



XP-32 Owner's Manual

WARNING

Water and moisture: This device should not be used near water (as per example, near a bathtub, washbasin, kitchen sink, laundry tub, wet basement or swimming pool). Care should be taken such that objects do not have the opportunity to fall, and that liquid is never spilled onto or into the device enclosure through openings.

Power Sources: This device must be connected to a mains power source in strict accordance with the supplied product owners manual. Please verify that the AC mains voltage specified in the product manual matches those requirements indicated on the unit and the AC voltage provided to your location by the power company. The product **MUST** be connected to a MAINS socket outlet with a protective earthing connection.

Power Cords: Pass Labs provides a power supply cord that meets all legislated requirements for the market in which the product was originally sold. If you choose to substitute an after-market product we urge you to choose one that is fully safety rated by the necessary local authority.

Power supply cords should be routed so that they are not likely to be walked on, abraded, or pinched by items placed on or against them, paying particular attention to cords where they enter plugs or exit from a device. Never under any circumstance insert a cut or damaged power cord into a mains power socket. Cables should never be connected / disconnected with equipment powered up. Failure to heed this warning may damage or destroy equipment.

Ventilation: Power-amplifiers run warm, but you should be able to place your hands on them without discomfort. You must allow for this heat in installation, by providing for free air circulation around the product. Leave a minimum of 6" of space around the amplifier. The ventilation should not be impeded by covering the ventilation openings with items, such as newspapers, table-cloths, curtains, etc.

Other Warnings:

No naked flame sources, such as lighted candles, should be placed on the apparatus; This amplifier is suitable for tropical climates under 2000m and ambient temperatures of 40 degrees C or less.

Servicing: To reduce the risk of fire, electrical shock or other injuries, the user should not attempt to service the device beyond that which is described in the operating instructions. All other servicing must be referred to qualified service personnel.

For Units With Externally Accessible Fuse Receptacle: Unplug the device from all sources of power before changing or inspecting any fuse. Replace fuse with one of same physical size, type and rating as that specified by the manufacturer for that product.

Country Specific Warnings:

China: For use at altitude 2000m or lower.

Norway: Apparatet må tilkoples jordet stikkontakt.

Sweden: Apparaten skall anslutas till jordat uttag.

Finland: Laitte on liitettävä suojakoskettimilla varustettuun pistorasiaan.

Denmark: Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord.

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Introduction:

Thank you for purchasing the Pass Labs XP-32 line stage, we trust it will entice you to re-discover your favorite recordings and explore new musical delights.

At Pass Laboratories we do not change products or offer a new model unless we believe the changes offer significant improvements over the previous version. As a result we typically experience products with a seven to eight year production run.

We are constantly working on and listening to new circuits and components, increasing our knowledge and seeking better sound and enhanced product reliability. Over time we find enhancements worthy of putting into production and significant enough to warrant a change in design. That time has come for the XP-32.

The new design uses double shielded low noise toroids in a true dual mono topology for the gain channels and another transformer, linear power supply dedicated to the control architecture. The use of three fully independent power-supplies in the control chassis results in dramatically lower radiated noise and far better THD+Noise figures in the gain stages. Residual circuit noise becomes paramount at low signal levels. By going to extreme lengths to lower noise we enjoy better resolution and dynamics in the music.

In the two gain chassis we continue to use our favorite NOS Toshiba's but with larger and higher biased output stages in a topology very similar to that used in the Pass Labs "Flagship" Xs Preamp

The larger output stages bring practicality to much longer and multiple cable runs, both balanced and single ended and gives us the advantage of simplifying our single ended output circuitry while simultaneously increasing performance.

The volume control is a single stage topology, it features greater range, 0.5dB volume steps while being quieter and more dynamic. Overall this makes for a quieter and more versatile control center for your music system. The XP-32 measures spectacularly well but more importantly it stands out sonically.

Thank you for purchasing this preamp. It is my sincere hope that you will enjoy its sound as much as we do.

Pass Labs

Setup:

Please read and understand the operational instructions and safety issues associated with this product. We go through great effort to make a soundly engineered and superbly performing product of lasting durability. If you have any questions we are anxious to assist in addressing them. Do not hesitate to contact either your dealer or the Pass Labs factory directly. We are here to support the product and you the end-user.

As with all things electrical, the power cord should be the last item attached to the pre-amp and the very first cable to be removed anytime you hook-up or remove any equipment from the signal chain.



The JAE umbilical cable should never be connected or removed without turning the XP-32 off from the rear panel power switch or by unplugging the AC Power cord. When installing the circular connector on the JAE umbilical, care must be exercised to fully seat the connector and bottom the ring nut. The connectors are keyed and can only go in one way. The larger tab goes to the top. The ring nut is provided with a conventional right hand thread that should never require any use of force or tools to connect or disconnect the cable from either chassis. Clockwise rotation of the ring nut to secure the connector, counter-clockwise rotation to remove.

The gain channels may be placed in proximity of the power supply control unit (either on top of or underneath) with negligible loss of performance due to the extensive shielding afforded the power supply. Some separation of the chassis is however encouraged. The umbilical cables as supplied are 1.5m (5ft) in length to allow for convenient component placement.

The XP-32 draws roughly 70W of power in operation. The pre-amplifier's actual voltage and current rating are indicated on an affixed tag on the rear of the pre-

amplifier. Please verify that the indicated voltage requirements of this product are consistent with the supplied power at your intended point of use. We have provided a standard IEC AC power cord that fits into the IEC 320 line receptacle / switched inlet module at the rear of the amplifier. In addition to providing for power cord attachment this inlet module additionally incorporates a power switch and fuse holder. The fuse in all cases will be a 5mm x 20mm non-re-settable time delay glass fuse. Proper fuse value is indicated on the back of the amp.

The IEC inlet provides for a safety ground via the AC mains power cord. In addition to safety this ground is necessary for proper noise rejection. Do not defeat this ground connection.

Operation:

The XP-32's front panel controls and display are straight forward and intuitive. We encourage you to become familiar with their operation prior to use.

On each gain channel there are 5 numbered inputs, one dedicated home theater input and a tape loop (total of 7 usable inputs) Each of the 7 inputs accept either single-ended (RCA) or balanced XLR cables.

On each gain channel there are two pairs of outputs associated with volume controls. One main output and one slave output (either RCA or XLR). The "slave" output may be set equal to or less than the "main" output by use of the "small volume control" knob on the gain channels.

Once set both "main" and "slave" outputs track each other through the main volume control on the control chassis. Having two available and relatively independent outputs with a single volume control allows for bi-amping using amplifiers of different gain or drivers of different sensitivity.

The output of the "Tape-loop" is at 0dB (unity gain) output which allows for convenient recording (independent of and bypassing the volume control).

Balanced inputs and outputs are via XLR connectors. Single-ended input and outputs are via RCA connections. The XLR connections in all instances conform to AES/EBU standards, where Pin 1 is grounded, Pin 2 is positive signal and Pin 3 is inverted signal.

The input from the RCA feeds a summing junction that maximized the patented supersymmetry (X circuit) and preserves the balanced character of the XP-32 from input to output when fed from a single-ended source.

After all the input and outputs are connected and double checked, you can now attach the AC power cord and turn the unit on from the rear panel switch located next to the AC inlet on the rear of the power-supply / control unit.

On the front panel the left-most "MUTE" switch when on silences the output of the pre-amp, illuminates the associated LED and blanks the volume step numbers in the alpha-numeric front panel display. Pressing the mute a second time re-establishes output, extinguishes the associated LED and re-instates the volume step numbers in the display

The front panel "MODE" switch cycles the front panel display through three different levels (Bright-Dim-Off) Using any control function of the XP-32 with the display "off" will momentarily bring the display back up to the dim setting. The two input selector switches (designated by left and right pointing arrows) cycle thru the active inputs, 1 through 5. The two additional inputs (home theater and tape) are selectable only from the hand remote.

Before selecting the home theater pass through (pass thru on the hand remote), for the first time, it is imperative that the input device on the HT input have it's gain set to zero Failure to follow this precaution could result in a volume level intolerable to both ears and speakers. Selecting home theater bypass, sets the gain of the pre-amplifier to 0dB (gain of 1x)

When the Pass Thru function is selected volume control of the system is under control of the device connected to "Pass-Thru" and the XP-32 is essentially invisible. When Pass-Thru is selected the display will show "PASS THRU" and the volume will quickly ramp from 000 to 179 in both right and left channels (each step representing 1/2 dB) Volume step 179 represents the afore mentioned 0dB gain for use with components such as a home theater processor that best function with their own internal volume controls. (NOTE: you may set any numbered input to "Unity" (0dB by manually selecting an indicated level of 179 on the XP-32 display

The electronic volume control of the XP-32 allows for 100 dB range in 0.5dB steps and is driven by a micro controller, reading an optical encoder serving as the front panel volume control. Assuring precise level steps with an absolute increment of 0.5 dB. This allows for accuracy and channel to channel tracking that is not available in more traditional volume controls and preserves high common mode rejection of signal in a true balanced circuit.

Note: You may need to be at step 80 or 100 before you can hear anything depending on your system.

Don't be afraid to turn the volume up to 120, 150 etc. The volume control is an attenuator so the higher up you use it the more of the original signal is used.



This remote is designed to operate several pieces of Pass Labs electronics, not all of the functions available on this remote will be applicable to your Pass Laboratories XP-32.

Power: is not used with the XP-32. This is used on other products and has no effect on this product.

Mute: pressing mute once will quiet the pre-amplifier outputs; pressing mute a second time will return you to the previous volume control setting

Input Selection: Pressing 1,2,3,4,5 will immediately move the input selection to that input selection; volume and balance settings will not be disturbed.

Volume: Pressing the increase (^) button or the decrease (v) button will shift the volume setting 1dB, holding a button down will increase or decrease the level until such time as you either release pressure on the button or reach the limits of the volume control.

Balance: Pressing balance left (<) or balance right (>) will increase the level in the left or right speaker, depending upon which button is pushed.

Tape: Pressing the tape button selects the tape loop and displays INPUT TAPE † with volume at 000. Push tape again get you out of tape mode.

Pass Thru: Pushing this button twice, sets the pre-amplifier to volume step 179 (0 dB) and input 5. As an added precaution when "pass through" is selected the volume ramps upto 179. This is to prevent nasty surprises when "pass thru" is selected accidentally. The ramp up sequence can be stopped at any time by hitting any button on the remote. The button must be pressed again to exit "Pass Thru" and unlock the other command selections.

Display: The default setting for the display is "bright", pressing the display button once changes the display to its "dim" or "low intensity" setting, pressing the button a second time selects "off" for the display. When "off" is selected any other control function will cause the display to indicate product operational status for approximately 7 seconds and then the display will once again blank. Pressing the display button a third time cycles back to a "bright display"

Ext amp on: Selection of "Ext Amp On" applies 12Vdc to a two conductor 3.5mm TS (tip-sleeve) connector on the rear of the XP-32 control chassis. This is intended to supply a trigger voltage that will turn on associated equipment such as power amps. As per convention + voltage is applied to the tip contact and - voltage is applied to the sleeve contract. Check the owners manual of your pre-amp to see if this function in compatible.

Maintenance:

Leave it on or turn it off: The product is designed to be left on all the time. The exception to this might be a case where the preamp will not be used for an extended time - in that case it can be turn off.

Cleaning: The finish can be damaged by harsh cleaners and abrasive cloths. We find a damp soft cloth works best. You can also use a mild solution of windex or white vinegar but be careful to avoid the acrylic window. The acrylic window should only be cleaned using "plastic cleaner & polish".

Remote batteries: The two AAA batteries should be replaced every six months at least. The batteries are located under the remote back. This is held in place with four 4-40 phillips flat head screws. Please note the polarity of the batteries, putting them in wrong could cause damage.

Replacing the fuse: The fuse should only be replace with the same type and size as indicated on the rear. Audio Specialty FUSE: NOTE: The "Overload" and "Time Delay characteristics" will differ slightly (due to the different metallurgy of the fuse elements) between commercial grade and audio grade fuses. We can't guarantee that your audiophile grade fuse, won't blow at a different in-rush current threshold, than your stock commercial fuse. Use of other than approved fuses, may invalidate your product warranty and result in product damage.

How to replace the fuse:



XP-32 Specs:

Power consumption:	70 watts
Gain:	9.6dB Balanced
Output Impedance:	25 Ohms RCA, 50 Ohms XLR
Input Impedance:	22K Ohms
Frequency response:	+/- 0.05 dB 10Hz to 20KHz, -2dB @ 150KHz
Crosstalk	> 110dB
Residual Noise	500nV RMS, SN -150dB ref max out
THD	< 0.001 @ 1V 1Khz
Dimensions:	17"w x 12.5"d x 4"h times three
Weight:	62.5 lbs

Warranty Information

We go through great effort to make a soundly engineered, and superbly performing product of lasting durability. But we also understand that things infrequently go wrong, if you have any questions or problems please contact either your dealer or the factory, we are here to support the product and you, the user.

All Pass Laboratories products purchased new from an authorized Pass Laboratories dealer in North America are covered by a transferable, limited 3-year warranty. This warranty includes all parts and labor charges incurred at the factory or factory specified repair facility, exclusive of any subsequent or consequential damages. Damage due to physical abuse is specifically excluded under this warranty.

For this warranty to apply the customer is responsible for returning the product unmodified to the factory within the specified warranty period. The customer assumes all responsibility for shipping and insurance to and from the factory or a factory specified repair facility. The conditions and stipulations of this Pass Laboratories warranty only applies to units originally sold new through an authorized dealer. Warranty on factory repair is 60 days and covers only the scope of the original repair.

Non-North America customers should consult with their original Pass Labs dealer or distributor for warranty repair instruction prior to contacting the factory or shipping product to the factory for repair.

Non-North American product must be returned to the country of origin for warranty service. Foreign distributors are only required to offer warranty service on Pass Laboratories product that they have imported, verifiable by serial number.

Please note: Conditions of warranty service and customer rights for product purchased outside the United States may vary depending upon the distributor and local laws. Please check with your local distributor for specific rights and details.

Any modifications to Pass Laboratories products that have not received written factory approval nullify all claims and void all provisions of the warranty and liability by the maker or authorized distributor. Should a modified product be returned to the factory for repair the owner will be required to pay all necessary charges for the repair in addition to those charges required to return the product to it's original configuration.

In the case of safety issues, no product shall be returned to the customer without those safety issues being corrected to the most recent accepted standards.

Removal or alteration of original Pass Labs serial numbers voids the factory warranty. Product with altered or missing serial numbers will be suspect as counterfeit or stolen product.

Pass Laboratories will not repair or in any way indemnify any counterfeit or cloned product. Pass Laboratories does not offer products in voltages intended for international markets either to authorized Pass Labs dealers or to third parties located in the United States or Canada.



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