Welcome to the February/March edition of SKIPPER Newsletter.

Sales

Echo Sounder, Transducer and NMEA tester (ETT985-SASW):

The SKIPPER ETT985 is a combined Echo Sounder simulator, Transducer tester and NMEA tester, in a single handheld unit. This tool allows the technician to test both the acoustical functions of the Echo Sounder and Transducers. The ETT985 has a built-in rechargeable battery.

**Simulator:**

The simulator will measure the transmitted pulse and replying with either the same pulse or a user defined pulse. In conjunction with the systems data bulletin an integrity test of the Echo Sounder unit can be performed in minutes.

**Transducer tester:**

This is a tester that measures the characteristics of the transducer, showing the resonance and electrical characteristics of the transducer. Using pre-programmed limits, the user can select a pre-programmed transducer and check with the factory values. A simple pass/fail is given. The tester works for any transducer (directly to transducer, not through circuitry).

**NMEA tester:**

The NMEA tester can monitor NMEA lines, loop back signals from devices and send standard formats for GPS, Gyro, Echo Sounders, Speed Logs etc.

It can also be used as a NMEA RS232 converter or directly to USB with included converter.

**Software:**

SKIPPER service software is available at no cost, giving tools for diagnostics for EML224 sensor, and the ETT985, as well as providing a terminal emulator.

With the optional software activated, the software changes the tester to a lab tool by increasing the functionality of the tester.
Using a serial port, the tester can be connected to the PC based software enabling the user to access extra parameters of the system.

The simulator can directly be controlled and be made to also generate fish signals for fish-finder Echo Sounders. It also allows a serial input function to change the depth and settings of the unit (ideal for bridge simulators).

The transducer tester becomes a full (un-calibrated) impedance analyser showing the full plot of frequency vs. impedance, susceptance, conductance, and phase as well as detecting the resonance, anti-resonance and calculating the bandwidth of the Transducer. In addition the limits of any Transducer can be programmed such that the pass/fail integrity test of any compatible Transducer can be checked with the tester alone in the field.

The NMEA tester can be programmed with your own formats and saved in the tester for later use.

ETT985-SA: Tester without pc software functionality
ETT985-SASW: Tester with pc software functionality

For more information regarding the ETT985 please enter our web site here!

SKIPPER is closed the following days due to Easter:

13. April 2017 – Closed
14. April 2017 – Closed
17. April 2017 – Closed

Service/support department:

Please send all requests regarding support and service to support@skipper.no.

Technical
Planned SKIPPER service trainings 2017

The following courses are planned for 2017. Please let us know if you intend to attend any of these courses.

SKIPPER Training program 2017

<table>
<thead>
<tr>
<th>Date</th>
<th>Place</th>
<th>Host company</th>
<th>Duration (days)</th>
<th>Training type</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.-13. April 2017</td>
<td>Singapore</td>
<td>Jason Electronics</td>
<td>4</td>
<td>All products</td>
</tr>
<tr>
<td>17.-20. April 2017</td>
<td>Singapore</td>
<td>Jason Electronics</td>
<td>4</td>
<td>All products</td>
</tr>
<tr>
<td>13-14. July 2017</td>
<td>USA</td>
<td>Mackay Houston</td>
<td>2</td>
<td>All products</td>
</tr>
<tr>
<td>19-21. July 2017</td>
<td>USA</td>
<td>Wärtsila North America, Ft. Lauderdale</td>
<td>3</td>
<td>All products</td>
</tr>
<tr>
<td>24-26. July 2017</td>
<td>USA</td>
<td>Mackay Marine Miramar</td>
<td>3</td>
<td>All products</td>
</tr>
<tr>
<td>September 2017</td>
<td>Europe</td>
<td>TBA</td>
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<td>All products</td>
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<tr>
<td>Nov.-Dec. 2017</td>
<td>China</td>
<td>TBA</td>
<td>4</td>
<td>All products</td>
</tr>
</tbody>
</table>

*The Singapore training is fully booked.

Best regards,

Sigurd H. Paulsen
Managing Director

SKIPPER Electronics AS