HawkEye DT1H Handheld Depth Finder with Temperature Instructions

Contents

HawkEye

HawkEye DT1H Handheld Depth Finder with Temperature

Product Information

Specifications

- **Model:** DT1H
- **Signal Type:** Sonar
- **Diffusion:** Yes

- **Refraction:** Yes
- **Backscatter:** Yes

Product Usage Instructions

1. **Understanding Diffusion**
   Diffusion refers to the spreading out of the sonar signal in multiple directions. This can result in the weakening of the signal strength. The DT1H is designed to account for diffusion and provide accurate readings even in challenging environments.

Dealing with Refraction
Refraction occurs when the sonar signal is bent or deflected as it passes through different materials with varying acoustic properties. This can lead to inaccurate readings or the formation of dash lines on the display. To minimize the impact of refraction, follow these steps:

1. Ensure the DT1H is properly calibrated for the specific material properties of the area you are scanning.
2. Avoid areas with significant variations in material properties, such as abrupt changes in sediment type or underwater structures.
3. If possible, adjust the angle of the sonar beam to reduce refraction effects.

Understanding Backscatter
Backscatter refers to the reflection of acoustic signals from the seabed back to the sonar receiver. This phenomenon can contribute to the formation of dash lines on the display. To minimize backscatter and improve signal clarity, consider the following:

- Choose a sonar frequency that is less susceptible to backscatter in the specific environment you are operating in.
- Optimize the gain settings on the DT1H to filter out excessive backscatter without compromising the detection of important features.

Frequently Asked Questions (FAQ)

Q: Why am I getting dash lines on the display?
A: Dash lines can be a result of signal weakening due to diffusion, refraction, or backscatter. Ensure that you are following the guidelines provided in the user manual to minimize these effects. If the issue persists, contact our customer support for further assistance.

DT1H Getting Dash Lines When In Use

You may be experiencing the diffusion of the sonar signal in many directions resulting in signal weakening through Refraction or Backscatter, primarily due to the material properties of the areas.

- **Backscatter:** The deflection of acoustic signals in a scattering process through an angle greater than 90 degrees. Backscatter is the term commonly used to describe the return of energy from the seabed to the receiver in an active sonar.
- **Refraction:** The change of direction of a sound beam when passing obliquely from one medium into another, where its wave velocity is different. Refraction is a type of ray bending that will affect acoustic returns for proper

sonar imaging. This occurs when sonar pulses encounter thermal zones, silt, salinity changes. Under these conditions the beam can be refracted sharply to the seafloor severely limiting range. If you are experiencing one of these conditions, first verify that the sonar is working by placing your ear up to the sensor and listening for the tick. If you hear the ticking sound, you may have to discontinue use under these conditions.

Documents / Resources

	HawkEye DT1H Handheld Depth Finder with Temperature [pdf] Instructions DT1H Handheld Depth Finder with Temperature, DT1H, Handheld Depth Finder with Temperature, Depth Finder with Temperature, Temperature

References

- User Manual