Warranty and service:

This part is warranted for 1 year, subject to the general warranty terms and conditions noted on our website:

www.aquarianaudio.com/warranty.html

This device is not intended to be waterproof.

Contact Aquarian Audio for technical support:

Aquarian Audio Products
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Aquarian Audio

PA1-P48

Hydrophone Buffer / Preamp

For interfacing piezo hydrophones to phantom-powered microphone preamps

PA1dX

The PA1 is designed to provide impedance conversion and gain, making passive piezo hydrophones compatible with microphone preamplifiers. Users may also find it useful for use with other piezo sensors, such as contact microphones or even electric guitars. It is designed to work with any common mic preamp that offers bias power, from 2.5V plug-in power to 48V phantom power. It is available with either 3.5mm TRS or XLR output. This guide is specific for the XLR version.

This amp uses Aquarian's CS6 signal conditioning board ("d" models), which is the same that is built into the H2 and H3 hydrophones. Gain and output impedance are dependent upon the bias current and input impedance of the mic preamp with which they are used.

USE:
No adjustment to this device or special knowledge is necessary. Simply connect the hydrophone to the adapter and the adapter to the mic input of your audio device.

Phantom power is required and will probably need to be enabled, either with a physical switch or within the menu system of your audio device.

Phantom power is an option with most professional-grade audio devices with microphone inputs. 48 volts (P48) is the original standard by which most manufacturers comply, but the need for lower power consumption in battery-powered devices, along with simplification of design, led to other standards. This module should work with any available phantom power supply, but performance may vary with alternate standards. If options for phantom voltage are available in your device, select the lowest voltage available to minimize noise and power usage.

The following specifications are based on use with IEC P48 phantom power. Your results when using alternate phantom powering standards may vary. See previous page for more detail.

20 Hz to 20KHz unweighted, RMS voltage, unless otherwise noted:

Gain:	18 dB	<1>
Noise:	< 20µV	10nF shunt
Response:	+0/ -1	dB
THD:	<0.1%	<2>
Input:	6.3mm TS	<3><4>
Z in:	300 KΩ	<4>
Max input:	250mV	<1>10%THD
Output:	XLR male	<4><5>
Z out:	6.8KΩ	<1>

<1> Specs will vary with non-standard phantom power supplies.
<2> Class "A" operation offers soft clipping at high amplitude and distortion is not noticeable at normal amplitudes.
<3> Standard connector--also referred to as 1/4" mono phone plug.
<4> Can be modified per user requirements.
<5> Full-size 3-pin, pin 1=GND; pin 2= hot; pin 3=unused (single-ended output)