

USER MANUAL

LG SONIC®

ULTRASONIC ALGAE CONTROL

MODELS

XXL, XL, TANK, POOL, SSS and PLUS MODELS

LG SOUND Gerrit van der Veenstraat 75, 2321 CD Leiden, The Netherlands www.lgsonic.com



LG

SOUND®

Ultrasonic Algae Control

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LG SOUND
Gerrit van der Veenstraat 75
2321 CD Leiden
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www.lgsonic.com

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1 Introduction

Congratulations on your purchase of the **LG Sonic**[®] algae control solution!

LG SOUND has designed and constructed your **LG Sonic**[®] device to the highest quality standards for years of reliable and accurate service. We hope you will enjoy using this device for a long period.

However, the algae control device can not function properly unless it is installed and maintained in the correct manner. Please read this document carefully in its entirety and follow the instructions for installation and usage of the **LG Sonic**[®] given, in order to ensure optimal performance and the best results.

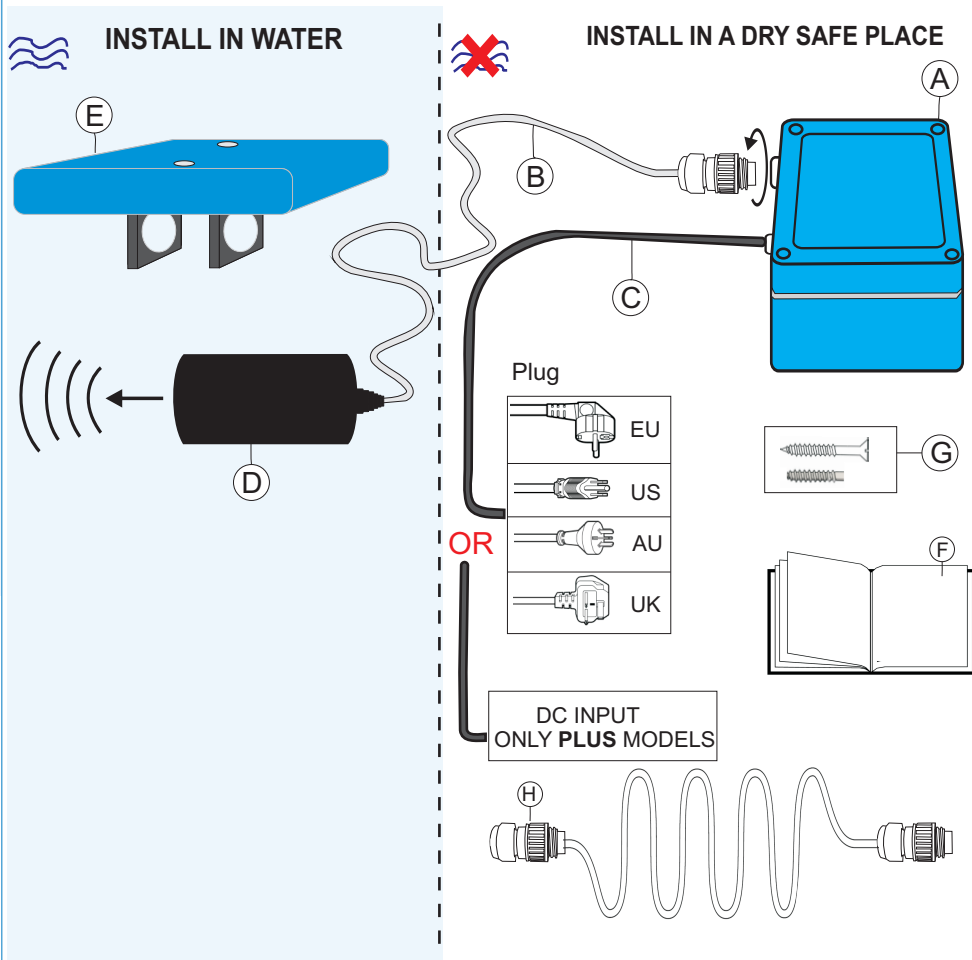
2 Safety instructions

- Ensure the power outlet used for the **LG Sonic**[®] has a ground fault circuit interrupter.
- Make sure the entire installation is out of children's reach.
- Never open the electronic box when it is in operation or while it is connected to power.
- Fasten the electronic box at least 2 meters from the edge of the water and ensure it is protected from direct sunlight and rain.
- Never place the electronic box under water to avoid electrocution.
- Handle the transducer with care and protect it from shocks or damage.
- Unplug the unit immediately if any of the two cables or the electronic box is damaged. Contact your dealer for further instructions.
- Always unplug the box before attempting to replace a fuse or perform any repairs, maintenance or other troubleshooting operations.
- Install the devices according to the instructions in chapter 4
- Avoid long term skin contact with the transducer in operation

Please check whether your device was delivered without any damage during transport. Ensure that there are no cracks or any broken parts.

If you notice even the slightest irregularity, please do not hesitate to contact your dealer before using your **LG Sonic**[®] device.

3 Components included



- (A) Electronic box
Only the **LG Sonic® Plus** models are provided with a aluminum (blue) box.
- (B) Transducer cable
- (C) Power cable
- (D) Transducer unit (Note direction of ultrasonic waves)
The color of the SSS and the pool transducer is white
- (E) Float (Optional part, purchased separately for the **LG Sonic® Pool** and SSS models)
- (F) User manual
- (G) Screw (4p)
- (H) Transducer power supply extension cord (Lead) (Optional part, purchased separately)
50- or 100-foot (15- or 30-metres)

4 Installation

Please always check if the voltage on the sticker of the electronic box matches with the plug type and your electricity network before installation. Please contact your dealer immediately if this is not the case.

CE
Product: LG SONIC ALGAE CONTROL
TYPE: <input type="checkbox"/> XXL <input type="checkbox"/> XL <input type="checkbox"/> Tank
<input type="checkbox"/> Pool <input type="checkbox"/> SSS
POWER SUPPLY:
<input type="checkbox"/> 220 - 240V AC, 50Hz
<input type="checkbox"/> 110 - 125V AC, 60Hz
SERIAL NO.: <input type="text"/>

4.1 Installation of the electronic box

The electronic box should be attached to a wall, with the cables facing downwards.

If you have a plastic box, please follow part 4.1.1 for installation details.

If you have an aluminium box please follow part 4.1.2 for installation details.



4.1.1 Installation of the plastic electronic box model

- 1) Open the electronic box.
- 2) Mark the fixing holes from the electronic box at the place where the box is to be mounted. Drill four corresponding holes into the wall.
- 3) Insert the four supplied screws into the fixing holes of the electronic box.
- 4) Mount the electronic box to the wall with the supplied screws.
- 5) Close the box carefully. Please note that the waterproof brim should be closed correctly.



4.1.2 Installation of the aluminum electronic box model

- 1) Remove the design strips on the sides of the box by carefully pulling them on both sides.
- 2) Mark the fixing holes from the electronic box at the place where the box is to be mounted. Drill four corresponding holes into the wall.
- 3) Insert the four supplied screws into the fixing holes of the electronic box.
- 4) Mount the electronic box to the wall with the supplied screws.
- 5) Carefully place the design strips back at the sides of the box.

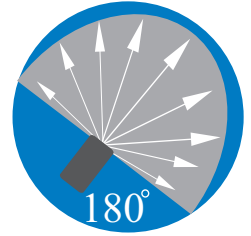


Make sure the connectors and wires always point down. Always install the electronic unit in such a way that it is protected from direct sunlight and rain. Use a separate enclosure if necessary.

4.2 Installation of the transducer

The transducer transforms the electrical signals produced by the electronic box into ultrasonic sound signals. These signals are inaudible. The transducer is a very sensitive instrument that needs to be handled with the greatest care.

The ultrasonic sound waves are issued by the transducer in a 180 degrees spread from the front of the machine. The device needs to be placed in such a manner that as much of the water surface as possible comes into direct contact with the sound waves. The strongest ultrasonic signals are those that come straight out of the transducer.



1. Determine the optimal location of the transducer:

a. Where as much of the water surface comes into direct contact with the sound waves

b. Where the front of the unit follows the water current and/or wind direction (for larger water surfaces above 5-10m²)

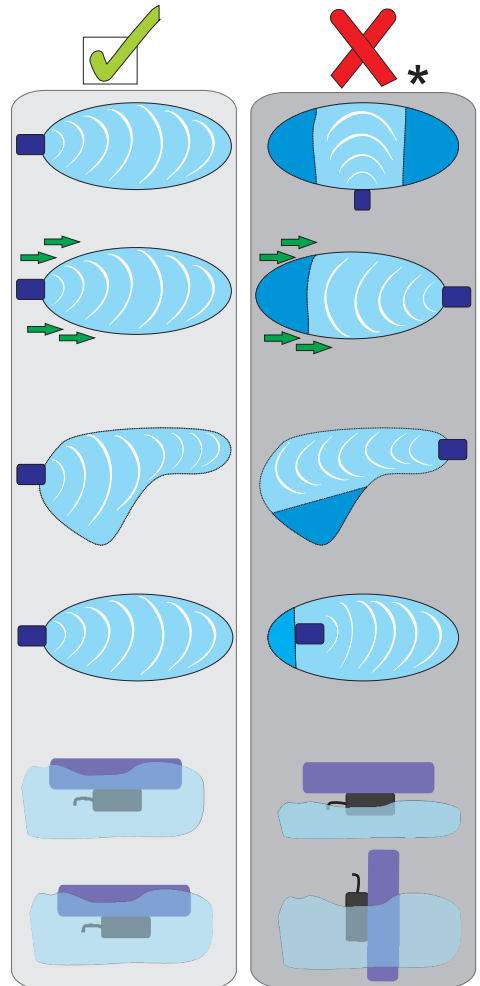
c. Where there are no corners outside the reach of the transducer, as this will greatly reduce the effectiveness of the device

d. With its backside as close to the water edge as possible

2. Place the transducer in the water

3. Ensure that the transducer is always completely below water surface

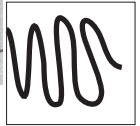
4. Always ensure a horizontal position of the transducer



* Dark area remains untreated

The cable between the transducer and the electronic box can NOT be lengthened. If you require a longer cable please contact LG SOUND

Spare cable should NOT remain wound. Due to the high frequencies, induction might be caused which could negatively influence the direction and quality of the sound waves. Leave the (transducer) cable un-winded, as this example shows.

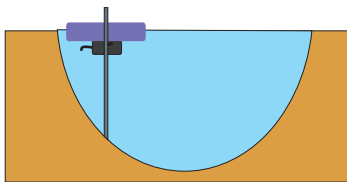


4.3 Installation of the float

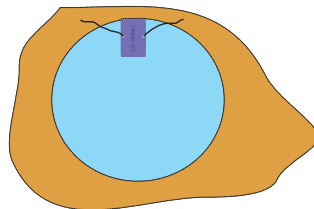
Only the following products are provided with a float: the **LG Sonic® XXL**, **XL** and **Tank**. This float ensures that the transducer always remains in a position of about 20 cm horizontally below water surface. In this way the sound waves will be reflected when they touch the water surface. The sound will be more efficiently spread throughout the whole water reservoir

The first 20 cm of the water column is where the highest floating algae (unicellular) concentrations can be found, especially during day time.

The float should be secured by means of a pole/spear or rope.



By means of a pole



By means of a rope.

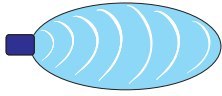
4.4 Installation of two units

Use multiple transducers when the water surface cannot be covered with one transducer

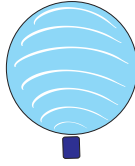
- Never place the transducers facing each other
- Never use multiple units if one unit can suffice
- It is advised to contact your dealer for advise on the usage of multiple units

For free placement assistance email us at info@lgsonic.com. Make sure that you have a site-plan with the accurate dimensions and configurations of your water reservoir.

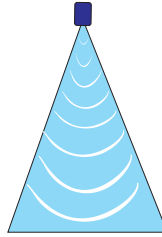
4.5 Installation examples



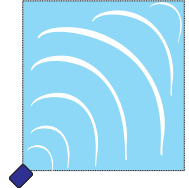
top view oval



top view circle



top view triangle



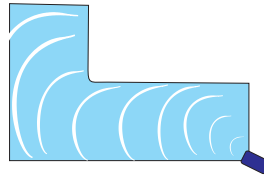
top view square



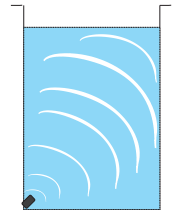
top view narrow rectangle



top view broad rectangle

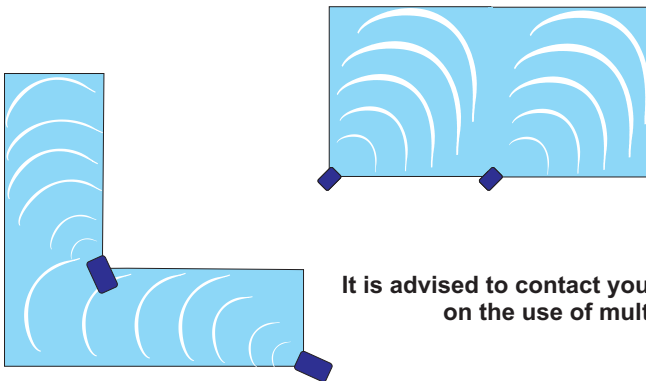


top view broad L shape



side view water tank /container

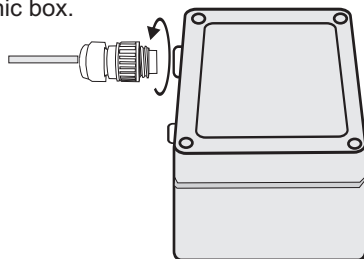
4.6 installation examples of two units



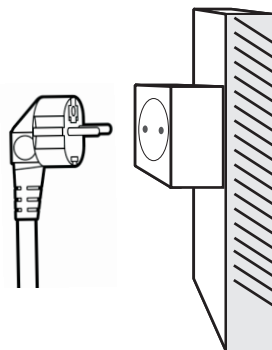
It is advised to contact your dealer for advice on the use of multiple units

4.7 Activation

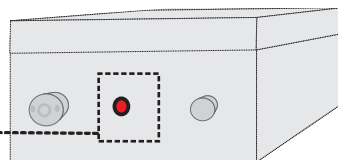
1. Connect the transducer cable to the electronic box.



2. Insert the power plug into the power outlet



3. Check if the light indicator is blinking



5 Usage

To operate effectively, the **LG Sonic**[®] algae control system must be operating continuously, 24 hours a day. The speed in which the algae are killed will depend on the concentration of algae in your water entity (for example, a lake, reservoir, swimming pool or pond) and the size of your device in relation to the quantity of water. The amount of time that passes until you begin to see results will thus vary from a few days to a few weeks.

Even after the water is cleared from algae, the **LG Sonic**[®] solution will be of use, as algae tend to come back if left untreated. Therefore, the **LG Sonic**[®] device should remain in order, to continue to keep the water mostly clear and free of algae.

After heavy rains new algae might be washed into your water reservoirs . Algae blooms might occur that the **LG Sonic**[®] algae control system will clear in, depending on the amount of algae, a few days to a few weeks.

Different types of algae respond differently to the **LG Sonic**[®] treatment. As certain types of algae die, they will float to the surface and should be removed as often as possible, but at least twice a week, as the blanket of algae will hinder the ultrasonic sound waves. Other algae will sink to the bottom, where they can easily be removed.

Finally, regular check whether the ultrasonic transducer and the float are still in the optimal position as per section 4.2.

6 Maintenance

Work described below can be performed by the user. Please contact your dealer for all technical maintenance and reparation activities .

6.1 Maintenance of the electronic box

Frequently inspect the electronic box for damage. Check the connection of power an transducer cable for damages. Damage to the electronic box can cause life threatening situations.

When damage to one or more parts of the **LG Sonic**[®] products is found, first disconnect the device from its power supply and contact your dealer. Your dealer can assist you with professional personnel to repair damages to the product.

6.2 Maintenance of the transducer

Clean the front of the transducer, where the ultrasonic sound waves are emitted, once a week. Failure to keep the front of the transducer clean will hinder the ultrasonic waves and ultimately result in reduced effectiveness of your **LG Sonic®** device.

Always disconnect power from the device before cleaning or handling it.

When the transducer is covered with calcium scale, use a lightly acid solution to remove it, such as kitchen vinegar.

7 Troubleshooting

7.1 The results appear negative

7.1.1 Filamentous algae (also known as string algae or blanket weed)

It is not unlikely that the amount of algae seems to have grown after the activation of your **LG Sonic®** system. This is caused by the reduction of the cohesion between the algal cells. The cells are thus less closely connected and will fill up more space.

Living filamentous algae feel very much like a wire and are difficult to pull apart. This changes when the algae are affected: the longer their cells have been dead, the easier they can be pulled apart.

Filamentous algae rise to the surface when they die, where they form a blanket causing the ultrasound waves to be absorbed. This blanket needs to be removed as often as possible, and at least twice a week, in order for the system to continue to operate correctly.

7.1.2 Roaming algae

Algae that grow on the surface of other materials may still be stuck to those surfaces after their demise, appearing as though they were still alive. However, if they are relatively easy to remove from the surface they are on, they are in fact dead. This is not valid for black algae.

Depending on the quantity of the algae, it sometimes takes some time before the algae appear to be dying (even for cyanobacteria, also known as blue green algae).

A very simple and effective way to test whether the roaming algae are indeed dead is the 'bottle test'. Fill a bottle with treated water from your reservoir and leave it resting for 24-48 hours in a quiet place. The bottle should not be closed and daylight should be included.

If the algae have sunk to the bottom or are now floating on the surface, they are dead. However, if the water remains greenish and unclear, the treatment has not yet worked.

Find the next section for instructions.

In a pond, where there is constant water movement (because of wind, fish, filters, fountains, and so on) it may take weeks before the algae are visibly dead.

7.2 The algae are not dying

1. Check whether the electronic box is in operation and the LED is on

a. If the LED is off:

- i. Check whether the power plug is connected properly to the power outlet
- ii. Check whether the device is tuned to the right voltage
- iii. Repeat the installation instructions in chapter 4
- iv. Contact your dealer if this does not solve the problem

b. If the LED is on:

- i. Check whether the led is on for 4 seconds and off for 1 second in a repetitive manner
- ii. Check whether the brightness of the led is the same when the transducer is connected to the electronic box, as when it is disconnected
- iii. When the led is less intense, moisture has been accumulating inside the electronic box
- iv. Contact your dealer for instructions in that case

2. Check whether the center of the front of the transducer (about 2 cm in diameter) is clean

a. The transducer appears to be clean

- i. The transducer is working

b. If the transducer is not clean and a calcium-like layer or biofilm has formed:

- i. The sound waves are not properly emitted
- ii. Clean the transducer with an acidic solution such as kitchen vinegar

3. Check whether any of the cables is damaged

- a. If they are, contact your dealer to replace your device

8 Guarantee

LG Sound, producer of the **LG Sonic**[®] device, has great confidence in its products and guarantees the quality of assembly and materials used. The warranty limits itself to material- and construction faults and has a term of TWO YEARS after purchase date.

In this period the necessary replacement of, by material- and/or construction faults, failing parts will be made available at no cost to the purchaser. Every additional claim on the warranty, compensation or consequential damage included, are here explicitly made exempt.

The above mentioned warranty is only valid under these conditions:

1. The device must be correctly installed following the instructions in this manual.
2. Every claim to the warranty becomes void when repairs, changes, adjustments or assemblies are made using parts that are not supplied by LG Sound or have not been approved of prior in writing. In addition, every claim becomes void if installation took place that did not comply with the local regulations.
3. The warranty is valid for normal use following the installation instructions. Damage resulting from usage for other means than for which the device is intended, overburdening, neglect or normal wear and tear are hereby made explicitly exempt.
4. Claims made during the period of warranty do not result in this period being extended
5. Every claim to warranty becomes void if the device is not cleaned at least once a year
6. Any expedition costs are to be carried by the buyer
7. The warranty can only be honoured if the statement of defect is accompanied by a copy of the invoice or proof of payment and a description of the defect.



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