

83739-1

11-22-2011

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U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs
Antimicrobials Division (7510C)
1200 Pennsylvania Avenue NW
Washington, D.C. 20460

EPA Registration Number:
83739-1

Date of Issuance:
NOV 22 2011

Term of Issuance:

Name of Pesticide Product: longen
Probe

NOTICE OF PESTICIDE:

- Registration
- Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Aquascape Designs, Inc.
901 Aqualand Way
St. Charles, IL 60174

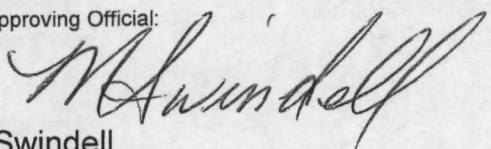
Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for re-registration of your product under FIFRA section 4.
2. Make the labeling changes listed below before you release the product for shipment:
 - a. Add the phrase "EPA Registration Number "83739-1."

Signature of Approving Official:

 Marshall Swindell
 Product Manager-33
 Regulatory Management Branch I
 Antimicrobials Division (7510P)

Date:
NOV 22 2011

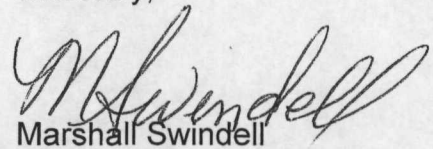
3. Based on the toxicity profile, the appropriate signal word for this product is "Caution".
4. Under the "Storage and Disposal" section on the product label, change the Pesticide Disposal subheading to read "Pesticide Disposal and Container Handling."
5. Add page numbers to each page on the product label.
6. The Confidential Statement of Formula dated November 3rd, 2011, is acceptable.

Submit three (3) copies of the final printed label prior to releasing this product for sale.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Sincerely,



Marshall Swindell
Product Manager 33
Regulatory Branch I
Antimicrobials Division (7510P)

Enclosure: (Stamped Labeling)

- A. IonGen™ Probe label
- B. Installation of the IonGen™ Probe
- C. Optional Label Claims
- D. IonGen™ System Instructions Manual

IonGen™ Probe
 ABN: *IonGen™ Replacement Probe*

For Use with the IonGen™ Electronic Algae Controller for Ponds and Pondless®
 Waterfall Systems

Active Ingredient:
 Copper (as metallic).....99.99%
Other Ingredients:..... 0.01%
 Total:..... 100.00%

Keep Out Of Reach Of Children

CAUTION

Refer to the product manual for complete directions for use and installation instructions.

EPA. Reg. No.: 83739-X
 EPA Est. No.:

Net Weight:

Manufactured For:
 Aquascapes, LLC
 901 Aqualand Way
 St. Charles, IL 60174-5303

ACCEPTED
 with **COMMENTS**
 EPA Letter Dated:

NOV 22 2011

Under the Federal Insecticide,
 Fungicide, and Rodenticide Act as
 amended, for the pesticide,
 registered under EPA Reg. No. 83739-1

18/4

A: IonGen™ Probe Label

IonGen™ Probe
ABN: *IonGen™ Replacement Probe*

For Use with the IonGen™ Electronic Algae Controller for Ponds and Pondless®
Waterfall Systems

Active Ingredient:
Copper (as metallic).....99.99%
Other Ingredients:..... 0.01%
Total:..... 100.00%

Keep Out Of Reach Of Children

CAUTION

Refer to the product manual for complete directions for use and installation instructions.

EPA. Reg. No.: 83739-X
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Aquascapes, LLC
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St. Charles, IL 60174-5303

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Under the Federal Insecticide,
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DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Graphic Burst (Controls (String) Algae)

The *IonGen™ Probe* fits inside the *IonGen™ System* an electric algae controller for Ponds, Pondless® Waterfalls, and other decorative waterfeatures. The *IonGen™ System* reduces unsightly (string) algae and helps reduce pond maintenance without the use of chemicals. A microprocessor inside the *IonGen™ System's* control panel causes the outermost copper atoms of the *IonGen™ Probe* to lose an electron, creating a positive ion. The positive ion attempts to flow from one of the probe's bars to the other and is swept away by the flow of water where the ion can begin to treat the water and reduce (string) algae. The *IonGen™ System's* control panel minimizes probe maintenance by using reverse polarity that helps reduce scale-build up on the probe's bars. The metal alloy in the probe are scientifically formulated and tested on Ponds, Pondless® Waterfalls, and Decorative Fountains to reduce (string) algae. The *IonGen™ System* is compatible with water containing fish and plants.

STORAGE AND DISPOSAL

Do not contaminate food or feed by storage or disposal.

PESTICIDE STORAGE: Store this product in a cool, dry place away from children.

PESTICIDE DISPOSAL: Dispose of recycling or put in trash.

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B: Installation of the IonGen™ Probe

Step-by-Step Installation for the IonGen™ Probe

Important: Before installing the IonGen™ System on an existing water feature, it is recommended to thoroughly clean the pond of as much algae and debris as possible. This will maximize the ion's effectiveness, and speed to achieve desired results. The more algae and debris present in the water feature, the longer it will take for the IonGen™ System to provide noticeable results.

1. Mount the IonGen™ System Control Panel

Mount the IonGen™ System control panel in the desired location; making sure the electrical cord reaches the GFI outlet. The IonGen™ System control panel is weather resistant, but steps to protect it from the elements, such as mounting the panel above the ground, are recommended to maximize its lifespan.

2. Install the Flow Chamber

The Flow Chamber for the IonGen™ System can be located in several areas within the water feature. The Flow Chamber is most effective when plumbed directly into the water feature's recirculating system. The Flow Chamber can also be submerged in a region of the water feature with a good water flow, such as in a skimmer box or the edge of a stream/waterfall. Make sure the electrical cord for the Probe reaches the Flow Chamber location. A 25' Extension Cable with Quick Connects (sold separately) is available, if needed. Follow the step-by-step installation instructions for the method you select.

Flow Chamber Option A:

Plumb directly into recirculating system

Cut and insert the Flow Chamber into the water feature's recirculating system. The Flow Chamber should be positioned after the water feature's pump and in a region of the plumbing line that will drain for servicing the replaceable *IonGen™ Probe*, as well as overwintering the fitting. It is recommended to use a pre-filter, such as a skimmer, prior to the Flow Chamber, in order to remove solids and debris that may interfere with the Probe. A small valve box may be used for easy access during maintenance.

- Glue the PVC Flow Chamber into position using PVC glue (not included). Follow the glue manufacturer's directions for proper steps.
- Install the Probe into the top of Flow Chamber making sure the water tight gaskets are the proper place. Hand-tighten the probe collar into position.
- Plug the connector from the Control Panel into the Probe fitting connector.

Flow Chamber Option B:

Skimmer or in-stream installation

The Flow Chamber can be submerged in a region of the water feature with a good flow of water, such as in a skimmer box or the edge of a stream/waterfall. The Flow Chamber must be completely submerged, and have sufficient water flow, in order to function properly. The Flow Chamber can be camouflaged into the edge of the stream using small rocks. Failure to provide sufficient water flow across probe will affect the IonGen™ System's performance. See *troubleshooting Table* for more information.

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Aquascape Inc., IonGen™ Probe (EPA Reg. No. 83739-X)
Label version (1) dated August 1, 2011

Under the Federal Insecticide,
Fungicide, and Rodenticide Act as
amended, for the pesticide,
registered under EPA Reg. No. 83739-1

Probe Maintenance

- The Replaceable *IonGen™ Probe* will typically last 1 or more seasons, depending on the usage, quantity of water and water chemistry of the water feature. The *IonGen™ System* display will read "00" when the probe is completely exhausted or there is a fault in the operation of the system.
- It is recommended to visually inspect the bars on the probe from time to time, and replace the probe if the bars are significantly worn.
- The *IonGen™ System* does contain a built-in, self-cleaning mechanism, but requires sufficient water flow to work properly. An excessive build-up of scale on the bars is an indicator that there may not be sufficient water flow. The scale will decrease the distribution of ions being released into the water, as well as affect the ability to raise and lower the Control Panels ionization level. Scale build-up can easily be brushed or scraped off the bars, immediately improving probe performance. If you notice scale repeatedly building up, you may want to move the probe to a location with higher water flow, such as plumbed directly into the main recirculating system.
- Starting out each year with a new probe is recommended and will significantly boost the performance of the *IonGen™ System*.

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C: Optional Label Claims

Optional Claims

- The IonGen™ System kills filamentous (string) algae that attaches to the rocks and gravel throughout the water feature.
- Drastically reduces pond maintenance caused by algae ~~without the use of chemicals~~
- Enhances the overall appearance of the waterfeature
- Simple to install
- ~~Does not harm fish and plants~~
- Energy efficient (Less than \$1.00 a month in electricity cost)
- Treats ponds, fountains, and waterfalls up to 25,000 gallons

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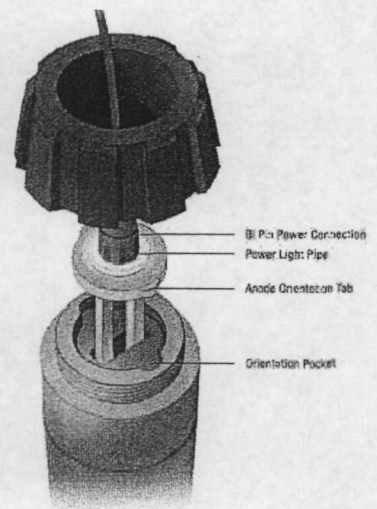
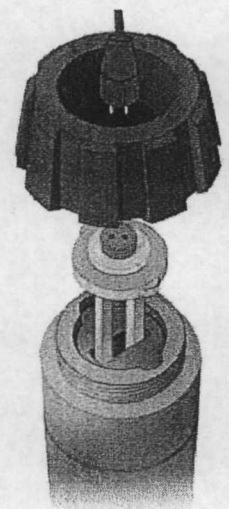
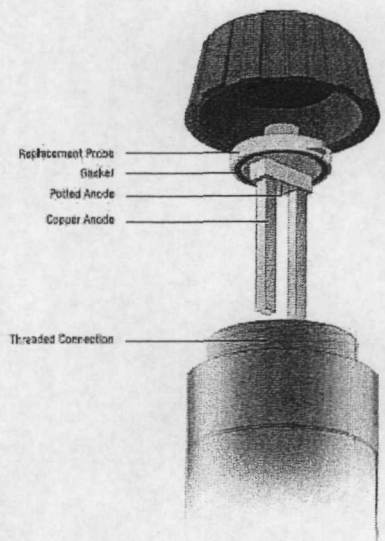
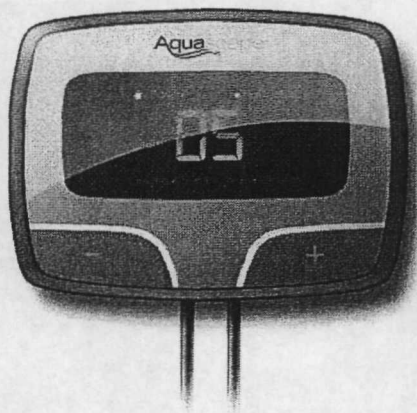
D: IonGen™ System Manual

IonGen™ System Instructions Manual

ACCEPTED with COMMENTS EPA Letter Dated:

NOV 22 2011

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide, registered under EPA Reg. No. 83739-1

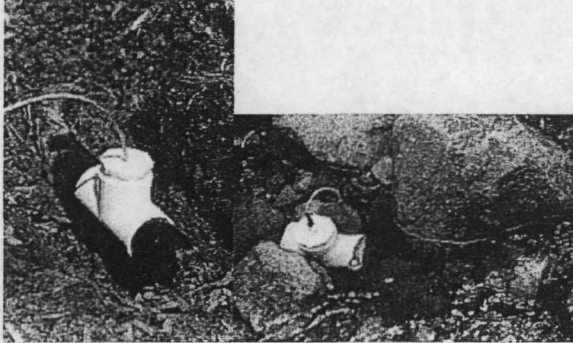


How does the IonGen™ System work?

- The IonGen™ Probe releases a calculated mixture of ions into the path of flowing water.
- The automatic control panel sends signals that slowly dissolve the replaceable metal probe. This ions control string algae, increases water quality, clarity and drastically reduces the need for traditional pond chemicals.

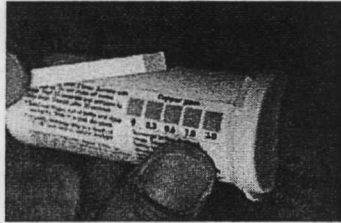
Easy to Install:

- Install the *IonGen™ Probe* flow chamber directly into the water feature plumbing or hide the chamber under water in an area with significant water flow



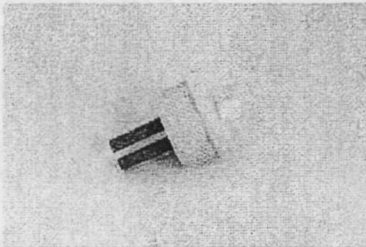
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- Mount the control panel
- Test the pond water with the included copper test kit and set ionization level



Features (arrows pointing to the device)

- Easy to use touch pad makes it simple to adjust the amount of ionization. Can be easily adjusted based on size of pond or water feature.
- Automatic electronic controller releases a premeasured amount of ions
- Electronic indicator automatically notifies you when the probe needs replacing. Best results are achieved when the probe is replaced annually.



- Comes complete with electronic control panel, outdoor rated transformer, probe flow chamber with replaceable probe, copper test kit and owner's manual

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Please Note:

For more information about our company or products please visit our website
www.aquascapeinc.com or give us a call (US) 1-866-877-6637 (CAN) 1-866-766-3426

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IonGen™ System

Electronic Algae Controller for Ponds, Pondless® Waterfall Systems and other Decorative Waterfeatures

Installation Instructions & Maintenance Owner's Manual

Congratulations on your purchase of the IonGen™ Probe.

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Graphic Burst (Controls (String) Algae)

The IonGen™ System is an electronic algae controller for Ponds, Pondless® Waterfalls, and other decorative waterfeatures. The IonGen™ System reduces unsightly (string) algae and helps reduce pond maintenance, without the use of chemicals. A microprocessor inside the IonGen™ System's control panel causes the outermost copper atoms of the IonGen™ Probe to lose an electron, creating a positive ion. The positive ion attempts to flow from one of the probe's bars to the other and is swept away by the flow of water, where the ion can begin to treat the water and reduce (string) algae. The IonGen™ System's control panel minimizes probe maintenance by using reverse polarity that helps reduce scale build-up on the probe's bars. The metal alloy in the probe are scientifically formulated and tested on Ponds, Pondless® Waterfalls, and Decorative Fountains to reduce (string) algae. The IonGen™ System is compatible with water containing fish and plants.

- A) IonGen™ Control Panel
- B) Flow Chamber
- C) Replaceable IonGen™ Probe
- D) Plug-in Transformer
- E) Copper Test Kit
- F) Ph/Total Alkalinity Test Kit (sold separately)
- G) 25' Extension Cable with Quick Connects (sold separately)

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Safety Precautions

- Read the Installation Instruction & Maintenance Owner's Manual before installing.
- Follow all local codes for installation.
- To reduce the risk of electric shock, connect only to a properly grounded, ground fault interrupter (GFI).
- Do not immerse the IonGen™ System's Control Panel in water.

Step-by-Step Installation for the IonGen™ Probe

Important: Before installing the IonGen™ System on an existing water feature, it is recommended to thoroughly clean the pond of as much algae and debris as possible. This will maximize the ion's effectiveness, and speed to achieve desired results. The more algae and debris present in the water feature, the longer it will take for the IonGen™ System to provide noticeable results.

1. Mount the IonGen™ System Control Panel

Mount the IonGen™ System control panel in the desired location; making sure the electrical cord reaches the GFI outlet. The IonGen™ System control panel is weather resistant, but steps to protect it from the elements, such as mounting the panel above the ground, are recommended to maximize its lifespan.

2. Install the Flow Chamber

The Flow Chamber for the IonGen™ System can be located in several areas within the water feature. The Flow Chamber is most effective when plumbed directly into the water feature's recirculating system. The Flow Chamber can also be submerged in a region of the water feature with a good water flow, such as in a skimmer box or the edge of a stream/waterfall. Make sure the electrical cord for the Probe reaches the Flow Chamber location. A 25' Extension Cable with Quick Connects (sold separately) is available, if needed. Follow the step-by-step installation instructions for the method you select.

Flow Chamber Option A:

Plumb directly into recirculating system

Cut and insert the Flow Chamber into the water feature's recirculating system. The Flow Chamber should be positioned after the water feature's pump and in a region of the plumbing line that will drain for servicing the replaceable *IonGen™ Probe*, as well as overwintering the fitting. It is recommended to use a pre-filter, such as a skimmer, prior to the Flow Chamber, in order to remove solids and debris that may interfere with the Probe. A small valve box may be used for easy access during maintenance.

- Glue the PVC Flow Chamber into position using PVC glue (not included). Follow the glue manufacturer's directions for proper steps.
- Install the Probe into the top of Flow Chamber making sure the water tight gaskets are the proper place. Hand-tighten the probe collar into position.
- Plug the connector from the Control Panel into the Probe fitting connector.

Flow Chamber Option B:

Skimmer or in-stream installation

The Flow Chamber can be submerged in a region of the water feature with a good flow of water, such as in a skimmer box or the edge of a stream/waterfall. The Flow Chamber must be completely submerged, and have sufficient water flow, in order to function properly. The Flow Chamber can be camouflaged into

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the edge of the stream using small rocks. Failure to provide sufficient water flow across probe will affect the IonGen™ System's performance. See *troubleshooting Table for more information.*

Operating the IonGen™ System

Power Indicator. – The Power indicator light will be illuminated green when the Control Panel is receiving power.

Ionization Indicator – The Ionization indicator light will be blue when the generator is ionizing.

Choosing Desired Ionization Level – The amount of ions being generated can be controlled using the up and down button. Depress the + or – button for 2 seconds to enter the setting mode. Raise or lower the ionization level using the + or – button. The ionization level can be raised from level 1 up to level 10. The setting mode will end 5 seconds after the final adjustments are made.

Operating Instructions

- Before using the IonGen™ System, please note the following:
 - If the total alkalinity of the water is less than 100 ppm, you'll need to increase the level of alkalinity.
 - If the total alkalinity of the water is above 250 ppm you will need to decrease the level of alkalinity. If alkalinity is more than 250 ppm it can be typically reduced by conducting a partial water change. Check to make sure your tap water is within the target water parameters.
 - Alkalinity (not hardness) can be determined using the pH/Total Alkalinity Test Kit sold separately (part #98953). Alkalinity levels outside of the recommended parameters will significantly reduce and possibly eliminate the effectiveness of the IonGen™ System to control the algae. See *Targeted Water Parameters section for more information.*
- Start-up of System
 - Turn on the pump and plug in the IonGen™ System
 - **Operating the IonGen™ System on a new water feature or a water feature with little to no algae-** Set the IonGen™ System to level 1 or 2. Follow the next step if algae growth begins to increase.
Important Note: Operate the IonGen™ System at a low level and only raise the ionization level if the quantity of algae becomes excessive. Maintaining the IonGen™ System on the low level will make sure the copper levels don't become too elevated, and also prolong the life of the probe.

Note: It is not unusual to have low or even no copper level readings on the test kit, no matter how high the IonGen's™ System ionization level setting. This is due to the copper being used within the water feature. Periodic copper testing will ensure that the levels are below the maximum level of .25 ppm.

- **Operating the IonGen™ System on an existing water feature with algae -** Set the IonGen™ System to the highest ionization level possible if there are significant levels of algae present in the water feature. In some water feature applications you may find that you are not able to raise the ionization level to the higher power setting (levels 7-10). This is typically due to the water chemistry of the water feature or the water flow rate across the probe. In most of these cases, the IonGen™ System will still produce sufficient quantity of ions to kill the algae. Be patient as it may take several days to a few weeks for noticeable results to occur. Using the included copper test kit, test the water over a period of days to ensure that the copper levels DO NOT rise above .25 ppm. The

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Aquascape Inc., IonGen™ Probe (EPA Reg. No. 83739-X)
Label version (1) dated August 1, 2011

ionization level can be lowered once the algae levels have decreased or the copper test kit indicates a maximum level of .25 ppm.

- o Pre-existing algae levels, poor water conditions, as well as the volume of water in the water feature are all factors that affect the speed at which the IonGen™ System will achieve desired results with the algae.
- o If the level of copper rises above .25 ppm, reduce the IonGen™ System down to one bar on the Ionizing Indicator Display or unplug the IonGen™ System until the copper levels fall below .25 ppm. A water change can also be conducted if the copper levels are significantly above .25 ppm.
- o In the case of a power failure the IonGen™ System Control Panel's internal memory will reset itself to the last setting before the power failure.

Maintenance

Probe Maintenance

- The Replaceable *IonGen™ Probe* will typically last 1 or more seasons, depending on the usage, quantity of water and water chemistry of the water feature. The IonGen™ System display will read "00" when the probe is completely exhausted or there is a fault in the operation of the system.
- It is recommended to visually inspect the bars on the probe from time to time, and replace the probe if the bars are significantly worn.
- The IonGen™ System does contain a built-in, self-cleaning mechanism, but requires sufficient water flow to work properly. An excessive build-up of scale on the bars is an indicator that there may not be sufficient water flow. The scale will decrease the distribution of ions being released into the water, as well as affect the ability to raise and lower the Control Panels ionization level. Scale build-up can easily be brushed or scraped off the bars, immediately improving probe performance. If you notice scale repeatedly building up, you may want to move the probe to a location with higher water flow, such as plumbed directly into the main recirculating system.
- Starting out each year with a new probe is recommended and will significantly boost the performance of the IonGen™ System.

Winterization Maintenance

- It is recommended to shut down the IonGen™ System in regions that have climates that experience cold temperatures during which algae growth does not occur. This will prevent elevated copper levels during the time of year when there is no algae growth and will prolong the life of the probe.
- The IonGen™ System Control Panel is weather resistant, but steps to protect it from the elements, such as mounting the panel above the ground, are recommended to maximize its lifespan.
- The Flow Chamber, when plumbed directly into the recirculating system, needs to be located in a region that will drain for servicing the replaceable *IonGen™ Probe*, as well as allowing the Flow Chamber fitting to over-winter.
- If shutting down the water feature during the winter, make sure the plumbing line is drained free of water. Failure to do so may cause water remaining in the plumbing line to freeze, potentially cracking the Flow Chamber.
- The Flow Chamber, when set in the skimmer or inside the pond, should be removed and stored inside.

Prior to restarting the IonGen™ System in the spring, it is a good idea to remove and inspect the Probe to ensure it is free of debris and scale build-up, and not exhausted or worn. Scrape away any scale build-up from the Probe's bars. Replace Probe if it appears to be close to being exhausted. See section above on Probe Maintenance for more information

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Aquascape Inc., IonGen™ Probe (EPA Reg. No. 83739-X)
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Troubleshooting Guide

Important: Before installing the IonGen™ System on an existing water feature, it is recommended to thoroughly clean the pond of as much algae and debris as possible. This will maximize the ion's effectiveness, and speed to achieve desired results. The more algae and debris present in the water feature, the longer it will take for the IonGen™ System to provide noticeable results.

Problem	Cause	Solution
1. Power Light not Illuminated	No AC power Controller failure	Check GFI and incoming power Contact Dealer or Installer
2. Ionizing Indicator Display reads "00"	Probe exhausted	Inspect and replace probe if exhausted Check to make sure all of the probe cable connectors are properly installed.
3. Ionization level not able to be raised to full power	Insufficient water flow through flow chamber Scale or debris on Probe Water chemistry make-up	In most of these cases the IonGen™ System will still produce sufficient quantity of ions to kill the algae as long as the units power level can be raised above 5. An excessive build-up of scale on the bars is an indicator that there may not be sufficient water flow. The scale will decrease the distribution of ions being released into the water, as well as affect the ability to raise and lower the Control Panels ionization level. The scale can be easily brushed or scraped off the bars which will improve the probes performance immediately. If you notice the scale repeatedly building up then you may want to move the probe to a location with higher water flow, such as plumbed directly into the main recirculating system. One simple solution that may help if the Flow Chamber is set in the skimmer or pump vault is to remove the probe fitting from the Flow Chamber and submerge the bare Probe into skimmer or pump vault. This will further improve flow across the Probe's bars. Water Chemistry also plays a role in the ability of the ionization level to be raised or lowered, as well as the effectiveness of the copper ions in the water. See Targeted Water Parameters section below the troubleshooting table.
4. Continued scale build-up on Probe Bars	Insufficient water flow across Probe	See #3 solutions

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Problem	Cause	Solution
5. Low copper level	Copper being used	It is not unusual to have low or even no copper level readings on the test kit, no matter how high the IonGen™ System's ionization level setting. This is due to the copper being used within the water feature. Use visual indicators, such as the quantity of algae in the water feature to determine if the ionization is working. Periodic copper testing will ensure that the levels are below the maximum level of .25 ppm.
6. High copper level	Ionizing level set too high	Reduce ionizing indicator to 1 bar or unplug Control Panel until copper level is below 0.25 ppm. A partial water change can also be conducted for quicker copper level decrease.
7. Algae levels remain high after prolonged use	<p>Low copper level</p> <p>Insufficient flow through Flow Chamber</p> <p>Debris stuck on Probe</p> <p>Water Chemistry outside of targeted water parameters</p> <p>Algae type</p>	<p>Raise ionization level</p> <p>See #3 solution</p> <p>See #3 solution</p> <p>See Targeted Water Parameters section below the troubleshooting table</p> <p>The IonGen™ System is very effective at controlling Filamentous String Algae. Some types of algae are less affected by copper than others. In these cases you may not have as noticeable results with the IonGen™ System.</p>

Targeted Water Parameters for Optimal Performance

To achieve the best results with the IonGen™ System, it is recommended that the water feature's water is within the water parameters listed in the table below. The water feature's water parameters can change during the season, especially in features that experience high evaporation. Many times a simple water change can help reset the water feature's water parameters. Alkalinity is an important parameter for the proper function of the IonGen™ System. One easy ways to raise low alkalinity is to use ordinary baking soda. Adding ¼ cup (0.15 pounds) per 1,000 gallons will typically raise the alkalinity by 10 mg/L (ppm). Raising the alkalinity should not be done all at once, but over a period of days. One easy way to lower high alkalinity is performing a water change.

Copper	Less than 0.25
Alkalinity	100 – 250 ppm

ACCEPTED
with COMMENTS
EPA Letter Dated:

NOV 22 2011

Under the Federal Insecticide,
Fungicide, and Rodenticide Act as
amended for the pesticide,
registered under EPA Reg. No. 83739-1

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IonGen™ Specifications

- Input Voltage: 120 Volts
- Input Frequency: 60 Hz
- Output Voltage: 12 V
- Output Current: 0.5A
- Plug-in Transformer: UL Listed, CSA Listed Rainproof Class 2
- Flow Chamber: Injection Molded Plastic
- Probe Material: 99% Copper
- Capacity: Up to 25,000 gallon water features

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