

Easytrak M-USBL, Model 2671



Key features

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

Easytrak M-USBL Overview

Easytrak is an Ultra Short Baseline (USBL) underwater positioning and tracking system centred on 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.

M-USBL 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
Tracking Beam Pattern	Hemispherical
Beacon Types	Transponders and responders
Interrogation Rate	Internally set or external key
Compass accuracy	0.5°

Electrical Specification

Power Requirements	90 to 240VAC 50A
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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 MI: General Purpose Vibration Test: Deployed or installed in surface ships: Sine sweep MI: General Purpose Vibration Test: Deployed or installed in surface ships: Sine dwell

Test Type	Region	Amplitude (mm pk)	Frequency (Hz)	Duration (mins)
Sine Sweep	Upper deck, Protected Compartment and Hull	0.125	5 to 33	60
Sine Dwell	All	1.250	14	20
		0.300	23	20
		0.125	33	20

Shock

DEF STAN 00-35 Part 3: Issue 4
M7: Shock Testing for Warship Equipment & Armament Stores: Classical Shock Pulse
NCUE – Classical Shock Pulse

	Region			Amplitude (mm pk)	Frequency (Hz)
Pulse Shape	Half Sine				
Pulse Width	10ms				
Acceleration	45g		25g		25g
Duration	1 shock in each direction of each orientation (6 in total)				

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

Cable Jacket	Polyurethane jacket
Construction	7 screened twisted pairs (STP)
Diameter	10.8mm approx.
Bend Radius	200mm minimum
SWL (Safe working load)	25kg, (tested to 50 kg)