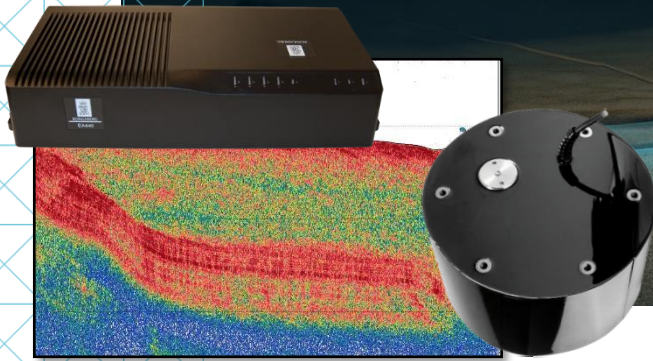


EA440



KONGSBERG



APPLICATION NOTE

EA440

- High performance hydrographic depths from 30 kHz to 500 kHz
- Sidescan sonar application from 100 kHz to 500 kHz
- Sub-bottom profiler application from 10 kHz to 30 kHz
- Available with high power output from 30 kHz to 50 kHz
- Extensive range of transducer interfaces, both Kongsberg transducers and third-party transducers
- Splash proof all-in-one hardware setup available

- CW and FM pulse forms
- True raw data logging
- World class bottom detection

- New map display to track your coverage

EA440 sub-bottom profiling

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 also supports portable and hull mounted sub-bottom profiling functionality for shallow waters.

EA440 for sub-bottom profiling

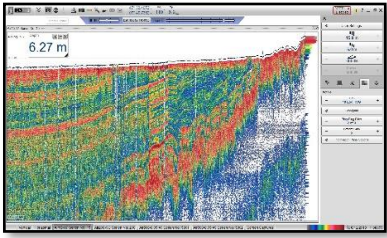
Sub-bottom profiling is used to image the sediment layers below the sea bottom.

The EA sub-bottom is an inexpensive and portable solution well suited for imaging the top layers, e.g. for port or river surveys.

Low frequency sound signals will penetrate the seabed and provide reflections from layers below the seabed. For EA440 a 15 kHz transducer is normally used, although for EA440 limited to max 300m water depths.

The signals penetration, and thus how deep into the seabed that sediment layers can be seen, is limited by source level and beam width. For EA440 max penetration of around 10-15m is expected, which makes this solution a well-suited solution for port surveys, river surveys, and for applications where only the top-level sediments are of interest.

Different bottom conditions (rock, sand, mud etc.) will result in different bottom echoes in the EA440 echograms. The EA440 software allows for adjusting the bottom gain, and the presentation is changed depending on the bottom type. The sub-bottom data will be saved in the raw data files for further adjustments. The EA440 software also provides SEGY output of the raw data, which is the standardized exchange format for sub-bottom data that can be used by geologists for further interpretation and mapping of the sub-bottom conditions.



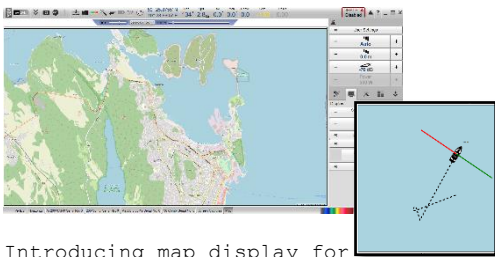
EA440 15 kHz echogram view



The 15-17 15 kHz transducer used for sub-bottom profiler application
 KM order no: KSV-223313
 Beam width: 17 deg
 Weight with 15 m cable: 28 kg
 Diameter: 368 mm

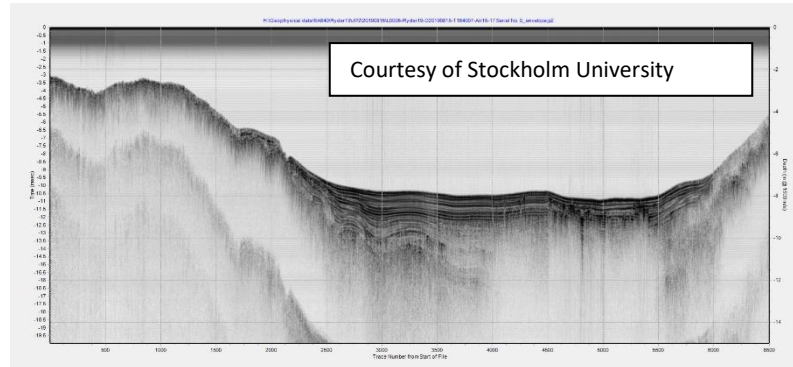
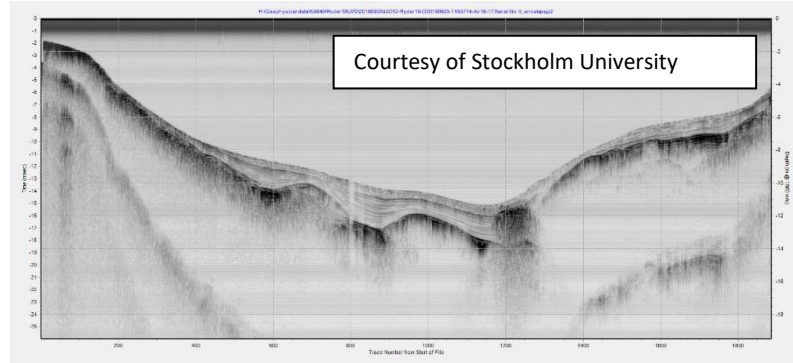


EA440 Wideband transceiver (WBT)



Introducing map display for tracking of your coverage (for WBT users only)

EA sub-bottom data examples



EA440 system configuration for sub-bottom profiling

The EA440 sub-bottom functionality occupies 1 of 4 WBT standard channels, and the system allows for combined application with depths and/or sidescan sonar



The EA440 software

- The EA440 software is an intuitive and user-friendly software. You can set up the display to suit your special needs. You can choose different presentations on the screen for echograms, **map view**, digital depth and other features. Save user settings for different operations and you can use these at your ease.
- EA440 offers internal storage of all raw sample data. This includes all external input sensor data for replay purposes.

