

460PX

Portable Sidescan Sonar

Low cost, compact and rugged sidescan sonar for rapid deployment from small boats



The Octopus 460PX is a complete, highly portable sidescan sonar system combining the Octopus 460 Sonar Acquisition System with the CM2 dual frequency sidescan towfish. Housed in a waterproof and rugged Peli-case, the 460PX allows digital side-scan sonar surveys from small open vessels.

Weighing less than 32kg (70lbs) for a complete system, the Octopus 460PX can be air freighted and installed with ease, and is 'one-man' deployable from almost any vessel including small rigid inflatable boats (RIBs). Incorporating our intuitive 6-key user interface, the 460PX can be configured and operated with the minimum of training, yet delivers high quality sonar data to meet the highest demands from both commercial and military users. Designed for use in hostile environments, the 460PX is splash proof in operation, water tight with the lid closed and ruggedly constructed for maximum reliability.

With internal data storage for over 36 hours, operation for up to 8 hours with the optional 24V battery pack, and easy data transfer for off-line analysis tools, the Octopus 460PX is ideal for all types of sidescan survey operation and is especially suited to operations in difficult conditions where space is at a premium. Supplied as standard with a 50m soft tow cable, the 460PX can be installed and deployed in minutes with no additional equipment. An optional compact winch (0.5m²/18in² footprint) allows operation in deeper water with up to 250m of cable. Standard interfaces for GPS, navigation systems and printers ensure that the Octopus 460PX is easily integrated with existing equipment, whilst standard formats help ensure that data can be imported into most mapping and sonar analysis tools including Coda GeoSurvey and Octopus 461 Mosaicing Toolkit.

FEATURES

- Low cost
- Splash proof
- Water-tight rugged Pelican case
- In-built hard disk for data recording
- Standard formats (Coda, XTF, SEGY)
- Simple data download function via network interface
- Simple keypad control
- High resolution waterfall display
- Navigation/USBL/annotation interface
- 24Vdc operation
- Optional battery pack
- Used by the UK Royal Navy

BENEFITS

- Rapid deployment for fast response surveys
- Minimum user training required
- Ideal for small open boat operations
- Operational in wet weather
- Easy download and transfer of data
- Compatible with both digital and analogue towfish
- Data compatibility with other processing systems
- Reduces hardware requirements



Octopus 460PX Sonar Acquisition System

Technical Specification

460P Acquisition System

PHYSICAL

Dimensions	450mm x 450mm x 210mm / 17.7in x 17.7in x 8.3in
Weight	10.5kg / 23lb
Power	24Vdc 40W (90 - 264Vac 47 - 400Hz optional)
Operating Temperature	0° to 50°C / 32°F to 120°F
Storage Temperature	-10° to 70°C / 14°F to 158°F
Display	10.4" TFT with adjustable backlight
Protection	Rugged Pelican case (watertight when closed, splash proof when open)

INPUT CONNECTIONS

RS 232 Inputs	2 x RS 232 channels, logs NMEA 0183 GLL, GGA, RMC and fixes (compatible with standard GPS)
Analogue Inputs	4 independent 16 bit channels, +/- 125mV full scale to +/- 5V full scale, user selectable range, 10m to 1000m (11yd to 1100yd) [for connection to existing analogue towfish]
External Trigger Input	TTL compatible, 50ns minimum pulse width

OUTPUT CONNECTIONS

Analogue Outputs	2 independent 16 bit channels, selectable for pairs of input channels
Internal Trigger Output	TTL compatible, 10ms pulse width
Printer Interface	Centronics i/f to iSys V8.5e, EPC 1086, Ultra 200 + 120 SCSI i/f to Alden
Network Interface	10/100Mbps - offline data transfer

PROCESSES

Waterfall display showing raw or processed data (2 and 4 channel)
 Scope screen for display of four analogue raw or processed channels
 External trigger output 10 metre to 1000 metre (11 yards to 1100 yards) range selectable
 Base gain and channel independent Time Varied Gain (TVG)
 On-line Slant Range Correction and Bottom Tracking

DATA RECORDING

XTF, CODA, MUSE SEG Y data formats
 Integration of positioning data in the above formats
 Internal 2.5" hard disk, 8Gb standard, 16Gb optional

CM2 Dual Frequency Tow Fish

PHYSICAL

Frequency of operation	100kHz, 325kHz or 780kHz (single or dual frequency towfish variants available)
Beam width	Horizontal: (-to-3dB): 0.3° HF, 0.9° LF Vertical: 70° HF, 50° LF (asymmetric, adjustable beam angle)
Weight in air	18kg / 40lb
Weight in water	10kg / 22lb
Depth rating (standard)	500m / 547yards (3000m / 3280yards option)
Tow speed	2-6 knots - operational (12 knots max)
Tow Cable	3.2 mm / 0.125" single core steel armoured cable to 5000m + / 5470yards+ or up to 100m / 109yards Kevlar reinforced soft tow cable
Additional features	Impact safety link

TECHNICAL

Transmitter source level	208 dB re 1µPascal at 1 metre
Transmitter pulse length	Optimised to range
Gain Control	Automatic Range Adaptive Gain linked to integral bottom tracking with manual user over-ride
Input dynamic range	96 dB (16 bit)
Communication	High speed digital data link
Additional features	Built-in altimeter

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