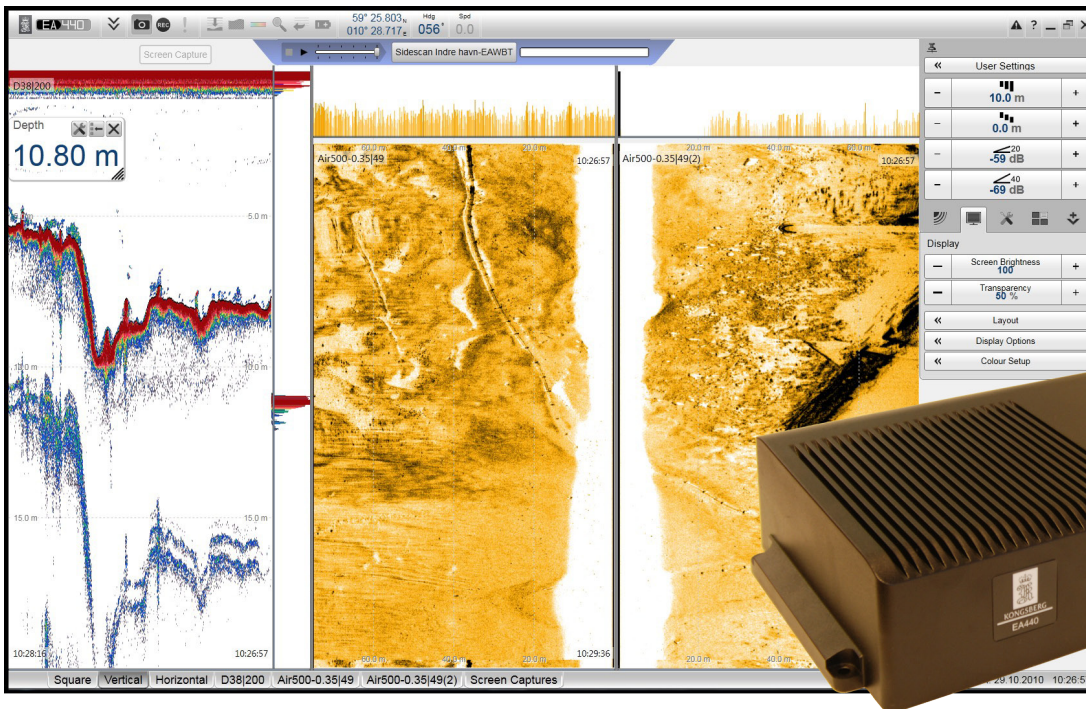


EA440



KONGSBERG



NEW GENERATION WIDE BAND 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. It supports portable and hull mounted sidescan and sub-bottom light for shallow waters.

Easy to operate

The EA440 has been designed for the professional hydrography community. For maximum flexibility and ease of operation, the EA440 echo sounders uses the Microsoft Windows® 7 operating system. The EA440 software can be run on any 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. With previous CW echo sounders range had to be sacrificed for resolution.

Replay and storage

The 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.

Individual screen presentation

You can set up the display picture to suit your special needs. You can choose different windows on the screen for echogram, A-scope and digital depth. You can even control all the functions in the EA440 with just a click on the screen. These functions include comprehensive context sensitive on-line help. Save your

favourite settings and call them back when you need them.

Highly flexible channel set up

Up to eight high-power transceivers can operate simultaneously from the EA440. For improved performance, they are installed close to the transducers and linked to the combined display and processor with a single data cable. Available frequencies span from 30 to 500 kHz. Low frequency transducer (typically 10 and 15 kHz) may be supplied for sub-bottom light but with a maximum range of 300 m. A variety of highly efficient transducers is available to suit all your operational needs from extreme shallow to 3000 m water depths.

Hydrographic depths, sidescan and/or sub-bottom light

With the EA440, you can cover several applications with a single system. Instead of running separate systems with synchronization issues the highly flexible EA440 can cover different applications simultaneously. Individual transducer channels may also be reprogrammed to use different frequency band.

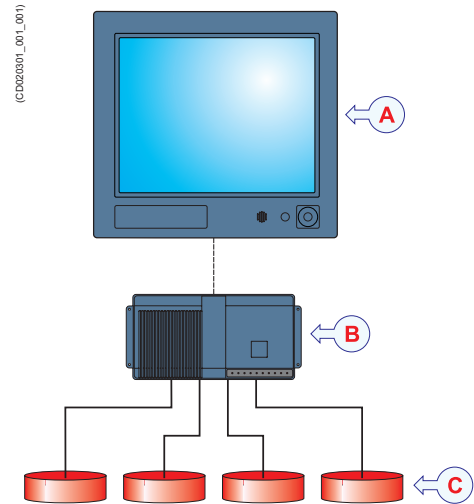
System software

The EA440 will continuously be updated on a regular basis. New software releases will be available to download free of charge from the Kongsberg web.

KEY FEATURES

The EA440 is a high precision hydrographic echo sounder.

- Multiple applications Hydrographic, sidescan and sub-bottom light
- Up to eight simultaneous channels
- Frequencies from 30 kHz to 500 kHz
- Sub-bottom 10 kHz and 15 kHz
- CW/FM pulse forms
- Easy to install on Windows 7 computers
- Roll, pitch and heave compensation
- True raw data logging
- World class bottom detection



- A. Hydrographic Operator Station (panel computer with integrated display)
B. Transceiver Unit (Wide Band Transceiver (WBT))
C. Transducer

TECHNICAL SPECIFICATIONS

Performance specifications

Pulse lengths and maximum resolution

- 500 kHz: CW 32 - 512 μ s, FM, resolution: 0.6 cm
- 200 kHz: CW 64 - 1024 μ s, resolution: 1.2 cm
- 38 kHz: CW 256 - 4096 μ s, resolution: 4.8 cm
- 18 kHz: CW 512 - 8192 μ s, resolution: 9.8 cm
- 12 kHz: CW: 1 - 16 ms, resolution: 19.6 cm

Range

- Display range: 1 to 12,500 meter
- Transducer range: 30 to 500 kHz and sub-bottom

Ping rate

- Maximum 20 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
- Optional interfaces:
 - Ethernet to ships' network
 - Sensors: GPS, gyro, motion, speed, temperature and sound speed
- Export file formats: See Interface specifications
- Depth output: See Interface specifications
- Remote control: Remote start/stop logging available on serial or network

User interface

- Operating system: Microsoft® Windows® 7

Specifications subject to change without any further notice.

- Main control: Mouse or track ball on a comprehensive menu system
- Menu languages: English, 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 format

Weights and outline dimensions

Transceiver Unit:

- Type: Wide Band Transceiver (WBT)
- Outline dimensions
 - Depth: 213 mm
 - Width: 438 mm
 - Height: 84 mm
- Weight: Approximately 5 kg

Power specifications

Transceiver Unit:

- Type: Wide Band Transceiver (WBT)
 - Voltage requirement: 12 to 15 Vdc, 5A
- A suitable power supply for 230/115 Vac operation is provided with the EA440 delivery.

Environmental specifications

Transceiver Unit:

- Type: Wide Band Transceiver (WBT)
- Operational temperature: 0 to +50 degrees Celcius
- Storage temperature: -40 to +70 degrees Celcius
- Relative humidity: 5 to 95% relative non-condensing