Easytrak is a multi-element single transducer that transmits and receives acoustic signals to and from a beacon attached to a dynamic subsea target from which range, bearing and depth information can be determined.

The Easytrak M-USBL has been developed to operate in the military environment as an OEM supply for integration into client systems.

**Key Features**

- Accurate and stable
- Integrated pitch, roll and heading sensors
- Tested to military standards for compatibility
- Easy to integrate
- Approved for military use

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**Technical Specification**

**PHYSICAL SPECIFICATION**

**Dimensions**

- Model 2671 Inboard Electronics Unit: 360.0mm x 240.0mm x 130.0mm
- Model ETM902C Acoustic Sensor: 410.0mm x Ø100.0mm (including connector)
- Model 2675 Interface Box: 161.0mm x 163.00mm x 91.0mm

**Weight**

- Model 2671 Inboard Electronics Unit: 11.0kg including x mounts
- Model ETM902C Acoustic Sensor: 9.5kg in air 7.0kg in water
- Model 2675 Interface Box: 1.6kg
- ETM902C Depth rating: 50m
ACOUSTIC SPECIFICATION

Accuracy is based on the correct speed of sound being entered, no ray bending and an acceptable S/N ratio

- Slant Range accuracy: 0.2m (accuracy dependent on correct speed of sound)
- Position accuracy: 0.6” drms 1.0% of slant range (acoustic accuracy excluding heading errors)
- Frequency Band (MF):
  - Reception: 24 - 30 kHz
  - Transmission: 17 – 26 kHz
- Transmitter power: > 187dB ref. 1µPa at 1m

Frequency Band (LF)

- Reception: 170 – 180 kHz
- Transmission: 170 – 180 kHz
- Transmitter power: > 187dB ref. 1µPa at 1m

ELECTRICAL SPECIFICATION

Power Requirements: 90 to 240VAC 50A

ENVIRONMENTAL SPECIFICATION

Temperature

DEF STAN 00-35 Part 3: Issue 4 including temperature shock test.CL14

- Operation in water: -4°C to +32°C
- Operation in air: -20°C to +44°C
- Storage temperature: -40°C to +70°C

High ambient temperature operation in air is for short duration system checks only, thermal protection is fitted and unit will auto shut down.

Vibration

DEF STAN 00-35 Part 3: Issue 4

M1: General Purpose Vibration Test: Deployed or installed in surface ships: Sine sweep
M1: General Purpose Vibration Test: Deployed or installed in surface ships: Sine dwell

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Region</th>
<th>Amplitude (mm pk)</th>
<th>Frequency (Hz)</th>
<th>Duration (mins)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sine Sweep</td>
<td>Upper deck, Protected Compartment and Hull</td>
<td>0.125</td>
<td>5 to 33</td>
<td>60</td>
</tr>
<tr>
<td>Sine Dwell</td>
<td>All</td>
<td>0.125</td>
<td>14</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.300</td>
<td>23</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.250</td>
<td>33</td>
<td>20</td>
</tr>
</tbody>
</table>
Shock
DEF STAN 00-35 Part 3: Issue 4
NCUE – Classical Shock Pulse

<table>
<thead>
<tr>
<th></th>
<th>Vertical</th>
<th>Lateral</th>
<th>Longitudinal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pulse Shape</td>
<td>Half Sine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pulse Width</td>
<td>10ms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acceleration</td>
<td>45g</td>
<td>25g</td>
<td>25g</td>
</tr>
<tr>
<td>Duration</td>
<td>1 shock in each direction of each orientation (6 in total)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

COMPATIBILITY

EMC
DEF STAN 59-41 Part 3*
*subject to power supply

Magnetic Signature
Acoustic sensor housing is Aluminum Silicon Bronze (NES 834) with a typical relative magnetic permeability of 1.05.

MODEL UC30 DECK CABLE

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable Jacket</td>
<td>Polyurethane jacket</td>
</tr>
<tr>
<td>Construction</td>
<td>7 screened twisted pairs (STP)</td>
</tr>
<tr>
<td>Diameter</td>
<td>10.8mm approx.</td>
</tr>
<tr>
<td>Bend Radius</td>
<td>200mm minimum</td>
</tr>
<tr>
<td>SWL (Safe working load)</td>
<td>25kg, (tested to 50 kg)</td>
</tr>
</tbody>
</table>