

# QUICK START GUIDE




## iWAND OPERATION GUIDE

# STEP 1

## SAFETY

It is recommended the operator complies with the Health and Safety Regulations applicable to the vessel and the region before operating this equipment.

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Documentation must be consulted whenever the warning symbol  is found on the equipment, in order to find out the nature of the potential hazard and any actions which must be taken.

The iWAND contains no user serviceable parts. Under no circumstances should the plastic housing be opened - any repairs require the unit to be returned to Sonardyne.

## PRODUCT SUPPORT

Should you require NON-EMERGENCY product support for your iWAND, email and telephone product support is available during normal UK office hours (08:00-17:00 GMT). Alternatively, please contact your nearest Sonardyne Office. Visit [www.sonardyne.com](http://www.sonardyne.com) for full details.

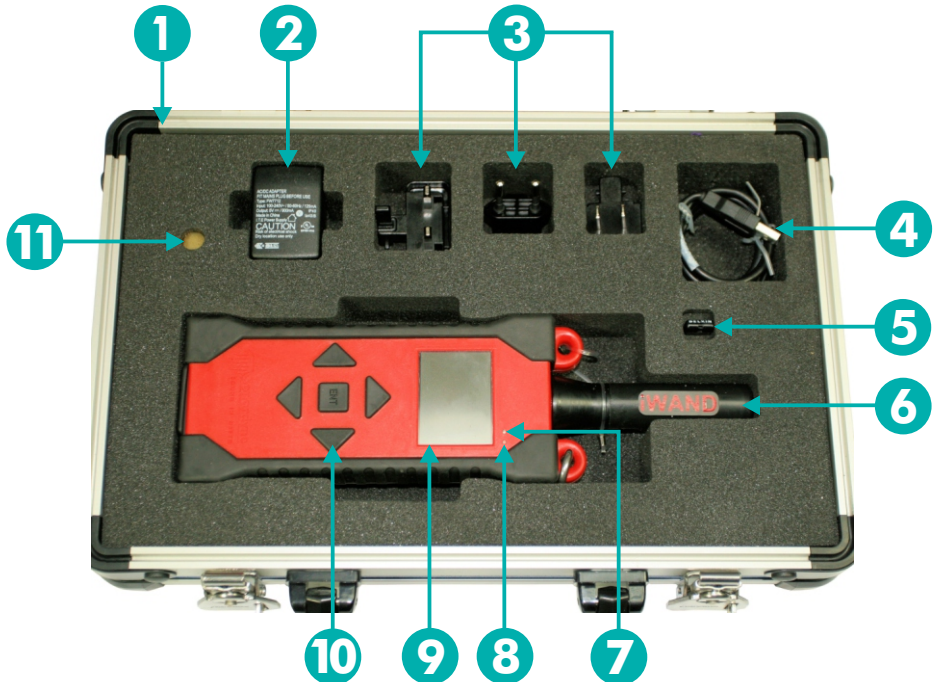
**Email: [support@sonardyne.com](mailto:support@sonardyne.com)**

**Tel: +44 (0) 1252 872288**

In emergency situations, the Sonardyne 24 hour helpline is answered during normal office hours - 08:00-17:00 GMT. Outside these hours, your call is automatically transferred to an agency who will log the details of your emergency and alert the appropriate Sonardyne personnel. Our aim is to ensure that emergency requests are dealt with immediately during office hours and are responded to within 30 minutes at all other times.

**SONARDYNE 24HR EMERGENCY HELPLINE: UK +44 (0) 1252 877600**

## EQUIPMENT SUPPLIED



- |   |                     |    |                         |
|---|---------------------|----|-------------------------|
| 1 | Transit Case        | 7  | Bluetooth Connected LED |
| 2 | Power Adaptor       | 8  | Fully Charged LED       |
| 3 | Universal Adaptors  | 9  | Colour LCD Display      |
| 4 | USB Lead            | 10 | 5 Button Keypad         |
| 5 | Bluetooth Dongle    | 11 | Reset Magnetic Disc     |
| 6 | Acoustic Transducer |    |                         |




- On receipt of the equipment, open the transit case and visually inspect the equipment for any signs of damage, e.g. cracking, dents or bent electrical pins.
- Using the power adaptor **2** with the correct universal adaptor **3** and the USB Lead **4**, connect the iWAND to a mains power supply and fully charge. This will be indicated by the green charging LED **8**.

# STEP 3

## INSTALLING THE SOFTWARE

The iWAND is used in conjunction with the iWAND 6G Configurator software to allow all 6G instruments to be easily configured and acoustically tested. The iWAND 6G Configurator software must be downloaded from the CD on to a PC.

Once downloaded the iWAND has various connection methods:

	Bluetooth (works with Windows 7 only)
	Serial
	USB

The USB is also used to recharge the internal battery. The internal GPS receiver provides UTC time tagging off communication to assets and can also be used to synchronise multiple assets to GPS time for logging applications.

## CHARGING THE iWAND

Before using the iWAND it will be necessary to charge it using the wall plug charger connected to the USB connection point. Connect the iWAND to a mains power supply and fully charge. This will be indicated by the green charging LED.

## SETTING THE iWAND TIME

- 1 Before using the iWAND it will be necessary to set the UTC real time on the LCD display.
- 2 Turn on the iWAND by pressing the **ENT** button in the middle of the keypad.
- 3 Make sure the GPS is enabled by scrolling to **iWAND Setup > Power Saving > GPS Enable**.
- 4 With the GPS enabled, stand outside and hold the iWAND so it has a clear view of the sky.
- 5 After a short period of time the iWAND time will appear on the screen.

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### NOTE

**The iWAND time shown is the UTC time and not local time.**

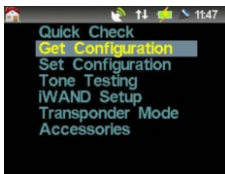
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# OPERATING THE EQUIPMENT

## GET CONFIGURATION

The iWAND requires no pre-programming with information. It will automatically discover the address and download the instrument status.

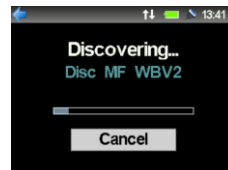
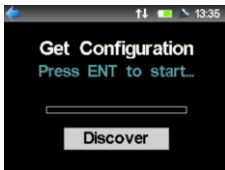
- 1 From the iWAND main menu select **Get Configuration**.
- 2 Hold the iWAND acoustic transducer against the transducer of the instrument.



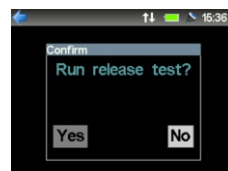
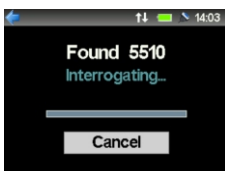
### NOTE

**The iWAND acoustic transducer must remain in contact with the transducer of the instrument during any transferral of information. If contact is not maintained the information transferral will be lost.**

- 3 Press the **ENT** button on the iWAND to start the **Get Configuration** sequence.
- 4 The **Discovering** sequence will gather all the information from the instrument.



- 5 When the iWAND has found the instrument, the address will appear. If this fails, refer to '**Pre-requisites for Operation**' in **Section 5** of the **iWAND UM-8315** manual.
- 6 The iWAND will begin to interrogate the instrument for its configuration.
- 7 If the the iWAND detects a **Release Mechanism** is fitted to the instrument the **Get Configuration** sequence will ask if a Release Test is required.

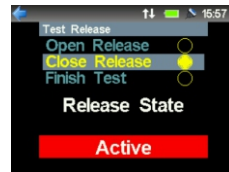
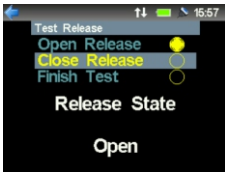


# STEP 5

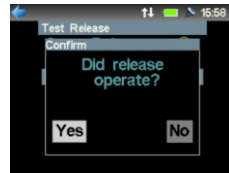
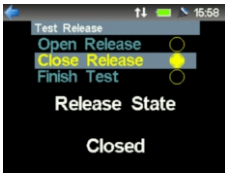
## OPERATING THE EQUIPMENT

### GET CONFIGURATION

- 8 If a **Release Mechanism** test is selected the iWAND will display what state the release is in.
- 9 Select a position to move the release mechanism to then press **ENT**.
- 10 The display will show the release mechanism is **Active**.



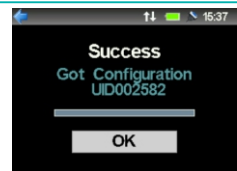
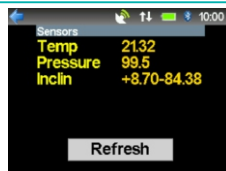
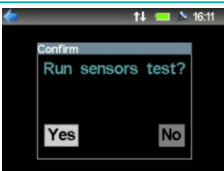
- 11 When the release has finished moving, the iWAND will display the new state.
- 12 Confirm the release mechanism has operated.



- 13 If the iWAND detects sensors are fitted to the instrument the **Get Configuration** sequence will ask if a **Sensor** Test is required.
- 14 If **Yes** is selected the iWAND will display the current measurements of each sensor available in the instrument.

### NOTE

The sensor value will change colour depending on the status of the measurement. **Green**:- the measurement is valid and less than 10 seconds old; **Orange**:- the measurement is greater than 10 seconds old; **Red**:- the measurement is reported in error (out of range).



- 15 Once all tests have been completed. The iWAND will display **Success Got Configuration** and the instrument address.

# OPERATING THE EQUIPMENT

## CONNECTING THE iWAND TO THE iWAND 6G CONFIGURATOR SOFTWARE

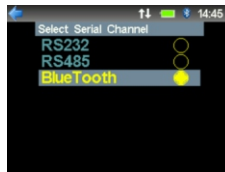
Connection of the iWAND to the iWAND 6G Configurator software can be achieved either by Bluetooth, a USB connection or Serial Port.

### NOTE

**When connecting using the Bluetooth make sure the supplied Bluetooth dongle is used. Drivers for the dongle are supplied on the Belkin Bluetooth CD. Refer to the iWAND manual UM-8315 for instructions on connecting the Bluetooth drivers.**

### Connecting the iWAND using Bluetooth

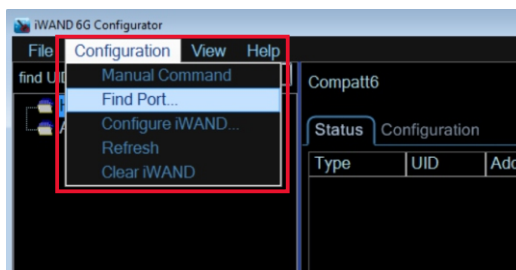
- 1 To be able to connect to the iWAND using Bluetooth, make sure the Bluetooth on the PC is enabled.
- 2 Make sure Bluetooth on the iWAND is enabled. Using the keys scroll to **iWAND Setup > Communications > Bluetooth**. Press **ENT**.



- 3 Open the iWAND 6G Configurator Software by clicking on the icon.



- 4 On the iWAND 6G Configurator Software toolbar select **Configuration**.
- 5 From the drop down list menu select **Find Port**.

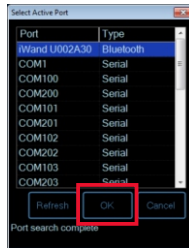


# STEP 7

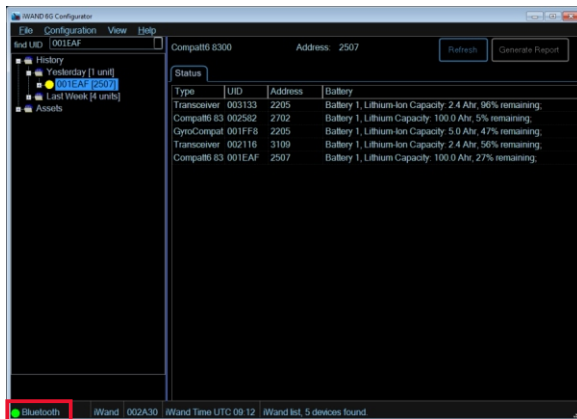
## OPERATING THE EQUIPMENT

### Connecting the iWAND using Bluetooth

- 6 In the **Select Active Port** window, the software will seek a Bluetooth connection.
- 7 When the iWAND Bluetooth has been detected it will appear at the top of the list.
- 8 Confirm the UID of the iWAND listed is correct. Click **OK** to connect to the iWAND.



- 9 If a successful connection is made the iWAND 6G Configurator homepage will now appear. A green indicator, at the bottom of the screen will show, the Bluetooth is connected and all data stored in the iWAND will be displayed.



### Connecting the iWAND using USB

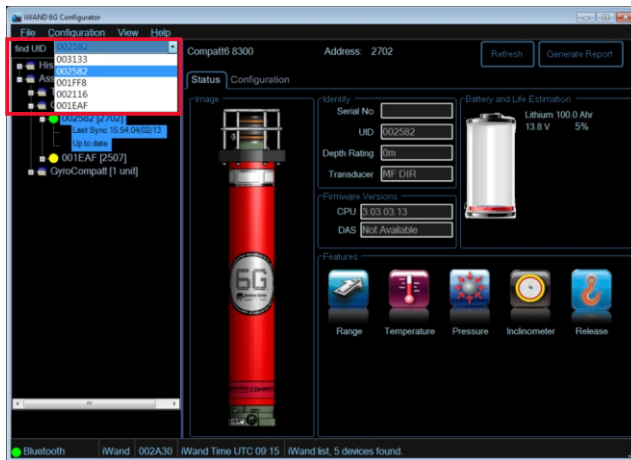
- 1 To connect the iWAND using a USB port, make sure the iWAND is connected to the PC using the supplied USB cable.
- 2 To connect to the iWAND 6G Configurator software follow the same procedure as connecting using Bluetooth, but select the correct Coms port the USB is connected to. The 'Type' field on the select active port window will show USB. Refer to the iWAND manual UM-8315 for instructions on installing the USB drivers.



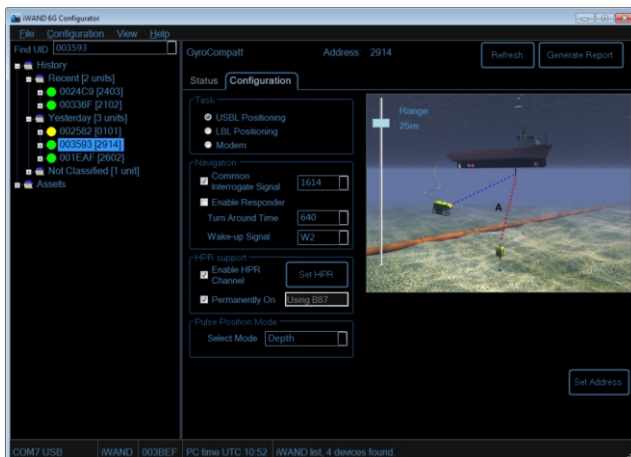
# OPERATING THE EQUIPMENT

## OPERATING THE IWAND 6G CONFIGURATOR SOFTWARE

- 1 To view an instrument, select it either from the **History** list or the **Asset** List.
- 2 Alternatively, enter the UID of the instrument, if known, in the **find UID** drop down box.



- 3 The **Status** tab will provide information about the selected instrument.
- 4 Configuration of an instrument can be changed by selecting the **Configuration** tab.

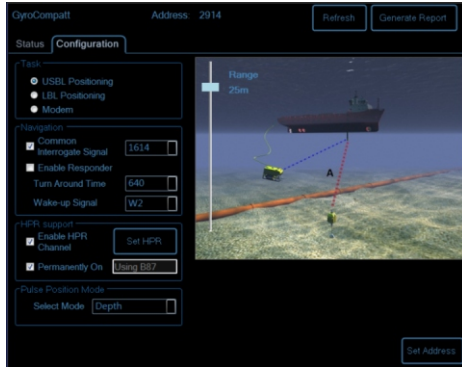


# STEP 9

## OPERATING THE EQUIPMENT

### OPERATING THE iWAND 6G CONFIGURATOR SOFTWARE

- Slide bars down the side or across the bottom of the image allow **Power and Gain** settings to be changed according to operational requirements.



- The instrument **Task** can be changed by selecting a different positioning technique.
- The **Navigation** settings of the instrument can be changed by enabling options and then selecting values from drop down lists.
- In the HPR Support section, the **Enable HPR Channel** can be enabled. If this is selected the **Set HPR** button will appear. If the **Set HPR** button is pressed the HPR channel screen will appear.



- Select the required HPR channel then click **OK**.

#### NOTE

**The HPR should only be enabled if integrated with a 3rd party system. To obtain the performance benefits of Sonardyne 6G equipment, HPR should be avoided.**

## OPERATING THE EQUIPMENT

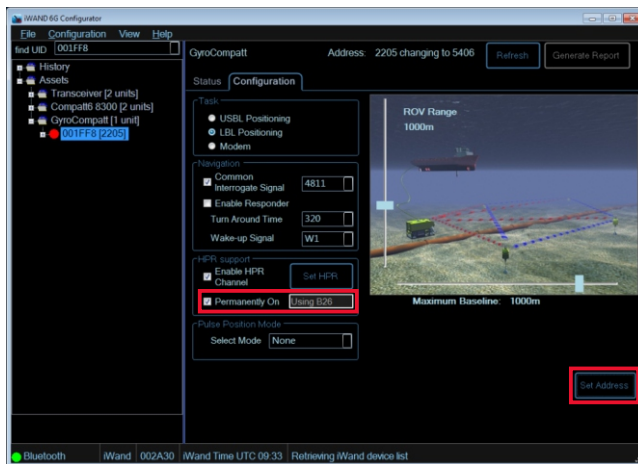
### OPERATING THE iWAND 6G CONFIGURATOR SOFTWARE

- 10 In the HPR Support section, as soon as the **Enable HPR channel** is selected the **Permanently On** option will default to on.
- 11 Select the required **Pulse Position Mode** from the drop down menu.

#### NOTE

**The Pulse Position Mode options will only be available if the relevant sensors are fitted to the instrument.**

- 12 If necessary it is possible to change the Address of the instrument by selecting the **Set Address** button at the bottom of the **Configuration** tab.



- 13 Clicking **Set Address** will open the address window.
- 14 Choose the new address according to the Wideband being used. Click **OK**.

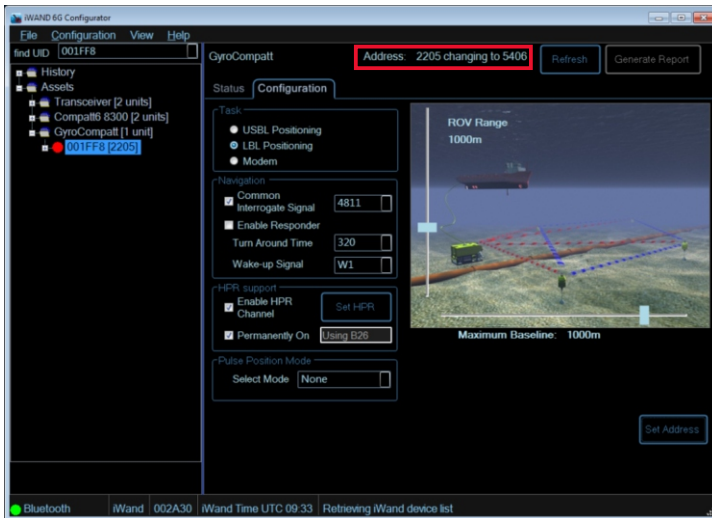


# STEP 11

## OPERATING THE EQUIPMENT

### OPERATING THE iWAND 6G CONFIGURATOR SOFTWARE

- 15 Notification of the address change and the new address will now appear at the top of the iWAND 6G Configurator page.



- 16 The iWAND 6G Configurator software uses a traffic light system to indicate the status of the equipment.
- 17 The traffic lights next to the unit indicate the following:
- Green - indicates the instrument configuration is fully up to date.
  - Amber - indicates that changes have been made to the configuration on the iWAND 6G Configurator software and transferred to the iWAND but not yet transferred to the instrument.
  - Red - indicates when configuration changes have been made on the iWAND 6G Configurator software but these have not yet been transferred to the iWAND.



## OPERATING THE EQUIPMENT

### OPERATING THE iWAND 6G CONFIGURATOR SOFTWARE

- 18 Configuration changes made to an instrument on the iWAND 6G Configurator Software must now be transferred to the instrument.

### USING THE iWAND TO SET CONFIGURATION

Once an instrument has been configured by the iWAND 6G Configurator software, the settings will be automatically downloaded to the iWAND ready for a synchronisation process to be performed.

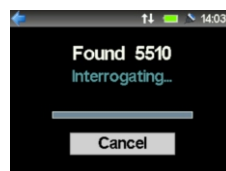
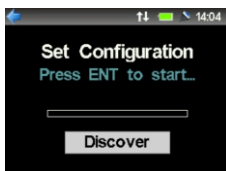
Disconnect the iWAND from the PC and move to the location of the 6G equipment to be configured.

Configurations for multiple instruments can be held by the iWAND at the same time.

- 1 On the iWAND home screen select **Set configuration** from the main menu.
- 2 Hold the iWAND acoustic transducer firmly against the transducer of the instrument and maintain contact throughout the configuration.



- 3 Press **ENT** to start the configuration process.
- 4 When the iWAND has found the instrument, the address will appear.
- 5 The iWAND will detect if a new configuration is pending based on the UID, and sends the appropriate setting changes to that unit.



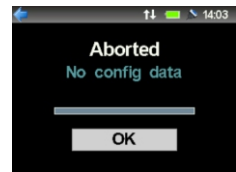
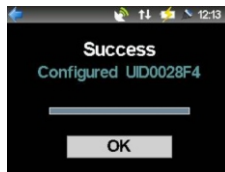
- 6 If the iWAND detects a **Release Mechanism** or **Sensors** are fitted to the instrument, it will ask if a Release Test or Sensor test is required. Refer to **Get Configuration** (Step 4) for the Release and Sensor Test procedure.

# STEP 13

## OPERATING THE EQUIPMENT

### USING THE iWAND TO SET CONFIGURATION

- When the iWAND has completed configuring the instrument it will display **Success Configured** and the instrument address.
- If the iWAND detects the instrument does not require configuring it will display **Abort**.



- On completion of the **Set Configuration**, connect the iWAND to a PC either by Bluetooth, Serial Port or USB connection.
- Check the traffic lights next to the instrument is green. This will confirm that the configuration changes have successfully been transferred to the instrument.
- A system report can now be generated. This will provide a complete overview of the configuration of the instrument for reference.

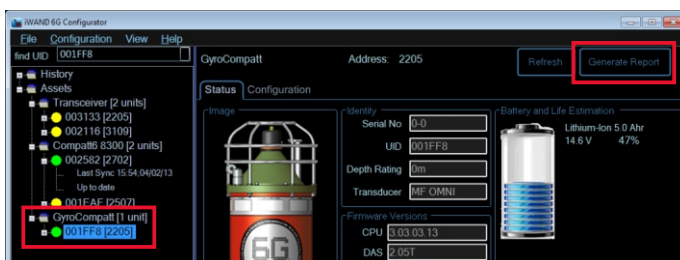
### GENERATING A SYSTEM REPORT

To view the full configuration of an instrument a report can be generated.

#### NOTE

**The Generate Report button is only available when the traffic light next to the instrument UID is green.**


- To generate a report, press the **Generate Report** button at the top of the iWAND 6G Configurator page.




## OPERATING THE EQUIPMENT

### GENERATING A SYSTEM REPORT

2 A pdf test report will be generated.



### 6G Test Report 003593



Acquired at 06 March 2013 16:35:18 UTC  
 Configured at 06 March 2013 16:46:15 UTC  
 Scenario USBL; 25m Range

Hardware Test PASS  
 Sensor Test User Skipped  
 Release Test Not Applicable  
 Battery Test 91% PASS

Unit Settings			
Acoustic Address	2914	Serial Number	282836-1
Transducer	MF Omni	Depth Rating	3000m
Firmware Version	V3.03.03.13	DAS Version	2.05T
Functionality Level	10SE		

Settings			
Turn Around Time	640ms	Linear Gain	60dB
Navigation Power Level	196dB	Telemetry Power Level	196dB
Blocking	100ms	Common Interrogate Channel	CIS14, Enabled
HPN Channel	HPN07, Enabled	Responder Enabled	Disabled
Pulse Position Mode	Depth	Activity Time	permanently on
Wake-up Signal	W2		

Battery Status			
Battery 1 type	Lithium-Ion	Battery 1 voltage	16.3volts
Battery 1 current	22.0mA	Battery 1 capacity	25.0Ah
Battery 1 capacity left	91%	Battery 1 temperature	23.0 °C

Sensors		
Sensor Type	Details	Last Measurement
Temperature	-5 to 40°C Accuracy = 0.10°C	°C Error
Pressure(DG2)	Max 4130kPa Accuracy = 0.013kPa	kPa Error
Sound Velocity	1400 to 1600m/s Accuracy = 0.030m/s	m/s Error
Lodestar	Heading Range 0-360 Accuracy 0.04 deg Roll & Pitch Range +/-180 Accuracy 0.01°	° Error

iWAND Information			
iWAND UID	002A30	Firmware Version	1.00.00.01
Time Date (iWAND GPS)	16.46.15.0603/1	Location	UNKNOWN

06 March 2013 09:08:38 1 of 2 6G Test Report for 003593

## STORAGE

The iWAND is supplied in a weatherproof purposely designed case. When not in use the iWAND must be stored in the case to maintain serviceability.

Make sure the housing is clean and dry before returning to the case.

Avoid leaving the iWAND in a deeply discharged, or fully charged state for long periods of time (40 - 60% charge for optimum battery life). Turn off the iWAND for storage and shipping by selecting:

**iWAND > Power Saving > Off for Shipping.**

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