



# PORPOISE

## SINGLE CHANNEL UNDERWATER ACOUSTIC MONITORING

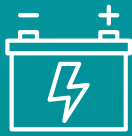
Compact & intelligent underwater acoustics  
in a low power & low cost package.

The PORPOISE underwater noise recording & signal processing system has taken all the processing power and real-time data streaming capabilities of its big brother the ORCA, and compressed that into a compact and streamlined, extremely low power, single-channel package.

With highly configurable sampling rates, huge memory capacity, intelligent on and off scheduling, configurable hydrophone settings, and real-time data processing, PORPOISE provides the best acoustic performance per dollar in the world.



[turbulentresearch.com](http://turbulentresearch.com)



## LOW POWER CONSUMPTION

72 hours continuous recording on internal AAA batteries

12 months + on external battery pack



### Porpoise

The standard Porpoise acoustic recording system is built from composite glass fibre and engineered plastic rated to 500m depth. This version of Porpoise includes an integrated hydrophone and low noise programmable gain pre-amplifier for excellent 24 bit acoustic data quality over a huge dynamic range. Each unit includes 128 GB of internal recording memory, and is user expandable with SD cards to 4 TB. In addition to world class performance, Porpoise comes at an affordable price for any research project.



### Porpoise-Ext 500m | 2000m | 6000m

Porpoise-Ext includes the same electronics and features as the standard version, but includes an option for an external hydrophone. This unit is housed in a pressure vessel that is depth rated up to 6000m. Porpoise-Ext allows users to use one of many hydrophones on the market that might suit a particular application. By decoupling the hydrophone element from the pressure vessel, users can choose the right sensor for a broader range of depth or export constraints.



### Porpoise-84D

PORPOISE-84D has all the same features as a Porpoise-EXT except for the internal battery pack. This version was designed to go the distance. The internal 84 D-cell battery pack allows the user to go the distance with longer deployments. The best of all, it's all in one package. Each unit includes 1TB of internal recording memory, and is user expandable with microSD cards to 8TB.



### Porpoise-36D

PORPOISE-36D has all the same features as a Porpoise-EXT except for the internal battery pack. This version was designed to go the distance. The internal 36 D-cell battery pack allows the user to go the distance with longer deployments. The best of all, it's all in one package. Each unit includes 1TB of internal recording memory, and is user expandable with microSD cards to 8TB.

## SPECIFICATIONS

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<b>POWER</b>	Internal Power: 12 x AAA Cells (user replaceable) External Power: 6.5V - 26V DC, External Packs Available
<b>ACOUSTIC</b>	Analogue Bandwidth > 150 kHz ADC: 24 Bits Sigma Delta Dynamic Range: 110 dB (full bandwidth) Configurable Gain: 10 dB- 40 dB Maximum Sensitivity: -165 dB Re 1 V/μPa Sampling Rates Supported: 2khz, 6khz, 8khz, 16khz, 24khz, 32khz, 48khz, 64khz, 96khz, 128khz, 192khz, 256khz, 384khz Programmable High Pass Filter: Software Controlled
<b>MEMORY</b>	1TB Micro SD standard, upgradable to 8TB Configurable recording, schedule and duty cycling
<b>DIMENSIONS</b>	PORPOISE: 70mm x 233mm, 2.5lbs PORPOISE-EXT (2000m): 70mm x 233mm, 4.8lbs PORPOISE-36D (750m): 610mm-183mm, 41lbs PORPOISE-84D (750m): 864mm-183mm, 67.1lbs
<b>COMMUNICATIONS</b>	Real Time Ethernet Streaming - spectrograms, live audio, configuration and data download
<b>ENVIRONMENTAL</b>	<b>PORPOISE:</b> 500m standard <b>PORPOISE-EXT:</b> 2000m or 6000m pressure vessel options, pressure relief valve included  Operating Temperature: -50°C to +50°C External hydrophone connection via 8 pin female subconnector- EXT version
<b>EXTERNAL INTEGRATION</b>	GPS Input for PPS Time Synchronization Real Time Buoy

PORPOISE-84D

PORPOISE-EXT

PORPOISE-6000M



- ✓ Up to 8TB of Micro SD Storage
- ✓ Real time streaming audio and spectrogram
- ✓ Internal battery and optional external battery packs
- ✓ Available with optional external Hydrophone



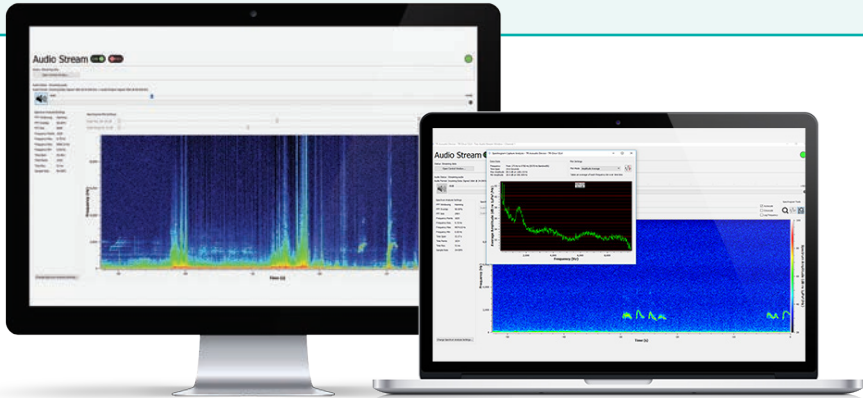
FULL SIZE PORPOISE

## TR-TRAC

### Real time configuration, analysis and visualization

The Turbulent Research Acoustic Control (TRAC) application is real time configuration, analysis and visualization software designed for use with all of Turbulent Research passive acoustic monitoring products.

TRAC allows users to easily setup their instrument parameters including enabled channels, sampling rates, channel gain, recording schedules and internal processing. Additionally, TRAC provides a real time portal to the user's instrument, digital multichannel acoustic data is presented as real time spectrograms, third octave plots with percentiles, and live real time audio.





**BUILDING INTELLIGENT TECHNOLOGY.**

Turbulent Research is a high technology company built on the talent in engineering, signal processing, and product development of its employees.

Founded in 2013, Turbulent Research began by building a broad range of underwater acoustic products for subsea use in oil & gas, underwater construction and ocean science.

**[turbulentresearch.com](http://turbulentresearch.com)**

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