applied acoustics
underwater technology

Applied Acoustic Engineering Ltd
Marine House, Marine Park,
Gapton Hall Road, Great Yarmouth
NR31 0NB, United Kingdom

T +44 (0)1493 440355
E general@appliedacoustics.com
W appliedacoustics.com

Easytrak Vesta USBL, Model EZT-2666

Key features

- aae Sigma 3 digital protocol
- Digital depth telemetry
- 8 target tracking
- Waypoint logging function
- 3% slant range accuracy
- Customisable user interface
- External heading & GNSS input
- USB or network interface
- NMEA outputs

Easytrak Vesta Overview

The Vesta USBL is an entry level tracking system and the most compact version of the applied acoustics' range of USBL systems. Ideally suited to small vehicle operations or diver tracking, Vesta is a cost effective system for monitoring targets of up to 1000m range, and features a number of enhancements that allows the system to punch above its weight.

Applications

- Underwater survey and inspection
- Cable and pipeline route surveys
- Nearshore construction and salvage
- Marine archaeology

Due to continual product improvement specification information may be subject to change without notice.
Easytrak Vesta USBL/March 2024/REV 1
EZT-2666-9001/1

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UKAS MANAGEMENT SYSTEMS
ISO 9001:2015 9940
ISO9001:2015 Certificate No: QEC/12/8208032010

Easytrak Vesta Technical Specification

Easytrak Vesta Console Model EZT-2666

Dimensions	260 x 90 x 250(268) mm. W x H x D
Weight	2.6kg approx
Power requirements	18-24VDC (60W) PSU Input: 90Vac – 230Vac 47-63Hz typically 2A
Connection to transceiver	Rear panel connector for ETM-904C Transducer using DC-20
Temperature	Operating: -10° to +40°C Storage: -20° to +50°C
Front panel indicators	LED indicators for power and system status
Communications	1 x RJ45 Ethernet 1 x USB 2 x Console RS-232
Internal GPS / DGPS	33 tracking/ 66 acquisition-channel GPS receiver <2m 2DRMS, SBAS (WAAS, EGNOS, MSAS.) corrected
Data Output	RS-232 Serial or UDP
Data Format	AAE format V1, Kongsberg $PSIMSSB, Pseudo $GPRMC, Pseudo $GPGGA, NMEA $GPGGA, NMEA $GPVTG, NMEA $GPTLL
Compass Input	NMEA HDT, HDM
GPS / DGPS Input	NMEA; GGA, RMC
Number of Targets	8 Transponder / 1 Responder
Responder Output	Positive 12V pulse 10ms long
Interrogation rate	1 – 10s update, sequential, rate set per target (1s interval)
Channels	Sigma 1 Sigma 3 AAE Tone HPR400

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Accuracy / Performance

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

Position Accuracy	2.0° RMS, 3.0% of slant range. Excluding effects due to GPS error, incorrect VOS, ray bending, AHRS and acceptable S/N ratio
Range resolution	Calculated to 10cm resolution
Frequency band (MF)	18 – 32 kHz
Tracking beam pattern	180°
Transmitter	186dB re 1µPa at 1m
Integrated AHRS:	Heading sensor 0.5° rms Pitch/Roll sensor +/- <1.0° rms
Beacon types	AAE Sigma 1, Sigma 3 Digital Spread Spectrum and AAE Tone channels. HPR400 channels AAE 1000, 1100, 1300A Series Beacons. Digital Depth Transponders
Internal GPS / DGPS	33 tracking/ 66 acquisition-channel GPS receiver <2m 2DRMS, SBAS (WAAS, EGNOS, MSAS.) corrected

Transceiver Cable

System Externally assessed for immunity and emissions; conforms to 89/336/EEC. RoHS compliant

Diameter	12.8 mm nominal
Length	20m
Colour	Yellow – Connectors Supplied
SWL	20 kg (Allows Transceiver to be deployed from cable)

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