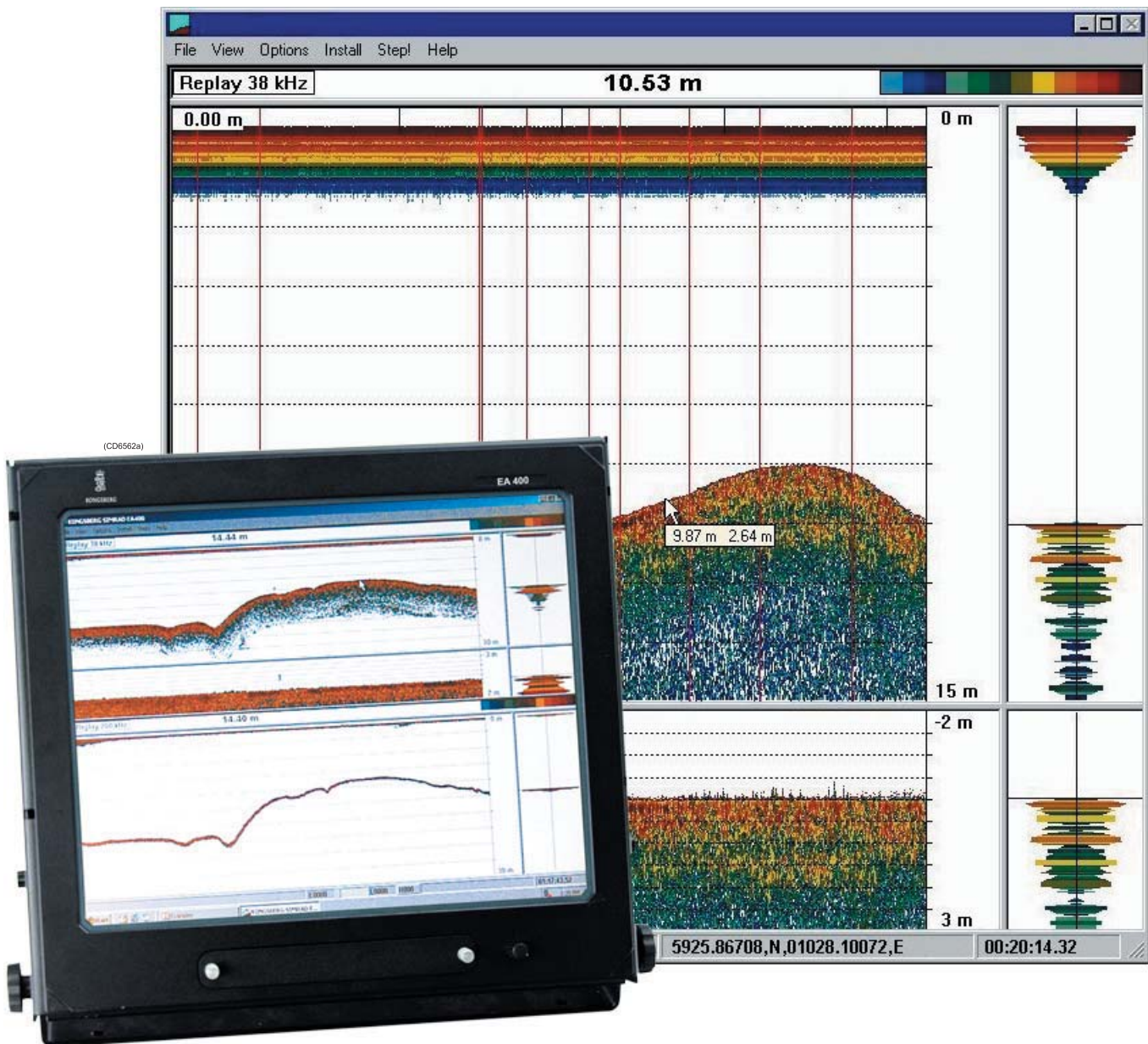




KONGSBERG

EA 400

Precision hydrographic echo sounding at your fingertips...



Easy to operate

For maximum flexibility and ease of operation, the EA 400 Series hydrographic single beam echo sounders use Windows XP® based software. You can operate the complete echo sounder using the ergonomically designed trackball supplied.

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, bottom expansion, A-scope and digital depth. You can even control all the functions in the EA 400 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.

Need multiple channels?

Up to four high-power transceivers can operate simultaneously from the EA 400. 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 38 to 710 kHz. A variety of highly efficient transducers is available to suit all your operational needs from extreme shallow to 3000 m water depths.

Replay and storage

Internal storage of all sample data, including all input signals for replay use or exporting. The replay file can be divided into “n” new files by using the replay dialogbox.

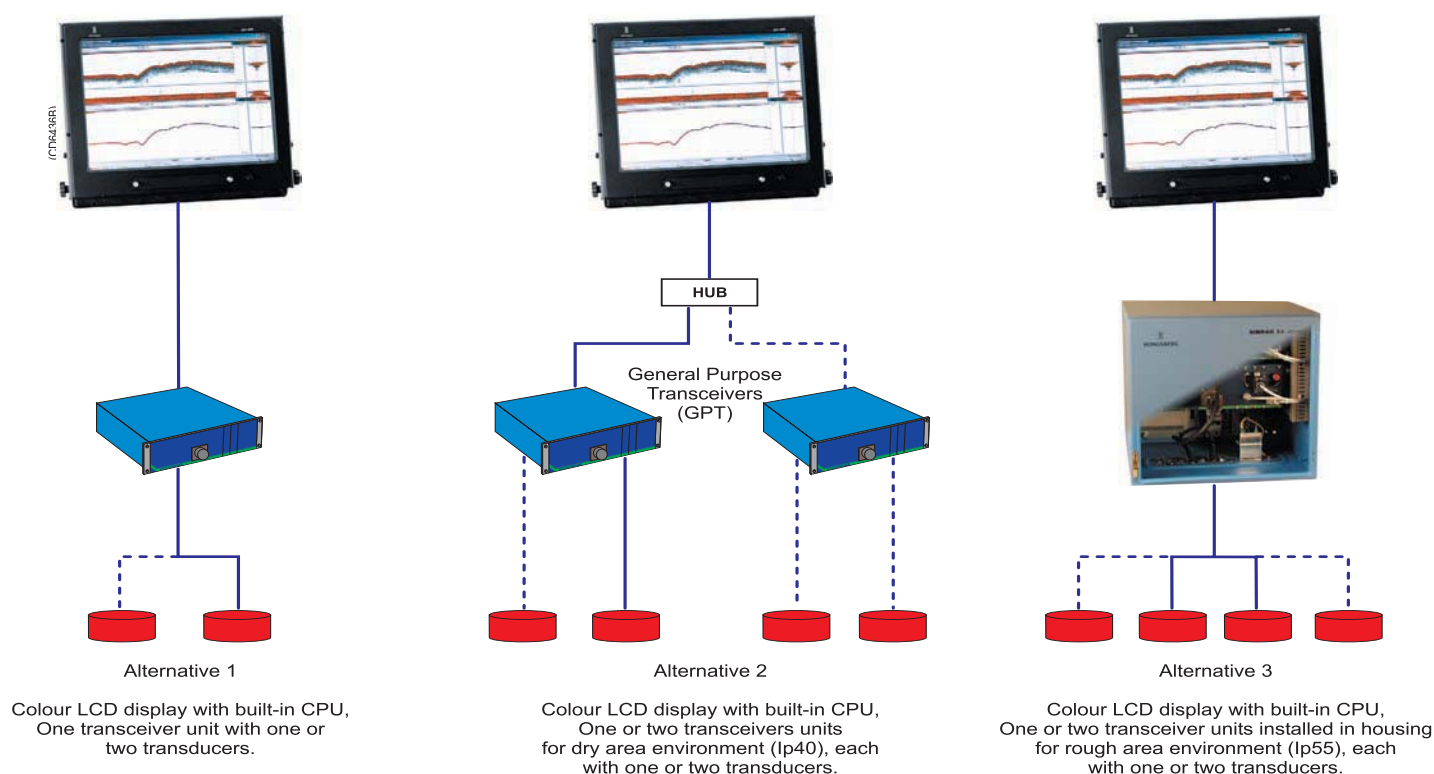
Easy to install

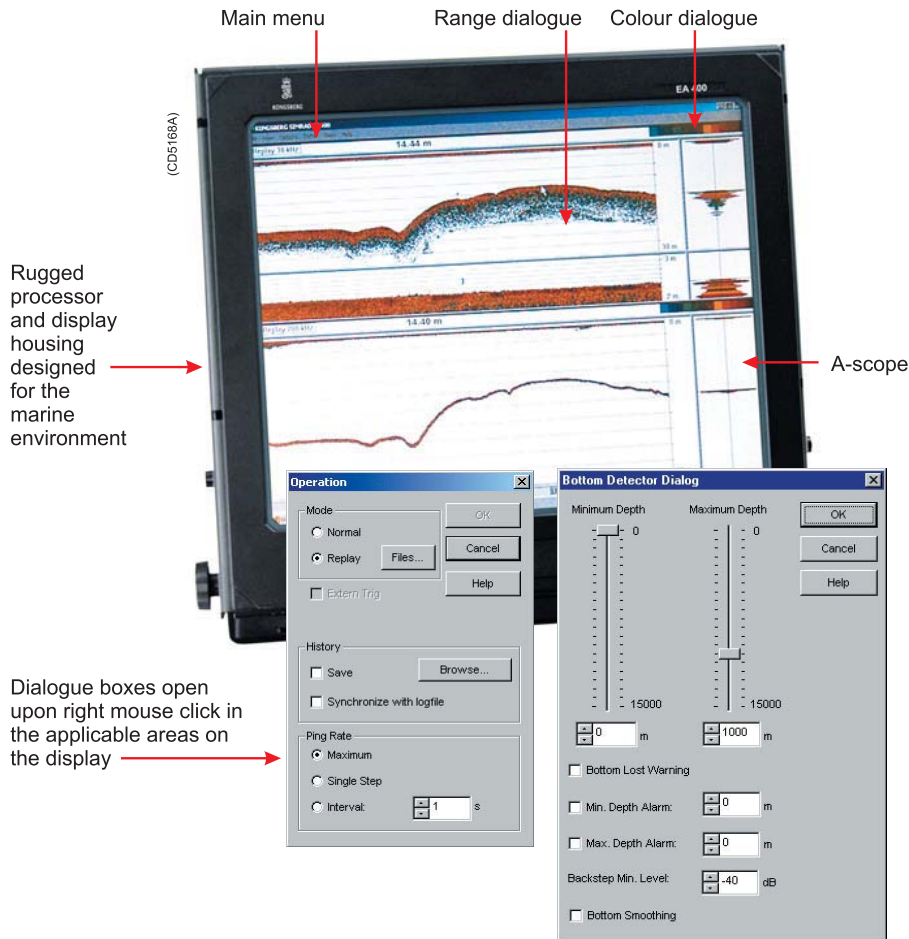
With the EA 400, you only need a standard data cable between the transceiver unit(s) and the combined display and processor. The transceiver(s) can either be located close to the transducers, or in the vicinity of the display. The powerful processing tasks required does not take up any physical space any longer, as the former Processor Unit has been fully integrated with the LCD unit.

System software

The EA 400 has a USB port in front where a read/write CD-ROM or DVD can be connected. System software is supplied on a CD ready for installation, as are subsequent software releases. Data storage may also be performed via this interface.

Typical system configuration



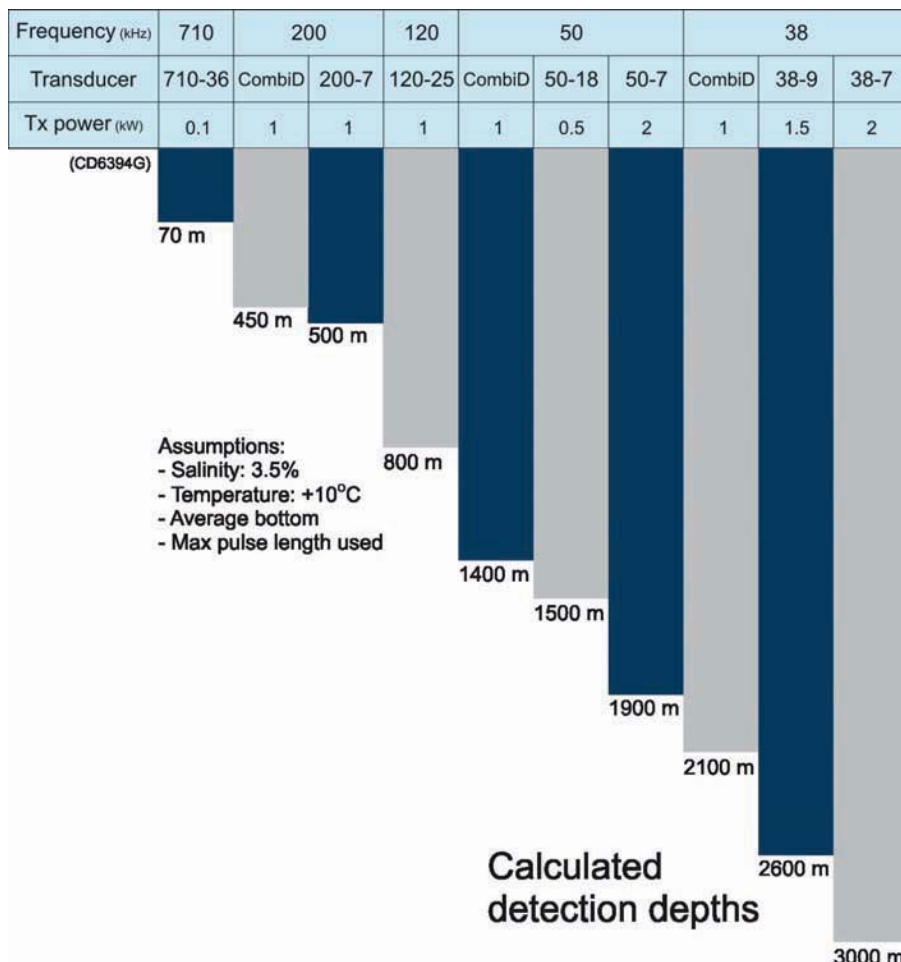


Unique features

- Windows XP® operation
- Up to four frequencies displayed
- Independent frequency operation, simultaneous transmission
- Built-in bitmap data storage: depth, position, heave and annotations
- Raw data storage with replay
- xyz, ASCII format for processing
- Memory of favourite settings
- A-scope
- 160 dB dynamic range
- Non-saturating receiver
- Simultaneous use of electronic chart or post-processing software (HyPack, Hydro, QUINSy)
- High resolution sidescan option
- Colour printer output
- In/out data are time stamped to 1/100 seconds

The digital technology of the EA 400 makes on-line printing of echograms obsolete. Depth soundings with positioning data and echograms can be stored internally on the echo sounder's hard disk, and archived on CD ROM. Stored echograms and depth sounding profiles can easily be retrieved at any time for display and verification purposes.

If required, any standard colour or black and white Windows compatible laser or inkjet printer can be connected to the combined display and processor unit.



System

Display / computer HOS 152 (integrated unit):

- Size: 15-inch LCD

- Resolution: 1024 x 768 pixels

Operating system: Windows XP®

Storage capacity:

- Minimum hard disk size: 30 Gb

- CD ROM / DVD: External (USB)

Language: English (Other languages on request)

Supply voltage: 115 / 230 Vac

Display range:

- Minimum: 5 m

- Maximum: 15,000 m

- Modes: Manual, Auto start, Auto range

Display phasing:

- Modes: Manual or Auto

- Maximum range: 10,000 m

Display bottom expansion:

- Minimum: 5 m

- Maximum: 5,000 m

A-scope: Screen or expanded area

Echogram recording: unlimited (disc space)

Colour printer: Optional

Variable sound velocity: 1,400 to 1,700 m/sec

Ping rate: Max 20 pr. second

Resolution: 1 cm

Accuracy (Assuming correct sound velocity, transducer depth and shortest pulse length):

- 710 kHz and 200 kHz: 1 cm

- 120 kHz: 2 cm

- 38 kHz: 5 cm

Interfaces

4xRS232 serial ports, baud rate 1200 - 115200

Data output (NMEA 0183) serial line or Ethernet:

• Simrad and Atlas

• \$--DBS, \$--DBT and \$--DBT NMEA formats

• Atlas depth datagram

• Echogram datagram

Data input (NMEA 0183) serial line or Ethernet:

• GPS (DGPS - pos, date, time)

• Any format on serial line (ASCII)

• Motion sensor data (serial, network/analog)

• Sound velocity profile data

Annotations:

• Event marker

• Text annotation (internal/external)

Connection

• 2xNetwork connection for exporting of data and connection to EA GPT

• Printer connection

• USB connection(4x)

Data storage

• Raw data

• History data

• Output data

• Echogram data

• xyz data

• Text file

General Purpose Transceiver (GPT)

Operating frequencies: 1 or 2

Single beam frequencies: 33, 38, 50, 70, 120, 200, 210 or 710 kHz

Power output, standard transducers:

• 38 to 50 kHz: Variable up to 2 kW

• 70 to 200 kHz: Variable up to 1 kW

- 710 kHz: 100 W

Power output, optional transducers:

- 33 kHz: Maximum 500 W

- 210 kHz: Maximum 150 W

Supply voltage: 95 to 265 Vac, or 12 Vdc, 50 to 100 W

Physical dimensions

General Purpose Transceiver:

• Height: 112 mm

• Depth: 246 mm

• Width: 284 mm

• Weight (approximately): 5 kg

HOS 192 unit:

• Height: 410 mm

• Depth: 134 mm

• Width: 450 mm

• Weight (approximately): 12 kg

IP55 cabinet:

• Weight with 1 GPT (approximately): 25 kg

• Weight with 2 GPTs (approximately): 30 kg

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