HydroBat

Quick Reference Guide*

HydroBat Multibeam Sonar System

The expedition-ready HydroBat compact multibeam sonar system for near-shore surveys.

- Depth performance: 100m
- Frequency: 160kHz
- Ping rate: > 20Hz (range dependent)
- Range: From 1 to 200m
- Power requirements: 100-230VAC, 50/60Hz, 500W max.
- Operating temperature wet end: +1°to +40°
- Operating temperature dry end: -15° to +45°

Transducer

Transducer 160kHz frequency	
Height	98mm ±1mm
Width	168mm ±1mm
Depth	330mm ±1mm
Weight in air	18kg ±0.5kg (incl. cable)

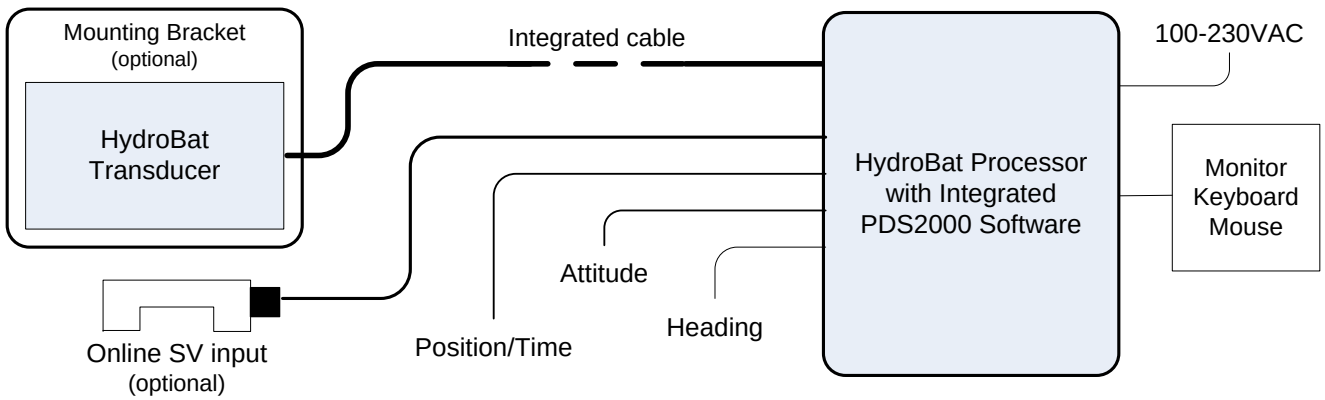
10m Standard Integrated Cable

Transducer to Processor	
Bend radius	350mm (minimum)

Other Processor I/O

- Local sound velocity input (serial)
- Position/Time input (serial/PPS)
- Attitude input (serial)
- Heading input (serial)

System Block Diagram – Basic



* This quick reference guide is not intended as a substitute for the Operator's Manual.

HydroBat

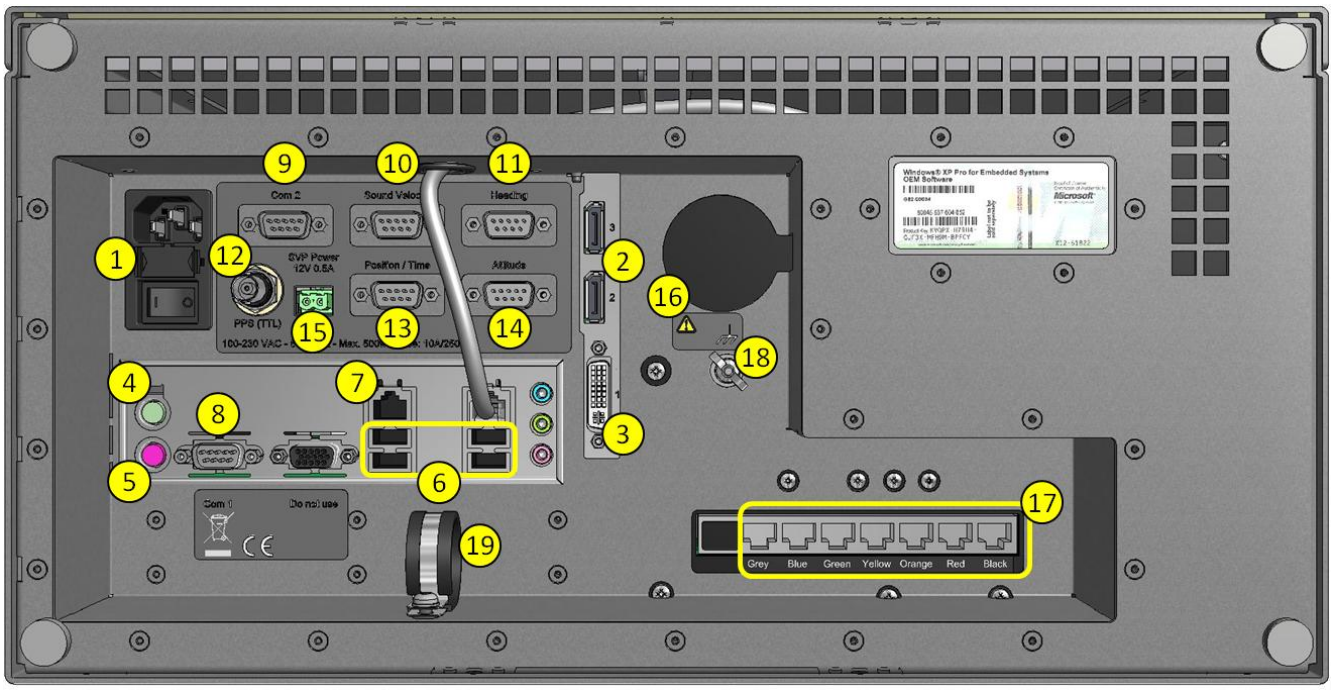
Quick Reference Guide*

HydroBat Processor

Sonar processor and interface functions combined into one processor unit:

Sonar Processor	
Height	221.5mm ±0.7mm
Width	478.0mm ±0.7mm
Depth	610.0mm ±0.7mm
Weight	24.6kg ±1.0kg

Processor Rear Panel Connections



1) Power input and switch	8) Com1	15) SVP power connection
2) Monitor output (2 display ports)	9) Com2	16) Transducer connection ⚠ (transmitter)
3) Monitor output (1 DVI-I port)	10) Sound Velocity sensor	17) Transducer RJ-45 ports (x7) (receiver)
4) Mouse	11) Heading sensor	18) Protective earth screw for equipotential connection
5) Keyboard	12) 1PPS input	
6) USB (x4)	13) Position/Time sensor	19) Cable clamp for securing transducer cable in place
7) Ethernet	14) Attitude sensor	

HydroBat

Quick Reference Guide*

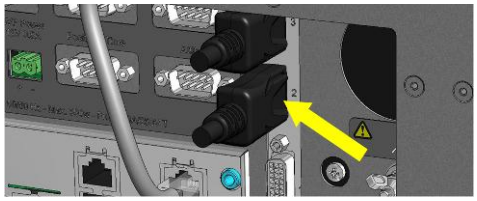
Personal Safety

The transmitter connection must be handled with great care as the output power voltage is hazardous to human safety.

Do **not** pull out the cable with power on.

Equipment Safety

- When removing the **display port cable** from the processor, press the button (at the arrow) on the connector to disconnect.
- Do **not** pull directly on the cord, as this will damage both cable and processor.



Processor to Monitor Connections

The monitor connections to the processor MUST be done as described below. Connections are achieved using DVI-I or display port connectors. Monitors can be cloned from within Windows®, although it is possible to clone a display port output by first converting to DVI-D and then using a DVI-D splitter (for details on cloning monitors, see the Operator's Manual).

DVI Port

DVI and Analog Monitor Connection	
One monitor	Use port 1

Note! For analog monitors, first add a DVI to analog adaptor to the DVI-I connector.

Display Ports

Display Port Connections	
One monitor	Use port 1
Two monitors	Use ports 1 and 2

Note! The display ports cannot be converted to analog monitors; however, adaptors are supplied to convert to DVI-D signals. (Note that DVI-D and DVI-I connectors are slightly different.)

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HydroBat

Quick Reference Guide*

Serial Data Input

The HydroBat uses DB9 connectors as inputs for six Com ports.

- The pinout of **Com1** and **Com2** is as shown in the following table.

DB9 Pin	RS-232
1	DCD
2	RxD
3	TxD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI

- The pinout of Com port **Position/Time** is as shown in the following table.

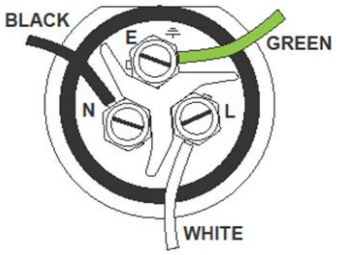
DB9 Pin	RS-232
1	NC
2	RxD
3	TxD
4	Shorted to pin 6
5	GND
6	Shorted to pin 4
7	Shorted to pin 8
8	Shorted to pin 7
9	NC

- The pinout of Com ports, **Attitude**, **Sound Velocity**, and **Heading** is as shown in the table to the right.
- The SVP data input is at the serial port marked 10 in the rear panel diagram. The SVP power connection is marked 15.

DB9 Pin	RS-232
1	Shorted to pin 4 and 6
2	RxD
3	TxD
4	Shorted to pin 1 and 6
5	GND
6	Shorted to pin 1 and 4
7	Shorted to pin 8
8	Shorted to pin 7
9	NC

Transmitter Plug Connections

Attach the white wire to L, the black wire to N, and the green wire to E/GND on the socket and tighten all three screws.



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