

# OWNER'S MANUAL



## Algae Control System



120-Volt AC Model:	210-240-Volt AC Model:		24-Volt AC Model:	24-Volt DC Model:
SS 100	SS 100-EU	SS 100-UK	SS 100-24-AC	SS 100-24-DC
SS 200	SS 200-EU	SS 200-UK	SS 200-24-AC	SS 200-24-DC
SS 400	SS 400-EU	SS 400-UK	SS 400-24-AC	SS 400-24-DC
SS 500	SS 500-EU	SS 500-UK	SS 500-24-AC	SS 500-24-DC
SS 600	SS 600-EU	SS 600-UK	SS 600-24-AC	SS 600-24-DC

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### IMPORTANT SAFETY INSTRUCTIONS

READ, UNDERSTAND, FOLLOW AND SAVE THESE INSTRUCTIONS

Operation, assembly details, parts listing, maintenance guidelines, troubleshooting hints and warranty information

#### WARNING

DO NOT operate device out of the water. This will result in the deforming of transducer head and will void your warranty.

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Date Purchased: _____
Serial Number: _____
Place of Purchase: _____
Address: _____
_____
_____

# Introduction

**Congratulations.** You have purchased an environmentally safe algae control system. Your SonicSolutions® device uses state-of-the-art ultrasonic technology to kill algae without harming other aquatic life such as plants or fish.

Please read and follow all of the instructions in this manual.

**If you have any questions concerning your SonicSolutions® device, call us at 1-866-KO-ALGAE (1-866-562-5423).**

**Thank you.**

## Important Safety Information

When installing this electrical equipment, basic safety precautions should always be followed, including the following:

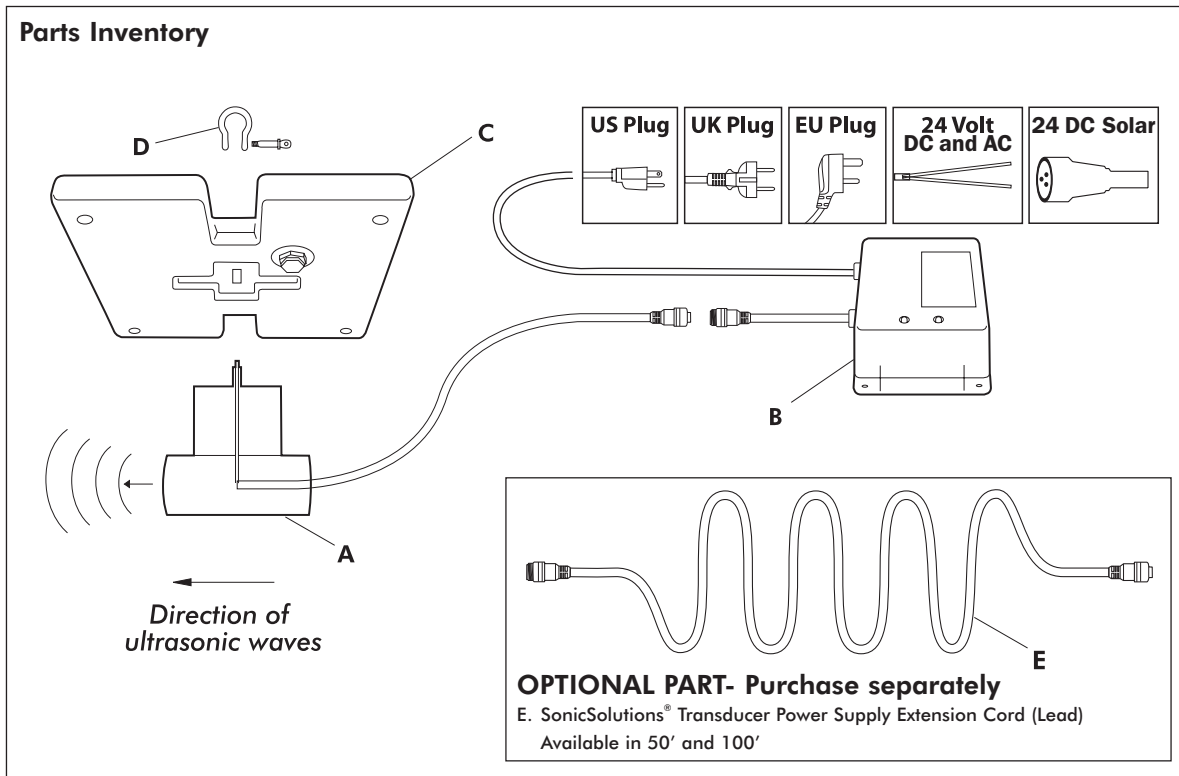
### READ AND FOLLOW ALL INSTRUCTIONS

1. **WARNING**—DO NOT operate device out of the water. This will result in the deforming of transducer head and will void your warranty.
2. **WARNING**—To reduce the risk of injury, DO NOT allow children to play with this device or any of its parts.
3. **WARNING**—Risk of electrical shock. Install only to a Class A GFCI [EU/UK earthed power supply—check relevant regulations] receptacle that has an enclosure that is weatherproof with the attachment plug cap inserted or removed.
4. **WARNING**—Locate the cord where it will not be damaged by lawn mowers, hedge clippers, propellers, and other equipment. If a electric power to the power supply has to run underground to a pond or lake, an armored cable should be used for this supply and run in a conduit under the ground to minimize the risk of damage. Always check with your local regulations.
5. **WARNING**—To reduce the risk of electric shock, replace damaged cords (leads) immediately. Use a qualified electrician to replace the cords (leads).
6. **WARNING**—DO NOT operate the SonicSolutions® device with a two bladed adapter plug or extension cord (lead). Doing so can result in serious personal injury.
7. **WARNING**—Risk of injury. May cause tissue damage. DO NOT place the transducer against your skin or body while the device is operating.
8. **WARNING**—Risk of electrical shock. Install only to a Class A GFCI receptacle that has an enclosure that is weatherproof with the attachment plug cap inserted or removed.

# Getting Started

## Parts

- A. SonicSolutions® Transducer Unit (**Note:** Direction of ultrasonic waves)
- B. SonicSolutions® Power Supply Box
- C. SonicSolutions® Float Unit (Models: SS 400, SS 500 and SS 600 only)
- D. SonicSolutions® Float Shackle

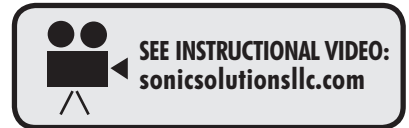


## Assembly

1. Position the **Float Unit (C)** with the white nut facing down and attach it to the **Transducer Unit (A)** with the **Float Shackle (D)**.
2. Mount the Power Supply Box to any convenient flat surface by using screws through the four mounting holes in the corners of the box. Attach the cord (lead) from the **Transducer Unit (A)** to the cord (lead) from the **Power Supply Box (B)** making sure the waterproof connection is securely fastened by completely tightening each flange.
3. If you are using an optional **Transducer Power Supply Extension Cord (Lead) (E)**, attach it to the cord (lead) from the **Power Supply Box (B)** and the cord (lead) from the **Transducer Unit (A)** making sure all waterproof connections are securely fastened by completely tightening each flange.
4. **DO NOT CONNECT** (plug in) the **Power Supply Box (B)** to the power source\* until the **Transducer Unit (A)** is in the water as this will result in the deforming of the transducer head and will void your warranty.

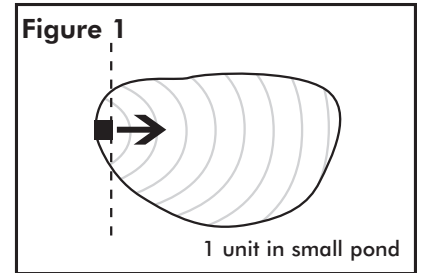
\*If using 24-volt DC power model with batteries see separate instruction booklet.

# Placement

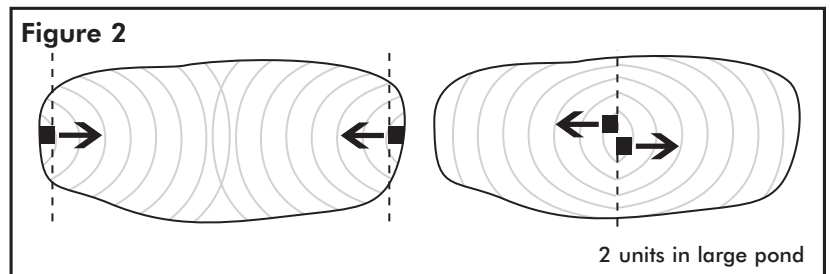


## How To Determine Where To Place The Device

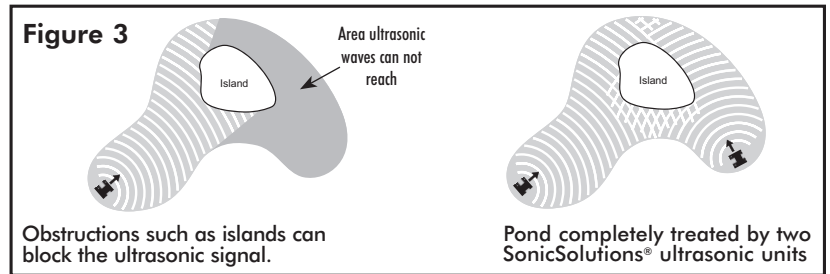
The SonicSolutions® Algae Control device emits directional ultrasonic waves that “fan out” at approximately 180° from the front of the transducer (See Figure 1). It is important to install your device to provide the optimal exposure of the ultrasonic waves to the body of water you are treating. You should position the unit in a minimum of 2’ of water, close to the edge of the water to minimize the area behind the unit that will not receive the ultrasonic waves.



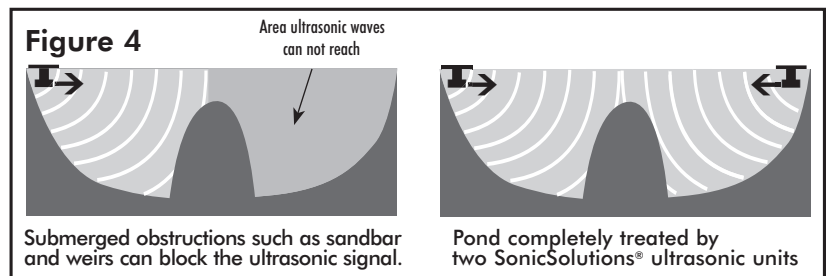
Large installations and certain shapes of ponds or lakes may require installation of more than one device. Multiple devices can be installed at opposite sides of a lake or pond or attached together pointing in different directions, depending on your site requirements (See Figure 2).



The SonicSolutions® device, like all ultrasonic devices, is a “line of sight” technology. Ultrasonic sound waves will not go around corners or navigate around islands that may be in your body of water. Ultrasonic sound waves reflect or bounce off of hard surroundings, such as concrete, rip-rap, and large rocks, islands, as well as submerged obstructions such as sandbars and weirs. Even thick weeds can block or degrade the signal strength. (See Figures 3 and 4).

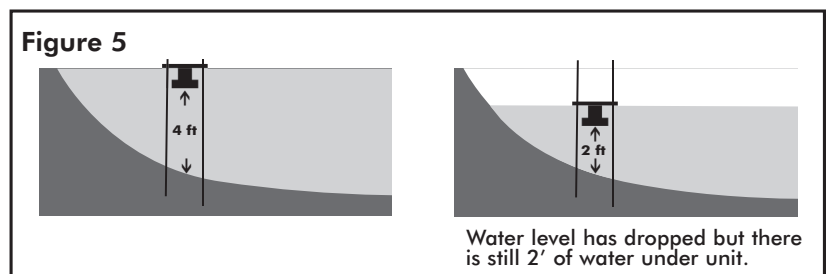


Make sure that the placement of the device takes into account any potential reductions in the water level. You must have a minimum of 2’ of water at all times. (See Figure 5)



### Need help?

For FREE placement assistance email us at [info@sonicsolutionsllc.com](mailto:info@sonicsolutionsllc.com) or fax your plan to: 413-247-9401. Make sure that your site-plan includes accurate dimensions and shape configurations of your water site. Also make sure that you identify and locate any submerged obstructions on your plans.



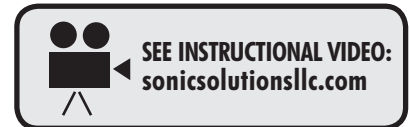
# Installation

There are several different ways to install your SonicSolutions® unit in the water depending on conditions. In an unlined pond you can use the Stakes or Poles Method. You can also mount the unit to a dock or floating raft. In a lined pond you can use the Cement Blocks Method to position the unit or use the Sled Mount Method (purchase kit from SonicSolutions®).

**Note:** *If your pond has a steep sloop or is unsafe for you to wade out in it, a small boat or a raft may be needed.*

## Unlined Ponds - Stakes or Poles Method

**Materials Needed:** poles or stakes, hammer



1. Place the stakes in the water. A minimum of 2' of water is required at all times. Use the float to judge the spacing of your stakes.



2. Place the unit in the water on the stakes, leaving the cable unconnected on the shore line. It is important to make sure that the float can go up and down with the water level. Make sure flat end of the transducer head (not the side with the cord) faces out.



3. Now that the unit is in the water\* you may plug the SonicSolutions® power supply into the GFCI outlet.



**\*It is EXTREMELY important you do not connect to power source before you put it in the water as this can result in damage to the transducer head and will void your warranty.**



# Installation



## Lined Ponds - Cement Blocks Method

This method works in locations where there will not be changes in depth of water. This method is designed to use the cement (or cinder) blocks as weight to anchor the unit in place and keep it pointed in the right direction, secured with four knots.

**Materials Needed:** waterproof rope (polypropylene),  
2 cement blocks

1. Cut two ropes based on your water depth and loop each one twice around each cement block.
2. Place the cement blocks in the water with the minimum of 2' of depth and then place the device into the water. Use the ropes to secure it to the cement blocks by tying the ropes to the 4 corners of the float. Make sure flat end of the transducer head (not the side with the cord) faces out.
3. Once the ropes have been secured to the four corners of the float, reposition the blocks (if needed) to tighten up the ropes and make sure the unit is pointed in the right direction.
4. Now that the unit is in the water\* you may plug the SonicSolutions® power supply into the GFCI outlet.

**\*It is EXTREMELY important you do not connect to a power source before you put it in the water as this can result in damage to the transducer head and will void your warranty.**



# Installation



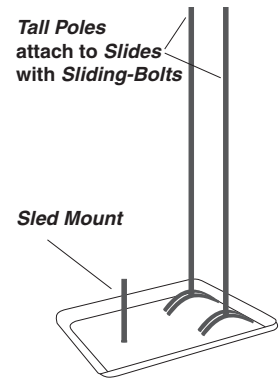
## Lined Ponds - Sled Mount Method

For installing your SonicSolutions® unit in a lined pond or lake, especially one with a fluctuating water level, we recommend using the Sled Mount Kit, which can be purchased from SonicSolutions®. It is simple to assemble and install, and will make it easier to access your device during periodic routine maintenance.

**Included in the Sled Mount Kit:** one stainless steel sled base; two stainless steel mounting poles; and two brass sliding-bolts.

**Addition Materials Needed:** waterproof rope, lubricant (such as petroleum jelly), cement block, short stake and a hammer

1. First, apply lubricant to the threads, slide bolts, and the channels of the four slides and then loosely install the mounting poles to the sled base using the sliding-bolts.
2. Attach a waterproof rope to the sled base in the hole and anchor it to the shore (above the high water mark and above the liner) with a stake. The rope will allow you to position the unit the proper distance from the shore and prevent the sled from sliding down the slope of the pond. The rope is also helpful when you need to retrieve the unit from the water for periodic cleaning.
3. In shallow water, place a cement block on the sled mount to provide weight (place over the mounting pole) and slide the sled assembly into the water to the proper location.
4. Adjust angle of the poles to vertical positions by turning the poles counter clockwise (a half turn) only to loosen them (just enough to allow you to set the angle. **Note:** Be careful not to turn the poles too far while loosening to prevent the sliding-bolts from falling off.) Once the poles are set vertically, tighten the poles by turning them clockwise.
5. Slide the SonicSolutions® unit onto the poles, facing the correct direction. Make sure flat end of the transducer head (not the side with the cord) faces out.
6. Adjust the anchoring rope to make sure there is no slack in the line to prevent the unit from sliding down the pond's slope.
7. Now that the unit is in the water\* you may plug the SonicSolutions® power supply into the GFCI outlet.



**\*It is EXTREMELY important you do not connect to a power source before you put it in the water as this can result in damage to the transducer head and will void your warranty.**

# Operations and Maintenance

To operate effectively, the SonicSolutions® algae control system must be on 24-hours-a-day continuously emitting algae killing ultrasonic waves.

## What To Expect

You will begin to see results from within a few days to three weeks, depending on the type of algae and how much algae was established in your water site. In addition, while certain algae will sink to the bottom when killed, some forms turn brown and float on the surface in mats of dead algae. If this occurs, **you should then remove it from the water**. Secondary blooms may occur due to the sunlight that can now reach the algae spores on the bottom that previously had not received sufficient sunlight to grow. Leave your device in the water and it will control the secondary bloom as well. This kill/bloom sequence may repeat two or three times as the “reservoir” of spores is exhausted. After that, the water should stay clear. Occasionally, after major rain events, you may experience algae blooms caused by large amounts of algae spores being washed into your water site. Depending on the amount of algae in the bloom, it can take a couple of days to a week for SonicSolutions® to bring the algae under control and clear the water.

## Easy-To-Read Indicator Lights

The SonicSolutions® device has two lights on the power supply box. The solid on green light indicates that the Power Supply is receiving electricity. The blinking green light indicates that your transducer is connected properly to the Power Supply and receiving power to produce the ultrasonic waves. This indicator light requires positive feedback from the transducer in the water and shows you that the SonicSolutions® device is working properly. It will blink every other second on average.



## Check that the power supply lights are lit

**Solid Green Light** = Power Supply is receiving electricity.

**Blinking Green Light** = Transducer is receiving power to generate ultrasonic waves.

## Maintenance Guide

It is important to keep the transducer head clean and free of algae or other scum buildup. We recommend that at least every 30 days you unplug your SonicSolutions® device from the power source, take it out of the water, wipe the face of the transducer off, put it back into the water and plug it back in. In most applications, once a month cleanings are sufficient, however, in a new installation you should check your unit(s) after initial two weeks to see if more frequent cleanings are necessary. Failure to keep the face clean will interfere with the ultrasonic waves and result in reduced effectiveness of the device.

1. Unplug the SonicSolutions® power supply\* from the Class A GFCI electrical outlet.

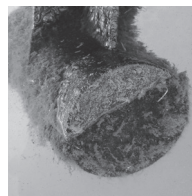
**\* It is EXTREMELY IMPORTANT you do not remove the SonicSolutions® transducer from the water before you unplug it from the electric outlet, as this can result in damage to the transducer head and will void your warranty.**



2. Once you have unplugged the power supply, retrieve the unit from water.



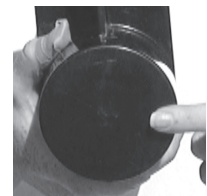
3. Wipe the transducer head with a soft sponge or cloth, removing dirt and build-up. In some cases with tough organic material or calcium deposits, it may be necessary to use vinegar or muriatic acid to clean the head. Do not use abrasive cleaners that would scratch the head.



**Dirty Head**



**Dirty Head**



**Clean Head**

4. Place unit back in the water facing the correct direction. Make sure flat end of the transducer head (not the side with the cord) faces out.



5. Once the unit is placed back in the water you may connect the SonicSolutions® power supply back into the power source.



# Troubleshooting

Check the following guide for possible cause of a problem before contacting SonicSolutions®, LLC, for service assistance.

Symptom	Causes	Solution
Both indicator lights are off	Electric power failure	Test and turn on power to grounded (earthed) power supply. (For power models install only to a Class A GFCI receptacle or equivalent.)
	Damaged power cord or damaged power supply box	Unplug and inspect for damage. Replace if necessary.
Both indicator lights are off (battery powered unit)	Dead Battery	Test, recharge and if necessary replace batteries.
Ultrasonic operation power indicator light is not blinking, but solid green light indicator is on	Bad connection to transducer unit Damaged transducer or power unit	Unplug, inspect cord (lead) attached to transducer. Clean and reconnect.
Algae is not dying	Dirt or debris on the face of the transducer may be interfering with the ultrasonic waves	Clean the face of the transducer regularly (read Maintenance Guide)

# Technical Specifications

EPA Registration #074929-MA-001

	Models	Power Input		UL Approved Power Supply	NSF Certification	Range*	Coverage*	
Residential	SS 100	US 120V AC 50/60Hz 0.5 Amps Max	EU/UK 240V AC 50/60Hz 0.5 Amps Max	E322023	NSF/ANSI 61	Small Tanks & Ornamental Ponds	—	Residential
	SS 100-24	US 24V AC, 1 Amps Max**	EU/UK 24V AC 1 Amps Max	—	NSF/ANSI 61		—	
		US 24V DC, 1 Amps Max***	EU/UK 24V DC 1 Amps Max	—	NSF/ANSI 61		—	
	SS 200	US 120V AC, 50/60 Hz, 0.5 Amps Max	EU/UK 240V AC 50/60Hz 0.5 Amps Max	E322023	NSF/ANSI 61	Medium Tanks & Ornamental Ponds	—	
	SS 200-24	US 24V AC, 1 Amps Max**	EU/UK 24V AC 1 Amps Max	—	NSF/ANSI 61		—	
		US 24V DC, 1 Amps Max***	EU/UK 24V DC 1 Amps Max	—	NSF/ANSI 61		—	
Residential or Commercial	SS 400	US 120V AC, 50/60 Hz, 0.5 Amps Max	EU/UK 240V AC, 50/60 Hz, 0.5 Amps Max	E322023	NSF/ANSI 61	400 ft/121.92 m	up to 2 acres	Residential or Commercial
	SS 400-24	US 24V AC, 1 Amps Max**	EU/UK 24V AC, 1 Amps Max	—	NSF/ANSI 61	400 ft/121.92 m		
		US 24V DC, 1 Amps Max***	EU/UK 24V DC, 1 Amps Max	—	NSF/ANSI 61	400 ft/121.92 m		
	SS 500	US 120V AC, 50/60 Hz, 0.5 Amps Max	EU/UK 240V AC, 50/60 Hz, 0.5 Amps Max	E322023	NSF/ANSI 61	500 ft/154 m	up to 6 acres	
	SS 500-24	US 24V AC, 1 Amps Max**	EU/UK 24V AC, 1 Amps Max	—	NSF/ANSI 61	500 ft/154 m		
		US 24V DC, 1 Amps Max***	EU/UK 24V DC, 1 Amps Max	—	NSF/ANSI 61	500 ft/154 m		
	SS 600	US 120V AC, 50/60 Hz, 0.5 Amps Max	EU/UK 240V AC, 50/60 Hz, 0.5 Amps Max	E322023	NSF/ANSI 61	600 ft/182 m	up to 8 acres	
	SS 600-24	US 24V AC, 1 Amps Max**	EU/UK 24V AC, 1 Amps Max	—	NSF/ANSI 61	600 ft/182 m		
		US 24V DC, 1 Amps Max***	EU/UK 24V DC, 1 Amps Max	—	NSF/ANSI 61	600 ft/182 m		

\* Range and coverage depends on location and conditions.

\*\* 24 volt AC units are compatible with any 24 volt AC low voltage lighting or irrigation power source.

\*\*\* 24 Volt DC units are compatible with any 24 volt DC power source.

Solar Power System, which includes two batteries, may be purchased separately from SonicSolutions®

# Warranty

## Limited Two (2) Year Warranty

SonicSolutions®, LLC warrants this product against defects in materials or workmanship for a period of two (2) years after the date of original retail purchase. During this period, SonicSolutions®, LLC will repair or replace a defective product or part, at their option, with a new or refurbished product or part without charge to you. You must deliver the entire product to our Authorized Service Center for service. Allow two to four weeks for repair or replacement. You are responsible for all transportation and insurance charges to our service center, except for failures which occur within ninety (90) days of the retail purchase date. If you are requesting warranty service within ninety (90) days of retail purchase, call our service center at 1 866-562-5423 or 1 413-247-9423 (from outside U.S. call 001-413-247-9423) for return shipping authorization. We will be responsible for all transportation and insurance charges to return the product to you throughout the entire two (2) year warranty period.

Return the device to: SonicSolutions®, LLC, 77B West Street, West Hatfield, MA 01088 U.S.A. Telephone: (413) 247-9423

NOTE: Product must be accompanied with proof of purchase in the form of a copy of the dated purchase receipt with the serial number of the device, and a description of the problem, and a phone number and contact name.

Upon receipt, SonicSolutions®, LLC will, at our option, repair or exchange the device for a new or refurbished device.

The above warranty is subject to the following conditions:

1. You must retain your bill of sale.
2. All warranty servicing of this product must be made by our Authorized Service Center.
3. U.S.A. warranty is effective only if product is purchased through an Authorized Dealer.
4. Warranty extends only to defects in materials or workmanship as limited above and does not extend to any product parts which have been lost or discarded by you; or to damage to products or parts caused by misuse, accident, damage caused by Acts of God, such as lightning; or fluctuations in electric power, improper installation, improper maintenance or use in violation of instruction furnished by us; or on devices on which repairs have been attempted by unauthorized person(s); or to devices that have been altered or modified without the expressed authorization of SonicSolutions®, LLC; or to damage to products or parts thereof, which have had the serial number removed, defaced, altered, or rendered illegible.
5. Repairs made under warranty do not extend the warranty period on the device beyond the original two (2) year warranty.
6. DO NOT operate device out of the water. This will result in the deforming of transducer head and will void your warranty.

All warranties implied by state law, including the implied warranties of merchantability and fitness for a particular purpose, are expressly limited to the duration of the limited warranties set forth above. With the exception of any warranties implied by state law as hereby limited, the foregoing warranty is exclusive and in lieu of all other warranties, guarantees, agreements and similar obligations of manufacturer or seller with respect to the repair or replacement of any parts. In no event shall SonicSolutions®, LLC be liable for consequential or incidental damages.

No person, agent, distributor, dealer or company is authorized to change, modify or extend the terms of this warranty in any manner whatsoever. The time within which an action must be commenced to enforce any obligation of SonicSolutions®, LLC arising under the warranty or under any statute, or law of the United States or any state thereof, is hereby limited to ninety (90) days from the date you discover or should have discovered, the defect. This limitation does not apply to implied warranties arising under U.S. state law or (outside U.S.) under law.

This warranty gives you specific legal rights and you may also have other rights which may vary from state to state (or country to country). Some states and countries do not allow limitation on how long an implied warranty lasts, when an action may be brought, or the exclusion or limitation of incidental or consequential damages, so the above provisions may not apply to you.

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# SONiC SOLUTIONS<sup>®</sup> LLC

Toll free: **1-866-KO-ALGAE** (1-866-562-5423)

77B West Street • West Hatfield, MA 01088

**sonicsolutionsllc.com**

This algae control system employs a:



Certified to NSF/  
ANSI 61

SONiCSOLUTIONS<sup>®</sup> power supply for outdoor use.

EPA# 074929-MA-001

SonicSolutions<sup>®</sup> is a registered trademark of SonicSolutions<sup>®</sup>, LLC.

# I2050 Rev C

**SAVE THESE INSTRUCTIONS**

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