

Ambrose One Owner's Manual



Manufactured by ModWright Instruments, Inc.
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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 Ambrose One preamp offers high bandwidth, low distortion, and exceptional musicality. We have designed this unit to allow the reproduction of recordings that is accurate, transparent and musical. Please note, absolute phase is variable and may be set via the remote

NOTE: *When the unit first powers up, it is DOES NOT invert absolute phase. Absolute phase may be toggled IN or OUT via the remote control phase button. When the second light over from the left is illuminated, then absolute phase is inverted. Pushing the phase button the remote again will revert to absolute phase being non-inverted.*

CAUTION: *DO NOT use any other signal tubes other than 6DJ8, 6922, 7308 or you WILL DAMAGE this unit. The rectifier tubes may be exchanged for other equivalent type rectifier tubes such as 5AR4/GZ34, 5U4G, 5U4GB, 5V4G, 5V4GB, 274B and equivalents.*

CAUTION: *Any source input connected to HT/BP inputs, will feed RCA Main outputs with **NO VOLUME ATTEUNATION**. 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. When the Ambrose One is powered down, the HT/BP input defaults to HT/BP mode. When unit is powered up, any source connected to HT/BP input may be operated in HT/BP mode. Importantly however, when the Ambrose One is powered down, the HT/BP input will default to bypass mode. **IF A SOURCE WITH NO VOLUME CONTROL IS CONNECTED TO HT/BP INPUTS AND THE AMBROSE ONE IS TURNED OFF, FRONT CHANNEL AMPS WILL RECEIVE FULL OUTPUT SIGNAL LEVEL FROM SAID 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. When changing tubes, power unit off and disconnect from all power sources. Failure to do so may result in injury or death.*

Setup:

It is always recommended to remove all tubes before shipping the unit. Be sure that the Ambrose One is NOT connected to AC power and that power plug is disconnected from the external supply and wall outlet. Install (2) 6922 signal tubes in 9-pin ceramic sockets and (2) rectifier tube in ceramic octal sockets in preamp prior to use. All tubes may only be inserted one way.

After tubes are installed, connect both umbilicals to the 'male' 8-pin barrel sockets on the back of the preamp. The umbilicals must be lined up with pins and then outer barrel securely tightened until connection is secure. Connect the other end of the two umbilicals to the two 'female' 8-pin barrel sockets on the external power supply and secure in the same manner. Both umbilicals are identical and it does not matter which order they are connected, right to left. They will only fit one way however, via 'male' and 'female' pin connections at umbilical and chassis/jack connectors. Only after this, should the power cord be connected to the external power supply

The Ambrose One has two sets of fully balanced inputs, located on the back of the unit, labeled 'BAL IN 1' and 'BAL IN 2'. The next two inputs are single ended RCA connections, labeled 'III' and 'IV'. The fifth set of RCA inputs is the Home Theater Bypass inputs, labelled 'HTBP'. Inputs are manually only, selected via the left hand rotary selector switch. There are four positions, starting with BAL IN 1, BAL IN 2, III and IV. HTBP input may be selected at any time by flipping the rear toggle marked HTBP to the ON position. All source inputs are received the same by the unit, except for HT/BP input. HT/BP input should ONLY be used as input from a Home Theater Preamp/Processor or other source with built-in volume control. This input only, may be configured to bypass all gain and volume control stages, directly feeding RCA Main outputs. When HT/BP switch is 'UP', any input connected to HT/BP RCA jacks will be routed straight to RCA main outs only, bypassing all gain stages and volume control.

CAUTION: WHEN AMBROSE ONE IS POWERED DOWN, HT/BP INPUT AUTOMATICALLY DEFAULTS TO HOME THEATER BYPASS MODE.

The Ambrose One has two sets of fully balanced main outputs, labelled 'BAL OUT 1' and 'BAL OUT 2'. There are also two single ended RCA main outs, labeled 'MAIN 1' and 'MAIN 2'.

NOTE: There is a ground toggle switch on the rear of the unit labeled 'FLOAT' and 'GND'. When this toggle is in the GND position, then RCA and XLR outs may be used at the same time, with XLR outs acting as SE outputs, by grounding pin 3 of the XLR jacks. When operating in fully balanced XLR output mode, you must flip the toggle to the FLOAT position. This then allows fully balanced output operation ONLY. Use of RCA outs with ground switch in FLOAT position will cause a system hum.

You may ONLY operate both XLR and RCA outputs at the same time with the Ground toggle in the GND position. You may only operate the XLR outputs in fully balanced mode with the ground toggle in the FLOAT position. In this setting, the preamp will operate with fully balanced XLR outs ONLY, but not RCA and XLR outs at the same time.

The external power supply 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 accessible from the back of the supply, in a twist lock module. (ONLY REMOVE FUSE WHEN UNIT IS POWERED OFF AND DISCONNECTED FROM ALL SOURCES OF AC MAINS POWER). Only replace fuse with 3A Slo-Blo type, 5mmx20mm.

There is a toggle switch located on the rear of the unit, adjacent to the power entry (IEC) input. In the 'DOWN' position, signal and power supply grounds are connected to chassis and earth ground. When toggle is in 'UP' position, chassis and earth grounds are disconnected from signal and power grounds. It is ideal to leave this switch in the 'DOWN' position unless system experiences ground loop hum or buzz issues due to system grounding configuration. 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.

Operation:

The face of the preamp features two rotary knobs, three illuminated indicators and one IR remote control input receiver (never illuminates). The indicators are, left to right: mute, phase, and HT/BP (Home Theater Bypass). The left rotary knob is input select and the right rotary knob is volume control. Power button is located on the top center of the Ambrose One. Depress to turn on/off. The aesthetics of the Ambrose One are intentionally spare and elegant.

When first powered on, the mute and HT/BP indicator and MWI logo will be illuminated. The unit will remain in mute for approximately 45-seconds, allowing for tubes to stabilize. The volume control will automatically return to the '0' position at this time. When the unit is operational, mute indicator will no longer be lit, unless mute is selected via remote. If unit is muted via remote, it will remain in mute and mute indicator will remain illuminated until unit is 'unmuted' via remote or volume is changed via the remote. When the unit powers up, the phase indicator will not be illuminated, indicating that signal is phase correct, or non-inverted. If the phase button on the remote is selected, the phase indicator will be illuminated and absolute phase of both channels will be inverted.

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.

The Ambrose One includes remote volume, mute and absolute phase control, via the included custom MWI remote control unit. Volume is controlled by depressing the Volume '+' and '-' buttons. Mute is indicated by the 'mute' symbol and Phase is indicated by the 'φ' symbol. These buttons are labeled on the remote. Remote may be used to mute/unmute, toggle phase and adjust volume up or down. While the remote includes other buttons such as, PWR, STANDBY, INPUT, MON., BAL. and TRIG., these functions are not used for this product.

Home Theater Bypass (HT/BP) Operation:

The purpose of the HT/BP loop is to allow integration of 2CH audio into existing Home Theater systems utilizing preamp/processors with integral volume controls. When using preamp in HT/BP mode, signal level is controlled by preamp/processor before entering HT/BP input of preamp and routed straight to main outs, presumably connected to the front L/R channel amplifier(s). In Home Theater Bypass (HT/BP) mode, the preamp is essentially out of the circuit, acting only as a straight-wire to the signal. If HT/BP switch is not engaged, then any of the other source inputs connected and selected, will be treated as typical input sources, with volume control and gain prior to signal output via Main Outputs.

When the rear HT/BP toggle is in the DOWN position, HT/BP indicator will be illuminated and the unit WILL NOT be in HT/BP mode. When the HT/BP toggle is in the UP position, the HTBP indicator will NOT be illuminated and the unit WILL be in HT/BP mode. At this time, any signal being fed into HT/BP inputs will completely bypass all active circuitry and volume controls in preamp, feeding main outputs directly with no attenuation of input signal.

In order to operate the Ambrose One in HT/BP mode, two steps are required:

- 1. You must first toggle the HT/BP switch to the UP position.**
- 2. You must also toggle the GND/FLOAT toggle to the FLOAT position (up).**

This serves connect the HT/BP inputs directly to the main RCA outs and also disconnect the output transformer that is part of the active preamp circuitry. Failure to toggle the GND/FLOAT switch to the FLOAT (up) position will result in a lower output volume and the sound will not be accurate.

CAUTION: In this mode, any HT/BP input signal will feed all Main outputs with NO VOLUME ATTEUNATION. This may DAMAGE downstream equipment if used incorrectly.

Vacuum Tubes:

The Ambrose One uses two 6922 signal tubes and one two rectifier tubes in the preamp.

The tubes operate at moderately high temperatures. 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 power rectifier tube.

The signal tubes used are installed in nine pin ceramic 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. The rectifier tubes are installed in eight-pin (octal) ceramic tube sockets that are spline-keyed to be installed only one way. Gently but firmly press the rectifier tube into socket until fully seated. **DO NOT POWER UNIT ON UNTIL TUBES ARE FULLY SEATED.**

Technical Specifications:

Tube Complement: (2) 6922 signal tubes, (2) 5AR4/GZ34 (or equivalent) rectifier tube.

Gain: ~10dB.

Input Impedance: 30Kohm.

Output Impedance: ~110ohm.

Frequency Response: 20Hz – 150Khz (-1dB)

Noise Level: -120dB.

Weight: 29 lbs. (34 lb. packed)

Dimensions: 17-1/2"W x 12-1/2"D x 4-3/4"H.

Basic Specifications:

(2) Pair XLR inputs, (2) pair RCA Inputs.

(2) Pair RCA Main outs, (2) pair Balanced XLR Main outs.

(1) Pair RCA HT/BP inputs.

Power, Input Select, Mute, Phase, Home Theater Bypass (HT/BP) and volume.

Design Information:

Power Supply: Fully dual mono, tube rectified, choke input current regulated, regulated DC heaters and discrete FET regulated B+ voltages.

Gain Stage: Lundahl transformer coupled input and output, fully balanced, Class A, zero negative feedback.

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

Volume Control: Remote Control Alps motorized volume potentiometer.

Balanced XLR and RCA Single Ended inputs and outputs.

Absolute Phase control.

Typical operation does NOT invert absolute phase.

Design Philosophy:

The Ambrose One 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 and high frequencies 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 6922 drive, tube rectification and pure Class A, dual mono circuitry allow for low distortion and exceptionally low noise.

Every step in the design was taken with the goal of creating a product that simply allows ultimate enjoyment of the musical experience.

Warranty:

ModWright Instruments agrees to warranty product for a period of five years from the date of purchase from a factory authorized ModWright Instruments Dealer or ModWright Instruments direct. Any problems with the unit not attributed to abuse, neglect or mistreatment shall be covered at no cost to owner; all parts and labor covered. The customer will be responsible for all shipping costs to and from ModWright Instruments or authorized service center. Tubes are under warranty for a period of six months following date of purchase. 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.

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.



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