

SUPERVISORY KIT

Getting Started



[soundmetrics.com](https://www.soundmetrics.com)

SUPERVISORY KIT GETTING STARTED MANUAL

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DISCLAIMER

- IMAGES SHOWN IN THE MANUAL ARE FOR REPRESENTATIONAL PURPOSES ONLY; ACTUAL APPEARANCE OF PRODUCTS MAY VARY
- SOUND METRICS RESERVES THE RIGHT TO CHANGE ANY INFORMATION IN THIS MANUAL WITH OR WITHOUT NOTIFICATION

WARNING:

- MISUSE OF EQUIPMENT CAN RESULT IN SAFETY HAZARDS

CAUTION:

- DO NOT POWER ON SYSTEM WITHOUT FULLY ENGAGING ALL CONNECTORS - CONNECTORS MUST BE FIRMLY TIGHTENED BY HAND UNTIL CONNECTOR STOPS TURNING AND PROVIDED GAUGE CAN NOT FIT BETWEEN CONNECTOR GAP
- DO NOT DISCONNECT CABLES WHILE SYSTEM IS UNDERWATER OR POWERED ON; POWER MUST BE OFF BEFORE DISENGAGING CONNECTORS
- DO NOT OVERTIGHTEN SCREWS; OVERTIGHTENING SCREWS CAN DAMAGE UNIT - APPROVED TORQUE IS AS FOLLOWS:
2.5 Nm – M4 SCREWS, 5 Nm – M5 SCREWS, AND 25 Nm – M8 SCREWS
- DO NOT ATTEMPT TO REPAIR EQUIPMENT
- FAILURE TO FOLLOW ABOVE INSTRUCTIONS WILL VOID WARRANTY



✓ GAUGE NO LONGER FITS BETWEEN CONNECTOR GAP



PLEASE READ THE ENTIRE MANUAL BEFORE USING THE SUPERVISORY KIT

SUPERVISORY KIT INTRODUCTION

ARIS SUPERVISORY KIT

FEATURES

- See what the Diver Sees in Real Time
- Ideal for Training Operations and
Topside Monitoring



SUPERVISORY KIT INTRODUCTION



SPECIFICATIONS

150 m SUPERVISORY KIT (SHOWN)

Part #015732

60 m SUPERVISORY KIT

Part #015731

The Supervisory Kit enables topside personnel to view and record the same information the diver sees in the Underwater Head Mounted Display. This kit is ideal for training operations and topside monitoring.

The Supervisory Kit also offers the versatility you need for a successful mission. Remove the Buoyancy Shell from the ARIS Defender 3000 to convert it into a standalone 300m depth rated ARIS Explorer 3000 Plus.

WHAT'S IN THE BOX?

INSIDE THE TRANSIT CASE



	PRODUCT	PART #
1	Waterproof Box	013410
2	Supervisory Kit Axle	015885
3	Supervisory Cable 60m, or Supervisory Cable 150m	014730 014372
4	Supervisory Kit Reel	016327

PARTS OF THE SUPERVISORY KIT



WHAT'S IN THE BOX?

INSIDE THE WATERPROOF BOX



	PRODUCT	PART #
1	Getting Started Manual	015425
2	Command Module	013470
3	Software USB Drive	014385
4	Power Supply	015046
5	AC Power Cable	016268
6	Ethernet Cable	014512

PARTS OF THE SUPERVISORY KIT



PARTS OF THE SUPERVISORY KIT



- 1 SUPERVISORY CABLE** - Tethers the Defender to the Command Module
- 2 SUPERVISORY KIT CABLE REEL & AXLE** - Compact system for organizing Cable.
- 3 COMMAND MODULE** - Allows topside personnel to see what the diver sees when connected to a PC
- 4 ETHERNET CABLE** - Connects the Command Module to the operating PC
- 5 POWER SUPPLY** - Primary power source for the Command Module
- 6 AC POWER CABLE** - Primary Cable that powers the Command Module



CONNECTING THE DEFENDER & COMMAND MODULE



STEP 1

Remove the contents from the Transit Case.



STEP 2

Place the Axle through the center of the Cable Reel.

CONNECTING THE DEFENDER & COMMAND MODULE



STEP 3

Guide the Axle into the hole of the Transit Case, and set the other side of the Axle on the resting opening.

CONNECTING THE DEFENDER & COMMAND MODULE



STEP 4

Remove the cord holding the longer end of the Cable in place. Unwind the Cable to the desired length.

Note: Depending on the needs of the deployment, the Cable may be completely removed from the Reel.



STEP 5

Remove the dust cover sleeve from the Cable. Spray the connector with Silicone Spray, included with the Defender, and connect the Cable to the ARIS Defender.

CONNECTING THE DEFENDER & COMMAND MODULE



STEP 6

Remove the cord holding the shorter end of the Cable in place.



STEP 7

Remove the dust cover sleeve from the Cable. Spray the connectors on the Cable with Silicone Spray, and connect the Cable to the Command Module.

Note: The arrow indicators on the Command Module show the proper rotation of the brass nut.

CONNECTING THE DEFENDER & COMMAND MODULE



STEP 8

Using the edge of the Connector Gap Gauge, check that the connectors are mated. The Gauge will no longer slide into the connector gap when fully engaged.

Note: Gently wiggling the Cable while turning the bronze nut will aid in tightening the connector.

CONNECTING THE DEFENDER & COMMAND MODULE



STEP 9

1 Pull the waterproof plugs out of the Command Module. 2 Line up the red dot on the Ethernet Cable connector with the red dot on the receptacle on the Command Module. Push in the connector until it is locked into place. Connect the Power Supply to the Command Module.

Note: To release the connector, pull the sleeve on the silver connector back until it slips out of the receptacle.

CONNECTING THE DEFENDER & COMMAND MODULE



STEP 10

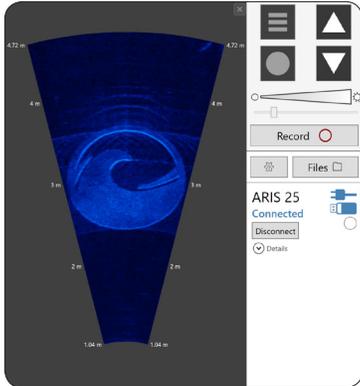
Connect the Command Module to the PC's ethernet port, and plug in the Power Supply.

INTRODUCTION TO COMMANDER



Commander shows topside personnel what the diver sees in real time. The latest Commander software is available for download by logging in to the Sound Metrics portal at:

www.soundmetrics.com/My-Account/Downloads/Customers/Software/ARIS



INSTALLING COMMANDER

Uninstall any previous version of Commander. Connect the USB drive to your computer, and open the Commander software file. Follow the install prompts to install the latest version of the software.

Note: Your computer may need to restart to complete the installation process.

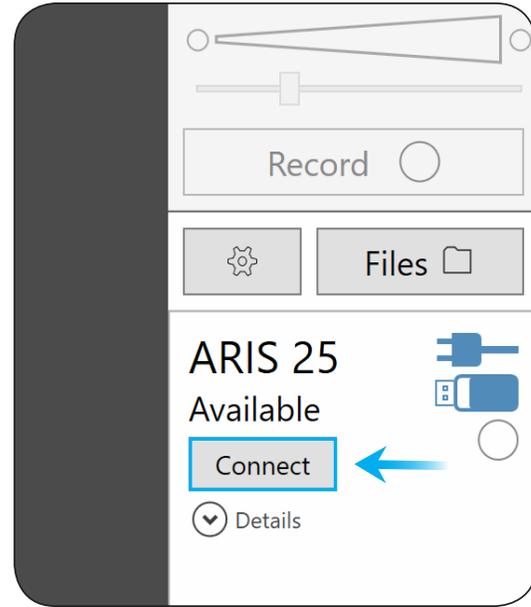
CONNECTING THE DEFENDER TO COMMANDER



STEP 1

Press the center button on the Command Module to power on or off. The blue light will flash a few times before remaining steady.

Note: Defender must be powered on via the handle switches, before or after the Command Module is turned on.

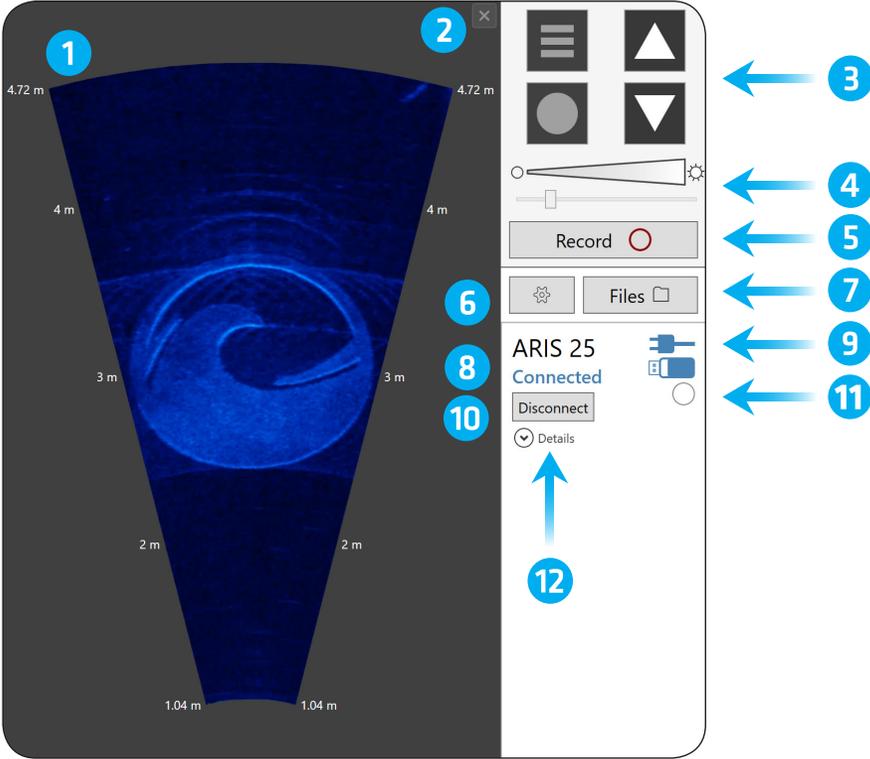


STEP 2

Open the Commander application on the PC, and connect the available sonar.

COMMANDER BASICS

MAIN SCREEN



COMMANDER BASICS

- 1 Image Display**
Displays acoustic image diver sees
- 2 Close Window**
Disconnects operating sonar
- 3 ARIS Defender Handle Button Icons**
Note: Only the up and down range buttons are operational via Commander
- 4 Brightness Slider**
Controls the brightness of PC image display
- 5 Record to PC Button**
Records data to PC independent of diver
- 6 Settings**
Sets desired location to which data will be saved
- 7 Files**
Opens Windows® Explorer where files are saved
Note: ARIScope must be installed to view .aris files
- 8 Sonar Connection Status**
- 9 Power & Storage Indicators**
Power icon indicates where power is being derived; storage icon displays amount of available storage on Data Power Pack
- 10 Disconnect Button**
Disconnects operating sonar
- 11 Diver Record Status**
Indicates recording status of the sonar
Note: the circle will illuminate red when the sonar is recording
- 12 Details**
Displays additional information about connected sonar

ARIS SUPERVISORY KIT APPENDIX

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SPECIFICATIONS

TECHNICAL SPECIFICATIONS

ARIS DEFENDER 3000

Depth Rating: 100 m

Dimensions: 43 x 22 x 24 cm

Weight in Air: 11 kg

Weight in Water: Neutral

ARIS DEFENDER 1800

Depth Rating: 100 m

Dimensions: 47 x 22 x 24 cm

Weight in Air: 12.6 kg

Weight in Water: Neutral

ARIS EXPLORER 3000 PLUS

Depth Rating: 300 m

Dimensions: 26 x 16 x 14 cm

Weight in Air: 5.5 kg

Weight in Water: 1.9 kg

ARIS EXPLORER 1800 PLUS

Depth Rating: 300 m

Dimensions: 31 x 17 x 14 cm

Weight in Air: 6.3 kg

Weight in Water: 2.3 kg

PROVIDED POWER SUPPLY

ARIS EXPLORER PLUS

Input: 100 - 240 Vac

Output: 48 Vdc

Maximum: 70 W

POWER CONSUMPTION

Typical: 20 W

Supplied Battery (Data Power Pack): 28.8 V Lithium Ion Battery

Battery Endurance: Up to 4 Hours Fully Charged

PC REQUIREMENTS

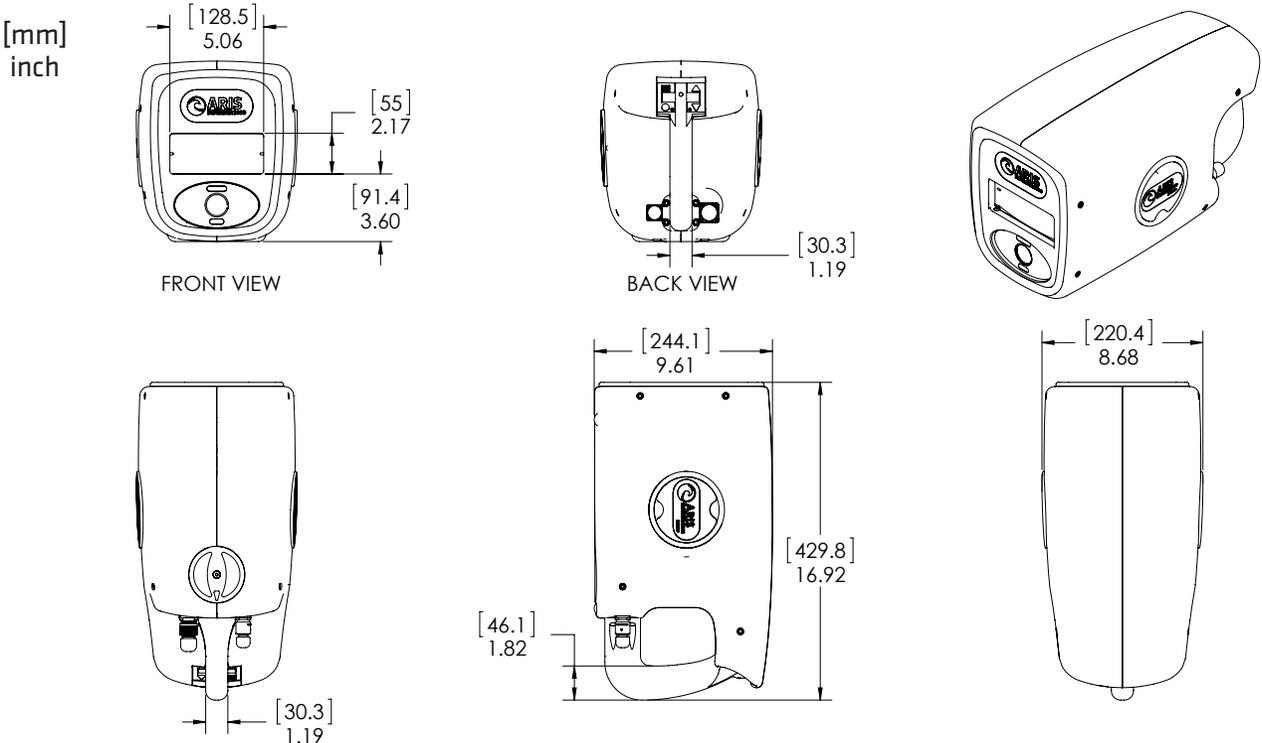
- Windows 7 SP1 or Higher Operating System
- PC Interface: 100BaseT Wired Ethernet
- DirectX 11 Compatible Graphics
- Multi-Core CPU

RECOMMENDED PC CONFIGURATION

- 8 GB RAM
- 512 MB Video RAM
- Available Hard Disk Space for Recording

MOUNTING DIMENSIONS

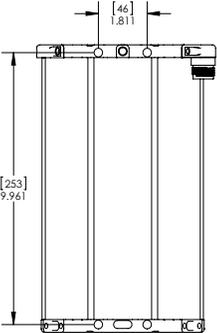
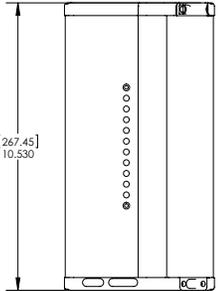
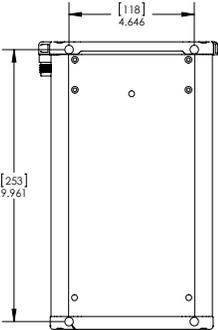
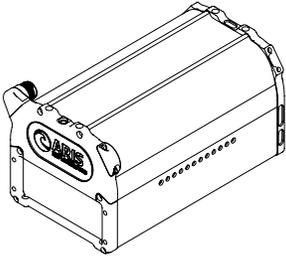
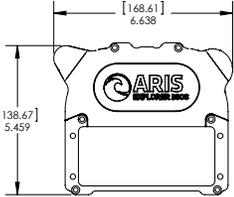
ARIS DEFENDER 3000



MOUNTING DIMENSIONS

ARIS EXPLORER 3000 PLUS

[mm]
inch

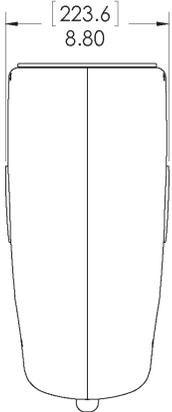
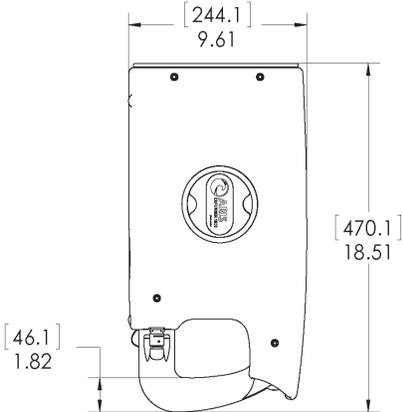
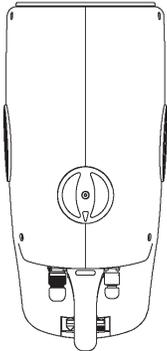
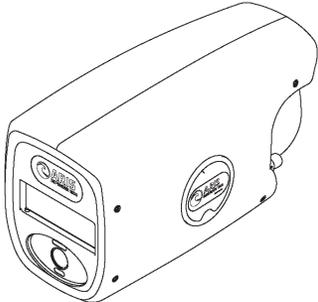
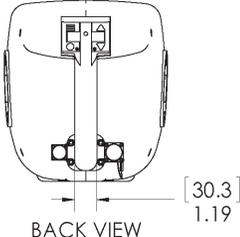
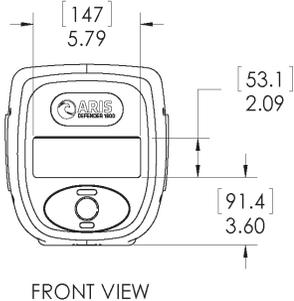


ALL MOUNTING HOLES
M5 x 8 Φ 8MM
8 PLACES

MOUNTING DIMENSIONS

ARIS DEFENDER 1800

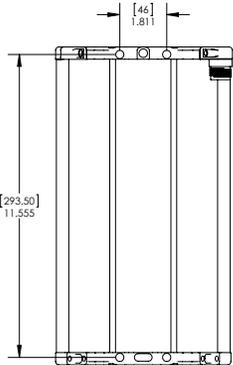
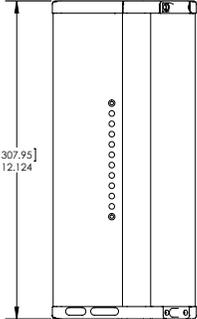
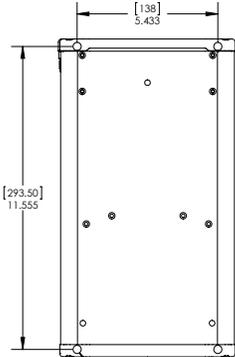
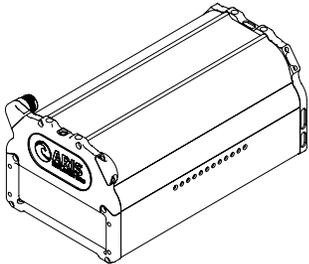
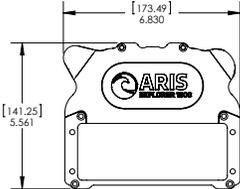
[mm]
inch



MOUNTING DIMENSIONS

ARIS EXPLORER 1800 PLUS

[mm]
inch



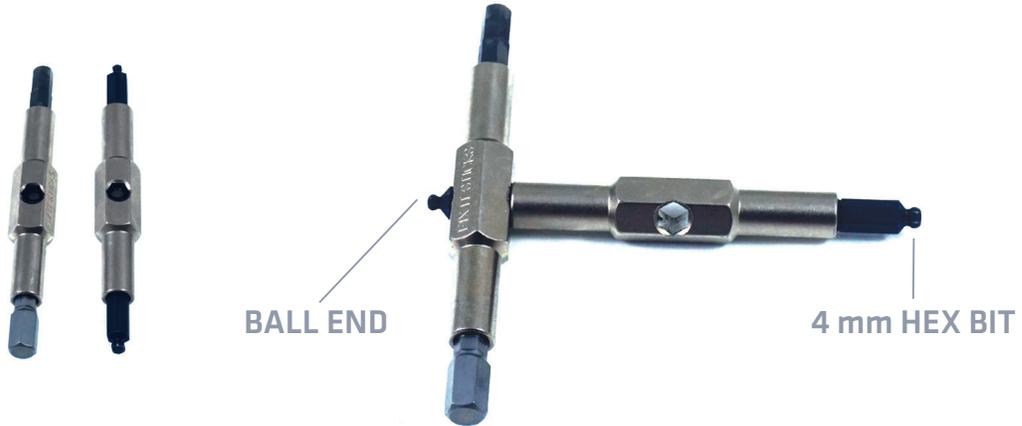
ALL MOUNTING HOLES
M5 x 8 8MM
8 PLACES

CONVERTING THE DEFENDER INTO THE EXPLORER PLUS

TAKING APART THE DEFENDER

Tools Needed (Included with the Defender):

- Fix It Sticks (x2)
- 4 mm Extended Hex Bit



STEP 1

Insert the ball end of the 4 mm Fix It Stick through the center of the second Fix It Stick to create a handle for the driver.

CONVERTING THE DEFENDER INTO THE EXPLORER PLUS



STEP 2

Loosen the four captive Screws on the right side of the buoyancy shell.



STEP 3

Remove the right side of the buoyancy shell.

CONVERTING THE DEFENDER INTO THE EXPLORER PLUS



STEP 4

Loosen the four captive Screws on the left side of the buoyancy shell.



STEP 5

Remove the left side of the buoyancy shell.

CONVERTING THE DEFENDER INTO THE EXPLORER PLUS



STEP 6

Place the Defender upside down, turn the Dial 180° toward the front of the Defender, and remove the Data Power Pack.



STEP 7

Remove the 4 mm Hex Bit from the Fix It Stick, and replace it with the Extended 4 mm Hex Bit.

CONVERTING THE DEFENDER INTO THE EXPLORER PLUS



STEP 8

Remove the two Screws from the bottom of the Data Power Pack bracket. Place the Defender upright, and remove the top two Screws.

Note: The Extended 4 mm Hex Bit is only needed to remove the two Screws from the bottom of the Data Power Pack Bracket. Upon removal, you may switch the Extended 4 mm Hex Bit to the shorter one.

CONVERTING THE DEFENDER INTO THE EXPLORER PLUS



STEP 9

Remove the Data Power Pack Bracket.



STEP 10

Disconnect the Cable from the right angle connector.

CONVERTING THE DEFENDER INTO THE EXPLORER PLUS



STEP 11

Remove the two Screws from the bottom of the handle assembly, and remove the two Screws from the top of the handle assembly.

CONVERTING THE DEFENDER INTO THE EXPLORER PLUS



STEP 12

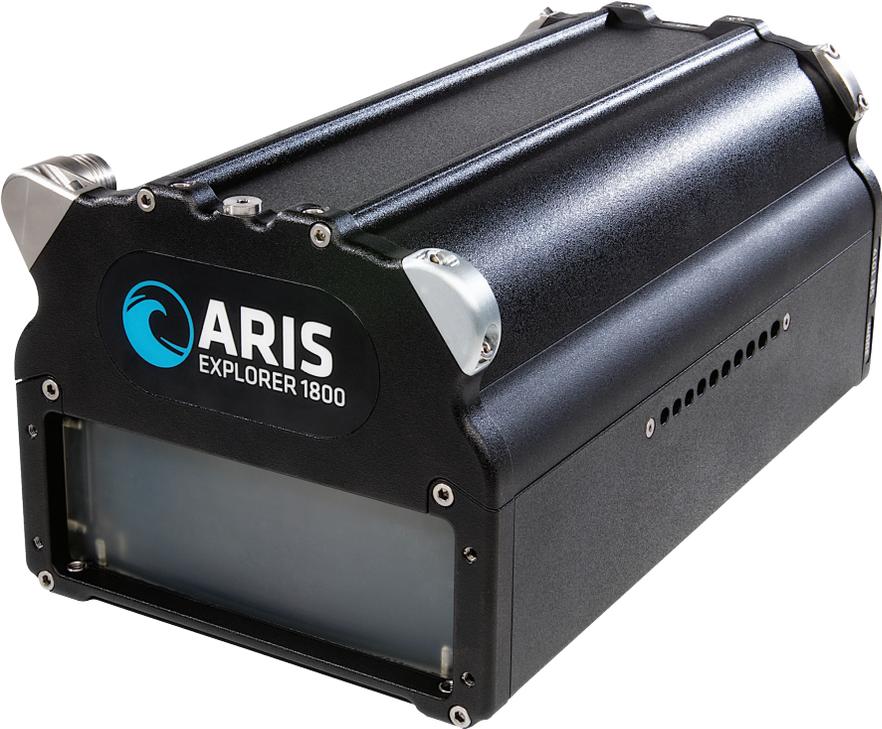
Loosen the connector on the handle.



STEP 13

Remove the handle, and add connect the sealing cap.

CONVERTING THE DEFENDER INTO THE EXPLORER PLUS



STEP 14

Once the shell of the Defender has been removed, the sonar can be connected and used as an ARIS Explorer Plus.

CONNECTING THE EXPLORER PLUS & COMMAND MODULE



STEP 1

Attach the bronze nut of the ARIS Cable to the ARIS Explorer Plus, making sure to line up the key in the cable with the keyway on the connector. Push in while tightening the ARIS Cable.



STEP 2

Attach the stainless threaded end of the ARIS Cable to the Command Module, making sure to line up the key in the Command Module connector with the keyway on the cable connector. Push in while tightening the nut on the Command Module.

Note: To tighten or loosen the nut, turn the nut in the direction indicated on the Command Module.

CONNECTING THE EXPLORER PLUS & COMMAND MODULE



STEP 3

Using the edge of the Connector Gauge, check that the connectors are mated. The Gauge will no longer slide into the connector gap when fully engaged.

Note: Gently wiggling the cable while turning the bronze nut will aid in tightening the connector.

CONNECTING THE EXPLORER PLUS & COMMAND MODULE



STEP 9

1 Pull the waterproof plugs out of the Command Module. 2 Line up the red dot on the Ethernet Cable connector with the red dot on the receptacle on the Command Module. Push in the connector until it is locked into place. Connect the Power Supply to the Command Module.

Note: To release the connector, pull the sleeve on the silver connector back until it slips out of the receptacle.

CONNECTING THE EXPLORER PLUS & COMMAND MODULE



STEP 5

Press the center button on the Command Module to power on the ARIS Explorer Plus. The blue light will flash a few times before remaining steady.

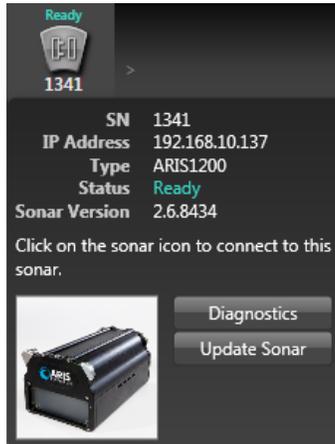
Note: Press the button on the Command Module again to power down the ARIS Explorer Plus.

INTRODUCTION TO ARIScope



Manual and automated controls are simple using the ARIScope software interface. The latest ARIScope is available for download by logging in to the Sound Metrics portal at:

www.soundmetrics.com/My-Account/Downloads/Customers/Software/ARIS



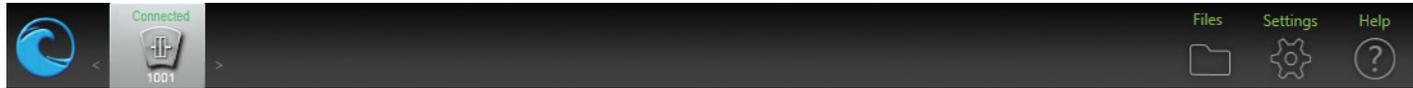
INSTALLING ARIScope

Un-install any previous version of ARIScope. Open the ARIScope installer file from the USB drive or downloaded from the Sound Metrics portal. Follow the install prompts to install the latest version of the software to the PC. Connect to the ARIS, hover the mouse over the sonar icon, and click *Update Sonar*.

Note: Your computer may need to restart to complete the installation process.

CONNECTING THE EXPLORER PLUS TO ARIScope

SONAR STATUS



1

After connecting the ARIS Explorer Plus to the Command Module and powering on, the user will be able to control the ARIS via ARIScope. To connect the ARIS Explorer Plus to ARIScope, click on the “Ready” icon.

1 SONAR ICON

All detected sonars on the network will display an icon with its connection status:



Mouse over a Connected Sonar icon to display additional information and to expose additional functions, including how to update the sonar. See Section 1.2 of the ARIScope Help Guide for more information.

Sonar Icon Dropdown

SN	1001
IP Address	192.168.10.175
Type	ARIS3000
Status	Connected
Sonar Version	2.0.6612

You are receiving active image data from this sonar.



[Diagnostics](#)

[Update Sonar](#)

MAINTENANCE



ANODE INSPECTION

- Periodically inspect attached anode
- Replace anode when it reaches approximately 50% of original size

CABLE CONNECTOR CARE

- Lightly spray connectors with provided lubricant before use; do not use grease
- Ensure connectors are clean after every use; clean with diluted mild dish detergent and rinse thoroughly with fresh water when necessary



LENS BUBBLES

Bubbles seen in the lens are normal and will not affect imaging during normal use.

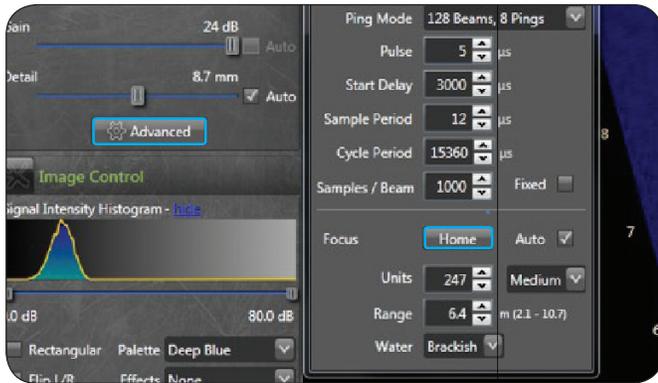
MAINTENANCE

LENS HOUSING CARE

After using ARIS in a high-silt environment, the lens housing should be removed for cleaning. Using silt plugs minimizes how often this needs to be done.

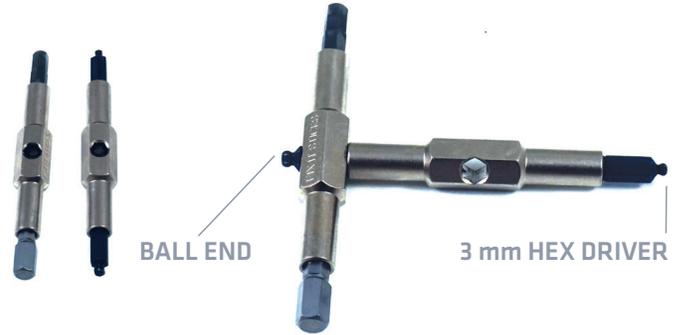
Tools Needed:

- Fix It Sticks (x2)



STEP 1

Before powering down the ARIS, click on the *Advanced* button and then click *Home*.



STEP 2

Insert one of the Fix It Sticks through the center of the second Fix It Stick to create a handle for the driver.

MAINTENANCE



STEP 3

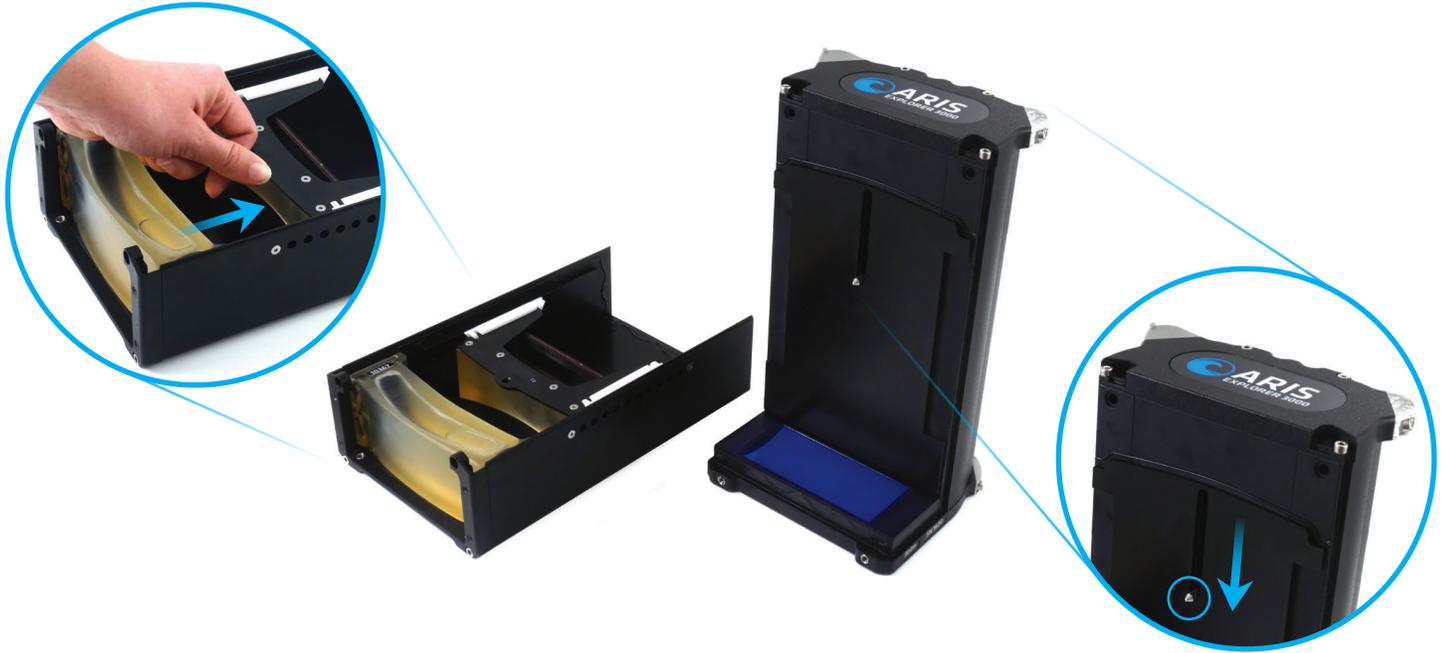
Remove the two Screws on the top of the front lens housing, and remove the two Screws on the bottom of the rear end cap.



STEP 4

Disconnect the lens housing from the pressure housing.

MAINTENANCE



STEP 5

Ensure the lens is in the Home position at the bottom of the focus groove. Slide the focus lens to the end of the travel. Inspect the lens housing and clean with fresh water.

MAINTENANCE

ASSEMBLY



STEP 1

Place the lens housing onto the pressure housing ensuring the pin engages into the hole in the focus bracket. Connect the top two Screws on the front of the Explorer Plus and the bottom two Screws on the back of the Explorer Plus.

Note: Do not overtighten Screws. See Page 2 for approved torque values.



STEP 2

Power the sonar, and connect it to ARIScope. While looking through the silt plug holes, move the focus by sliding the range slider in ARIScope back and forth.

Note: If engaged properly, you will see the focus lens moving back and forth through the silt plug holes.

MAINTENANCE

HOW TO INSTALL SILT PLUGS

If you plan on using the ARIS in a high silt environment you may want to install the silt plugs.



STEP 1

Install eight of the ten silt plugs on each side of the sonar, leaving one plug on each end of the strip open.

STEP 2

Submerge in water until the lens housing is full, and install the remaining two silt plugs to seal in the water.

WARRANTY INFORMATION

WHAT TO DO IN CASE OF A PROBLEM WITH THE SUPERVISORY KIT

Sound Metrics Corp (SMC) warrants the Supervisory Kit for one year according to the terms of the official warranty document. If the product appears to be defective please contact SMC by email or phone to discuss your options. In many cases, we can help resolve issues without having to return the unit, but if not, SMC pledges to repair your product as quickly as possible. For product returns, you need to contact SMC for a “Case Number” and provide details of the problem(s) - this allows us to prepare so your product can be repaired and returned to you quickly. We ask that you ship the product in its original protective storage case. If still under warranty, the unit will be repaired and returned to you at no cost; otherwise, you will be charged for parts, labor and return shipping. We will provide you with an estimate of any repair and wait for approval before proceeding with the work.

In most cases, it is not advisable to open or attempt to repair the product in the field. However, this may be the only option if time is critical. SMC is best qualified to make that determination and our personnel can provide step-by-step instructions if that is determined to be the best course of action. Your warranty may be void if you attempt such servicing without first contacting SMC.

SOUND METRICS

11010 Northrup Way
Bellevue, WA 98004

PHONE: 425-822-3001

EMAIL: support@soundmetrics.com

WEBSITE: www.soundmetrics.com

WARRANTY INFORMATION

SUPERVISORY KIT LIMITED WARRANTY

Sound Metrics Corp (SMC) warrants that the Supervisory Kit (“Product”) will be free from defects in materials and workmanship under normal usage for one year from the date the Product is shipped to the first purchaser of the Product (“Warranty Period”), unless SMC has agreed in writing to alter any of the foregoing terms.

Any implied warranties, including without limitation the implied warranties of merchantability and fitness for a particular purpose, shall be limited to the duration of this limited warranty, otherwise the repair, replacement, or refund as provided under this express limited warranty is the exclusive remedy of the consumer, and is provided in lieu of all other warranties, express or implied. In no event shall SMC be liable, whether in contract or tort (*including negligence*) for damages in excess of the purchase price of the Product, or for any indirect, incidental, special or consequential damages of any kind, or loss of revenue or profits, loss of business, loss of information or data, software or applications or other financial loss arising out of or in connection with the ability or inability to use the Product to the full extent these damages may be disclaimed by law.

Some states and jurisdictions do not allow the limitation or exclusion of incidental or consequential damages, or limitation on the length of an implied warranty, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state or from one jurisdiction to another. This warranty extends only to the first purchaser of the Product, and is not transferable.

This limited warranty is your exclusive remedy and applies to new Product which are accompanied by or sold with this written warranty when the Product is purchased from Sound Metrics or its authorized partner or reseller. Outside the United States and Canada your rights in warranty may differ from this written warranty. This limited warranty gives you specific legal rights, and you may also have other rights which vary from country to country or jurisdiction to jurisdiction.

If the Product proves defective during the warranty time period, please contact SMC by email or phone to discuss options for repair or replacement at the sole option of SMC. SMC will, in a timely manner, provide you an option for repair or replacement but that, in any event, SMC will repair or replace your Product in a commercially reasonable time. For warranty work, you must first contact SMC for a “Case Number” and provide details of the problem(s) - this allows preliminary preparation so your Product can be repaired or replaced as necessary. We ask that you ship the Product to SMC or SMC’s designated repair depot in its original protective storage case. The Product will be repaired or replaced and returned to you at no cost. SMC reserves the right to use functionally equivalent conditioned/refurbished/pre-owned or new parts in the case of repair or replacement. In most cases, it is not advisable to open or modify the Product in any manner. However, this may be the best initial action if time is critical. SMC is best qualified to make that determination and their personnel can provide step-by-step instructions if that course of action is determined best at SMC’s sole discretion. Any attempt to alter the Product in any manner or the misuse or abuse of the Product may void your warranty.

CONTACT US

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