

SWL 9.0 Anniversary Edition Owner's Manual



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Introduction:

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

The SWL 9.0 Anniversary Edition preamplifier offers high bandwidth, low distortion, and exceptional musicality. We have designed this preamp to allow the reproduction of recordings that is accurate, transparent and musical.

The SWL 9.0 Anniversary Edition also includes a number of features not found on simpler Line Stage only designs. This includes remote volume control and mute. We have also included a hybrid Class A headphone amp, fed via the preamps tube output and designed to handle most modern headphones with impedance between 20 – 600 ohms. Lastly, there is an Opt. (Upgrade Option) input for future addition of internal phono stage.

Please note, this design is phase inverting and this may be addressed by reversing polarity at both speaker cables, either at amp(s) or speakers.

Design Philosophy:

The SWL 9.0 Anniversary Edition was designed to offer World-Class Performance. It uses the best components and proprietary circuitry to offer a full, fast and accurate recreation of the entire frequency range. Bass is deep, tight and authoritative, with seductive midrange and high frequency sparkle. The tonal balanced is designed to be accurate and detailed without edge or glare. The liquidity and holographic imaging of tubes is present, without the ‘soft’ or ‘syrupy’ sound often attributed to tube designs. Use of the very linear 5687 (also 7044/7119/6900 and suitable substitutes) driver tubes and SS rectifiers allow for low distortion and exceptional musicality.

Top quality parts are used throughout the design, including proprietary custom designed MWI metalized, oil-impregnated polypropylene capacitors. Great care is also taken to insure short signal paths and power, ground, transformer and signal layout to minimize noise, allowing for the cleanest and purest audio signal. Every step in the design was taken to create a product that allows ultimate enjoyment of the musical experience.

Note: Rectangular plate is installed over the optional phono input on the back panel of the unit. This is removed when installing optional phono upgrade. There is room for two RCA phono connectors that are user installable. Phono upgrade option is entirely user/dealer installable.

CAUTION: Any source input connected to HT/BP inputs, will feed RCA Main outputs with NO VOLUME ATTENUATION, when HT/BP function is selected. It is important to ONLY use this input for signal from the front channels of a Home Theater Pre/Processor or other source WITH built in volume control. The preamp must be powered on in order for HT/BP to operate. IF A SOURCE WITH NO VOLUME CONTROL IS CONNECTED TO HT/BP INPUTS AND HT/BP BUTTON IS PUSHED, FRONT CHANNEL AMPS WILL RECEIVE FULL OUTPUT SIGNAL LEVEL FROM HT/BP INPUT SOURCE WITH NO ATTENUATION. THIS COULD LEAD TO SYSTEM DAMAGE.

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

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

Setup:

It is always recommended to remove all tubes before shipping the unit. Be sure that the SWL 9.0 Anniversary Edition is NOT connected to AC power and that power plug is disconnected from unit and wall outlet. Use supplied 5/64" hex driver to remove lid screws on sides and front and rear ends of top panel and install (2) 5687 signal tubes in ceramic 9-pin sockets. After tubes are installed, replace lid and secure with screws. Only after this, should the power cord be connected. Tubes may only be inserted one way.

The SWL 9.0 Anniversary Edition has five sets of standard inputs, located on the back of the unit, labeled CD, DAC, DVD, HTBP and PH (optional phono). The unit also features two sets of RCA main outs and one set of RCA tape outs.

HT/BP (Home Theater Input) is meant only for preamp processor or other input with volume control that, when activated, bypasses all active circuitry and volume control, directly connecting to main outputs. This is meant to be used for integrating a 2CH system into a Multi-Channel or Home Theater system. When used in this mode, home theater preamp or processor is connected to HT/BP inputs, the **HTBP rotary input is selected and HTBP button is depressed. The signal is then output straight to 2CH main outs, with no volume attenuation, connected to stereo amp inputs.** This allows direct connection to front L/R channel amp(s) with no sonic impact from the SWL 9.0 Anniversary Edition.

Inputs may be selected via front panel rotary selector switch on the left side of the front panel. The optional phono input is selected the same way, but requires installation of phono card to allow for connection to turntable. If PH (phono) input is selected and upgrade is not installed, there will simply be no signal.

All main outputs invert absolute phase. This may be corrected by reversing speaker leads for both speakers at amp(s) or speaker. The Tape Outs are RCA and will always output exactly what input source is selected, bypassing all gain and volume control and NOT inverting phase.

This product is fitted with an IEC input, for use with detachable power cords. Unless otherwise specified, unit is designed for use with 120V-60Hz AC power. Main fuse is located inside unit, accessible by removing top cover (**ONLY DO SO WHEN UNIT IS POWERED OFF AND DISCONNECTED FROM ALL SOURCES OF POWER**). Only replace fuse with 1.5A Slow-Blow type.

Operation:

The face of the preamp features two rotary knobs, three buttons and a ¼” headphone jack. Controls are labeled from left to right: Select (rotary knob), Power, Mute, HTBP (buttons), HP (headphone ¼” jack input), Volume (rotary knob).

When first powered on, blue LEDs above both power and mute switches will be lit. The unit will remain in mute for approximately 45-seconds, allowing for tubes to stabilize and gently reach operating voltage. The volume control will automatically return to the ‘0’ position at this time. When unit is operational, mute LED will no longer be lit.

When powering any system up, it is recommended as standard practice, to always turn on preamplifier first and amplifier last. When shutting any system down, it is recommended to turn off amplifier first and preamplifier last.

Headphone Out Operation:

NOTE: WHEN INSERTING AND DISCONNECTING HEADPHONE JACK WHILE CONNECTED TO POWER AMP, YOU WILL HEAR SOME NOISE AS CONTACTS MUTE AND UNMUTE SIGNAL. TO AVOID THIS, SIMPLY MUTE PREAMP OUTS WHEN USING WITH HEADPHONES.

NOTE: MUTE function does not operate when using headphone outputs. When a headphone jack is inserted in the ¼” headphone jack, the main outs are muted and music signal flows only to the headphone output. The MUTE button controls the main out signal only. To mute music from the headphone outs, you must turn the volume down.

NOTE: If HTBP input is selected and HTBP button is depressed, the headphone output will also receive a signal without attenuation, from the source connected to the HTBP. DO NOT depress the HTBP button when using headphones unless you are using a source connected to the HTBP inputs with a volume control. Failure to do so COULD DAMAGE HEADPHONES.

The headphone amp was designed for modern headphones with impedances ranging from 20 ohms to 600 ohms. It will drive Ether, HiFi Man, Sennheiser, Grado and most other modern headphones, with the exception of electrostatic headphones such as Stax, which require a specific amplifier.

Vacuum Tubes:

The SWL 9.0 Anniversary Edition uses two 5687 signal tubes, as basis of design. You may experiment with different NOS 5687 and equivalents, such as 7119/7044 and 6900.

Tubes operate at very high temperature. Care should be taken when replacing or removing tubes after being in recent use and after being disconnected from AC power. The preamp will reach optimum sonic condition within 30-45 minutes following startup, due to warm up of tubes.

The tubes installed in the unit should work well for a very long time as they are conservatively driven. Both triodes in each tube are used per channel. When replacing tubes, they should be replaced as a matched pair. Tubes may be changed or replaced simply, provided certain precautions are taken. In order to access the tubes, you must first **POWER UNIT OFF AND DISCONNECT FROM ALL POWER SOURCES. FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY OR DEATH.** You may then remove the top cover of the unit and access the tubes. If the unit has been recently in use, check tube temperature as they may still be very hot to the touch. The tubes operate at high temperatures and will burn the skin if touched before they are allowed to adequately cool.

Signal tubes are installed in ceramic 9-pin tube sockets and may only be installed one way. Rotate tube until pins align with socket and gently but firmly press the tubes down into socket until seated.

At this point, reattach the lid to the unit and **DO NOT POWER UNIT ON UNTIL LID IS ENTIRELY FASTENED. VERY HIGH VOLTAGES ARE PRESENT INSIDE UNIT DURING OPERATION AND IT IS CRITICAL THAT THE PREAMP ENCLOSURE NOT BE OPEN WHEN UNIT IS POWERED ON. FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY OR DEATH.**

Technical Specifications:

Tube Complement: (2) 5687 signal tubes.

Gain: ~14dB.

Input Impedance: 30Kohm.

Output Impedance: ~800 ohm.

Frequency Response: 20 Hz – 150 Khz

Weight: 28.5 lbs. (35 lb. packed)

Dimensions: 17"W x 12"D x 4"H.

Basic Specifications:

(3) Pair RCA Inputs.

(1) Set RCA Home Theater Bypass (HT/BP) Inputs.

(1) Pair phono RCA Inputs when optional phono card is installed.

(2) Sets RCA Main Outs.

(1) Set RCA Tape Outs.

Design Information:

Power Supply: Pi filter, choke current regulated.

Gain Stage: 'Mu' variation single gain/buffer stage.

Power Sequence: Mute-on delay turn-on sequence with soft-start.

Volume Control: Remote Control Alps motorized volume potentiometer.

RCA inputs and outputs.

Phase inverting circuit.

Warranty:

All ModWright Instruments products are warranted for a full five years from date of purchase. Any problems with unit not attributed to abuse, neglect or mistreatment shall be covered at no cost to owner. Customer will be responsible for all shipping costs. Tubes are warranted for a period of six months following date of purchase. Warranty is non-transferable. Only units sold by factory-authorized dealers shall have valid warranty. All ModWright products will be serviced by ModWright for life. Service outside of warranty will incur associated labor and parts costs.

Contact Information:

If you have any questions about ModWright Instruments (MWI) 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.

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