

Instruction Sheet

Hydrophone

for the Minimate Pro4™/Minimate Pro6™ Monitoring Units

The Hydrophone advanced sensor may be connected to any Minimate Pro4 or Minimate Pro6 monitoring unit. The hydrophone senses pressure changes to 324 kPa (47 psi) down to water depths of 46 meters (150 feet).

WARNING

Do not use the hydrophone for monitoring near-field applications. Exceeding the minimum distance from the charge versus the Hydrophone may cause permanent damage to the sensor.

Range of Applications

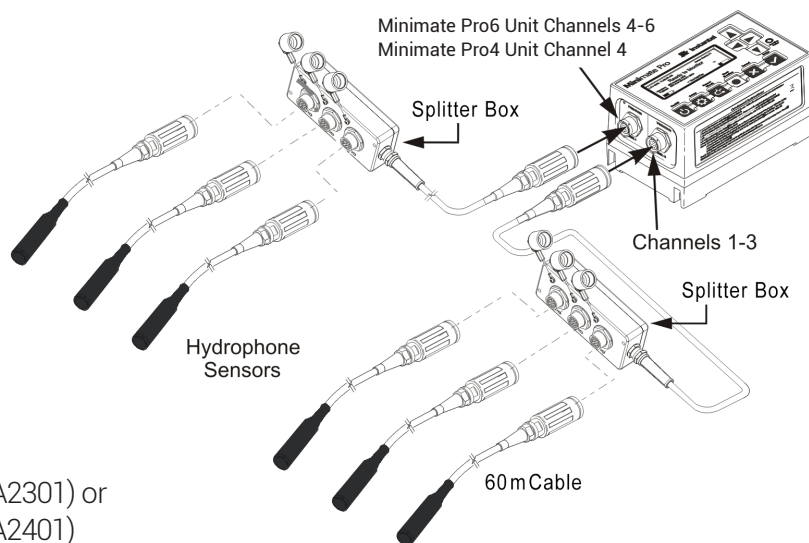
- Underwater Monitoring
- Research/Education
- Environmental

Physical Installation

Hydrophones can be connected directly or via a Splitter Box to the Minimate Pro (see image - opposite). Before using the Hydrophone, use THOR Advanced software to configure the Minimate Pro unit with the Hydrophone settings (see next page).

Tools and Materials Required

- Minimate Pro4 monitoring unit(P/N: 720A2301) or
- Minimate Pro6 monitoring unit(P/N: 720A2401)
- Hydrophone(P/N: 720A5001)
(recommended sample rate 65,536 S/s)
- Splitter Box(P/N: 720A5501)
- THOR Advanced software(P/N: 72300201)



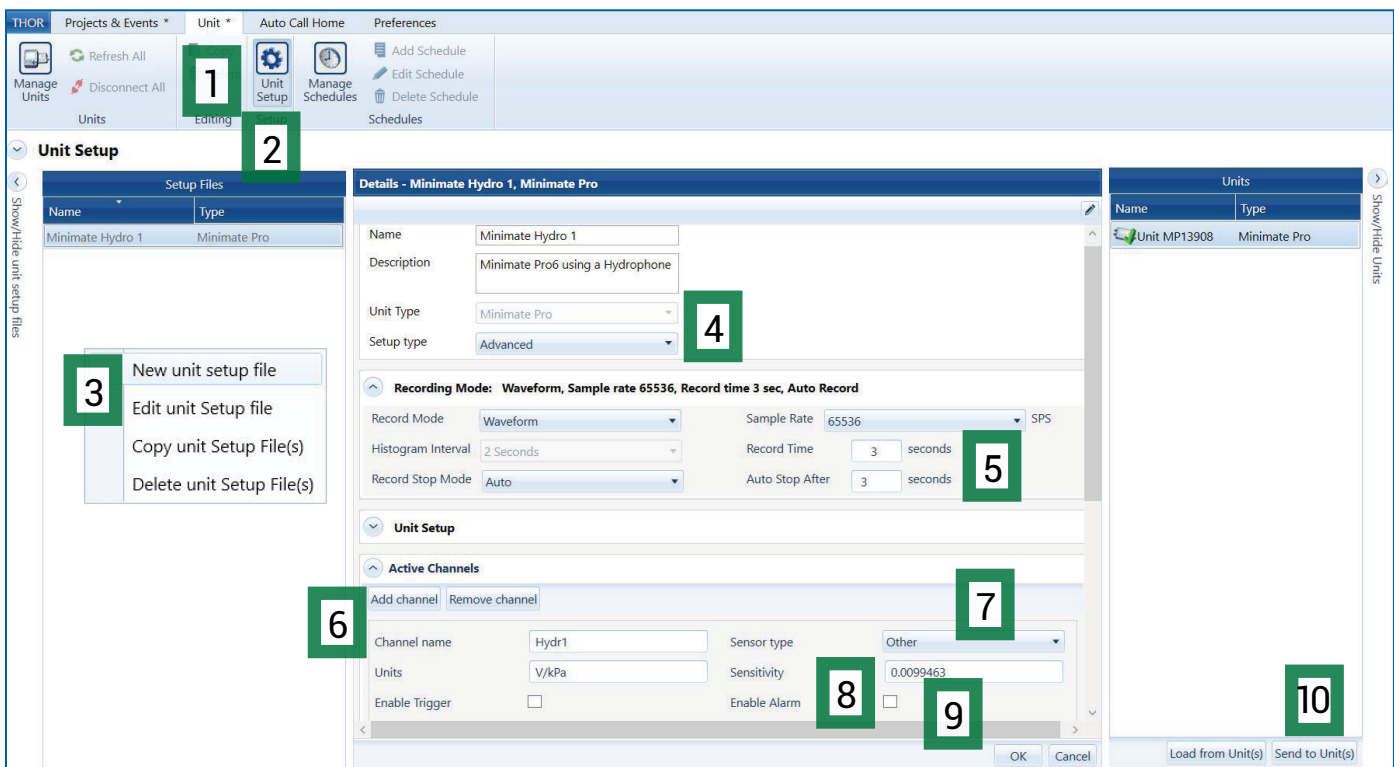
**Minimate Pro4/Minimate Pro6 Units
Uniaxial Sensor Configuration
with Two Splitter Boxes and Hydrophone Sensors**

Specifications	Metric	Imperial
Amplitude Range	324 kPa	47 psi
Frequency Range	8 - 500 Hz	
Sensitivity	0.0099463 V/kPa	0.068566 V/psi
Resolution	0.0101 kPa	0.00146 psi
Trigger Levels	0.162 - 324 kPa	0.0234 - 47 psi
Recommended Sample Rate	65,536 S/s	
Natural Frequency	14.7 Hz	
Maximum Operating Depth	46 m	150 ft
Cable Length	60 m	200 ft

Software Setup

The Hydrophone setup requires Instantel® THOR™ Advanced software.

1. Click on the **Unit Tab**.
2. Click on the **Unit Setup** icon.
3. In the Unit Setup section, right-click and select "**New unit setup file**".
4. Fill in the details and select **Unit Type: Minimate Pro**, then **Setup Type: Advanced**.
5. Set the **Sample Rate** (recommended 65,536 samples per second).
6. Under Active Channels, add the necessary channels by clicking the "**Add Channel**" button.
7. Under Sensor Type select "**Other**".
8. Fill in the sensitivity of the Hydrophone along with its respective units. Repeat for all connected Hydrophones.
(Note the Sensitivity values are dependent on the units used; metric or imperial)
9. Click **OK** (and save the changes in the popup dialog box).
10. Send the Setup File to the unit by selecting the unit from the list and clicking the "**Send to Unit(s)**" button.



Note: Make sure the Minimate Pro unit is using this setup file. To verify, press the **Setup** key on the unit followed by the **Enter** key.

Note: Use Channel 1 for a single Hydrophone, Channels 1-3 when using one Splitter Box and Channels 4-6 when connecting 4, 5, or 6 hydrophones.

Warranty

Instantel products come with a limited one-year warranty against defects in materials or workmanship unless otherwise stated. The warranty begins on the date of shipment from the Instantel factory to the customer and is subject to certain exclusions and conditions as stated below. Monitoring units and sensors will have the warranty extended for a second year if they are returned to the Instantel factory for service and calibration within 30 days of the 'Next Calibration' date printed on the calibration label located on the product.

If, within a period of one year from the date of shipment to a customer, the instrument fails to perform in accordance with Instantel's published specifications under normal use and operating conditions, it will be repaired or replaced at the sole discretion of Instantel free of charge. Components subject to fair wear and tear in regular use, as solely determined by Instantel, are excluded from this coverage. This warranty will not apply if the damage or malfunction occurs due to (i) adjustments, additions, alternations, abuse, misuse or tampering of the instrument; (ii) instrument operation or use contrary to the operating instructions; (iii) power fluctuations; or (iv) any other cause not within the cause or control of Instantel. If inspection by Instantel fails to disclose any defect covered by this limited equipment warranty, the instrument will be repaired or replaced at customer's expense and Instantel's regular service charges will apply. This warranty is non-transferable.

Any shipments returned directly to Instantel must have prior approval, and all packages must display the Return of Material Authorization (RMA) number issued by Instantel. Shipping charges to Instantel's factory will be paid by the customer and return shipment to the customer will be paid by Instantel.

To protect your warranty, you must complete and return a Warranty Registration Certificate, or complete the online Warranty Registration Form, within ten days of purchase. Products will be assumed out of warranty if no warranty card is on file at Instantel. Retain this warranty statement and the proof of purchase for your records.

Except for the foregoing limited equipment warranty, Instantel makes no other warranties and hereby disclaims and excludes all other warranties, whether statutory, express or implied, whether arising under law or equity or custom or usage, including any implied warranty of merchantability, fitness for a particular purpose, non-infringement, satisfactory quality, or quiet enjoyment, and any warranty that the product supplied may not be compromised, or that the product will in all cases provide the function for which it is intended.

EC Warning

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.