

Warranty and service:

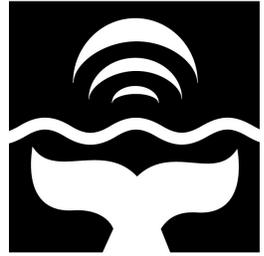
This part is warranted for 1 year, subject to the general warranty terms and conditions noted on our website:

www.aquarianaudio.com/warranty.html

This device is not intended to be waterproof.

Contact Aquarian Audio for technical support:

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AQUARIAN AUDIO

PA1-PIP

Hydrophone Buffer / Preamp

For interfacing piezo hydrophones to plug-in-powered microphone preamps

PA1-PIP

Thank you for your purchase of the PA1-PIP Buffer / Preamp. This module is designed to provide impedance conversion, making passive piezo hydrophones compatible with standard consumer-grade microphone preamplifiers that are built into digital recorders, smart phones, computers, and other common audio components. It can also adapt piezo contact mics, electric guitars and other high-impedance audio signals to these audio devices.

The PA1-PIP offers a low-cost alternative for underwater recording enthusiasts. Intended to be an entry-level module among the Aquarian Audio line, the PA1-PIP uses cost-effective cables and connectors with a simple and versatile low-noise FET amplifier that will not compromise the quality of your recording.

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.

PIP (plug-in power) is required* and may need to be switched on within the menu settings of your audio device.

*Plug-in-power is a bias current used extensively in consumer audio devices. It is used to power common electret microphones, as well as the circuits in this buffer / preamp. Unfortunately, there is no standard for PIP and power varies widely between components. This module is configured for dual-mono output—driving both left and right channels and using PIP from both channels. It will typically also work well with a single input channel at half the bias current. Because of these uncertainties relating to bias power, performance from this module will vary.

The following specifications are based on a typical PIP supply of 3 volts though a 2.2K bias resistor. Your results may vary. See previous page* for more detail.

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

Gain:	3 dB	<1>
Noise:	< 12 μ V	10nF shunt
Response:	+0.5, -0.1	dB
THD:	<0.3%	<2>
Input:	6.3mm TS	<3><4>
Z in:	300 K Ω	<4>
Max input:	300mV	<1>10%THD
Output:	3.5mm TRS	<3><4>
Z out:	2.2K Ω	<1>

<1> These specs are strongly influenced by the PIP supply*

<2> Harmonic distortion is higher than many amps because of the low-voltage class "A" operation required for PIP. However, clipping is soft at high amplitude and distortion is not noticeable at normal amplitudes.

<3> Standard connectors--also referred to as 1/4" and 1/8" mono and stereo phone plugs respectively.

<4> Can be modified per user requirements.