



POWER IONIZER

Hybrid System for Swimming Pools

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STOP!!

**DO NOT CONNECT POWER TO YOUR MAIN ACCESS
POWER IONIZER UNTIL YOU HAVE READ THESE
INSTRUCTIONS!**

"IMPORTANT SAFETY INSTRUCTIONS!

1. PLEASE READ AND FOLLOW ALL INSTRUCTIONS.

2. *WARNING*****

RISK OF INJURY.

- Never permit children to operate this product.

RISK OF ELECTRICAL SHOCK & HAZARD:

- Connect transformer only to a proper-sized grounding type receptacle protected by a Ground-Fault-Circuit-Interrupter (GFCI) Contact a qualified electrician if you cannot verify that the receptacle is protected by a GFCI.
- **DO NOT** remove transformer power supply cord grounding prong. Doing so could result in serious injury or death.
- **DO NOT** bury the electrical cord. Place cord out of the way of lawn mowers, hedge trimmers and other electrical equipment.
- Replace a damaged electrical cord immediately.
- **DO NOT** use an extension cord to connect the transformer to an electrical supply. Provide a properly located outlet.

3. SAVE THESE INSTRUCTIONS.

GETTING STARTED!

NOTE: In order to avoid immediate staining, make sure any Marcite Finish pools cure at least 90 days before your Power Ionizer System is used.

Water Management:

1. If your water contains iron, it must be removed before you start your Ionizer. This can be accomplished by adding a metal remover, which is available from your pool dealer. It should be circulated in the water for approximately 48 hours. Your filter system should then be cleaned or backwashed. Turn your Power Ion System "Off" until the iron is removed from your water.
2. Please test and balance the levels of your pool water.

	<u>Ideal Range</u>
pH	7.2 - 7.8
Total Alkalinity	80 - 140 ppm
Calcium Hardness	200 - 350 ppm
Total Dissolved Solids	1,000 - 2,000 ppm

NOTE: Balance your calcium hardness first, if necessary. Then the Total Alkalinity should be adjusted before adjusting the pH. *More details on the chemicals required to adjust your levels will be found in the Water Management and Troubleshooting Pamphlet provided.

NOTE: Stabilizer is not needed and may, at high levels, cause purple stain with high levels of copper in the water.

3. If the Total Dissolved Solids (TDS) in the water is less than 1,000 ppm, it will be difficult to build up a copper residual. The TDS can be raised by adding sodium chloride (pure salt) or water softener salt to the water. One pound (1 lb.) of sodium chloride will raise the TDS by 12 ppm in 10,000 gallons of water.
4. Shock your pool water with one pound (1 lb.) of Refresh per 10,000 gallons. You must maintain a chlorine residual of 1.0 to 3.0 ppm in your pool water for 2 to 3 days (the time generally required to reach the adequate ion residual level in your pool). Chlorine levels can be maintained with slow dissolving chlorine tablets (read manufacturer's instructions for proper use). It is only necessary to maintain a chlorine residual until your ion residual reaches 0.3 to 0.5 ppm.
5. Your Filtration System should be in operation through the water balancing process. The Power Ion System will activate the unit automatically once it has power and water flow is achieved. At this point in time, adjust your Power Ion Level Control to three (the "Active" light signifies operation). We recommend continuous water circulation or filter operation to speed the residual building process.

*** SET CONTROL TO LOWER SETTING IF RED SERVICE LIGHT COMES ON.**

NOTE: It is important to check your copper level daily when starting up. It may only take a few days to build the residual with ideal conditions.

6. Check the copper residual daily until it has reached between 0.3 - 0.5 ppm. This should take approximately 2 - 3 days once the TDS level reaches 1,000 ppm. Once the recommended copper residual has been reached, you will need to carefully monitor the level setting on the Power Ionizer. Each pool has its own personality based upon usage and environment. Set your daily pump run time to the number of hours as recommended by your pool dealer. Continue to check your copper level every second day. If it continues to rise, turn the Power Ion Level Control down. If it starts to drop below 0.3, turn the Power Ion Control up. Once your copper residual has stabilized between 0.3 - 0.5 ppm, you can revert to testing your water on a weekly basis. It is no longer necessary to maintain a chlorine residual.

NOTE: Adjustment to your Power Ion Level Control will increase or decrease the residual level in your pool in conjunction with the length of your filtration cycle. For a longer filtration cycle, lower your Ion Level Control. For a shorter cycle, turn up your Power Ion Level Control.

Water Testing and Oxidizing

- 1 Your Power Ion System is introducing copper and silver into your pool water which attack bacteria, viruses, algae, etc. However, it cannot remove the dead organisms and bather wastes which accumulate in the pool water. This is done by oxidizing or shocking. Your water balance is also very important and these parameters should also be checked and adjusted, if required, on a weekly basis. Be sure that your pump is still going to run for a few hours after you balance and oxidize your water.
- 2 A maintenance calendar has been included to reference for your convenience. NOTE: Under normal conditions, oxidizing is required every other week. However, if your pool is heavily used and the temperature becomes very hot or if you get a severe rain storm, you may have to oxidize more frequently. The first signs of a need to oxidize are the water losing its sparkle and/or an oily film developing on the surface of the water.

NOTE: If the copper residual gets excessively high, turn the Power Ion Level Control setting on your Power Ion System to "Off" immediately. Ensure that the water balance parameters are in check and allow the copper residual to come down on its own.

NOTE: The electrode bars are eroding while the Power Ionizer is used. Once you achieve the desired copper level and level control setting, over time you will need to increase that setting slightly to maintain that same copper level. Eventually you will have to set the control at "Maximum" and, once the bars have eroded to the point that they are no longer effective, your "Chamber" indicator will come on. At that point, you will have to change your Power Ionizer Chamber, which is recommended after one swimming season.

POWER ION POOL MAINTENANCE CALENDAR

(an example of monthly pool care)

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	2	3 Test pool water and balance levels.	4	5	6	7 Shock with 1 lb. of Refresh shock per 10,000 gallons.
9	10	11 Test pool water and balance levels.	12	13	14	15 Add one pint of Cleanse per 10,000 gallons.
15	16	17 Test pool water and balance levels.	18	19	20	21 Shock with 1 lb. of Refresh shock per 10,000 gallons.
22	23	24 Test pool water and balance levels.	25	26	27	28 Add one pint of Cleanse per 10,000 gallons.
29	30					

POWER IONIZER UNIT INSTALLATION INSTRUCTIONS

Note: In order to avoid immediate staining, make sure any Marcite Finish pools cure at least 90 days before your Power Ionizer System is used.

• Electrical Hook-up

CAUTION:

- Do not connect power to your Power Ionizer until you have followed the System Installation Instructions.
- Alteration of any electrical cord will render the warranty null and void.
- Ensure that your electrical hook-up conforms with all local and national electrical codes.

Your 120 volt Power Ion System must be plugged directly into a properly grounded, GFCI protected receptacle with the cord provided.

*****Please Reference Safety Instructions Before Proceeding!*****

If a GFCI protected outlet has been installed, you are now prepared to install your Power Ion System.

WARNING: If your system includes a gas heater, be sure to install your Power Ion System at least 18" from the heater unit.

SYSTEM INSTALLATION

1. Turn your pool filtration system off. Plug both the water suction and return fittings on your pool to prevent any water loss during system installation.
2. Disconnect the water return hose from your filter unit and remove the connecting threaded fitting from your filter. Apply teflon tape to the fitting and re-install it into the female pipe thread end of your chamber.
3. Apply teflon tape to both ends of the connector fitting included with your system. Carefully thread it into your filter return port (DO NOT OVERTIGHTEN).
4. Thread the other end of the connector fitting into the return side of the filter tank.
5. Open both your suction and return lines to your filter system and inspect for any water leaks. Turn your filter system on and connect power to your Power Ion System.

• System Features

There are two(2) Indicator lights located on the side panel of the POWER IONIZER.

"Active"- indicates the Power Ionizer is attached to a live power source, and the electrodes are receiving power.

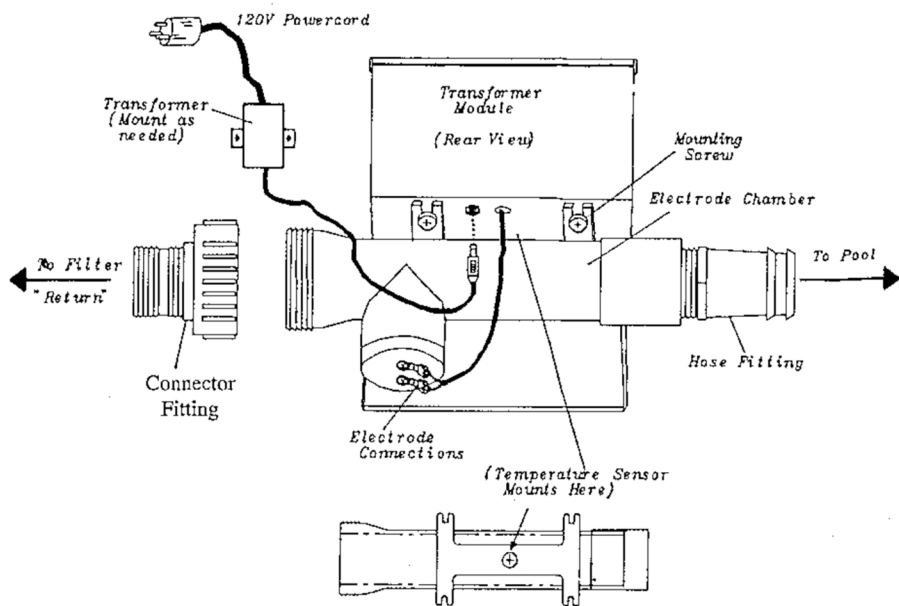
"Chamber"- indicates the electrodes are not producing ions and that it is time to replace your Electrode Chamber.

Your "Level Control" will adjust the rate at which copper and silver ions are dispensed into pool water. Follow the instructions under the "Getting Started" sheet, paragraphs 4 and 5, to use this control properly.

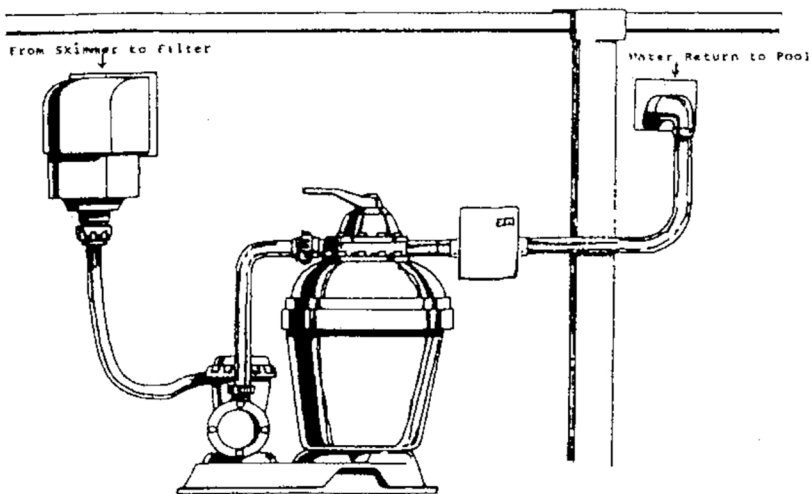
• Temperature Display

The Temperature Display is provided to allow you to know the approximate temperature of the water in your swimming pool with a glance from a distance, provided your filtration system is operating at the time.

After installation, if your Power Ionizer faces the wrong direction to see the display, it can be reversed by simply removing the four (4) mounting screws that secure the Transformer Module to the Electrode Chamber and turning it around. If you do this, just be careful not to damage the temperature sensor cable when you re-attach the Chamber to the Module. (See "Replacing Your Electrode Chamber" for an illustration.)



"ABOVE-GROUND POOLS"



This pamphlet was designed to help you reduce the time, effort and cost of maintaining your pool, while you improve the quality of water. It's both a guide to healthy alternatives and a primer on water chemistry that will help you understand Power Ion System water purification. We believe the more that you know, the healthier and more enjoyable your family's swimming experience will be. Enjoy and thank you again for your business!

A Fresh Look At THE BASICS

To have pure water in your pool, you need to manage:

- **Quality Water Circulation and Filtration.** The continuous movement of water necessary to filter out debris and circulate in oxidizers.
- **Purification.** Disinfecting and oxidizing (burning off) harmful micro-organisms. The Power Ion System releases natural minerals into your water.
- **Water Balance and Stability.** Water is sensitive to changes in pH, Total Alkalinity and Calcium Hardness. Your Power Ion System makes water balance easier to maintain. Unlike chlorine and bromine, the Power Ionizer is pH neutral.
- These three processes affect each other directly. As a result, you need a maintenance program that keeps them all in balance. One of the biggest complaints about chlorine and other chemicals is that they often create a "see-saw" effect in the water's pH and Total Alkalinity that can only be corrected by adding more chemicals, making stability and balance difficult to maintain. Your Power Ion System will reduce this fluctuation.
- **Circulation and Filtration.**
Circulation is essential since it helps ensure that water will not become a breeding ground for bacteria, algae and viruses. **Filtration** is also essential since it removes debris from water. However, most bacteria and viruses are smaller than the finest filter screens, so you must also purify your pool water.
- **Purification.**
Pure water is clear, refreshing, healthy and free of micro-organisms that dirty your pool and cause disease. Maintaining pure water requires the removal of harmful micro-organisms through disinfection and oxidation.
- **Disinfecting.** Chlorine is a potent chemical element first used as a bleaching agent in England 160 years ago. In this century, it has also been used to disinfect water. While chlorine kills harmful living organisms, it is so powerful it can create a very uncomfortable swimming environment. Chlorine can also be unstable. As a result, chlorine-treated water generally requires constant monitoring and frequent chemical additions which affect water balance (pH, Total Alkalinity and Calcium Hardness). This need for regular chemical adjustments and increased pool maintenance can reduce the joy your pool was originally intended to generate.

Your Power Ion System purifies water the natural way with copper and silver. Without affecting the balance of important pool water properties, low levels of copper and silver attack algae, bacteria and viruses that infect your pool water. These minerals, which are natural disinfectants, are safe to both you and your family as well as our environment.

Oxidation. Oxidation is needed to eliminate dead algae, dead bacteria and organic wastes from your pool. Be sure to follow the manufacturer's instructions to insure that adequate oxidation occurs.

- **Balancing Your Water.**

Beyond quality filtration, disinfection and oxidation, water balance is maintained by controlling the pH, Total Alkalinity and Calcium Hardness levels of your pool water.

The ideal ranges for pH, Total Alkalinity and Calcium Hardness differ with local water conditions. Also, water balance must be monitored regularly since it can be disrupted by almost anything.

- **pH** The pH refers to water's acidity (basicity). An improper pH level can damage your pool's surface, plumbing and equipment. For instance, etching of the pool surface or corrosion of metal parts in the pump and plumbing are signs that water is too acidic (pH is too low). Alternatively, scale on the pool surface, cloudy water and fouled equipment are signs of water that is too basic (pH is too high). The recommended level of pH is between 7.2 and 7.6.
- **How to correct pH.** If pH is too low, add soda ash (following manufacturer's instructions to reach the ideal range). If pH is too high, add dry acid (following manufacturer's instructions). An Acid Demand Test will help you determine the amounts of dry acid needed to adjust your pH.
- **Calcium Hardness.** All water naturally seeks moderate hardness levels. While some forms of chlorine actually make water harder, the natural ionization process of Power Ion has no effect on Calcium Hardness, so it helps maintain balance.

The recommended minimum level of Calcium Hardness is 200-350 parts per million (ppm). If your water hardness is too low, the water will seek sources of calcium. In plaster pools, water will actually start dissolving the plaster, bringing a rough feel to the pool surface (called plaster "etching"). It will also become very corrosive to the pool equipment. On the other hand, excessive hardness may create hard, rough, discolored deposits on the pool surface and inside pool equipment (called "scale"). Controlling scale formation requires tighter control of Total Alkalinity and pH at the lower end of their ideal ranges. This is particularly important if Calcium Hardness rises above 400 ppm.

How to Correct Calcium Hardness. Increasing Calcium Hardness is easy: add hardness ~ increaser such as calcium chloride (following manufacturer's instructions to reach the ideal range). However, removing hardness is more difficult. You may have to partially drain your pool and then refill it with new water containing a lower calcium hardness level.

- **Total Alkalinity.** Total Alkalinity is the water's "buffer capacity". Properly balanced Total Alkalinity helps the pH level remain stable, and prevents scale deposits from forming on pool surfaces. Low Total Alkalinity means that water has too little buffering capacity, which results in constantly fluctuating pH readings. This can damage equipment and pool surfaces. High Total Alkalinity is indicated by:
 - pH is difficult to adjust
 - cloudy water
 - potential for scaling

The ideal range of Total Alkalinity is 80-120 ppm.

How to correct Total Alkalinity. When Total Alkalinity is too low, an alkalinity increaser (following manufacturers instructions to reach the ideal level) will return it to the recommended level. Total Alkalinity that is too high may be more difficult to adjust and may require a large amount of acid to bring it down.

TROUBLESHOOTING FOR PROBLEM WATER

Problem: Difficulty in building and maintaining the proper ion level in your pool.

Possible Solutions:

Total Dissolved Solids: Levels below 1,000 ppm inhibit efficient operation of your system. Adjust to the ideal range by adding pure salt or water softener salt to your pool water. One pound (1 lb.) will raise the Total Dissolved Solid levels in 10,000 gallons by 12ppm.

Check Your Power Source: Check the "Active" light on the system's side panel for power indication. The light should be illuminated and should remain on while your filtration system is in operation. Check your power supply if the lights are not operational.

Adjustment to your Ion Level Control: Adjusting the level control will increase or decrease the residual level in your pool in conjunction with the length of your filtration cycle. For a longer filtration cycle, lower your Ion Level Control. For a shorter cycle, turn up your Level Control. Please refer to the "Getting Started" sheet for more details.

High pH or Alkalinity Levels: These levels will impede your ability to maintain your ion residual. Adjust both levels to the ideal range.

Problem: Cloudy Water.

Possible Solutions:

Test pH and Total Alkalinity: First test and balance your pH and Total Alkalinity to proper levels. Quite frequently this will solve your problem. If not, shock your pool with Chlorinated Shock (per manufacturer's instructions) to eliminate the build-up of waste products.

Check Filter Operation: Be sure to check your filter operation and length of filter operation time cycles to ensure adequate water purification. (Check with your local pool dealer for recommended times)

Avoid using Sodium Persulfate. If water lacks "sparkle", it may be due to insufficient oxidation or improper shock chemicals. Use Potassium Monopersulfate or an appropriate dose of chlorine-based shock.

Problem: "Clear" Green-Tinted Water.

Possible Solutions:

Test Total pH and Total Alkalinity Level: Adjust pH to 7.0-7.2, and Total Alkalinity to the ideal range of 80-120 ppm. Check results after 24 hours and, if necessary, re-adjust.

Shock Pool: if necessary, shock your pool with Chlorinated Shock, (per manufacturer's instructions).

Eliminate High Levels of Contaminants: Be sure to shock your pool as instructed on "Getting Started" sheet. High contaminant levels in your pool water will make it very difficult to build an ion residual. Treat with one pound (1 lb) of Chlorinated Shock per 10,000 gallons of water.

Check Level of Iron: Iron that is present in your water must be removed prior to initial start-up. Metal removers are available at your local pool dealer.

Service to Chamber: A "Chamber" light will illuminate, indicating the need for a new chamber. Please refer to the details below.

Check Ion Residual: Finally, check your ion residual as it may be excessive. Turn Level Control to "Off" and add Metal removers to reduce the high copper residual. Monitor your copper level carefully on a daily basis. Remember, the filtration run cycles will affect your Power Ion output. You must adjust your Power Ion System accordingly to maintain the desired ion residual of .3 to .5 ppm. Please refer to your "Getting Started" sheet for further details.

TROUBLESHOOTING YOUR POWER IONIZER

The Temperature Display should be lit anytime your unit is attached to the appropriate power source. The "Active" indicator should be lit anytime your unit is plugged-in and water is flowing through it. If it is not lit:

1. Make sure the power is on. The receptacle should be ground-fault-protected. Check the status of the ground-fault-protector to see if it is tripped. If tripped, follow your ground-fault operating instructions to reset. If it continues to trip, contact your local pool dealer for assistance. If the GFCI is not tripped, make sure the circuit breaker in your main breaker panel is on.
2. Make sure the power source is correct. Compare it to the electrical rating on the top of the transformer module.
3. Make sure the pump is operating and water is flowing through the ionizer. The Ionizer senses water flow and without it this light will not come on.
4. If the power is on, the GFCI is not tripped, and you have good water flow, contact your local pool dealer for assistance.

The "Chamber" indicator should only come on if your bars are no longer able to put copper and silver ions into your pool and your Level Control is set at "Maximum". If it is not lit, your system should be operating normally.

If it is lit:

1. Check the connection to the Ion Chamber from the Transformer Module. Reconnect if necessary.
2. If the connection between the Ion Chamber and Transformer Module is good and the light is still on, then it is time to replace your Power Ionizer Chamber.

NOTE: The electrode bars are eroding while the Power Ionizer is used. Once you achieve the desired copper level and level control setting, over time you will need to increase that setting slightly to maintain that same copper level. Eventually you will have to set the control at "Maximum" and, once the bars have eroded to the point that they are no longer effective, your "Chamber" indicator will come on. At that point, you will have to change your Power Ionizer Chamber.

Thank You For Choosing The Power Ionizer!

We are confident that this Water Management and Troubleshooting Pamphlet will provide you with the proper product knowledge you will need for operating your new Power Ionizer in the most effective and efficient way.

Each year, Main Access invests a considerable amount of time and money making sure we manufacture the most reliable and cost effective merchandise possible. Our number one goal is to achieve and maintain superior customer satisfaction and service. Be assured that we are genuinely committed to stand behind the reputation of our products. Should you have any questions about your new Power Ionizer that your local pool dealer cannot answer, please contact our Service Department at 440-937-4870.

1 year “HASSLE FREE” warranty

This warranty extends to the original purchaser only and commences on the date of original retail purchase, regardless of date of installation. Accordingly, this warranty is not transferable to subsequent purchasers.

If your Ionizer ceases to operate within the warranty period, it will be repaired or exchanged by Main Access, at no charge. This warranty does not cover any Ionizer which has been subject to misuse, neglect, negligence, or accident, or that has been operated in any way contrary to the operating instructions as specified in the specified instruction manual. This warranty does not apply to any damage that is a result of improper maintenance or to any Ionizer which has not been installed as specified in the owner's manual. This warranty also does not cover any Ionizer that has been altered or modified.

IN ORDER FOR THIS WARRANTY TO BE EFFECTIVE, THE WARRANTY CARD MUST BE COMPLETED AND RETURNED TO THE ABOVE ADDRESS. ALL WARRANTY CLAIMS WILL BE HANDLED DIRECTLY BY THE COMPANY.

To obtain warranty service, the Ionizer must be returned, within the warranty period. A Return Goods Authorization (RGA) number must be obtained prior to shipping the Ionizer by calling 1-888-333-1134, toll free. The expense of removing, reinstalling and returning the Ionizer is the responsibility of the owner. THE COMPANY'S responsibility with respect to warranty claims is limited to exchanging or repairing the Ionizer and shipping charges related to its return to the owner. No claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale of any Ionizer.

THE COMPANY reserves the right to change or improve the design of any Ionizer without obligation to modify any Ionizer previously manufactured.

All implied warranties, including merchantability and fitness for a particular purpose are disclaimed in their entirety after expiration of the warranty period with respect to parts and design.

THE COMPANY's obligation under this warranty is strictly and exclusively limited to the exchange of defective Ionizers and THE COMPANY does not assume or authorize anyone to assume for it, any other obligation.

THE COMPANY's assumes no responsibility for incidental, consequential or other damages including, but not limited to, transportation or shipping expenses, telephone charges, rental of a like product during the time warranty service is being performed, travel, loss or damage to personal property, loss of revenue, loss of use, loss of time or inconvenience.

Some states do not allow the exclusion or limitation of incidental, consequential damages, so the above limitations and exclusions may not apply to you.

IMPORTANT

4 year "HASSLE FREE" *extended warranty

An extended 4 year "Hassle Free" warranty is available with your new "Power Ion" Ionizer. You have 30 days from your original date of purchase to purchase the extended warranty. Read below for details.

WHY PURCHASE THE EXTENDED WARRANTY?

Your new "Power Ionizer" (Transformer module only. Electrodes are not covered) is covered by a 1 year, "Hassle Free", warranty. The extended warranty program provides an inexpensive way for you to eliminate any worries concerning costly maintenance and repairs for 5 full years. This is particularly important today because labor and component parts costs are always increasing.

For only \$49.95, you can extend your 1 year, "Hassle Free", warranty for an additional 4 years. That means, if your "Power Ionizer" should fail any time during the 5 years following your original date of purchase, you can return the ionizer and we will repair or replace it at no charge.

The procedure is very simple. If your "Power Ionizer" stops operating, call toll free, at 1-888-333-1134. Mention that you have an extended warranty and request a Return Goods Authorization number (RGA). Remove and package your "Power Ionizer," mark the RGA number on the outside of the box in large printing and return it to Main Access shipping prepaid. When we receive it, we will repair or replace it and we will send it back to you via UPS.

IMPORTANT NOTES:

- 1. FAILURE TO SEND YOUR CHECK FOR \$49.95, ALONG WITH THE COMPLETED RETURN PORTION OF THE EXTENDED WARRANTY CARD WILL MEAN AUTOMATIC ENROLLMENT IN THE 1 YEAR WARRANTY PROGRAM ONLY!!!**
2. It is the responsibility of the owner to remove and return the "Power Ionizer." Should you wish to have the equipment removed and returned for you by a dealer or service company, you will be responsible for any labor or other charges relating to its removal or installation.
3. Terms and conditions of the 1 year warranty also apply to the extended warranty and are extended to the original purchaser only. Proof of original purchase may be requested before any warranty work is performed.
4. Fill out the return portion of the extended warranty card and separate along perforation. Make out a check payable to: Main Access. Mail both items to: Main Access, 1004 Jaycox Rd., Avon OH 44011 within 30 days of purchase of your new "Power Ionizer." Your cancelled check is your proof of extended warranty enrollment.

** See 1 year warranty card for details.*

Pool Maintenance Schedule/Notes

Date

Warranty Card or Proof of Purchase
must be on file at:

MAIN ACCESS
1004 JAYCOX RD.
AVON OH 4401
1-888-333-1134

- 1 Year Warranty
 4 Year Warranty
 Check for \$49.95
included

Please Print

NAME _____

ADDRESS _____

CITY _____ STATE _____

ZIP _____ PHONE (____) _____

RETAILER WHERE YOUR IONIZER WAS
PURCHASED:

STORE NAME _____

ADDRESS _____

CITY _____ STATE _____

ZIP _____ PHONE (____) _____

DATE PURCHASED _____

DATE INSTALLED _____

MUST SPECIFY:

MODEL # _____

CATALOG # _____

SERIAL # _____



POWER IONIZER

Your Local Main Access Dealer

**MAIN ACCESS
1004 JAYCOX RD.
AVON OH 44011**

1st
Class
Postage
Required

