

# **DH-4**

## **Directional Hydrophone**



***SONOTRONICS***

3169 S Chrysler Ave  
Tucson, AZ 85713  
Email: [sales@sonotronics.com](mailto:sales@sonotronics.com)  
[www.sonotronics.com](http://www.sonotronics.com)

Updated 6/6/2008

## DH-4 DIRECTIONAL HYDROPHONE

This unit provides the greatest range and precision in locating tags in lakes, rivers, and oceans, and permits rejection of local noise caused by dams or pumping stations in rivers and streams. The DH-4 is the primary hydrophone for both fixed stations and manual tracking.

SENSITIVITY: -84 dBV ref 1 uBar.

BEAM WIDTH: +/-6 degrees at half power points.

SHAFT LENGTH: User supplies mounting shaft. (1 1/4 inch PVC)

OUTPUT: BNC connector on 10 foot coaxial cable (other lengths available).

WEIGHT: 1.5lbs (700g)

LENGTH: 6.5" (16.5cm)

APERATURE: 5.5" diameter (13.5cm)

CABLE: *Replaceable* RG-58 C/U



### DH-4 OPERATION:

Typically the DH-4 is mounted to a staff (such as 1 1/4" PVC pipe) by tightening the nylon mounting screws included with the hydrophone against the outside wall of the staff. If a pipe or other hollow staff is used, a 5/8" hole may be drilled above the hydrophone, allowing the cable to travel up the center pipe providing maximum protection against chafing or tearing of the outer insulation. The top of the staff should be marked so that the direction the hydrophone is being pointed is apparent while the hydrophone is submerged in the water.

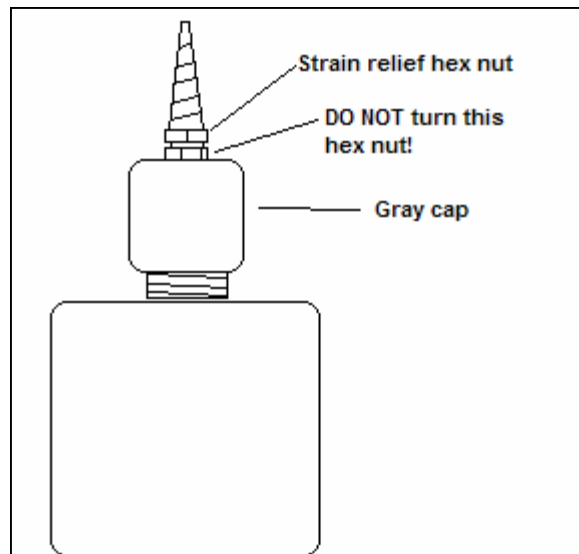
Key to using the DH-4 is its +/- 6° beam width: this provides a very accurate determination of the bearing to targeted pinger. The hydrophone can be slowly rotated on the pole so that the entire 360° field is covered. As the user gets closer to the pinger, the signal in the headphones will increase, and may become difficult to determine a precise direction: reducing using the gain of the receiver will regain some directionality. If precise location <10m is desired, attenuators (Sonotronics accessory, ATN-95) may be used to further reduce incoming signal, enhancing directionality.

## Replacing hydrophone cables:

It is important to follow the correct procedure when replacing a hydrophone cable. The order of the steps matters to ensure a tight seal and avoid damage.

1. Loosen the strain relief. The strain relief is the spring-like portion above the gray cap. There is a small hex nut attached to the spring-like portion which is used to loosen the strain relief. Do not turn the hex nut closest to the gray cap.
2. You may now unscrew the gray cap, which should be removable by hand.
3. Reach into the now exposed hole in the hydrophone, push down on the BNC connector, and turn it counterclockwise. It will release and will then be free of the hydrophone.
4. When reattaching the cable, follow these steps in reverse order. Make sure to use Teflon tape on the threads of the gray cap to ensure a watertight seal. Make sure that both the gray cap and the strain relief are tight (hand tight).

**DO NOT** try to unscrew the gray cap while the strain relief is still tight. This will damage your hydrophone cable.



**CARE OF THE DH-4:**

Care should be taken when coiling the hydrophone cable to loop the cable gently into a loop approximately 1 1/2' in diameter. The cable will have a direction that it will tend towards when looping, and this direction should be followed in order to avoid unnecessary stress on the cable. The cable that comes with the hydrophone is rugged military grade coaxial cable, however the user should be aware that any nick or puncture in the cable will most likely cause corrosion to begin, especially in saline environments. The detachable hydrophone cable connection allows the cable to be detached and replaced. The cable should be replaced immediately if any puncture is suspected before corrosion travels through the cable and enters the hydrophone.



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