

# Hydrophones

Available in a variety of frequencies and capabilities to enable detection of all transmitters and to communicate with deployed transponding receivers

Our hydrophones come in a variety of options - omni-directional, directional and transponding omni-directional - as well as frequencies to enable detection of our full line of coded and continuous transmitters. They are used with the VR100 receiver to locate and actively track acoustic transmitters on passing fish or equipment.

Transponding omni-directional hydrophones also have transmitting capabilities and are used to communicate remotely with deployed transponding receivers to obtain status such as unit health, number of detections, tilt, range, temperature, noise, signal strength, data watch tables, and estimated remaining battery life and memory. They are also required to remotely release the VR2AR Acoustic Release Receiver and the Ascent Acoustic Release.

## Omni-Directional Hydrophones

The VH165 and VH180 are omni-directional hydrophones that detect pings from any direction. The VH165 operates between 50 kHz and 85 kHz enabling detection of all 69 kHz transmitters while the VH180 operates at 180 kHz frequency to enable detection of all 180 kHz transmitters.

## Directional Hydrophones

The VH110 and VH180-D are directional hydrophones that detect pings from one direction (or side) of the unit. The frequency range for the VH110 is 50 to 85 kHz enabling detection of all 69 kHz transmitters while the VH180-D operates at 180 kHz frequency to enable detection of all 180 kHz transmitters.

## Transponding Omni-Directional Hydrophones

The VHTx series omni-directional transponding hydrophones detect pings from any direction and transmit in all directions. Available in three different frequencies (69, 180 and 307kHz) to enable detection of all 69, 180 and 307 kHz frequency tags, they are also capable of communicating with deployed transponding receivers.



## Pair With

All hydrophones are used with the VR100 Receiver and Deckbox

Use VH165 Omni-directional and VH110 Directional with:

- » 69 kHz Transmitters

Use VH180 Omni-directional and VH180-D Directional with:

- » 180 kHz Transmitters

Use VHTx-69k Transponding with:

- » VR2AR Acoustic Release Receiver

- » VR2Tx Receiver
- » Ascent™ Acoustic Release
- » 69 kHz Coded Tags

Use VHTx-180k Transponding with:

- » HR2 High Residence Receiver
- » 180 kHz Coded Tags

Use VHTx-307k Transponding with:

- » HR3 High Residence Receiver



## PRODUCT SPECIFICATIONS



### Frequency (Omni-directional)

VH165: 50-85 kHz

VH180: 180 kHz

### Frequency (Directional)

VH110: 50-85 kHz

VH180-D: 180 kHz

### Frequency (Transponding)

VHTx--69k: 69 kHz

VHTx-180k: 180 kHz

VHTx-307k: 307 kHz

### Beam Pattern ±10% (Directional)

69 kHz: Horizontal ±20°; Vertical ±50°

180 kHz: Horizontal ±15°; Vertical ±30°

### Operational Temperature Range

-5°C to +40°C (water must not freeze)

### Preamplifier Gain

50 dB nominal

### Dimensions

VH165 and VH180: 16 mm diam x 100 mm length

VH110 and VH180-D: 95 x 83 x 32 mm

VHTx: 41.275 mm diam x 210 mm length

### Weight in Air

VH165 and VH180: 500 g

VH110 and VH180-D: 840 g

VHTx-69k (with cable): 2434 g

VHTx-180k (with cable): 2370 g

VHTx-307k (with cable): 2370 g

### Cable Type and Lengths

VH165 and VH180: Shielded twisted pair, polyurethane jacket; Lengths 5 m, 10 m (standard), 30 m

VH110 and VH180-D: Shielded twisted pair, polyurethane jacket; Length 10 m

VHTx: Shielded twisted pair, polyurethane cable jacket with a minimum bend radius of 4 inches; Length 25 m

Ready to Get Started? [Contact us](#) today.

### About Innovasea

Innovasea designs the world's most technologically advanced aquatic solutions for fish tracking and builds them to withstand the toughest conditions. It's all driven by a commitment to make our ocean and freshwater ecosystems sustainable for future generations. Today. Tomorrow. For life.



[www.innovasea.com/fish-tracking](http://www.innovasea.com/fish-tracking)

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