



Owners Manual
And
Operations Guide

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Congratulations!

You are now a member of the Waterscapes family of new pool owners. We hope to have made the building experience pleasant for you. With construction now complete, its time to relax and enjoy your new backyard!

Once our start-up service is complete, our service technicians will go over the basic operation instructions and features of your new pool and/or spa. We hope you will find this manual helpful as a reference, with tips that will help you to keep the pool operating efficiently and looking great for years to come. For additional information on your equipment, you can log on to the manufactures links provided for you on our website.

If you have any service or warranty related questions, please contact us at service@waterscapesdfw.com , or by phone at 214-502-9865.

Again, we would like to thank you for your business. We would welcome any comments on how we may improve our services, or referrals of friends that might be able to use our services.

Sincerely,
Rick Redwine
President / Waterscapes Inc.

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EQUIPMENT

Pump

This piece of equipment is used to move the pool water through the system. There is not much maintenance required, only checking for debris that collects in the strainer basket, and making sure the lid is tightly secured. A leaky pump lid can allow air into the system and may prevent the pump from priming. Check the o-ring periodically to make sure it is properly lubricated and makes a tight seal.

Filter

To remove dirt and other particles from the water, your pool uses a filter system to trap it as the water passes through. Keep your filter clean, so it has a better chance of catching debris.

Cartridge Filters

Most of our pools are equipped with cartridge filters. As the water passes through, mesh material in the cartridges traps the waste material. You don't backwash with a cartridge filter, but you will need to open the tank and rinse the filters every six months to remove the debris. Some clients have found it easier to purchase a second set of filters and swap-out every other cycle.

Diatomaceous Earth Filters

This filter uses DE to trap waste particles in the filter. DE is a white powder added to the filter through the skimmer while the pump is running.

The interior grids will need to be taken out and cleaned at least once a year.

The pressure gauge

Keep a close eye on the filter's pressure gauge. It monitors the pressure in pounds per square inch. When your filter is new or has just been cleaned, make a note of the normal starting pressure. When the pressure increases by 10lbs, it's time to clean the filter again. Lower pressure could indicate a flow obstruction, such as clogged baskets or possibly an air leak.

Heater

Most of our pool and/or spa packages come equipped with a heater. Water at normal temperature enters the unit and is heated by flames fueled by propane or natural gas. Warm water then exits the heater and returns back to the pool or spa. Our electronic ignition heaters use electricity to start the heater and contain no pilot light. Minimum water-flow is required for operation, and a dirty filter may prevent the heater from firing.

Proper water balance will also help extend the life of the heaters interior parts.

Cleaner

To help out with the task of keeping the pool clean, we have installed plumbing that will allow a automatic vacuum system to be installed. The Polaris and Legend are both pressure side cleaners that are powered by clean water and randomly move about the pools floor. You will need to clean the catch bag as needed and occasionally check the filter screen located were the cleaner connects to the wall.

Don't run the cleaner more than needed. Set your timer for run times according to the season or debris load.

Chlorinators

Typically, one of two systems will be installed to help you Maintain chlorine levels in your pool and spa.

In-line Chlorinators are systems that store chlorine Tablets, and allow you to adjust the amount of sanitizer That returns to the pool. The summer months will require You to check the tablet levels at least once a week, and Adjust the flow dial to keep up with the demand Winter operation can be cut back to the lowest levels.

Salt Generators are systems that make chlorine gas from a Low level of sodium that is installed in the pool.

They are designed to provide the needed levels of Sanitizer for you year round. You will still be required to test The chlorine and pH levels with your kit, but any changes to The chlorine levels can now be done at a touch of a button. Don't forget to have the salt and conditioner levels checked at least twice a year.

Timers

To help you set the correct length of run cycles, we have installed one of two time clocks.

Intermatic Time clock

This clock will allow you to set on/off trippers

At the desired times on the clock face. This will control

The main pump as well as the cleaner pump. The booster

pump is wired to only operate while the main pump is on.

There is a freeze control feature which will allow you to set

the temperature for the main pool pump. This will provide

circulation throughout the system and prevent eq damage.

Compool System

This feature gives you total control of your pool at the touch

of a button. Each feature such as the main pump, spa,

lights, or booster pump, can be preset to come on at a

certain time. Or you can simply touch a button to activate

any of the controllers features. The built in freeze protection

will be set up to activate the main circulation system only

Lights

To illuminate your pool at night we have installed one of three types of lighting.

Standard Amerlite

Typical 500w pool light and 100w spa light. They are white

Lights that have color lens that can be added to set a mood.

The light has a one pilot screw that holds it into the housing

or "niche" in the pool wall. There is enough cord in the niche

so that the light can be brought up onto the deck for service

or bulb replacement. If your lights should fail to come on,

the first thing to check is the ground fault indicator, or GFCI,

usually installed near the equipment pad.

Spectrum Amerlite

This halogen light gives you the option to automatically

change colors without changing an outer lens. The color

wheel on the inside of the light scrolls through the different

color combinations, or you can lock it on your favorite color.

Simply turn lights on to start, then off/on again to set the

desired color.

LED

The latest in efficiency and most models will offer color

changing capabilities.

EQUIPMENT MANUALS

The links listed below are provided to give you quick reference to many of the equipment items that we use.

Intellitouch Controller

<http://www.pentairpool.com/pdfs/IntelliTouchUG.pdf>

Easy Touch Control System

<http://www.pentairpool.com/pdfs/EasyTouchSystemUG.pdf>

Intelliflo Pumps

<http://www.pentairpool.com/pdfs/IntelliProVS+SVRSOM.pdf>

Whisperflo Pumps

<http://www.pentairpool.com/pdfs/WhisperFloOM.pdf>

Pentair DE Filters

<http://www.pentairpool.com/pdfs/FNSPlusOM.pdf>

Pentair Cartridge Filters

<http://www.pentairpool.com/pdfs/CleanandClearPlusOM.pdf>

Pentair LED Lights

<http://www.pentairpool.com/pdfs/IntelliBritePoolOM.pdf>

Pentair Amerilite

<http://www.pentairpool.com/pdfs/AmerliteOM.pdf>

Paramount PV-3 In-floor Cleaning

<http://www.paramountpoolproducts.com/faq/pv3.php>

Aquacal Heat / Chill Pumps

<http://www.aquacal.com/webimage/pdf/aquacal/aquacal-heat-pump-manual.pdf>

Rheem Heaters

<http://www.rheem.com/product.aspx?id=8B064EC5-B708-4821-9F2B-DEF3A2243F90>

Polaris 280 Vac Sweeps

<http://www.polarispool.com/files/manual/PolarisManual280.pdf>

BASIC OPERATION

Although they are built in many different shapes and styles, the way the pool operates is fundamentally the same.

CIRCULATION

Water is pulled from the pool to the equipment by a circulation pump. Water leaves the pool from skimmers, pool floor drains, and spa floor drains. These plumbing lines are labeled and have control valves to open or close water-flow. These components make up the suction side of the system. After water passes through the pump, it enters the pressure side of the system. Water is now pushed through the filter, heater, and sanitizing system. At this point water passes through another valve and returns to the pool or spa.

POOLS WITH SPAS

The pool and spa are built to operate with a common equipment set. The plumbing valves allow you to isolate the spa from the pool when you want to use it. Normal filtration or "pool" mode, returns clean water through the fountain connection in the floor of the spa and provide circulation and overflow into the pool. To go from "pool" to "spa" mode, follow the steps below.

With automated control system:

- 1) Push "spa" button
- 2) Set desired temperature
- 3) Push "blower" button for air bubbles
- 4) Push "pool" button when finished

With manual time clock controls:

- 1) Turn pump on
- 2) Rotate valve so that spa suction is open
- 3) Rotate valve so that spa return is open
- 4) Turn heater on
- 5) Turn blower on
- 6) Reverse steps 2-5 when finished
- 7) Allow pump to run 10 min to allow cool down

Note: Spa overflow and pool cleaner will NOT operate when spa is being used.
Heat up times may take up to one hour, depending on ambient temp.
Do not run blower for more than 30 min. Allow 10 min cool down time.

To keep your pool looking its best, the timer for the circulation system will be set to maintain proper run times. You will need to adjust run times depending on usage or seasonal changes. Pools with multispeed pumps may run longer hours at a lower RPM for energy savings.

SUMMER RUN TIMES

Circulation pump/filter.....8 to 12 Hours per day
Automatic Cleaner.....2 to 4 Hours per day
Water feature pump.....As desired

WINTER RUN TIMES

Circulation pump/filter.....3 to 5 Hours per day
Automatic Cleaner.....2 to 4 Hours per day
Water feature pump.....Drain for winter months

The circulation pump is equipped with a freeze sensor that will over-ride your normal settings and provide water-flow in cold weather conditions. We do not set up water-feature or booster pumps with this feature. We recommend that they be drained for the cold weather months to avoid freeze problems.

CLEANING & MAINTENANCE

You will need to allow few minutes each week for some routine pool cleaning. It can be a time to have a few minutes by yourself, or you can make it a family event. A clean pool makes everything work better. The equipment doesn't have to work as hard and your chemicals will last longer. It really doesn't take very long and it's easy to do!

Tools of the trade include a tele-pole, nylon brush, stainless steel wire brush, surface skimmer, leaf rake, vacuum head and hose.

First, clean up around the pool are. Chances are that most dirt and debris around the pool will wind up IN the pool.

Skim the surface

Use you surface skimmer net to get the leaves and blow-in debris off the surface of the pool. Empty the debris into a trash or far enough away from the pool so that it doesn't wind up blowing back in.

Brush the walls and floor

Go around the pool brushing the tile, walls, and floor. This will loosen any foreign material and keep algae and other particles suspended so the filter can remove them. Start in the shallow areas of the pool and move all debris towards the main drains in the deep end.

Empty the baskets

Turn off the pump and empty the baskets in the skimmers and circulation pump. Replace the baskets, make sure the pump lid and o-ring is secured tightly and turn the pump on.

Vacuum the pool

Using a vacuum system will allow you to quickly remove debris from the pool floor. With the pump on, simply connect the head and hose to the tele-pole and lower it into the pool slowly to allow the hose to fill with water. Feed the hose through the front of the skimmer and connect the hose to the skimmer plate or the active suction port at the bottom of the skimmer. Once the hose is primed, move the head slowly across the pool floor. Moving too fast can stir up the debris. Clean both baskets once you have finished the vacuum.

Check the cleaner

Keep in mind that automatic cleaners are designed to help keep a clean pool clean and not to clean a dirty pool. The bag will only hold so much debris. Overfilled bags will effect the way the cleaner moves and will stretch and tear the bag prematurely. Empty the bag often and check the in-line filter screen inside the housing where the cleaner connects to the pool wall. Check the tires and wheels to make sure that they are secure and turn freely.

Check the filter

Check the pressure gauge on the top of the filter. High or low pressure will effect the way the water circulates and ultimately how the pool looks. A pressure 8 to 10 lbs over your clean start pressure indicates its time to back wash or clean the cartridges. Low pressure indicates full skimmer or pump baskets, line obstructions, or pump suction problems. Be sure to check the air relief just below the gauge. Turn and bleed off any air that may be trapped in the filter to get a true pressure reading.

Cartridge Cleaning

- 1) Turn pump off
- 2) Loosen filter clamp / remove top
- 3) Carefully remove cartridge elements
- 4) Hose off debris
- 5) Soak in cartridge cleaning solution
- 6) Inspect and lubricate tank o-rings
- 7) Replace cartridges and secure filter top
- 8) Turn pump on

Note: Filter operates under high pressure. Make sure to securely fasten the filter top to avoid injury. However, over tightening the ring can cause the o-ring to leak. Marking the clamp and tank before removal will help with reassembly.

Backwash Procedure

- 1) Turn pump off
- 2) Rotate & lift BW handle
- 3) Turn pump on for 30 to 45 seconds
- 4) Turn pump off
- 5) Lower and lock BW handle
- 6) Turn pump on for 30 to 45 seconds
- 7) Repeat steps 1-5
- 8) Turn pump on an add DE powder to nearest skimmer

Check the water level

The water level needs to be correct for your equipment to function properly. The full mark or level of your pool is considered to be approximately 3" up from the bottom of the tile. Your pool has been equipped with a fill line so you can easily add water to compensate for evaporation and splash out. The pool may lose as much as two inches a week, depending on heat, humidity, wind, and use. Water that rises above the full level will dump into a line that will help out with those heavy Texas rains. This overflow line is typically located in the mouth of the skimmer and occasionally needs to be checked to ensure the grate is clear of debris.

Check the chemicals

At least once a week, check the chemistry levels and make the necessary adjustments. Learn how the sun, rain, and heavy use will all affect the chemical balance. Your local chemical supplier will be happy to double check your test and make recommendations as for needed chemicals.

WATER CHEMISTRY

The two elements to crystal clear water are proper filtration cycles or run times, and chemical balance. Lets tackle the issue of water chemistry.

Don't be confused or intimidated! Water chemistry is easy. The term "balance" refers to keeping a few key vital signs in a particular range. The "vitals" to check weekly are alkalinity, pH, and chlorine levels. Your test kit has step by step instructions for each vital test and directions for making any changes.

The suggested chemical standards listed below are for gunite pools and are set forth as recommendations by the National Spa and Pool Institute. Tests are measured in parts per million (PPM)

Free Chlorine (PPM).....	1.0 – 3.0
Combined Chlorine (PPM).....	0.0
pH.....	7.2 – 7.6
Total Alkalinity (PPM).....	80 – 100
Total Disolved Solids (PPM).....	1000 – 2000
Calcium Hardness (PPM).....	200 – 400
Cyanuric Acid (PPM).....	30 - 50

Total Alkalinity

Total Alkalinity is a measure of the waters resistance to change in pH. It acts as a buffer and helps stabilize pH swing.

To raise.....add sodium bicarbonate (baking soda)
1.5lbs per 10,000 gals will raise 10PPM
To lower.....add muratic acid
1 pt. Per 10,000 gals/ retest in 8 hrs

PH

On a scale from 0-14, we are trying to keep the pH slightly above neutral. Low pH can cause corroded equipment, stains, and etch plaster surfaces. High pH can cause cloudy water, scale and calcium build up, and can decrease the effectiveness of chlorine and other sanitizers.

To raise.....add sodium carbonate
.5lbs. per 10,000 gals / retest in 8 hrs
To lower.....add muriatic acid
1 pt. Per 10,000 gals / retest in 8 hrs

Chlorine

Available in tablet or granular form, this is the product that keeps your pool free from bacteria and algae. You will need to keep a close eye on this vital in the summer months. Rain, hot Texas sunshine, and a heavy bather load will deplete chlorine levels rapidly. To "shock" or super-chlorinate is to raise the chlorine levels quickly so it will burn out ammonia and nitrogen compounds. This should be done every week during the swim season.

To raise.....add granular or tablet chlorine
Shock with 1lb per 10,000 gal
To lowerturn feeder down or off

Note: Most salt chlorine generators have a super chlorinate feature!

Algae Control

Algae are tiny plants that bloom and grow in pools if nutrients are present and a sufficient level of free chlorine is not maintained. Maintaining proper water quality, adequate filtration run times and frequent brushing of the pool walls will deprive algae of the opportunity to get started. Also using an algaecide or phosphate remover per the manufactures instructions will act as a good preventative.

Green Algae – most common type, gives water and walls a green color.
Heavy shock treatment with algaecide follow-up, brushing,
and 24hr filtration should take care of the problem

Yellow Algae- more resistant to chemical treatment, will return if not treated
With a copper based algaecide.

Black Algae- most difficult to get rid of. Shows up as small black dots or
"buds" in corners, steps, tile grout areas. Wire brush these
devils and spot treat with a tri-chlor tablet.

More tips on chemicals

- Have your water tested by a pool pro at least once every quarter.
- Test the pool water weekly
- Always read and follow manufactures instructions before adding chemicals to your pool
- Store chemicals in a cool, dry place – Not in garage
- Store chemicals out of reach of children
- Shock or super-chlorinate once a week during swim season
- Never add calcium based shocks directly into colored plaster pools
- Never mix chemicals – add each to pool separately
- Avoid breathing vapors and fumes
- Don't purchase more than one seasons worth of chemicals at a time
Old chemicals are not as effective and can be a hazard
- Become a label shopper. Use high quality stabilized chlorines that have a minimal amount of inert ingredients
- Most liquids should be diluted into water, then poured into the pool
- Acid should be added to the deep end away from fixtures and returns.
- Allow plenty of time between tests – some changes take 24hrs
- Replace test kit chemicals once a year

SAFETY

Though it is listed in the last section of our manual, water safety should be observed as one of the most important elements of pool ownership. Water is a wonderful element to work with, but it does demand respect. It only takes a few seconds and a few inches of water for a drowning to take place. Our wish is to provide you with a few simple guidelines that could help prevent a tragedy.

- Always know the location of your children
- Check the pool area first if a child is missing
- Never leave children alone in your pool
- Never rely entirely on safety floatation devices
- Nothing substitutes for constant adult supervision
- Never assume someone is watching your child unless you have designated an adult to watch the water
- Never swim in thunderstorms or inclement weather
- Never swim under the influence of drugs or alcohol
- Swim lessons are great for the entire family
- Learn CPR and rescue techniques with your family
Certified instructors will teach you in your own home
- Keep Coast Guard approved safety devices near the pool
(i.e., shepherds hooks, life preservers and jackets)
- Install or keep a telephone in the pool area
- Establish and review your safety plan with your family
Do they know what to do and who to call in an emergency?
- Maintain your pool. Safety is the best reason to keep the pool clean so that visibility is kept at a maximum.
- Remove all toys and floats when pool is not in use
- Make sure swimmers understand how jumping or diving into water can result in injury. Inform them of the depths of the water, and which areas are safe to jump or dive into.
- Keep fences and gates working properly. The gate should self-closing and should be kept locked when the pool is not in use.
- Safety fences are great! Be sure to keep lawn chairs or other items away so that children will not have an aid to climb over them!
- Safety covers and pool alarms are available to help you maintain a safe pool environment

