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## WIDEBAND AUTONOMOUS TRANSCEIVER (WBAT)

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The EK Wideband Autonomous Transceiver is made for applications where it is necessary to gather scientific data from other platforms than traditional research vessels. Typically this involve long term monitoring or monitoring in places where it would not be practical, or in some cases not even possible, to use a research vessel. As the WBAT has a standard depth rating of 1000 meter, it can also be used to profile layers in depths where a ship carried system cannot reach.

An autonomous EK system consists of an autonomous transceiver, one or more transducers, and a mission planner. The data from the system can also be viewed and calibrated with the EK80 SW as the RAW data format are the same.

The WBAT uses the same technology as the WBT wideband transceiver, but has been redesigned to be more compact and energy efficient. The four independent channels can be used as multiple single beam channels, or working together with a split beam transducer. With the built-in multiplexer you can also use two split beam transducers together using sequential pinging.

The advantage is that with the WBAT you collect data in a format, and of a quality, that you already know from the EK80. Regardless if the data is collected from the ship sounders, a profiling probe, or from other platforms the sounders use the same data format. This means that the data coming from different sources can be easily integrated. As with the EK80, the Autonomous EK is capable of split beam, which means that it can be calibrated to the same standards and with the same techniques as the EK80.

The pressure rated housing itself, along with the connections and the internal battery are already proven Kongsberg Maritime technology. The Kongsberg transponders are used globally in the oil and offshore industry, with the highest requirements for quality and safety found anywhere in the marine business. This way we have learnt from the experience of thousands of users, resulting in reliable sounders that the customers can count on.



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## NEW SMALLER TRANSDUCERS

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The WBAT can be connected to any transducer within the band between 35 and 500 kHz, but most commonly depth rated transducers will be used. A range of 7°, 1500 meter depth rated Simrad transducers are available within this band. However, we continue to expand the range of depth rated

transducers towards a series of new, more compact transducers. The transducer in the picture is developed for the WBAT, the 18° opening angle makes the entire construction smaller and lighter.

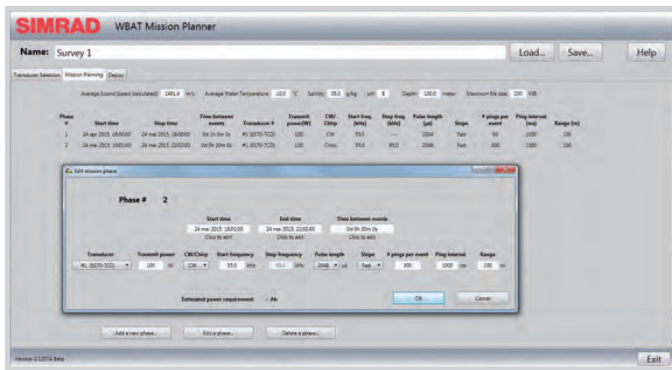
# PLAN YOUR MISSION

The WBAT Mission Planner is, as the name implies, a new Simrad software used to plan any survey from deployment to recovery. It can run in any Windows™ based laptop.

All details regarding when the sounder should wake up, how long it should transmit and when it should fall to sleep again is set before deployment. In the Mission Planner the user can set as many phases as the survey requires. This could be helpful if you

want the transmission scheme to change throughout the deployment. You might want to do CW most of the time, while doing chirp in shorter periods to look at frequency response of targets.

After carefully planning the deployment, all settings are uploaded to the WBAT. The unit is then ready to be deployed, and the only remaining task is to click on the Activate mission button.



The Mission Planner's flexible and intuitive use, makes the user feel confident that the result will meet his expectations.

# SIMRAD EK 15

The EK15 has been designed for a variety of applications to be a small, affordable and rugged echo sounder. The system is built around a compact narrowband transceiver and comes with a small 28° transducer as a standard. Up to 15 units can be used simultaneously in the SW, and in applications where very high dynamic range, split beam and wideband is not critical, the EK15 might be a cost effective choice.

- EK15 main features:
- Single frequency (200 kHz), single beam
  - Low power consumption
  - Small, rugged and splash proof
  - Raw data storage and Ethernet communication
  - Third party post-processing SW support
  - Pulse duration 80 to 1240 μs, typical range 0,1-200 meter

