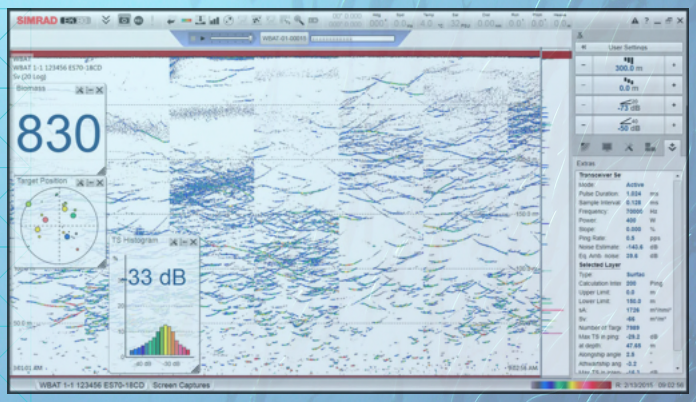
WBAT



KONGSBERG

Simrad WBAT

WIDEBAND AUTONOMOUS TRANSCEIVER

KEY FEATURES

- Autonomous all-in-one echo sounder
- Advanced mission control
- Internal battery and data storage
- More than 1 year deployment
- Depth rating: There is a 1500 m version and a 6000 m version .
- Freqencies 30-500 kHz
- Connects two split-beam or four single-beam transducers
- Continuous Wave (CW) and LFM (Linear Frequency Modulation) pulse forms
- Standardized Simrad EK80 raw data format
- Wide range of transducers available

APPLICATIONS

- Ocean observatories
- Fish migration studies
- Long-term biological studies
- Improved fish stock assessment

WBAT is a cutting edge subsea innovation rising from a need to monitor marine life and detect gas leaks at virtually any corner of the world.

The WBAT is at the forefront of monitoring marine life. The instrument is available in two versions. The standard version is enclosed in an aluminimum housing and depth range is 1500m. The extended version is enclosed in a steel housing and depth range is 6000 m.

When deployed, the WBAT is self-contained and will record data with the acoustic settings at the given time intervals. A built-in USB stick is used for storing recorded data.

Between data recording events the WBAT will be in “deep sleep”, conserving energy and extending battery life.

Order information

To order the WBAT in any of the two available versions, contact your local dealer. If you do not have a regular dealer, a list of all our distributors and dealers can be found on our website. Your dealer will also be able to help you with a detailed quotation including price and delivery information.

Transceiver

- Deliverables:
  398129 WBAT 1500 m
  453683 WBAT 6000 m

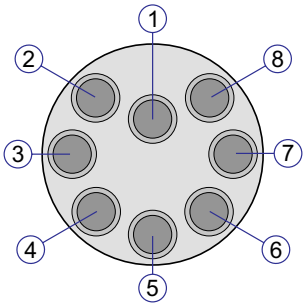
Included in the delivery:

- Transceiver
- Interface cable
- Documents

SIMRAD
By KONGSBERG

Transducer 8-pin

Connector type: MacArtney female MCBH8F

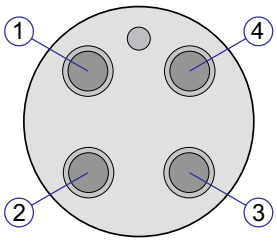


Face view of bulkhead connector

1 Channel 1+ (Black)
2 Channel 1– (White)
3 Channel 2+ (Red)
4 Channel 2– (Green)
5 Channel 3+ (Orange)
6 Channel 3– (Blue)
7* Channel 4+ (White/Black)
8* Channel 4– (Red/Black)

Transducer 4-pin

Connector type: MacArtney female MCBH4F



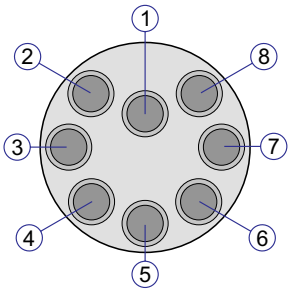
Face view of bulkhead connector

1* Channel 4+ (Black)
2* Channel 4– (White)
3 N/C (Red)
4 N/C (Green)

*Pins 7 and 8 on the 8-pin transducer connector are connected in parallel with pins 1 and 2 on the 4-pin transducer connector.

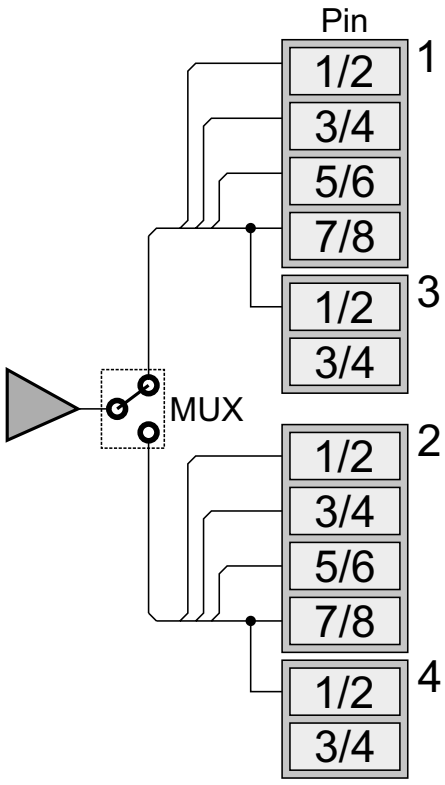
Serial RS 422

Connector type: MacArtney female MCBH8F



Face view of bulkhead connector

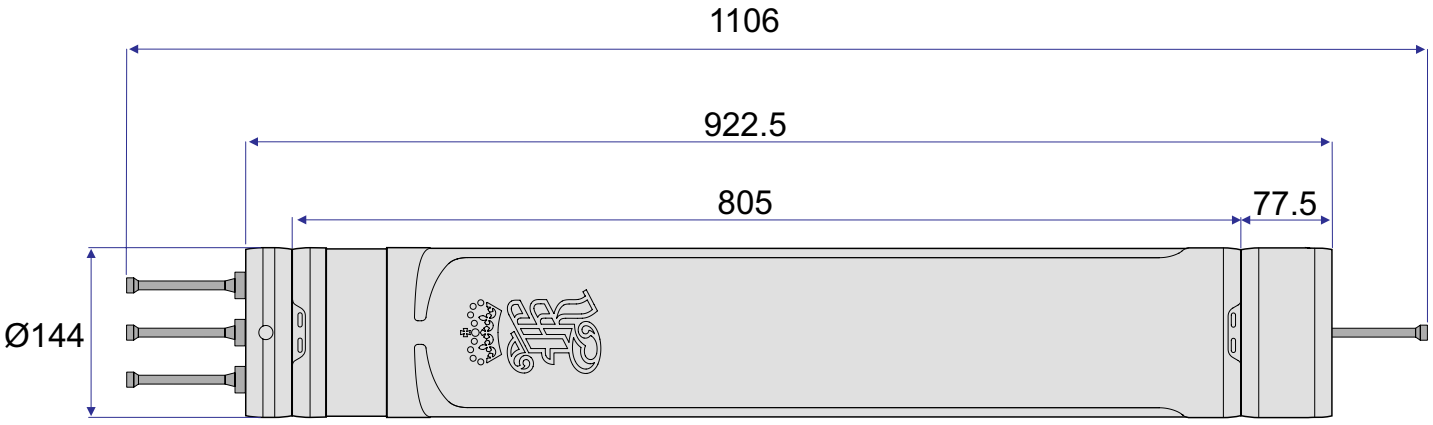
1 Transceiver RxD + (Black)
2 Transceiver RxD - (White)
3 Transceiver RxD - (Red)
4 Transceiver RxD + (Green)
5 Ground (Orange)
6 N/C (Blue)
7 N/C (White/Black)
8 N/C (Red/Black)

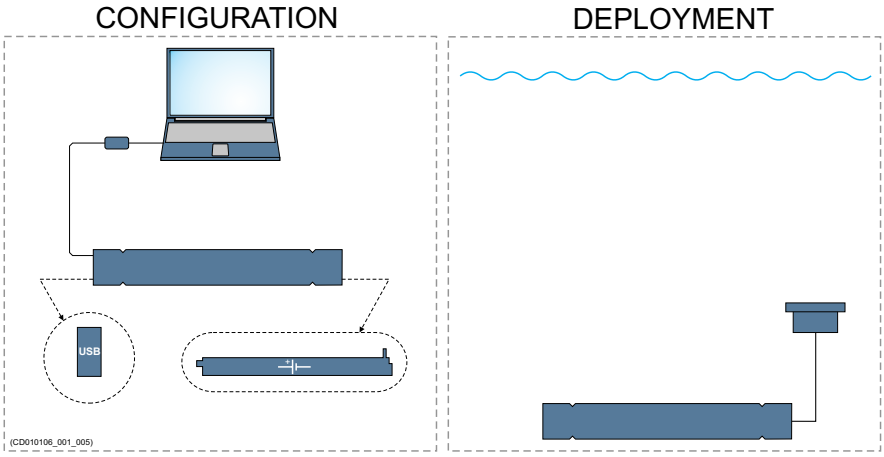


Transducers and multiplexing

The transceiver has four transducer connectors. There are two 8-pin connectors (identified as 1 and 2) and two 4-pin connectors (3 and 4).

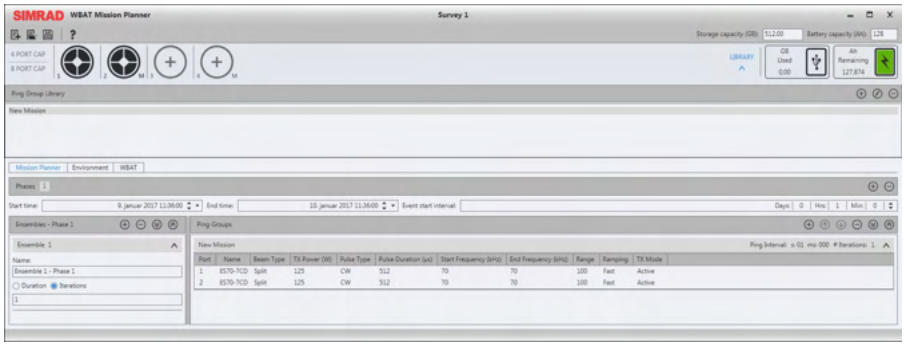
- Connector 1 is the main connector. It is always in use.
- Connector 2 is used for multiplexing with connector 1.
- Connector 3 is used for adding an extra single-beam transducer when a 3-sector split-beam transducer is connected to connector 1
- Connector 4 is used for multiplexing with connector 3.





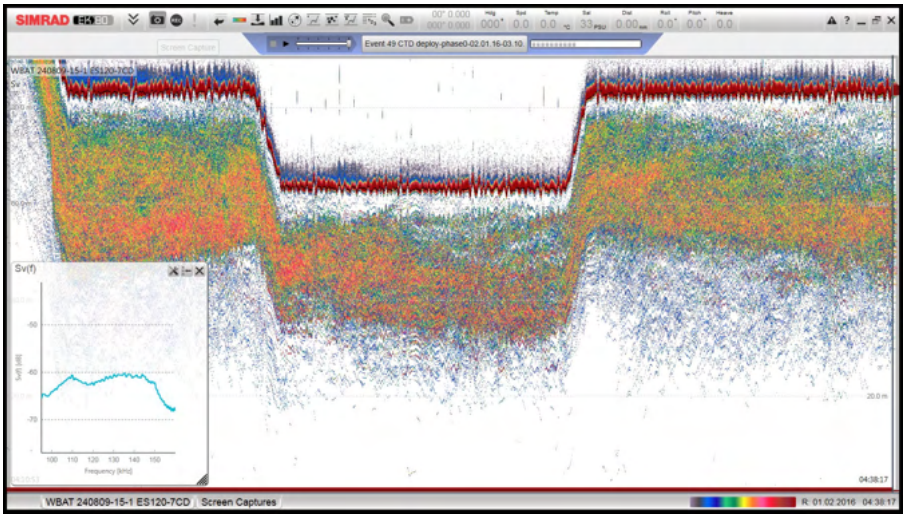
Regardless if the data is collected from the ship sounders, a profiling probe, or from other platforms; the echo sounders use the same data format.

A WBAT system consists of an autonomous transceiver, one or more transducers and Mission Plan software.



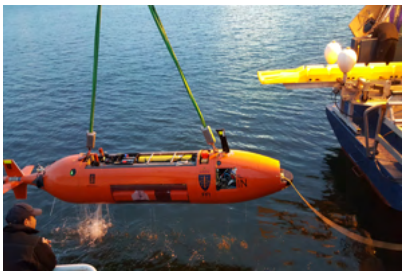
An advanced mission control software gives the operator a full spectre of parameters to chose from. Once uploaded into the transceiver the unit will record the data based on the acoustic settings.

Mission Planner user interface



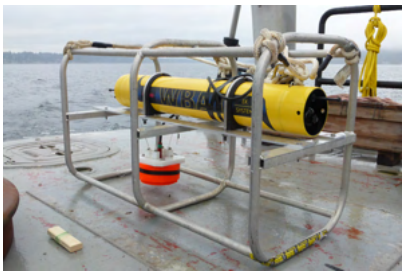
The data from the system can be viewed and calibrated with the EK80 software as the RAW data format used by these products are identical.

EK80 echogram playback of krill from Antarctica. (Screen capture kindly provided by the British Antartic Survey, UK



WBAT mounted in HUGIN Oslofjord, Norway

WBAT testing onboard NOAA/Saildrone platform San Fransisco



WBAT calibration on Lake Washington Seattle, WA

TECHNICAL SPECIFICATIONS

Performance	Frequency range: 30-500 kHz Number of channels: 4 Pulse forms;CW + FM (Linear up-sweep), Active and Passive Pulse duration: 128-2048 µs Multiplexing: Built-in multiplexer for each channel DC voltage: 14 V (internal battery) Battery capacity: 128 Ah Battery type: Primary Lithium Current consumption Active: 350 mA, Sleep: 1.5 mA Control: Pre-planned mission External interface: RS-422 Maximum transmit power: 1000 W @55Ω Transducer options: Single beam/Split beam
Weight Outline dimensions	Outline dimensions: Diameter: 144 mm Length: 923 mm 1500 m version: Weight in air (ex. battery): 18 kg Weight in water (incl. battery) 12 kg 6000 m version: Weight in air: (ex. battery) 54 kg Weight in water (incl. battery) 48 kg
Environment	Operational temperature -5°C to 40°C Storage temperature -20°C to 50°C
Depth rating	Maximum depth: 1500 m version 6000 m version

The WBAT Transceiver comprises a rugged cylinder providing all necessary transmitter and receiver electronics, a battery and the necessary interface and control circuitry. Here it is assembled with transducer mount..

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