# EA440SP





# PORTABLE SPLASHPROOF HYDROGRAPHIC ECHO SOUNDER

EA440 is a high performance hydrographic wide band single beam echo sounder. The echo sounder is developed for hydrographic use in shallow to medium depth waters. The EA440SP is a splashproof version of the standard EA440, making it the perfect portable echo sounder for surveying in shallow water depths in small and open boats.

The system consists of a Wide Band Transceiver (WBT) housed in a rugged and splashproof protective suitcase with a computer. The computer can be delivered as a standard laptop or a rugged IP rated laptop or notepad.

#### Easy to operate

For maximum flexibility and ease of operation, the EA440 echo sounders uses Microsoft Windows 7. The EA440 software can be run on any medium range Windows compatible commercial computer.

### System functionality

Wide band frequency sweep (FM) in combination with advanced signal processing gives an exceptionally good signal to noise ratio and range resolution.

# Replay and storage

EA440 offers internal storage of all raw sample data. This includes all external input sensor data for replay purposes. A highly flexible processing regime makes it possible to log high density complex raw data for advanced post-processing. We recommend using an additional external storage device.

## Individual screen presentation

You can set up the display to suit your special needs. You can choose different presentations on the screen for echograms, digital depth and other features. Save user settings for different operations and you can use these at your ease.

#### Wide range of inputs and outputs

EA440 supports a wide range of inputs from third party sensors and you can also export these data and data from EA440 to a wide range of different outputs.

## Flexible channel setup

Available frequencies span from 30 to 500 kHz. A variety of highly efficient transducers is available to suit all your operational needs.

## **Sub-bottom functionality**

Available frequencies from 10 to 30 kHz and limited to 300 metres range.

## High resolution sidescan functionality

120, 200 and 500 kHz are available.

The software is prepared for dual sidescan operation and presentation, even with a normal echo sounder doing acoustic imaging at the same time.

# **FEATURES**

EA440 is a high performance hydrographic wide band single beam echo sounder.

- · Hydrographic-, sidescan- and sub-bottom light applications
- · Easy to install on Windows computers
- · Four channels
- · Frequencies from 30 to 500 kHz
- · Sub-bottom frequencies from 10 to 30 kHz
- · CW and FM pulse forms
- · True raw data logging
- · World class bottom detection



# TECHNICAL SPECIFICATIONS

### Performance specifications

Pulse lengths and maximum resolution

- 500 kHz: CW 32 to 512 µs, FM, accuracy: 0.3 cm
- 200 kHz: CW 64 to 1024 μs, accuracy: 0.6 cm
- 38 kHz: CW 256 to 4096 µs, accuracy: 2.4 cm
- 15 kHz: CW 512 to 8192 μs, accuracy: 4.9 cm
- 10 kHz: CW: 1 to 16 ms, accuracy: 9.8 cm

#### Range

- Display range: 1 to 12,500 m
- · Transducer range: 10 to 500 kHz
- 10 to 30 kHz sub-bottom range 300 m

## Ping rate

· Maximum 40 per second

## Sound speed

- Manual (1400 to 1700 m/s)
- · Calculated from temperature and salinity
- · Calculated from temperature sensor and salinity
- · Read from sound speed probe

#### Interfaces

- · Transceiver: Ethernet communication
- Ethernet to ship's network
- Sensors: GPS, gyro, motion, speed, temperature, and sound speed
- Remote control: Remote stop/start logging available on serial line or network

### User interface

- Main control: Mouse, trackball or touch screen on a comprehensive menu system
- Menu languages: English, German, French, Icelandic, Norwegian, Spanish

Supported datagram formats for depth output: DBS, DBT, DPT, Simrad, Atlas and Hymas

#### Export file formats:

Raw data, xtf, SEG-Y, xyz, echogram and EA400 formats

### Weight and outline dimensions

- Width: 488 mm
- Height: 190 mm
- Depth: 386 mm
- · Weight: Approximately 11 kg

## **Power specifications**

· Voltage requirement: 12 to 15 VDC, 5A

A suitable power supply for 220/110 VAC operation is provided with the delivery.

### **Environmental specifications**

- Operational temperature: 0 to 50 °C
- Storage temperature: -40 to 70 °C
- Relative humidity: 5 to 95% relative non-condensing
- IP56

Specifications subject to change without any further notice.