HATCHecker
USER MANUAL

SDT Ultrasound Solutions

▲ : increase
⊕ : correct
▼ : decrease

Red: too high
Green: correct
-.-: too low

X
ID
Sensor?

Specifications :

General		Mechanical	
Function	Ultrasound measurement device	Housing material	ABS
Operable with	SDT FlexID2	Dimensions housing	158x59x38.5 mm 6.22"x2.32"x1.51"
Measurement channel	1 channel via a 7 pole LEMO connector		
Display	160x128 pixels Color OLED	Flexible rod length	445 mm |17.51"
Keyboard	5 function keys	Weight	164g | 5.78oz
Measuring range	-6 to 99.9 dBµV (ref 0 dB =1µV)	Power	
Resolution	0.1 digits	Battery	2 AA batteries
Measurement bandwidth	39.6 to 40.1 kHz	Autonomy	7 hours
		Audio	
Signal amplification	+30 (built-in sensor gain) to +102 dB by step of 6 dB	Amplification	5 adjustable positions in steps of 6 dB
Environmental		Operable with	SDT provided head set only
Operating temperature range	-10 to +50 °C |14 to 122°F	Maximum output	+83dB SPL with SDT headset
IP rating	IP42	Headset	25dB NRR Peltor HQ headset

Powering your equipment:

Open up the battery compartment using the supplied screwdriver. Correctly insert two AA alkaline or rechargeable batteries. The remaining battery level is displayed in the right hand top corner ❶.

A full green battery in the right hand top corner means that the battery is fully charged. The equipment's autonomy when fully charged will be around 7 hours.

The device can be powered through its USB port ❷ with an external battery pack. Important: The HATCHecker turns off automatically when the battery power is insufficient to ensure proper operation, or after 10 minutes of inactivity.

Connecting the flexible sensor:

Connect the cable of the flexible sensor to the device by lining up the red dot on the plug with the red mark on the connector ❾ and then inserting the plug into the connector. To unplug them, move-up the knurled barrel of the plug without any rotating movement. Proceed in the same way to connect and unplug the cable on the side of the flexible extension. The '⊗ ID' and 'Sensor ?' messages ❿ indicate that no or an incompatible sensor is connected. The "x"-"sensor" indication will only disappear when the Hatchecker is correctly wired up and connected to the correct flexible sensor.

Using the Hatchecker:

When pressing the on/off switch ❹, the equipment will switch on immediately.

To switch off, the on/off button needs to be pressed for approx.. 2 seconds.

To take a correct measurement, the amplification needs to be adjusted for every reading. This is done by using the up and down arrows ❺ and following the triangular amplification guidance icons ❺ in the top left hand corner of the display.

The current amplification setting is displayed here ❼.

Once the correct amplification level is reached, the reading (measurement) will be displayed in green and a "smiley" ☺ will appear in the place where previously the triangular amplification guidance icon was shown. When the reading (measurement) is displayed in red, the amplification is too high and will need to be reduced by pressing the "arrow down" button. When ''-.-'' is displayed on the screen, the amplification is too low and will require increasing by pressing the "arrow up" button. In both cases, i.e. when the amplification is too low or too high, the amplification should be adjusted until the reading(measurement) is displayed in green and the smiley ☺ appears in the left hand top corner.

To ensure and confirm that the selected amplification level is correct, the operator can make the sum of the amplification (shown in the right hand lower corner ❼) and the reading (measurement) on the display ❻, the result of which must be between 60 and 80.

Using the headphones:

To enhance the hearing experience, the audio volume of the headset can be adjusted by pressing the left and right arrows ❺ until the sound level is comfortable. Avoid setting the sound too low as otherwise some signals may not be heard and possible leaky spots overlooked. Connect the headphones here ❸.

The current volume setting is displayed ❽ only when a headset is connected.

Reporting:

In order to facilitate recording of the readings (measures) taken during the survey, and reporting after the survey is completed, SDT has developed the Sherlog HATCHReporter App.

More info about the Sherlog HATCHReporter app can be found on following link:

http://sdtultrasound.com/hatchreporter

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