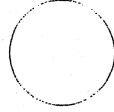
### **WARNING**

**MAKE SURE PH-301 IS UNPLUGGED FROM POWER PACK BEFORE  
SERVICING.**



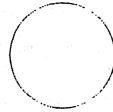
**ECC-82 / 12-AU7**

**L**



**ECC-83 / 12-AX7**

**R**



**ECC-83 / 12-AX7**

**PH-301Mk II Tube Placement Sheet**

# 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:

Amplifiers and Preamplifiers, Three (3) years from the date of the original purchase.  
Digital Products, One (1) year from the date of 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:
  - (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 optimum performance from this product. Therefore, carefully read the Operating Manual. This warranty does not apply to any defect that Cary Audio Design, Inc. 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 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, Inc. 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, 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 have other rights which vary from state to state.



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