



AC POWERED PULSAR MANUAL

ULTRASOUND TECHNOLOGY TO CONTROL ALGAE AND BIOFILM WITHOUT CHEMICALS



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NOTICE – WARRANTY AND TERMS

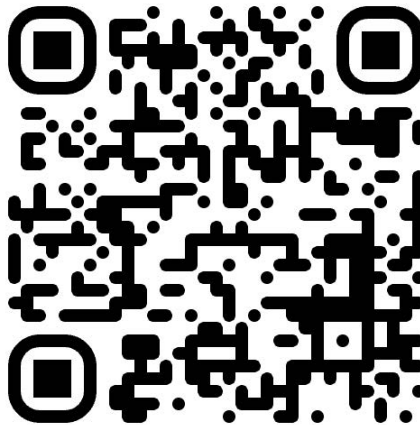
Warranty: The Limited Product Warranty is provided in this Owner's Manual. Please review before installation and operation.

Terms: By installing, operating, or using this equipment, Customer agrees to SonicPure's applicable terms and conditions available at:

<https://production.sonicpurebms.com/terms>

Portal/API (if applicable): Use of the reporting/telemetry portal and any APIs requires account registration and acceptance of portal terms presented during registration/login.

Support: support@sonicpure.com | +1-931-277-0456 | sonicpure.com





DO NOT WORK ON THIS PRODUCT UNLESS YOU HAVE READ AND UNDERSTOOD INSTRUCTIONS PROVIDED TO YOU BY SONIC PURE. CONTACT THE MANUFACTURER OR DEALER FOR REPLACEMENT GUIDE. PROPER CARE IS YOUR RESPONSIBILITY.



FAILURE TO FOLLOW INSTRUCTIONS
MAY

INJURY OR DEATH
PROPERTY DAMAGE
PRODUCT FAILURE
WARRANTY VOIDANCE



CALIFORNIA PROPOSITION 65
WARNING

This product can expose you to chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm.

For more information, go to
www.P65Warnings.ca.gov

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1 Introduction

Thank You for your recent purchase of the Pulsar Algae control apparatus for your algae control needs. Sonic Pure products and solutions control algae and biofilm safely, efficiently, and in an environmentally friendly way – without the use of dangerous chemicals.

2 Instructional Warnings

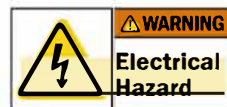
READ AND FOLLOW

1. Read and follow instructions that are on the product and/or provided with the product.
2. Use device(s) only where advised.
3. **DO NOT** use tools to install cables.
4. **DO NOT** operate Pulsar out of water.

IMPORTANT: FAILURE TO FOLLOW
INSTRUCTIONS MAY RESULT IN NON-WARRANTY

3 Safety Requirements

1. Read and follow instructions that are on the product and/or provided with the product.
2. Use device(s) only where advised.
3. Route all cords to remove trip hazards, possible vehicle damage, or damage from equipment with cutting blades, such as lawn mowers and hedge clippers.
4. If water animals are present in or near your water system, additional cable protection is recommended. Use nylon or polyester braided sheath.
5. Have more than one adult present while installing or working on unit(s).



IMPORTANT: FAILURE TO FOLLOW INSTRUCTIONS COULD RESULT
IN PERSONAL INJURY, LOSS OF LIFE, AND/OR PROPERTY DAMAGE.

4 AC Powered System

4.0 Overview

The AC Powered System receives power from an AC outlet. The outlet provides power to the AC Power Hub that uses a medical grade power supply to power our Pulsar system. Within the AC Power Hub, is our advanced communication device collecting telemetry metrics that syncs to a cloud interface for real time data viewing.

4.1 Safety Warnings

Pulsar Head:

- Do not touch Transducer or allow skin contact while unit is powered.
- Transducer cable should be located to avoid damage by vehicles, pedestrians, mowers, wildlife, etc.
- For high traffic areas, cable should be buried approximately 6 inches (15cm) below surface and/or wrapped in a protective sheath.

4.2 AC Connection:

- Product must be connected to a customer supplied GFCI protected AC receptacle.
- Use UL certified surge protectors.
- AC connection must be made to a dedicated breaker.
- Keep AC Power Hub out of direct sunlight.
- Obey State, Federal, and Local regulations if making outdoor accommodations for unit(s).

4.3 Assembly Components

AC Power Hub  QTY: 1	PULSAR HEAD  QTY: 1(SINGLE HEAD) QTY: 2(DUAL HEAD)	FLOAT  QTY: 1 PER PULSAR HEAD	AC INPUT CORD  QTY: 1 TYPE UPON REQUEST
AC Power Hub WALL MOUNT TABS  QTY: 4	10m ANCHOR ROPE  QTY: 10 METERS PER ANCHOR	DIELECTRIC COMPOUND  QTY: 1	CABLE  QTY: LENGTH PREDETERMINED BY SALES TEAM
¼" STAINLESS STEEL SCREW PIN WIDE D SHACKLE  QTY: 1	¼" STAINLESS STEEL SCREW PIN SHACKLE  QTY: 1	ANCHOR  QTY: 1 PER PULSAR HEAD	

4.4 Not Included with Kit

- Boat/Canoe/Raft – pending anchoring location as pre-determined by Sonic Pure sales team.
- Tools.

4.5 CABLE ALIGNMENT INSTALLATION:

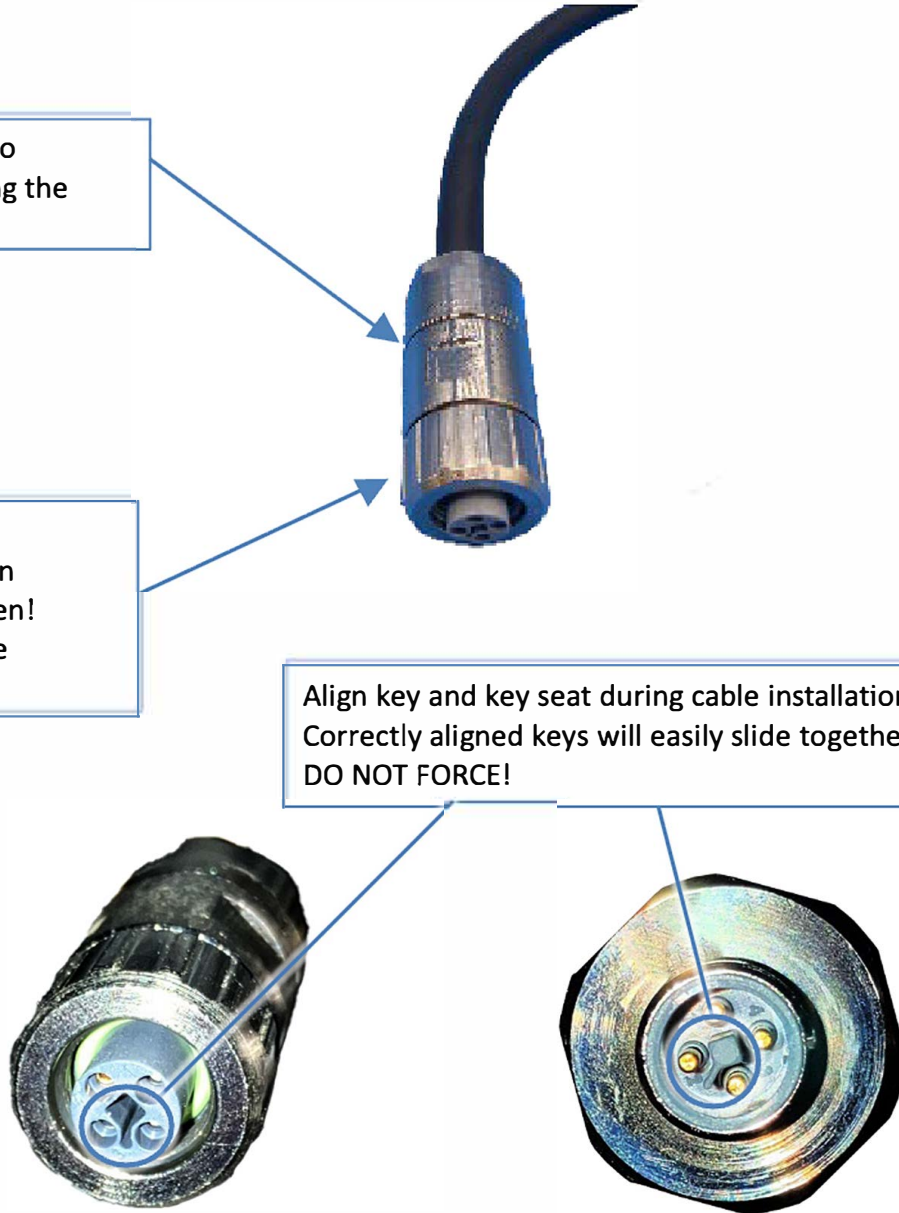
READ BEFORE PROCEEDING:

WHEN MAKING CABLE CONNECTIONS, APPLY PEA SIZE AMOUNT OF DIELECTRIC COMPOUND TO CONTACTS LOCATED WITHIN RECEPTACLES BEFORE ATTACHING CABLE. ALIGN KEY. HAND TIGHTEN CABLE CONNECTIONS. **NO TOOLS!**

Hold this area by hand! No tools are to be used during the tightening process.

This is the only part of the connector that moves. Turn this end clockwise to tighten! Overtightening will damage connector.

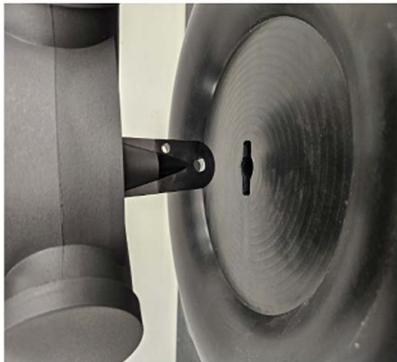
Align key and key seat during cable installation. Correctly aligned keys will easily slide together. DO NOT FORCE!



4.6 Installment Instructions

A. Pre-Deployment Preparation

i. Connect Pulsar to Float



1 Insert Sonic Head head through hole in float.



2 Securely Install Wide D ¼" Shackle through hole of Sonic Head Head.



3 Lay assembly top side down.

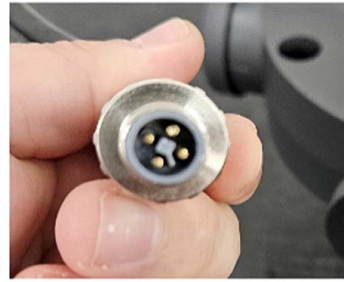
ii. INSTALL CABLE END AND ANCHOR SHACKLE



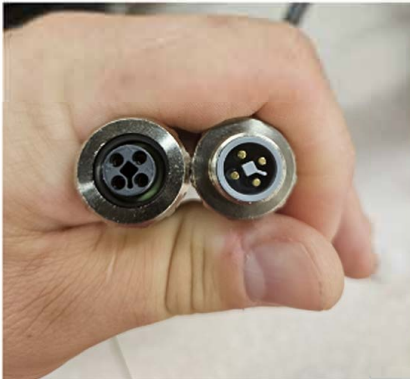
4 Locate Pulsar Head Receptacle Cap.



5 Remove caps from cable end and the pulsar.



6 Apply dielectric grease to the contacts on the pulsar head.



7 Align "Keys" from the cable and pulsar unit insert into the other.



8 Twist the top of the cable ends into one another. Hand tighten only. Do not force. There will be a gap.



9 Install 1/4" Screw Pin Shackle.

iii. FLOAT DEPLOYMENT

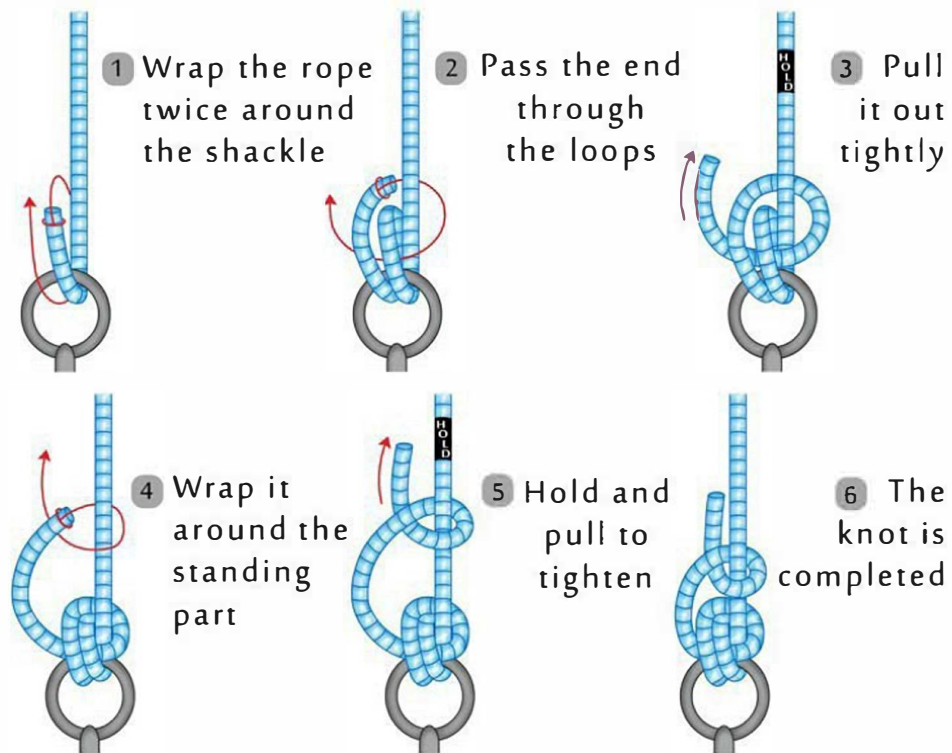


10 Tie rope to Anchor Shackle per instructions provided and lower into water at deployment location.



11 Pull slack from rope and tie to Pulsar Head shackle. Set Float/Head assembly into water oriented as shown.

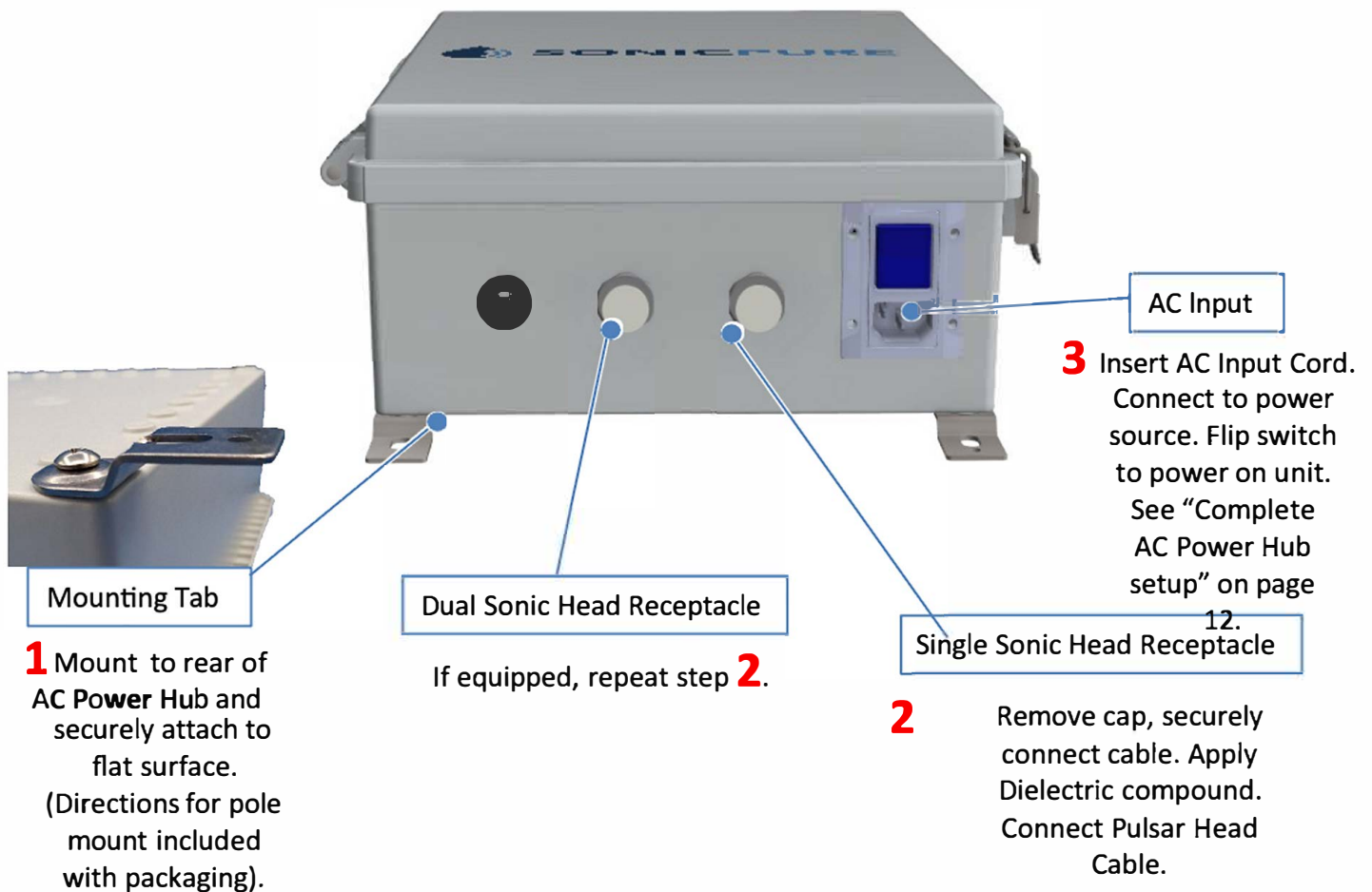
B. Anchor Hitch Instructions



SPACE INTENTIONALLY LEFT BLANK

C. AC Power Hub Setup

Using the below Image, prepare AC Power Hub



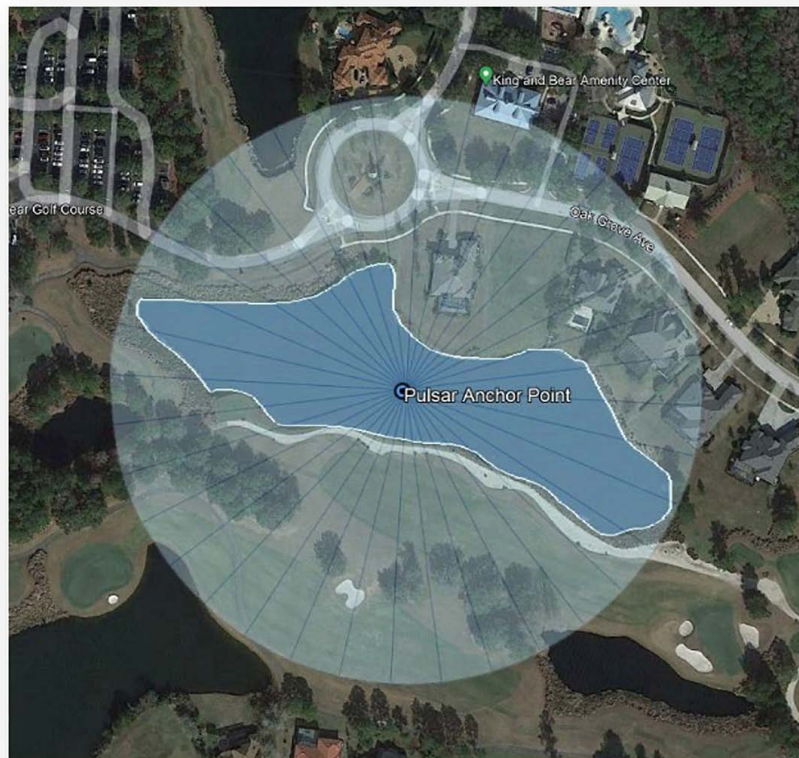
APPLY DIELECTRIC COMPOUND TO RECEPTACLE CONTACTS, SEE PAGE 6

D. Installing in the Water

The Pulsar algae control unit emits sound waves in a 360° pattern. The unit is designed to be suspended below the surface of the water. You will anchor the unit, suspended from the float, in the approximate location as pre-determined by the Sonic Pure sales team as the best location in the pond/water for optimal coverage.



360° Algae Control Zone



E. Installing in the Water Continued

- **Complete Sonic Head and Float Assembly.**

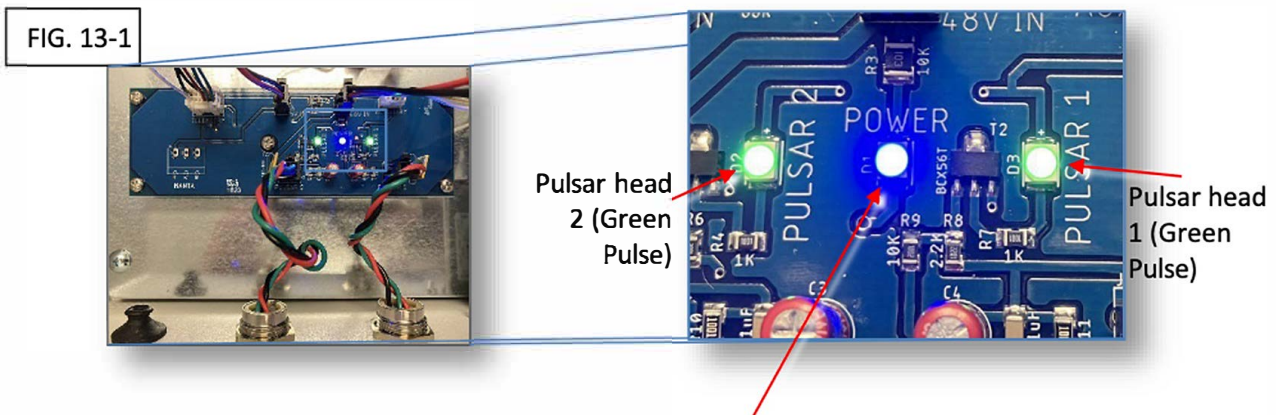
- Place float in water with Sonic Head submerged.
- Set anchor at location site (boat/canoe/raft may be required at this time).

NOTE: It does not matter if the Sonic Head or float rotates as the ultrasound signal is emitted in a 360° pattern.

F. Completing Installation

- **Complete AC Power Hub setup.**

- Mount AC Power Hub next to power outlet, do not plug in or turn on.
- Connect Sonic Head cable(s) to AC Power Hub (Page 6). Mark cable assuring it is visible and out of the way of people, animals, lawn mowers, etc.
 - a. Remove all packing material from inside AC Power Hub.
 - b. Plug AC Input Cord in AC Input.
 - c. Flip switch at AC Input once all steps are complete to power one unit.
 - d. Reference Fig. 13-1 for activity during proper operation.
 - e. Verify green LEDs are active *only* if Sonic Head Connection exists.



Power ON (Solid Blue Display) LED's light when powered on in accordance with system options.

Close AC Power Hub and secure latches. (Fig 13-2)



5 System Maintenance

The Pulsar family products come equipped with coating for anti-fouling on the ultrasound unit. Sonic Pure recommends a monthly cleaning of the unit with a soft cloth.

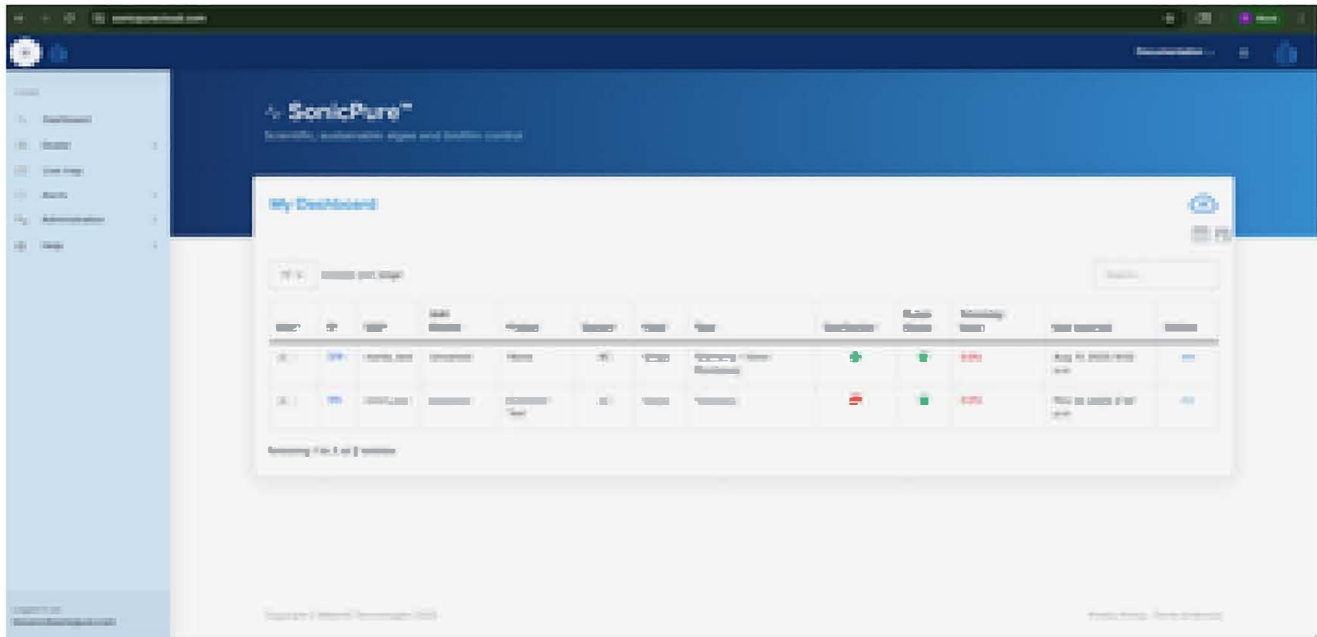
WARNING: METAL PLATES MAY BE HOT

1. Turn off power to AC Power Hub per switch indicated on Page 10.
2. Unplug AC Power Hub from power source.
3. Remove Sonic Head Float Assembly from water and wipe off with soft cloth.
4. Check cable to ensure no damage has occurred.
5. Place into water.
6. Plug AC Power Hub into power outlet.
7. Re-establish power per AC switch.
8. Open AC Power Hub and ensure LEDs are functioning properly.
9. Close lid and secure with latches.



6 Telemetry Setup

1. Go to sonicpurecloud.com/users/register
2. Register using the form in the link above. A user will be created and emailed to you.
Note: If you do not receive an email with login information within 24 hours please email support@sonicpure.com or go to sonicpurecloud.com/administration/create_ticket



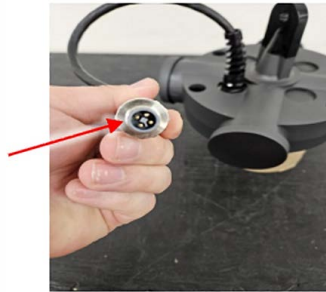
3. On the left side you will see a navigation bar. From top to bottom:
 - a. Dashboard
 - i. On the dashboard page you will see your project name at the top of the table. Underneath will be a list of all project devices. You can hover over each column name to get more information about each column. You can also click on each unit link under Unit ID to get details about the data from each unit report.
 - b. Live Map
 - i. On the live map page, you will see a marker on the map where each unit is located.
 - c. Alerts
 - i. On the alerts page you can set and view alerts. The alerts can be set to trigger an email or text message on a certain value reporting from the unit. This can be used to remotely monitor your devices activity and performance.
 - d. Help
 - i. On the help page you can click to submit a ticket for technical support. After filling out the form you can talk directly to a technical support agent for assistance.

7 Winterization

1. Place water probe in storage in a dry, safe area.
2. Power off unit by flipping switch at AC Power Hub to the "OFF" position.



3. Remove ultrasonic head from water.
4. Remove cable from head and immediately place cap in end of cable and onto sonic head.



5. Clean sonic head and place in storage in a dry, safe area
6. When redeploying, repeat installation instructions.

Solar panel limitations extend to its ability to turn sunlight into energy. While these parameters are -40°F(-40°C) to 185°F(85°C), there is not a lower temperature limit for exposure. Once aforementioned processes are completed, the rest of the construct can remain at its current location. Please be sure to use a damp cloth to clean solar panels when reactivating the unit.

8 Technical Specifications

Mechanical Data	Materials and Technical Data
Housing	Brass / Die cast stainless steel 316l
Housing Surface	Nickel plated
Inserts	Pbt fire protection class V-0
Contacts	Copper alloy/ Brass
Contact surface at point of contact	Gold Plated
Minimum mating cycles	>100
Seals/O-Rings	Fkm / buna-n/ Hnbr
Temperature Range	-40°f – 257°f (-40°c – 125°c) (k + l) -40°f – 185°f (-40°c – 85°c) (s + t)
Type of Contacts	Screw S + T
Protection	iP 67 / iP 69k (When Mated)
Connector diameter	20mm
Cable Conductor	Class K per ASTM B174
Cable Insulation	Thermoplastic Elastomer (TPE)
Cable Jacket	SJEOOW / SJOOW
Cable AWG	18
Cable Stranding	16/30
Cable Insulation Thickness	0.762mm
Cable OD	8.331mm
Cable Weight	0.09 kg/ meter
Cable Ampacity	10 / 30A
Cable Capacity	150A 300V
Cable Standards	UL 62 CSA C22.2 No. 49 OSHA Accepted Sunlight Resistant Oil Resistant Abrasion Resistant

	Electrical Reference	Electrical Specification
INPUT	Voltage Range	85 ~ 264VAC
	Frequency Range	47 ~ 63Hz
	AC Current	5A/115VAC 2.4/240VAC
OUTPUT	DC Voltage	48V
	Rated Current	9.5A
	Rated Power	456W

SonicPure LLC – Limited Warranty Statement
Effective January 1, 2026

1. Warranty Overview – Parts Only

This is a Limited Warranty provided by SonicPure LLC (“SonicPure”) to the original end user (“Purchaser”) of the SonicPure System (the “System”). The “System” refers to the complete ultrasonic algae control solution(s) sold by SonicPure. By installing, operating, or using the System, the Purchaser acknowledges and agrees to be bound by the terms of this Limited Warranty.

The warranty period will begin on the date of shipment, as verified by invoice.

SonicPure will supply, at its option, new, like-kind, or rebuilt replacement parts. “Parts” are defined as integral components of the SonicPure System.

SonicPure warrants that, for the time periods set forth in the table below, the System will be free from defects in materials and workmanship under normal use and approved applications. Any rented, repaired or replaced component or part of the System will be covered for the remainder of the original warranty period.

This Limited Warranty is limited to defects in materials and workmanship and does not guarantee that the System will achieve any particular level of algae, cyanobacteria, or biofilm reduction, as actual results depend on site conditions, nutrient loading, hydraulics, and other external factors beyond SonicPure’s control.

The table below specifies the warranty periods for key Parts within the System.

SonicPure Warranty Term Table

Warranty Period (1)	3 years	2 years	1 year
Common Components:			
Pulsar Transducer	X		
Pulsar Power Cables	X		
Telemetry Hardware	X		
Pulsar Kit Additional Items			
Power Hub	X		
Float	X		
Anchor System	X		
Shoreline Solar Kit Additional Items			
Solar Panel	X		
Solar Charge Controller	X		
Solar Power Supply Unit	X		
Battery Box Components (2)	X		
Batteries (2)		X	
Frame	X		
Float	X		
Anchor System	X		
Sentinel AIQ & AIQ+ Kit Additional Items			
Solar Panel	X		
Solar Charge Controller	X		
DC Power Hub	X		
Battery Box Components (2)	X		
Batteries (2)		X	
Frame	X		
Pontoon Float	X		
Navigation Lights			X
Bird Deflector			X
Water Quality Monitoring System (3)		X	

(1) For any installations that involve placing equipment in saltwater or highly saline/brackish environments, all warranty periods are reduced by 50%. For example, the 3-year warranty for the transducer goes from 3 years to 18 months.

(2) Battery box components do not include batteries. See separate line for battery warranty. Batteries installed in Shoreline Solar and Sentinels must meet required specifications provided by SonicPure or the warranty for Shoreline Solar and Sentinel units may be voided.

(3) The water quality monitoring system may be sold as a standalone unit or integrated into the Sentinel AIQ+ kit.

2. PROPER INSTALLATION

This Limited Warranty applies only to Systems that are either (a) installed by a SonicPure-authorized representative, or (b) installed by the customer in full accordance with (i) SonicPure's installation and operating instructions, and (ii) generally accepted trade practices.

3. TERMS OF WARRANTY

Before requesting service, please review the user instructions and technical documentation for your System to ensure that power is properly supplied and all cables are correctly installed.

To obtain warranty parts service, contact SonicPure technical support at +1-931-277-0456 or email support@sonicpure.com. Proof of purchase is required to validate this Limited Warranty.

To maintain warranty eligibility, retain all purchase documentation, follow the installation instructions, and confirm that the product and packaging serial numbers have not been altered or removed.

This Limited Warranty covers only the provision of replacement Parts as described above and, where SonicPure requires return of a component for inspection, SonicPure's in-shop diagnostic and repair labor for confirmed warranty defects. It does not cover any on-site labor or other costs incurred by the Purchaser or any third party in connection with installation, removal, reinstallation, service, maintenance, or repair of the System. The Purchaser is solely responsible for all such labor and associated costs. Please consult the applicable technical documentation regarding maintenance procedures.

This Limited Warranty shall not be modified or amended by, and no obligation or liability shall arise out of, SonicPure providing, directly or indirectly, any technical advice, information, or service to the Purchaser in connection with the System.

4. THESE LIMITED WARRANTIES DO NOT COVER:

- a.) Any System purchased from an unauthorized online retailer.
- b.) A System not installed, serviced, maintained, or operated in accordance with instructions and guidelines set forth in the installation, operation, maintenance, software, or engineering publications made available by SonicPure.
- c.) A System that had a serial number or any part(s) thereof altered, defaced, or removed in any way.
- d.) Any and all shipping or freight charges or damages arising from transportation of parts covered by the Limited Warranty.
- e.) Damage and/or failure caused by fire, water, wind, floods, impact damage from projectiles, earthquake, theft, riot, vandalism, force majeure, acts of war, or any acts of God.
- f.) Damage and/or failure caused by power surge, interruptions of electrical power, faulty power supply, improper wiring or installation, or fluctuations in electrical power.
- g.) Damage and/or failure caused by misuse, neglect, improper adjustment of user controls, incorporation with other products, or any modification, alteration, reconfiguration, or

customization of the System or its components.

h.) Damage and/or failure caused by locating or exposing the System to extreme weather or environmental conditions, or to corrosive chemical vapors and/or liquids, including but not limited to: salt air or spray, chlorinated water or vapor, fluorine vapor, formaldehyde, sulfur, or other components of formicary corrosion.

i.) Wear and tear or changes in appearance of the System that do not affect its performance.

j.) Replacement of fuses and replacement or resetting of circuit breakers.

k.) System installation or setup, or removal of a System from the location where it was originally installed.

l.) Incorrect matching of product or System.

m.) Any third-party component(s) or part(s) used to install the SonicPure System.

n.) Any discrepancy between promotional or advertising materials and the actual System specifications provided at the time of sale.

o.) Any software, firmware, or connectivity-related issues that are not caused by a defect in SonicPure-supplied software or firmware, including (by way of example) unauthorized modifications or updates, user-installed applications, loss or corruption of data, or interruptions, limitations, or failures in third-party wireless, cellular, or other communications networks used by the System.

p.) Damage or deterioration resulting from improper storage or failure to install within a reasonable period following delivery.

5. Warranty Disclaimer and Limitation of Liability

THE WARRANTIES STATED ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT OF THIRD-PARTY RIGHTS, AND FITNESS FOR A PARTICULAR PURPOSE. UNDER NO CIRCUMSTANCES SHALL SONICPURE BE LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES, OR OTHER ECONOMIC LOSS, WHETHER BASED ON BREACH OF WARRANTY, TORT, OR OTHERWISE, EVEN IF SONICPURE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT SHALL SONICPURE'S LIABILITY EXCEED THE PURCHASE PRICE OF THE SYSTEM.

Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above exclusions or limitations may not apply. Residents of California and Quebec are not required to register the System in order to obtain all of the rights and remedies applicable to this Limited Warranty.

6. DISPUTE RESOLUTION AND ARBITRATION

This Limited Warranty shall be governed by and construed in accordance with the laws of the State of Wyoming, without regard to its conflict of law principles. Any dispute, claim, or controversy arising out of or relating to this Limited Warranty, including its breach, termination, enforcement, interpretation, or validity ("Dispute"), shall be resolved exclusively through final and binding arbitration.