



deep blue water technologies

# MPULSE 3000™

## Pool Water Treatment System



## Instruction & Owner's Manual

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# **The BENEFITS of the MPULSE 3000™ Pool Water Treatment System**

**Alternative forms of water treatment used to be the exception, and now have become the rule for swimming pool maintenance. With the inception of salt-water chlorine generators and other non-chemical forms of water treatment, many pool builders and service providers have found these alternative forms as the best way to maintain pools and treat water for the destructive effects of “hard water” without expensive and noxious maintenance procedures. By treating the water in this manner, a conditioning effect occurs that can be felt on the skin and in the hair, and seen in the overall clarity of the water. Impulse Technology is moving into the forefront of alternative water treatment for swimming pool applications.**

# How the MPULSE 3000™ POOL WATER TREATMENT SYSTEM works utilizing IMPULSE TECHNOLOGY

*Impulse Technology...* sends 3000 to 5000 low voltage (positive and negative), high frequency impulses per second between an anode and a cathode to physically change the form of the calcium. At the molecular level, these impulses apply energy to the calcium molecules to release hydrogen from the calcium bicarbonate in your swimming pool water. This action changes the calcium bicarbonate into aragonite, a calcium carbonate formation. This aragonite form of calcium is a soluble form which does not adhere to surfaces in a scaling manner. The aragonite crystals are also a natural pH balancer.

# PERFORMANCE CLAIMS OF THE MPULSE 3000™ POOL WATER TREATMENT SYSTEM

Results of the MPULSE 3000™ Pool Water Treatment System may vary. As with any swimming pool product of this nature, overall success depends on many factors which include but are not limited to:

- Amount of calcium hardness contained in the water (Recommended levels 200 – 400 PPM)
- Source of water (private well, municipality, etc)
- Age and wear of swimming pool surfaces
- Chemical maintenance and PH balance
- Seasonal temperatures and time (duration) of filtering cycle
- Porous surfaces (i.e.; rock fixtures) around spill ways and at pool water level

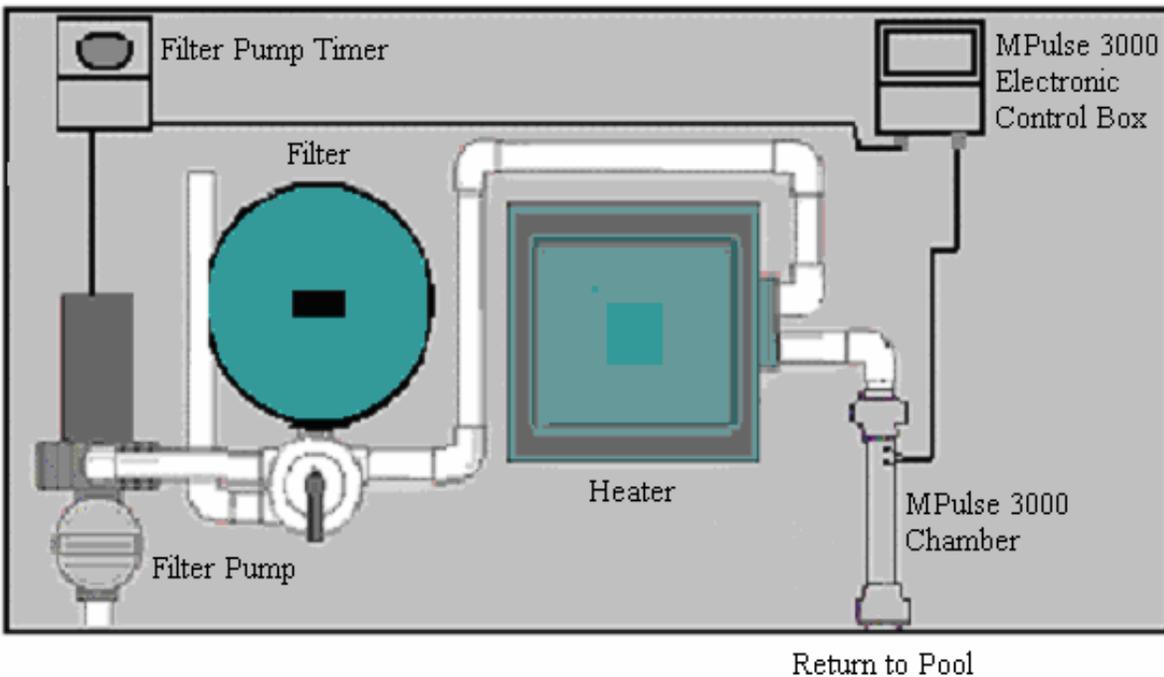
*Pool owners and service personnel must remember that regular maintenance and scheduled service must be followed in order for the MPULSE 3000™ to provide the highest level of performance. This includes regular weekly maintenance schedule, maintaining a PH level between 7.4 and 7.6, and an Alkalinity level of 80 to 120 PPM. Also, regularly brushing the water line, spillways, and water features, as well as any other troubled areas of the swimming pool.*

# INSTALLATION INSTRUCTIONS

(PLEASE READ CAREFULLY & THOROUGHLY BEFORE INSTALLING)  
INSTALLATION SHOULD ONLY BE PERFORMED BY AN AUTHORIZED PROFESSIONAL

- 1) The **Chamber** must be installed in line on the return side to the pool;
  - A.) Primary position - after the heater, and before any salt/chlorination system
  - B.) Secondary position - after the filter before the heater.
  - This unit may be installed vertically or horizontally and has no required flow direction.
  - The unions on the chamber each contain an “o-ring”. Make sure they are lubed and in the proper position before tightening the unions.
- 2) The **Electronic Control Head** must be installed no further than **6 (six) feet** from the chamber, and must be connected to the load side of the timer **only** to run with the circulation pump. Only hook up to 220 Volts.
- 3) Connect the plug on the low-voltage wire from the chamber to the appropriate receptacle at the bottom of the electronic control head (see following pages for further instruction).

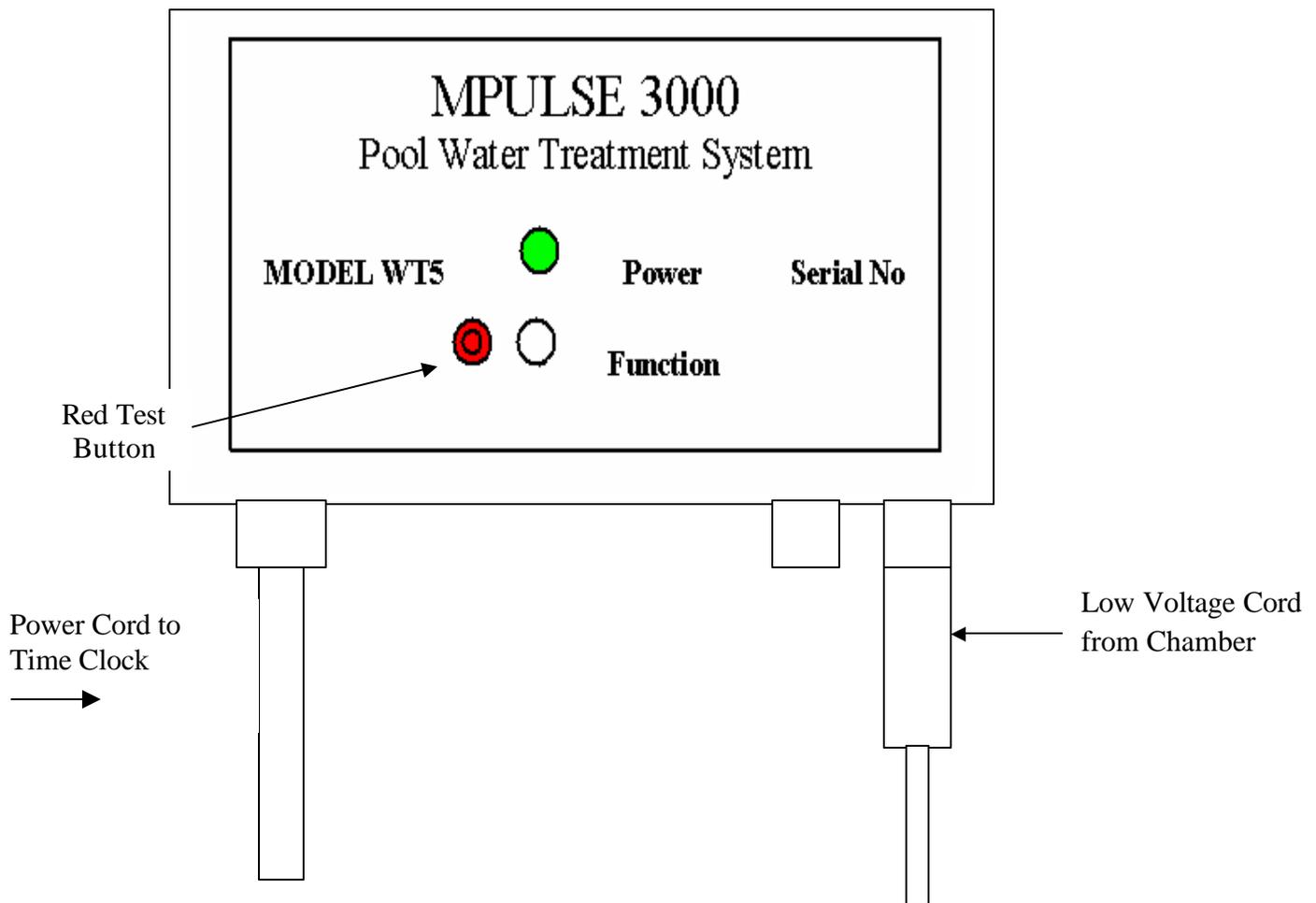
**CAUTION:** The low-voltage wire is a set length for proper operation, if the length is modified the warranty will be void. The power cord may be lengthened.



TECHNICAL SUPPORT/HELP DESK: 1-877-887-2997

# LOW VOLTAGE CONNECTION INSTRUCTIONS PART I

FOR USE WITH SALT WATER CHLORINE GENERATOR OR FOR  
USE WITH OVER-CHLORINATED SWIMMING POOLS

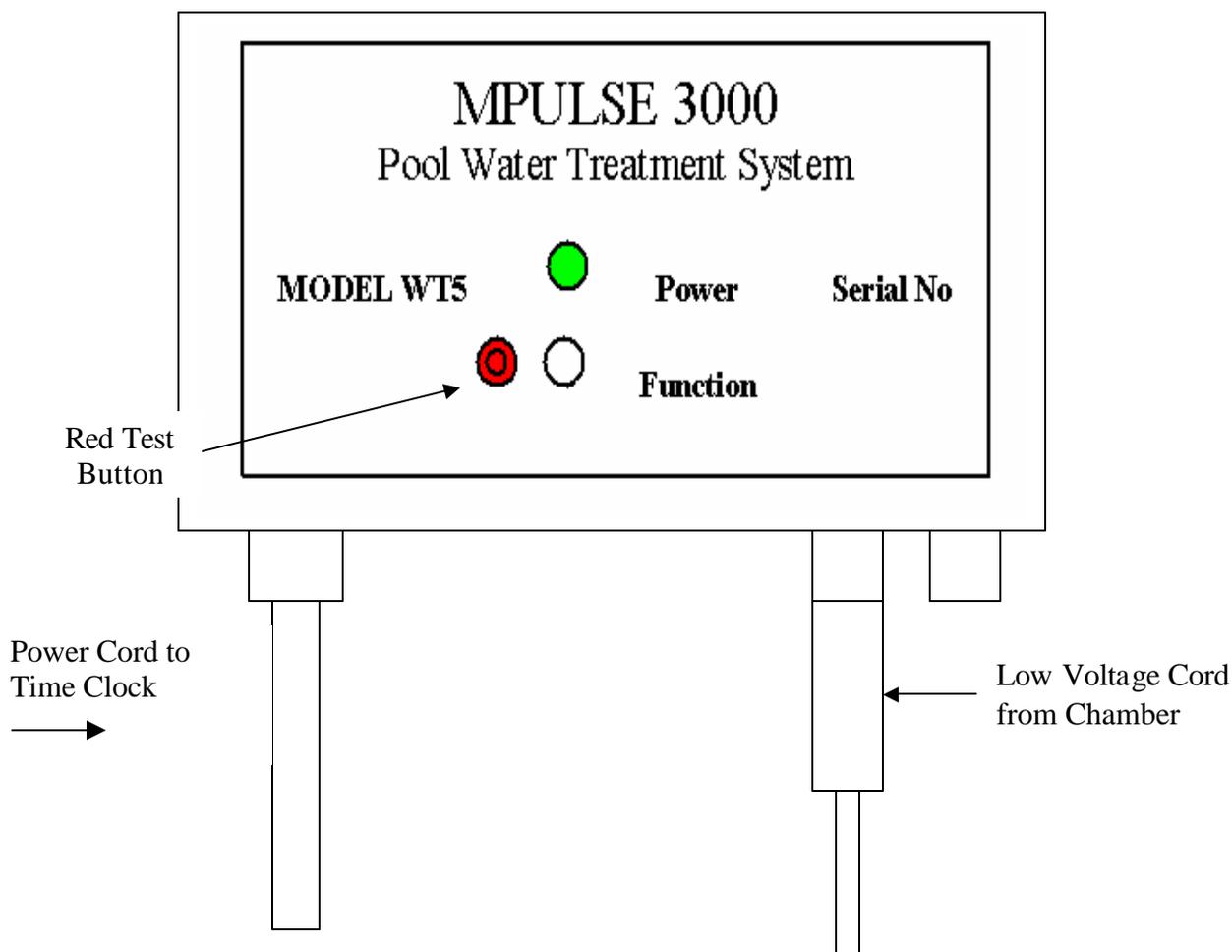


**REMEMBER, THE PLUG ON THE RIGHT SIDE (ILLUSTRATED ABOVE) IS ONLY FOR USE WITH A SALT WATER CHLORINE GENERATOR OR WITH OVER CHLORINATED POOLS.**

**SIMPLY INSERT THE FEMALE END OF THE PLUG ON THE LOW-VOLTAGE WIRE THAT CONNECTS TO THE CHAMBER, INTO THE PROPER MALE END ON THE ELECTRONIC BOX, WHICH IS LOCATED ON THE UNDERSIDE OF THE BOX.**

# LOW VOLTAGE CONNECTION INSTRUCTIONS PART II

FOR USES OTHER THAN – SALT WATER CHLORINE  
GENERATORS AND OVER CHLORINATED SWIMMING POOLS



REMEMBER, THE PLUG ON THE INSIDE (ILLUSTRATED ABOVE) IS ONLY FOR USE ON SWIMMING POOLS THAT ARE NOT USING A SALT WATER CHLORINE GENERATOR OR ARE OVER CHLORINATED.

SIMPLY INSERT THE FEMALE END OF THE PLUG ON THE LOW-VOLTAGE WIRE THAT CONNECTS TO THE CHAMBER, INTO THE PROPER MALE END ON THE ELECTRONIC BOX, WHICH IS LOCATED ON THE UNDERSIDE OF THE BOX.

# TESTING THE SYSTEM

THE GREEN POWER LED WILL BE ILLUMINATED WHEN THE FILTER PUMP IS ON.

THE GREEN FUNCTION LED WILL REMAIN OFF WHEN FILTER PUMP IS ON.

PUSH THE RED TEST BUTTON TO TEST THE UNIT. IF THE GREEN FUNCTION LED IS ILLUMINATED WHEN THE RED TEST BUTTON IS PUSHED THE SYSTEM IS FUNCTIONING CORRECTLY.

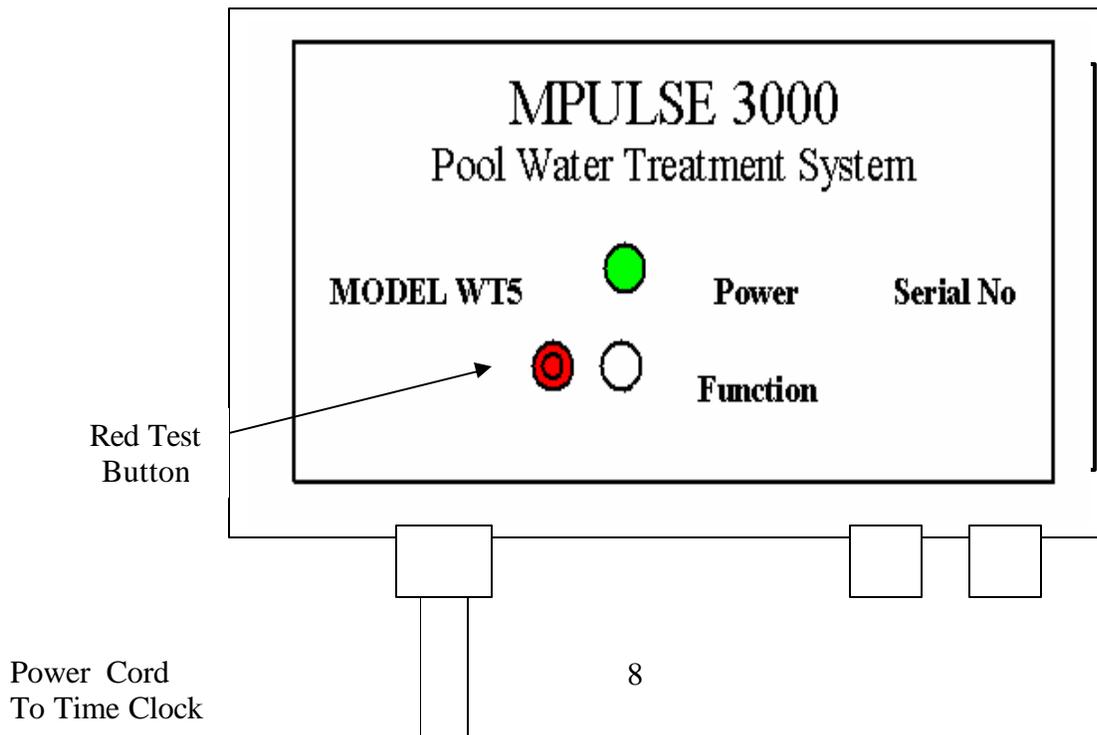
*NOTE: The green function LED may be dimmer than the power LED.*

IF THE GREEN FUNCTION LED DOES NOT ILLUMINATE WHEN THE RED TEST BUTTON IS PUSHED, TURN OFF THE POWER FOR 5 MINUTES TO RESET THE ELECTRONICS AND TEST AGAIN.

IF THE GREEN FUNCTION LED STILL DOES NOT ILLUMINATE, TURN OFF THE POWER FOR 5 MINUTES AND DISCONNECT THE MPULSE 3000™ REACTION CHAMBER FROM THE ELECTRONICS, RE-APPLY POWER AND TEST AGAIN;

- (1) IF THE LED STILL DOES NOT ILLUMINATE AND THE POWER LED IS ON, THE ELECTRONICS NEED TO BE REPLACED.
- (2) IF THE GREEN FUNCTION LED ILLUMINATES AFTER RESETTING, (STILL WITH THE CHAMBER DISCONNECTED), THE ELECTRONICS COULD BE GOOD BUT YOU MAY HAVE A PROBLEM WITH THE SWIMMING POOL WATER CHEMISTRY. CHECK THE pH LEVEL. IF THE ACID LEVEL IS TOO HIGH THE SYSTEM WILL NOT FUNCTION. WAIT UNTIL ACID DISSIPATES AND TEST AGAIN AT A LATER DATE.

TO TEST THE MPULSE 3000™ REACTION CHAMBER WITH THE WORKING ELECTRONICS, UNDO THE CHAMBER FROM THE SWIMMING POOL PLUMBING, INSERT A 2" CAP IN ONE END OF THE CHAMBER AND FILL WITH TAP WATER THRU THE OTHER END. THEN CONNECT THE CHAMBER TO THE FUNCTIONING ELECTRONICS AND PUSH THE RED TEST BUTTON. IF THE GREEN FUNCTION LED ILLUMINATES, THE ENTIRE SYSTEM IS WORKING. IF THE FUNCTION LED DOES NOT ILLUMINATE, THE CHAMBER NEEDS TO BE REPLACED. TECHNICAL SUPPORT/HELP DESK (877) 887-2997.



# The MPULSE 3000™ Pool Water Treatment System and Muriatic Acid

Generally, Muriatic Acid is used in swimming pools to lower the pH level, and to aid in balancing alkalinity.

Maintaining a pH level between 7.4 and 7.6 in swimming pools helps insure other pool chemicals work properly. It also helps prevent damage to pool surfaces and equipment and helps prevent eye irritation.

While controlling the form of calcium in the swimming pool, the MPULSE 3000™ also aids in the process of balancing the pH levels by releasing the positive hydrogen ions from the calcium bicarbonate. In high concentrations, acid can also free these positive ions from calcium bicarbonate.

Adding unnecessary Muriatic Acid will change the conductivity of the water and could affect the operation of the MPULSE 3000™ and negate the scale reduction. When the acid dissipates the conductivity will return to normal and the MPULSE 3000™ will perform correctly again. Always check pH levels before adding Muriatic Acid.

# FREQUENTLY ASKED QUESTIONS

1. *Does the MPULSE 3000™ remove calcium from the water?*

No. The MPULSE 3000™ changes the form of the calcium so it does not adhere to surfaces in a scale form. Pool owners and service personnel may still see some calcium on the tile or in rock pores. This is calcium carbonate aragonite (the non-scaling calcium), which is settling in the pores and crevasse, and is easily removable with a steel brush or diluted cleaning solution and applicator.

2. *Does the MPULSE 3000™ remove previous calcium scaling from pool surfaces?*

Well, it depends. If the current scaling is a result of years of neglect, it would take a long time to remove such calcification with the MPULSE 3000™. However, if the scaling is fairly recent (30-60 days), we have seen instances where the water level was raised above the scaling and the calcium was eventually removed. The time and success rate of this can vary from pool to pool.

3. *Does a white line on my pool automatically mean there is calcium scaling?*

Not necessarily. Remember, there are also irons and other minerals in the water, along with other outside substances such as suntan oils, lotions, etc., that can cause “staining”. This is another reason why brushing your waterline is an important step in pool/spa maintenance. Water treatment and balancing water chemistry is a process that requires attention to all aspects of pool maintenance as well as a balanced approach.

4. *What is the down side of the MPULSE 3000™?*

When dealing with water chemistry and water treatment, pool owners and service providers are often looking for a “quick fix.” That said, there are also many factors that must be observed, especially with regard to water chemistry and water treatment. As with the introduction of the salt-water chlorinators, pool service providers and owners are slow to adapt to new technology that requires observance of water chemistry. Overall, this process gets easier, but it does require some adaptation of water chemistry.

# **SPECIFICATIONS**

- 2” Slip Connection With Union
- Voltage 220~
- 18 W
- 65 GPM or 250 LPM
- Max Temperature 200°F
- Weight 8 lbs or 3,65 kg
- Size 24” x 5”x 5”
- Max. Pressure 100 PSI

# Limited Residential Warranty Certificate

## To the Original Retail/Consumer of the MPULSE 3000™ Pool Water Treatment System

The MPULSE 3000™ Pool Water Treatment System is comprised of two basic components:

1. The Electronic Control Head
2. The Chamber

The **Electronic Control Head** and the **Chamber**, are fully warranted for a period of **five (5)** years. Should either of these components fail for any reason other than abuse (to include vandalism), modification of low-voltage wire length, act of God, or act of War, the part/parts will be replaced or repaired at no charge.

Follow all manufacturer recommended schedules for usage and settings for your pool, spa, and/or water feature, along with your regular weekly chemical and maintenance service.

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## MPULSE 3000™ Pool Water Treatment System WARRANTY REGISTRATION CARD

Date of Purchase: \_\_\_\_\_  
Serial Numbers: Control Head \_\_\_\_\_ Chamber \_\_\_\_\_  
Customer Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

I purchased my MPULSE 3000™ from:

Pool Supply Store  Pool Service Company  Builder \_\_\_\_\_ Other

Name: \_\_\_\_\_

**IMPORTANT:** Retain your Bill of Sale for Proof of Warranty Eligibility

Please mail to: deep blue water technologies  
890 W Grant Rd  
Tucson, AZ 85705  
877-882-4695

Deep Blue Water  
Technologies  
890 W. Grant Rd  
Tucson, AZ 85705

Sales

**1-877-882-4695**

Technical Support/  
Help Desk

**1-877-887-2997**