

ModWright Instruments, Inc.

PH 9.0 Tube Phono Stage

Owner's Manual



Manufactured by ModWright Instruments, Inc.
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CAUTIONS:

Do not operate or power up unit without ALL tubes installed in tube sockets. Failure to do so will result in damage to tubes.

WARNING: DO NOT POWER UNIT ON UNTIL LID IS ENTIRELY FASTENED. VERY HIGH VOLTAGES ARE PRESENT INSIDE UNIT DURING OPERATION. IT IS CRITICAL THAT PREAMP ENCLOSURE NOT BE OPEN WHEN UNIT IS POWERED ON. FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY OR DEATH.

WHEN CHANGING TUBES, POWER UNIT OFF AND DISCONNECT FROM ALL POWER SOURCES. FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY OR DEATH.

Introduction:

Thank you for purchasing a ModWright Instruments product. This unit is designed to offer high performance and exceptional reliability.

The PH 9.0 phono stage offers high bandwidth, low noise and distortion, and exceptional musicality. We have designed this phono stage to allow the reproduction of vinyl recordings that is accurate, transparent and musical.

The PH 9.0 includes features not found in simpler phono stage designs:

- Front panel resistance loading on the fly.
- 0, -6dB and -12dB gain adjustments for MM and MC, on the fly.
- MM, Mute, MC input select on the fly.
- Mono/Stereo switch on back panel.

The PH 9.0 is a high-gain, low noise phono stage design with exceptional flexibility. Maximum gain for the PH 9.0 ranges from 64dB (MC) to 52dB (MM). Gain may be adjusted by -0dB, -6dB or -12dB for either MC or MM operation. This allows for compatibility with different MM and MC cartridges of high, low or medium gain.

Cartridge loading for MC (resistance only), is user selectable via front panel controls for six different resistance settings.

Cartridge loading for MM is 47K fixed resistance.

The PH 9.0 was designed purposely with an external, solid-state power supply. The power supply is connected to the phono stage via a 6ft umbilical, and it is recommended that the power supply be well separated from the phono stage for lowest possible noise.

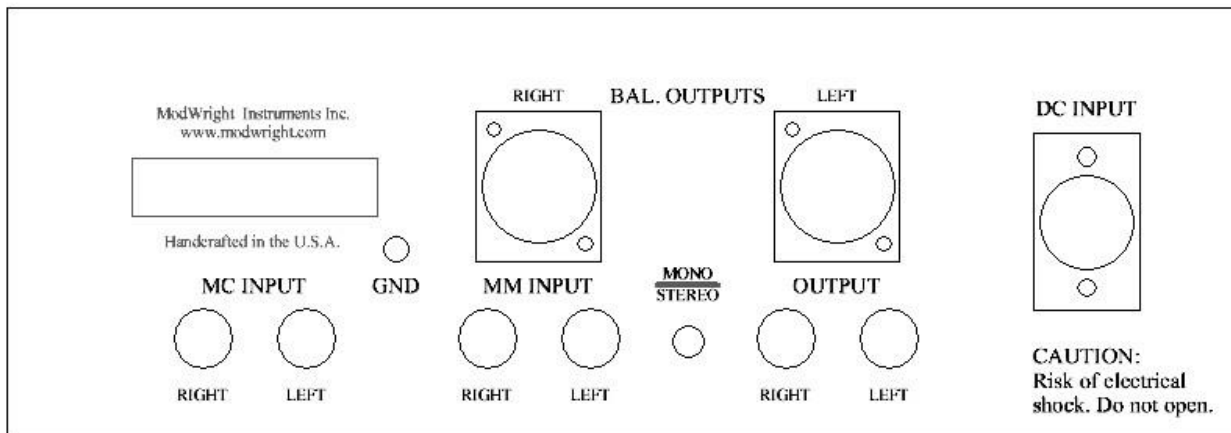
The ground lug on the rear of the PH 9.0 enclosure is common to signal ground, earth ground and the Power Supply and PH 9.0 enclosure. Depending on system grounding, you may need to connect a ground wire from turntable to the phono stage ground lug.

Setup:

It is always recommended to remove all tubes before shipping the unit. Be sure that the external Power Supply is NOT connected to AC power and that the power plug is disconnected from the unit and wall outlet. Use supplied 5/64" hex driver to remove four lid screws in top panel and install (2) 6C45 and (2) 6922 signal tubes in 9-pin ceramic tube sockets. Align tube pins with socket and gently but firmly press the tubes down into socket until seated.

After tubes are installed, replace lid and secure with four screws. Only after this, should the external Power Supply be connected to the PH 9.0 phono stage. Do not connect the Power Supply to AC power until umbilical is connected to both Power Supply and PH 9.0.

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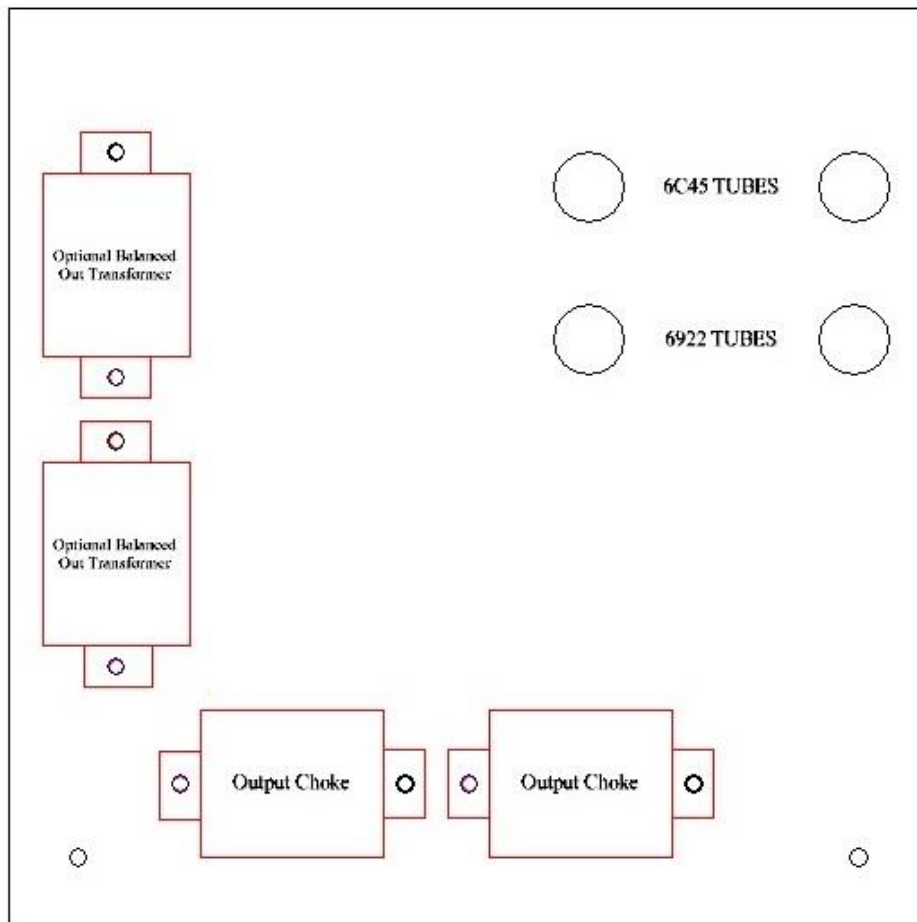


PH 9.0 REAR PANEL

The PH 9.0 phono stage is powered by the external Power Supply. The umbilical supplied, connects the Power Supply to the PH 9.0 and provides DC voltage to the phono stage. The Power Supply is solid-state and has no user-serviceable parts inside. Operating voltage is indicated on the back panel of the POWER SUPPLY. The Power Supply uses a single SLO-BLO fuse, 5mmx20mm in size. For 120V operation, the fuse should be rated for 3A. For 240V operation, the fuse should be rated for 1.5A.

After tubes are installed in the PH 9.0, first connect the umbilical to the Power Supply and connect the other end of the umbilical to the PH 9.0 Phono stage. The umbilical has Male/Female, 4-pin connectors. It can only be connected in one direction. Only after the umbilical is securely connected at both power supply and phono stage, should AC power cord be connected.

Signal cables must be connected for input and outputs. You may connect the turntable to phono stage for MM or MC operation, by connecting cables to the appropriate RCA input connectors. If cables from turntable to phono stage have a ground wire, this may be connected to the ground lug on the rear of the PH 9.0. Signal cables must also be connected (RCA or XLR) main outs to preamp. (XLR outputs only present if option installed).



Internal PH 9.0 Layout
Tube Installation Diagram

Power Up:

You are ready to power the unit up if the following have been done:

- 1) Tubes are installed in PH 9.0 and cover secured in place.
- 2) Umbilical is connected between PH 9.0 and Power Supply.
- 3) AC power has been plugged into IEC power inlet on Power Supply, of appropriate AC mains voltage as indicated on back of power supply.
- 4) MM or MC signal cables and ground wire are connected between turntable and phono stage.
- 5) RCA or XLR signal cables (Balanced Option is installed) are connected from main outs of PH 9.0 to preamp.

Flip the power toggle up on front face of unit, to power up the PH 9.0. When first powered on, a blue LED above the power switches will be lit. The unit will remain in mute for approximately 25-seconds, allowing for tubes to stabilize and gently reach operating voltage.

Operation:

Once the PH 9.0 is powered up, you must first select MM or MC input. The knob on the left side of the front panel allows for MM, Mute, or MC input selection when rotated clock-wise. *[You will notice that while the input is labeled MM, Mute, MC, there are actually four positions. This is because each MM and MC input has a separate mute position. To prevent any possibility of switching noise when selecting between MM and MC, we found that it was critical to mute after MM and also before MC.]*

The Gain toggle switch on the lower right side of the front panel is used to select desired attenuation. It is a 3-way toggle, with the middle position being '0 dB', the up position being '-6dB and the down position being '-12dB'. For example, if MC were selected, in the '0dB' position, max gain would be 66dB. If this were too much, then moving the toggle switch to the -6dB position would reduce MC gain to 60dB. The same may be done for MM use, where max gain is 52dB when Gain selector is in '0dB' position.

If you are using a MC cartridge, you may set the recommended Resistance loading for your cartridge. This may also be changed with or without music playing. Six resistance settings: 10 ohm, 20 ohm, 50 ohm, 100 ohm, 250 ohm and 470 ohm are intended to meet most MC cartridge loading needs.

You may also at this time select if you are listening to a Mono or Stereo recording. The rear Mono/Stereo toggle is in the down position for Stereo and in the up position for Mono playback.

Ground:

You should **ALWAYS** use a grounded AC cord with this product. The chassis is always connected to earth ground if unit is fitted with proper grounded AC power cord.

Technical Specifications:

- MC Gain: Max 66dB.
- MM Gain: Max 52dB.
- Gain Attenuation: 0dB, -6dB, -12dB.
- MC Resistance Loading: 10, 20, 50, 100, 250, 470.
- MM Resistive loading: 47K fixed.
- Frequency Response: 20Hz – 20Khz (+/- .2dB)
- Weight: PH 9.0 - 12 lbs; PS150 - 17 lbs.
- Dimensions: PH 9.0 - 10"W x 10"D x 4"H; Power Supply: 7"W x 9"D x 3"H

Basic Specifications:

- (1) pair MM RCA inputs.
- (1) pair MC RCA Inputs.
- (1) pair RCA Main Outs.
- (1) pair XLR Main Outs, fully balanced (if option installed).

Vacuum Tubes:

- Two 6922 signal tubes – may substitute ANY 6922/6DJ8/7308 compatible tubes.
- Two 6C45 signal tubes.

Warranty:

ModWright agrees to warranty product for a period of 5 years from the date of purchase from a factory authorized ModWright Instruments Dealer.

Warranty covers parts and labor for repairs due to equipment failure not related to customer abuse and/or neglect. Customer is responsible for shipping costs to and from ModWright Instruments or authorized service center.

Warranty is non-transferable to second party.

Contact Information:

If you have any questions about ModWright Instruments products or ModWright modifications or products, please do not hesitate to contact us via phone, e-mail or conventional mail.

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Thank you for purchasing a ModWright Instruments product.

Dan Wright,
President, Owner
ModWright Instruments, Inc.