

OPERATING MANUAL

THE METAL FRAME LIVE SEAFOOD DISPLAY SYSTEM



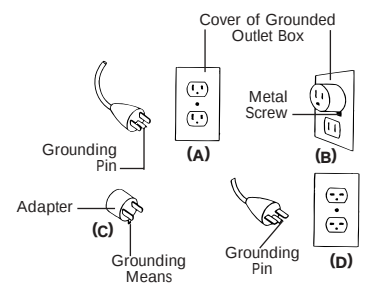
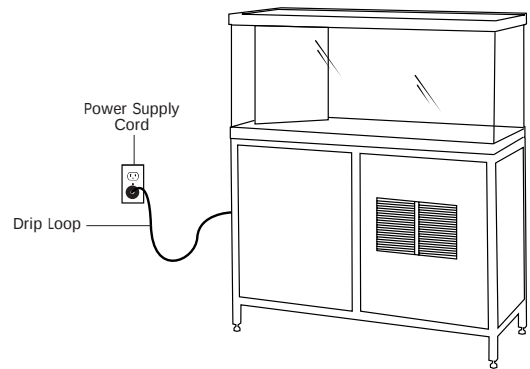
IMPORTANT SAFEGUARDS

WARNING – To guard against injury, basic safety precautions should be observed, including the following:

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

DANGER – To avoid possible electric shock, special care should be taken in the use of aquarium equipment. For each of the following situations, do not attempt repairs yourself; contact an authorized service facility for service.

1. A. If an appliance falls into the water, DON'T reach for it! First unplug it and then retrieve it. If electrical components of the appliance get wet, unplug the appliance immediately.
B. If an appliance shows any sign of abnormal water leakage, immediately unplug from the power source.
C. Carefully examine the appliance after installation. It should not be plugged in if there is water on parts not intended to be wet.
D. Do not operate any appliance if it has a damaged cord or plug, or if it is malfunctioning or if it is damaged in any manner.
E. To avoid the possibility of the appliance plug or receptacle getting wet, position unit to one side of a wall mounted receptacle to prevent water from dripping onto the receptacle or plug. A "drip loop", shown in the Illustration at right should be arranged for each cord connecting appliance to a receptacle. The "drip loop" is that part of the cord below the level of the receptacle or the connector, if an extension cord is used, to prevent water traveling along the cord and coming in contact with the receptacle. If the plug or receptacle does get wet, DON'T unplug the cord. Disconnect the fuse or circuit breaker that supplies power to the appliance. Then unplug and examine for presence of water in the receptacle.
2. Close supervision is necessary when any appliance is used by or near children.
3. To avoid injury, do not contact moving parts or hot parts such as heaters, reflectors, lamp bulbs, etc.
4. Always unplug an appliance from an outlet when not in use, before putting on or taking off parts, and before cleaning. Never yank cord to pull plug from outlet. Grasp the plug and pull to disconnect.
5. Do not use an appliance for other than intended use. The use of attachments not recommended or sold by the appliance manufacturer may cause an unsafe condition.
6. Do not install or store the appliance where it will be exposed to the weather or to temperatures below freezing.
7. Make sure appliance is securely installed before operating it.
8. Read and observe all the important notices on the appliance.
9. If an extension cord is necessary, a cord with a proper rating should be used. A cord rated for less ampere or watts than the appliance rating may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.
10. This appliance should be grounded to minimize the possibility of electric shock. This appliance is equipped with an electric cord that has an equipment grounding conductor and a grounding type plug. The plug must be plugged into an outlet that is installed and grounded in accordance with all appropriate codes and ordinances.
11. This appliance is for use on a nominal 120 volts circuit, and has a grounding plug that looks like the plug illustrated in (A). A temporary adapter which looks like the adapter illustrated in (B) and (C) may be used to connect this plug to a two pin receptacle as shown in (B) if a grounded outlet is not available. The temporary adapter should be used only until a grounded outlet can be installed by a qualified electrician. The green colored rigid ear (lug and the like) extending from the adapter must be fastened to a permanent ground such as a grounded outlet box.



SAVE THESE INSTRUCTIONS

THE METAL FRAME

LIVE SEAFOOD DISPLAY SYSTEM

Models ML-18SFBW(1) and ML-24SFBW(1)



This manual will provide you with the information you need to successfully operate and maintain your Live Seafood Display System. Please read it carefully and keep it for future reference.

The Metal Frame Live Seafood Display System is a compact, economically priced, self-contained system for maintaining lobster under ideal water conditions. Its dual mechanical/chemical filtration and powerful commercial BIO-Wheel wet/dry biological filter ensure optimum water quality at all times.

Your system comes complete with everything you need to become fully operational:

- Consumables:
- Prefilter Pads - Blue (#CS1859)
 - Carbon Filtration Pack (#CS1829)
 - Dolomite Filter Pack (#C1978)
 - Instant Ocean® Lobster Salt (#CS0309)
- Accessories:
- Hydrometer (#C1501)
 - Thermometer (#C1502)
 - Lobster Rake (#C1503)

NOTE: To prepare for the possibility of extra water changes, we recommend the purchase of additional Instant Ocean Lobster Salt (enough for two water changes).

Inside the System...

In this closed system, prefiltered water from the Sump is pumped to the display tank. On the way, water is also routed through the Refrigeration Unit, Protein Skimmer, UltraViolet (UV) Disinfection Unit, and Corner Spray Nozzles.

The UV Disinfection Unit (complete with convenient “Operation Display Light”) helps stop the spread of bacteria and disease throughout the system. Water enters the UV Housing, where it is exposed to UV light. This exposure destroys the DNA of free swimming bacteria, viruses and algae, preventing them from reproducing. After exposure, water exits and is returned to the system.

The Protein Skimmer employs heavy aeration to remove dissolved organic matter from the tank in the form of foam. The foam is flushed from the system and deposited into a floor drain or waste receptacle.

The thermostatically controlled **Refrigeration Unit** is capable of maintaining tank temperatures of 45 - 70° F and can be preset to the exact temperature required by the system.

From the display tank, water exits via Bi-Level Skimmer, passing through the Spillway Screen on its way to the BIO-Wheel Filtration Module.

As water flows through the BIO-Wheel Filtration Module, additional mechanical and chemical filtration is provided by a polyfiber Prefilter Pad (Tray 1) and Carbon Filter Pack (Tray 2). Filled with one pound of Black Diamond Premium Activated Carbon, the Pack adsorbs dissolved organic compounds. The Dolomite Filter Pack in a third Filtration Tray acts as a buffering agent.

After passing through the Filter Media Trays, water spills onto the BIO-Wheel mounted below. Because system flow causes it to rotate, the BIO-Wheel is constantly exposed to both water *and* air, thus developing a thriving culture of aerobic nitrifying bacteria. This bioculture efficiently oxidizes all ammonia and nitrite on contact.

NOTE: Precultured BIO-Wheels are available from Marineland. Shipped to you ready to go, they provide full load biological filtration capacity immediately upon installation. Call (800) 322-1266 to order.

SPECIAL FEATURES

Front, Rear and Side Access Panels
provide easy access to Filtration Module,
UV, Master Switch and all system outlets.



Display Tank Corner Spray Nozzles
introduce water to the system, providing
necessary surface and bottom agitation.



Custom **Bi-Level Skimmer**
draws returning water and floating debris
from both the bottom and surface levels
to ensure uniform water processing.



MODEL ML-18SFBW (1)

SYSTEM SPECIFICATIONS

Dimensions:

48 ½" L x 18 ½" W x 57 ½" H

Capacity: 120 Gallons*

Weight: 350 lbs.*

Recommended Load: Lobster: 75-100 lbs.

* Approximate

Power Requirements:

ETL-Listed for cord-connected installation,
15 Amps

Filtration:

Mechanical Filtration:

One 7 ½" x 14" Polyfiber Pad

Chemical Filtration:

One Carbon Filter Pack containing 1 lb.
Black Diamond Premium Activated Carbon
One 3 lb. Dolomite Filter Pack

Wet/Dry Biological Filter: One CBW-1
Commercial BIO-Wheel

UV Treatment: Aquafine DW-300; 50,000
uWs/cm2 @ 4,000 hrs.

Circulation/Filtration:

PUMP: Little Giant 4-MDQX-SC

Turns Per Hour (TPH): 8 TPH nominal

Refrigeration:

⅓ HP Compressor with Helical Heat
Exchanger (R134a, UR)

UL-listed Thermostat Controller:
Temperature range: 45 - 70°F

Installation Connections:

Electric Supply:

Cord-connected; 115 VAC., 60 Hz, 15 AMP

Recommendation: GFCI-protected outlet

Protein Skimmer Discharge:

Dedicated or Container

Materials Of Construction:

Frame: Mild steel tubular welded
construction, epoxy powder-coated

Tank: Dual-pane tempered glass

Sump: Fiberglass

Misc. Panels & Covers: ABS

MODEL ML-24SFBW (1)

SYSTEM SPECIFICATIONS

Dimensions:

48 ½" L x 24 ½" W x 57 ½" H

Weight: 350 lbs.*

Capacity: 120 Gallons*

Recommended Load: Lobster: 75-100 lbs.

* Approximate

Electric:

ETL-Listed for cord-connected installation,
15 Amps

Filtration:

Mechanical Filtration:

One 7 ½" x 14" Polyfiber Pad

Chemical Filtration:

One Carbon Filter Pack containing 1 lb.
Black Diamond Premium Activated Carbon
One 3 lb. Dolomite Filter Pack

Wet/Dry Biological Filter: One CBW-1
Commercial BIO-Wheel

UV Treatment: Aquafine DW-300; 50,000
uWs/cm2 @ 4,000 hrs.

Circulation/Filtration:

PUMP: Little Giant 4-MDQX-SC

Turns Per Hour (TPH): 8 TPH nominal

Refrigeration:

½ HP Compressor with Helical Heat
Exchanger (R134a, UR)

UL-listed Thermostat Controller:
Temperature range: 45-70°F

Installation Connections:

Electric Supply:

Cord-connected; 115 VAC., 60 Hz, 15 AMP

Recommendation: GFCI-protected outlet

Protein Skimmer Discharge:

Dedicated or Container

Materials Of Construction:

Frame: Mild steel tubular welded
construction, epoxy powder-coated

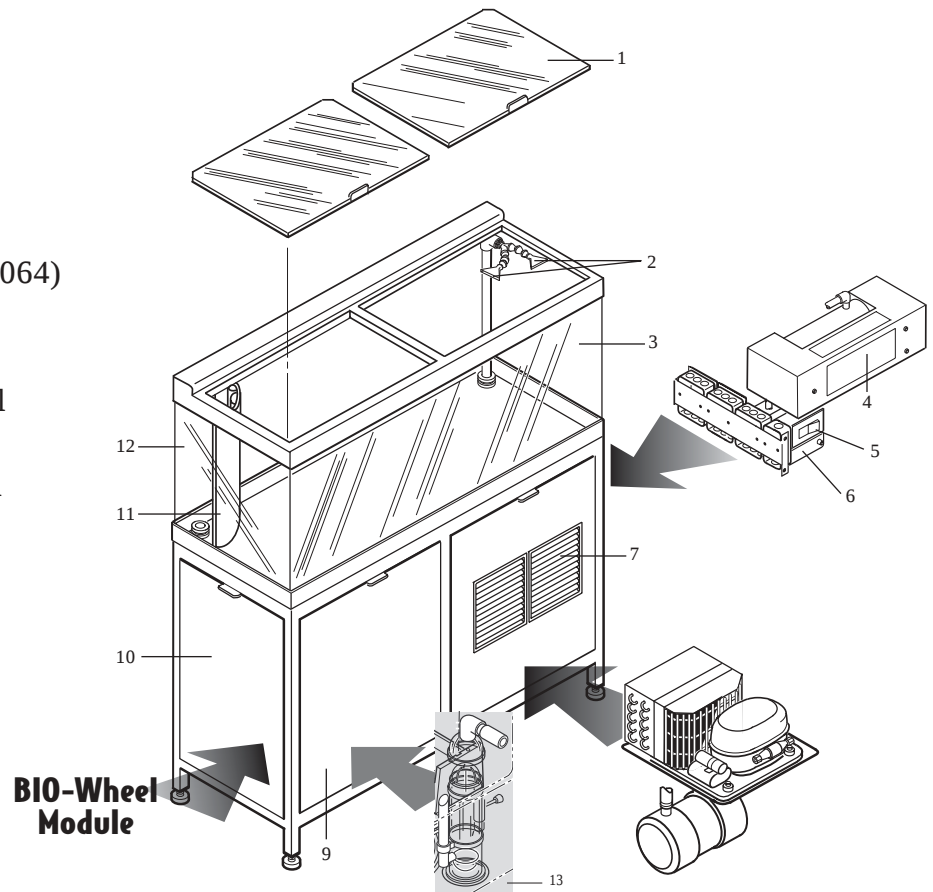
Tank: Dual-pane tempered glass

Sump: Fiberglass

Misc. Panels & Covers: ABS

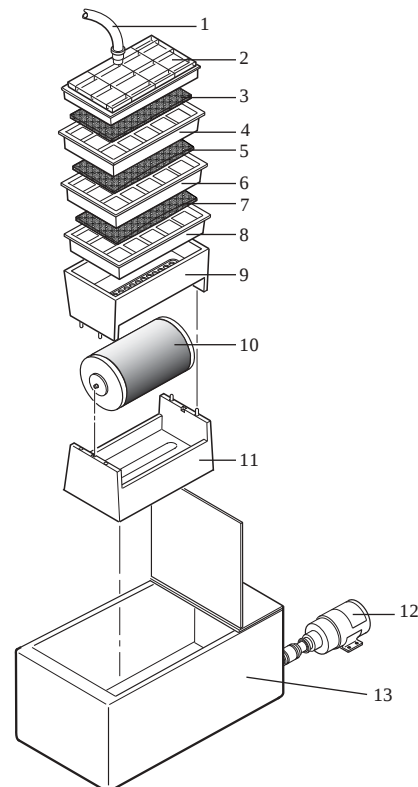
METAL FRAME LIVE SEAFOOD DISPLAY SYSTEM Exploded View

- 1 - Clear Plastic Lid (#CP1870)
- 2 - Corner Spray Nozzles
- 3 - Display Tank
- 4 - UV Disinfection Unit (#MZ0064)
- 5 - Master Switch
- 6 - Thermostat (#CP1558)
- 7 - Front Electrical Access Panel
- 8 - Refrigeration Unit
- 9 - Front Filtration Access Panel
- 10 - Side Filtration Access Panel
- 11 - Overflow Weir
- 12 - Bi-Level Skimmer Chamber
- 13 - Protein Skimmer (#CP1850)



BIO-WHEEL FILTRATION MODULE Exploded View

- 1 - Distribution Pipe
- 2 - BIO-Wheel Assembly Cover
- 3 - Prefilter Pad (#CS1859)
- 4 - Upper Filter Media Tray (#CP1825)
- 5 - Carbon Prefilter Pack (#CS1826)
- 6 - Middle Filter Media Tray (#CP1825)
- 7 - Dolomite Prefilter Pack (#CP1978)
- 8 - Lower Filter Media Tray (#CP1825)
- 9 - Upper BIO-Wheel Housing (#CP1823)
- 10 - BIO-Wheel (#CP1807M)
- 11 - Lower BIO-Wheel Housing (#CP1822)
- 12 - Circulation Pump (#MZ0156)
- 13 - Sump



INSTALLATION

The following simple steps are required to get your system up and operational. Consult exploded views for any necessary clarification.

Tank Preparation

1. Locate unit near a 110–120 volt grounded outlet with a 20 amp dedicated circuit.

WARNING: Do not attempt to operate unit on extension cord or non-grounded circuit. Do not handle or connect plug with wet hands.

2. Make sure panels are not obstructed. (to avoid overheating, we recommend keeping an adequate distance between the vent and any barriers to ventilation.) These panels provide access to filters, thermostat, on/off switch, drains and other components.
3. Unpack all accessories and supplies from tank.
4. Remove Front Electrical Access Panel. Make sure system components are plugged into Junction Box.

NOTE: Cord receptacle outlets are labeled for clarity. If the cord becomes disconnected, be sure to reconnect to the designated outlet.

5. Replace Front Electrical Access Panel.

FILTRATION PREPARATION

IMPORTANT: Your system contains five types of filters:

1. *Mechanical* – Filter pads to screen out solid waste particles.
2. *Chemical* – Premium Activated Carbon to adsorb dissolved contaminants, discoloration, odors, toxic gases.
3. *Biological* – BIO-Wheels and Dolomite filter bed to remove toxic ammonia and nitrites and help maintain pH balance.
4. *Protein Skimmer* to drive dissolved organic matter from water as foam.
5. *UV Disinfection Unit* to eliminate waterborne bacteria, viruses and algae spores.

NOTE: Ammonia (produced from animal waste and respiration) is THE biggest killer of aquatic animals. For this reason, biological filtration is CRITICAL.

A biological filter is a *living* filter...aerobic beneficial bacteria that consume animal waste products and convert toxic ammonia to non-toxic nitrate. When properly maintained, it keeps your product alive and healthy, your water clear. When a biological filter is overtaxed or abused, water clarity and product longevity will be affected.

Use of precultured BIO-Wheels (optional) means no need for a lengthy (6-8 week) break in period. Your bacteria culture is in place, ready to go to work. Product can be immediately loaded and displayed.

We recommend that you make an effort to keep your tank population relatively constant. Beneficial bacteria breathe oxygen, but *consume* ammonia. No animals, no ammonia. No ammonia, no bacteria.

NEVER use soap or cleansers in or around tank.

NEVER leave tank turned off for long periods of time.

NEVER let gravel bed dry out.

Adding Filtration Media

Prior to system startup, it is necessary to install filtration media. Follow the few easy steps outlined below to get your system ready for operation. Refer to the Exploded View (pg. 7) for additional clarification.

1. Remove Front Filtration Access Panel



2. Disconnect Distribution Pipe.



3. Remove clear BIO-Wheel Assembly Cover.



4. Lift out Upper Filter Media Tray and set aside.



5. Lift out Middle Filter Media Tray and set aside.



6. Unwrap Dolomite Filter Pack and rinse thoroughly in cold water (at sink) until water runs clear (A). Place Dolomite Filter Pack inside Lower Filter Media Tray (B).

A



B



7. Replace Middle Filter Media Tray (A).
Unwrap Carbon Filter Pack and rinse thoroughly in cold water (at sink) until water runs clear (B). Place Carbon Filter Pack inside Middle Filter Media Tray (B).

A



B



C



8. Replace Upper Filter Media Tray and place polyfiber Prefilter Pad inside.



9. Replace clear BIO-Wheel Assembly Cover. Reconnect Distribution Pipe.
Replace Front Filtration Access Panel.

SYSTEM STARTUP

When media is in place, follow the steps below to get your system up and running.

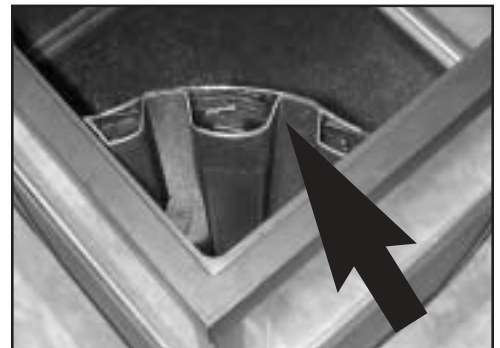
TO BEGIN: Add approximately 28 lbs. of Marineland's Instant Ocean® Lobster Salt to tank. Save the remainder to adjust salinity at a later time.

NOTE: When filling tank, run cold water through salt to dissolve it faster.

1. Fill Sump to operating water level indicated by "Fill to This Line" Label.



2. Manually fill Display Tank to level of Overflow Weir (inside Bi-Level Skimmer chamber).



3. Remove Front Electrical Access Panel. Plug power cord into 110-120v dedicated outlet and activate Master Switch (shown). Never attempt to plug in unit unless hands and plug are absolutely dry.

NOTE: After system has operated for five minutes, Sump water level will momentarily drop. Refill Sump to "Fill to This Line" label.



4. Adjust Thermostat to desired temperature. Check temperature after approximately eight hours and make any necessary adjustments.



5. Allow system to operate with mechanical and chemical filtration media (blue polyfiber Prefilter Pad, Carbon Filter Pack and Dolomite Filter Pack) for a period of 24 hours. Be sure to inspect areas near pump, UV and other components for leaks.

NOTE: Do not install BIO-Wheel for first 24 hours of operation.

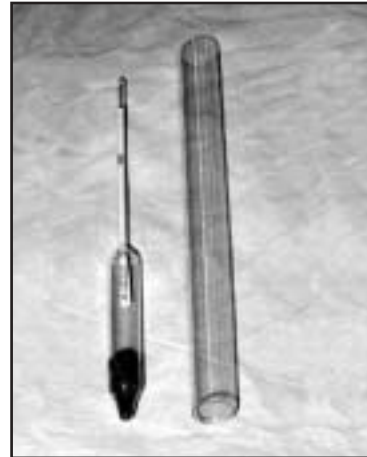
6. Adjust “IN” Water Nozzles in Display Tank to ensure optimum circulation.

NOTE: Water should flow just below the surface - not above.



MEASURING SALINITY

After your saltwater system has been running for about two hours and water is clear, it is time to measure the tank's salt level.



1. Remove Hydrometer from plastic tube.

2. Rinse plastic tube and fill it with water from tank.

3. Place Hydrometer in tube and tap tube lightly so that Hydrometer floats.

NOTE: You may also float Hydrometer in tank.

4. Read scale on tube. Reading should be between 1.020 and 1.025. If the reading is below 1.020, add salt; above 1.025, drain some water and replace with fresh water. 1.022 is ideal.

When replacing water lost due to evaporation, simply add cold, clean tap water.

If water is removed for a specific purpose, e.g. to dip lobsters or clean tank, new salt and water will be needed.

Always wait for salt to dissolve before taking Hydrometer reading.

Never pour new salt into tank if lobsters are present. Use a clean container to dissolve salt (approximately 1.5 lbs of salt to every 5 gallons of water).

AFTER 24 HOURS...

After 24 hours of system operation:

1. Turn off system.
2. Follow steps 1-5 in “Adding Filtration Media” section.
3. Remove Lower Media Tray and set aside.

4. Remove Upper BIO-Wheel Housing and install BIO-Wheel in Lower BIO-Wheel Housing (A). Tray guides will ensure correct positioning.



5. Replace Upper BIO-Wheel Housing (B), Lower Media Tray, Middle Media Tray, Upper Media Tray.



6. Replace clean BIO-Wheel Assembly Cover.
7. Connect Distribution Pipe.
8. Replace Front Filtration Access Panel.
9. Restart System.

ADDING ANIMALS

Lobsters

Set salinity. Adjust water temperature (45°F). Before introducing new lobsters into the system, dip each lobster thoroughly in a bucket of saltwater. Dipping removes accumulated shipping debris and prevents lobsters from fouling tank.



Never use fresh water for lobster dips...it will kill the lobsters.

NOTE: Do not leave lobsters unattended in purging container for any length of time without oxygenating water. They may suffocate.

For best results, rinse water should be taken from the established display tank, discarded after use and replenished according to guidelines on pg. 12.

Recommended temperature setting is for North American Lobster (*Homarus Americanus*). When using tanks for other species of lobster, adjust temperature as necessary for that particular species.

MAINTENANCE

Routine maintenance must be performed. The procedures listed below are neither difficult nor time consuming. They will keep your system clean, your stock healthy. Failure to follow these simple maintenance steps will adversely affect system performance and could lead to premature failure of some components. We recommend setting up a maintenance log to track procedure completion.

Daily

Check Tank for fatalities and weak or damaged stock - Remove immediately. Clean or Replace Prefilter Pads

A clogged filter pad overflows and will not collect waste. Uncollected waste is returned to the display tank and can severely reduce system efficiency.

To replace a Prefilter Pad:

1. Remove clear BIO-Wheel Filtration Module Cover.

NOTE: Have a bucket or large plastic pan ready to catch spills from removed pad(s).

2. Lift out used pad.

3. Rinse or replace with new pads ("blue" - #CS1859). *NOTE: Pads may be rinsed more than once. Replace when they become damaged or misshapen from repeated use.*

4. Replace Cover.

Check Water Pump and BIO-Wheel Operation

Observe flow of water to the BIO-Wheel Assembly. Make sure that water flow to the BIO-Wheel is unhindered. The BIO-Wheel should rotate freely and remain wet at all times. Speed of rotation is not important. If a BIO-Wheel is turning - regardless of the rate - it is working.

If flow interruption is evident, check Pump Inlet (in Sump) for obstructions. If clogged, shut off system, remove Strainer and clean. If flow interruption is still evident and no obstructions are found, consult "Troubleshooting Guidelines" section in this manual.

NOTE: A properly cultured BIO-Wheel is brown or discolored. There is no reason to clean a BIO-Wheel or replace it - unless it is damaged. If removed from the system for any reason, make sure that it is kept moist and exposed to air until you reinstall it. If a BIO-Wheel is allowed to dry out or is inadvertently exposed to a contaminant, the bioculture may be destroyed. A precultured replacement can be purchased directly from Marineland.

Check UV Operation Display Light

The UV Operation Display Light is located on the UV Disinfection Unit Cover. **When lit**, it indicates that the UV Lamp is operating. See Service section for UV Lamp replacement instructions.



Weekly

Replace Carbon Filter Pack

Keeping the Prefilter Pad and Carbon Filter Pack clean and unrestricted is critical to the successful operation of the BIO-Wheel. It must receive clean, filtered water to keep nitrifying bacteria healthy and thriving.

1. Remove clear BIO-Wheel Filtration Module Cover.
2. Lift out Upper and Middle Filter Media Trays with Prefilter Pads.
NOTE: Have bucket or large plastic pan ready to catch water spillage from trays.
3. Set Upper and Middle Filter Trays aside. Lift out Lower Filter Media Tray.
4. Replace Carbon Filter Pack (#CS1826) and rinse out filter tray before replacing.
NOTE: Before installing, be sure to rinse Carbon Filter Pack thoroughly in cold water until water runs clear.

Wipe Down All Exterior Surfaces

Never use chemicals, soaps, detergents or harsh abrasives on any part of the system.
Do not use cleaners inside or near the tank at any time.

WARNING: *Never spray insecticides within 20 feet of your tank system. The resulting contamination could kill your stock and destroy your biological filter. If you must use insecticides, be careful to turn off the system and cover all open water until the odor has cleared from the area completely. And don't forget to turn the system back on.*

Clean Protein Skimmer Froth Cup/Foam Separator

To ensure proper operation, Froth Cup and Foam Separator should be cleaned every week with warm water and a dedicated cloth.

To remove Froth Cup and Foam Separator:

1. Shut down system.
2. Remove front Filtration Access Panel.
3. Remove Protein Skimmer Drain Hose from Drain Port.
4. Remove (lift up) Froth Cup from Contact Chamber.
5. Clean Froth Cup and Foam Separator.
6. Return Cup and Separator to position atop Contact Chamber.
NOTE: Make sure that a good seal forms around Cup and Chamber.
7. Reconnect Protein Skimmer Drain Hose.
8. Restart System. Inspect Skimmer for leaks.
9. Replace Front Filtration Access Panel.

Inspect Display Tank Inlets

Remove or wipe away any obstructions or algae growth to ensure unhindered flow.

Inspect Display Tank for Algae Growth

Algae spores enter the system naturally via tank inhabitants and light allows them to grow. Although your system's UV Disinfection Unit eliminates the majority of algae spores, the more light you have, the greater the potential for some algae growth.

To remove algae, simply wipe inside tank surface with a cloth, algae scraper or blue filter pad. NEVER use soap or metal scouring pads. Maintain a separate cloth *only* for the tank. It should be kept clean and isolated from other departments so that it does not get contaminated by multiple task use.

Clean Bi-Level Skimmer

Wipe Skimmer areas clean with designated tank cloth or scrubber.

Monthly

Clean Refrigeration Unit Condenser

Intake Screen

To guard against system failure, Refrigeration Condenser Intake Screen should be brushed or vacuumed clean every month (shown). This eliminates accumulated dust and prevents clogging. To reach the Screen, remove Rear or Side Electrical Access Panel.



Every Six Months

Replace Dolomite Filter Pack

1. Remove clear BIO-Wheel Filtration Module Cover.
2. Lift out Upper Filter Media Tray with Prefilter Pad.
NOTE: Have bucket or large plastic pan ready to catch water spillage from upper and lower tray.

3. Set Upper Filter Tray aside. Lift out Middle Filter Media Tray.

4. Replace Dolomite Filter Pack (#CP1978) in Lower Filter Media Tray.

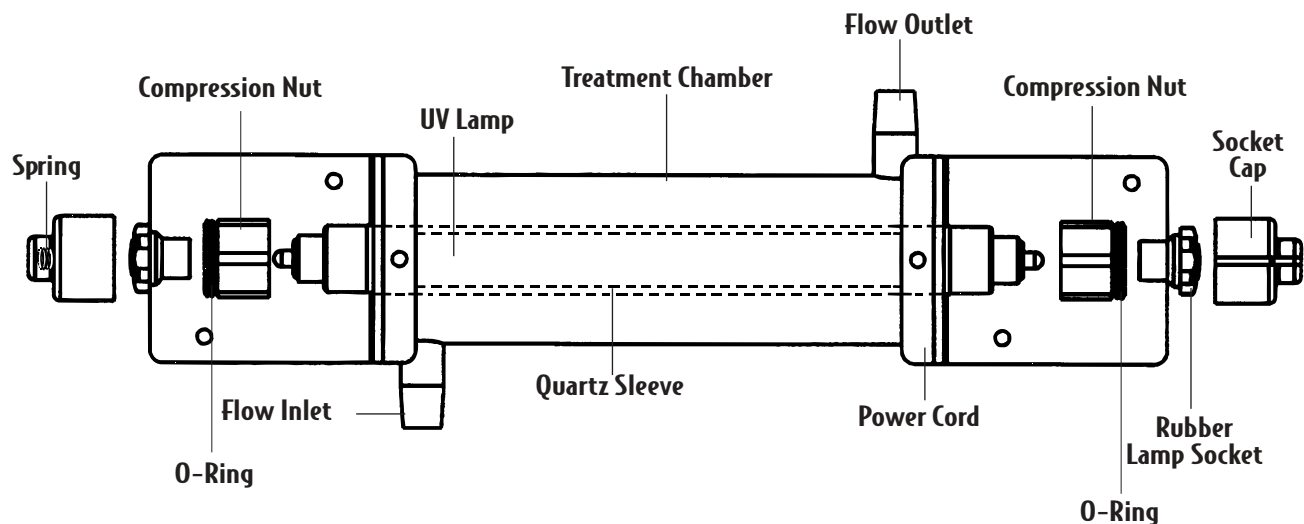
NOTE: Before installing, be sure to rinse Dolomite Filter Pack thoroughly in cold water until water runs clear.

SERVICE

We strongly recommend that all servicing for your system be performed by a qualified technician or trained associate. For a service referral, call (800) 322-1266.

AQUAFINE UV DISINFECTION UNIT

IMPORTANT NOTE: To prolong the life of the Aquafine UV Disinfection Unit and avoid leaving fingerprints on the UV Lamp, we strongly recommend that you wear cotton gloves at all times during servicing of UV Disinfection Unit.



Specifically assembled to help ensure convenient servicing of the Aquafine UV Disinfection Unit, the Marineland UV Lamp Replacement Kit (#MZ0017) contains instructions, a pair of cotton gloves, and silicon lubricant. UV Lamps are also available (#MZ0061). **To order kits or replacement lamps, call (800) 322-1266.**

WARNING:

Never look directly into UV Lamp while in operation...eye injury may occur.

Never restore power while UV Lamp is separated from Treatment Chamber. Skin damage and/or injury may result.

Always make sure hands are absolutely dry before servicing equipment.

Every Six Months

Replace UV Disinfection Unit Lamp and Clean Quartz Sleeve (exploded diagram, pg. 21)

The UV Lamp has a useful service life of about six months. After this time – whether it continues to appear functional or not – it must be replaced. If the UV Operation Display Light goes off before this time, change lamp immediately.

The Quartz Sleeve will develop a layer of scum on its surface which can reduce UV Lamp effectiveness. Scum should be cleaned off *at least* once every six months. When changing UV Lamp, *always* clean Quartz Sleeve. *Always* exercise care when cleaning.

1. Turn off Master Switch. Allow UV unit to drain (3-5 minutes).

2. Open Front and Side Electrical Access Panels.
Remove UV Cover by unscrewing outer nuts and lifting away from unit.



3. Unscrew both threaded Socket Caps from Treatment Chamber ends. Gently disconnect UV Lamp from Rubber Lamp Sockets and carefully remove UV Lamp from Treatment Chamber, sliding it out through Side Electrical Access Port (as shown). Carefully set aside.



4. Unscrew and remove both threaded Compression Nuts. Grasp one end of Quartz Sleeve and gently draw it from Treatment Chamber.

CAUTION: Quartz Sleeves are very fragile. Handle with care to prevent breaking or chipping.

5. Wash Quartz Sleeve with mild soap and hot water. Rinse thoroughly with hot water.

NOTE: For heavier deposits, we recommend cleaning with calcium/lime remover or alcohol. Gently wipe sleeve with clean cloth before reinstalling.

6. Working from one end of Treatment Chamber, carefully insert clean Quartz Sleeve through stainless steel nipple and into Treatment Chamber. Sleeve should protrude an equal distance from each end.
7. Before installing Compression Nuts, remove and clean O-Rings. Then lubricate each with a very thin coating of silicon lubricant (provided). Reinstall O-Rings.
NOTE: O-Rings should be replaced each year.
8. Install Compression Nut at one end. Finger tighten while holding opposite end of Quartz Sleeve.
9. Install remaining Compression Nut. Hand tighten (firmly) both Compression Nuts.
CAUTION: Do not over tighten Compression Nuts. This can fracture ends of Quartz Sleeve. After hand tightening Compression Nut, release it one half turn to avoid fracture.
10. Carefully reinsert UV Lamp into open Quartz Sleeve and gently push it about 2-3 inches out beyond the opposite Compression Nut.
11. Insert lamp base into spring equipped Rubber Lamp Socket (see diagram), sliding “boot” portion over end of lamp. Push until you feel a firm, “bottomed out” connection.
NOTE: Make sure “boot” does not fold under.
12. Connect opposite lamp base to remaining Rubber Lamp Socket.
13. Once Rubber Lamp Sockets are attached to UV Lamp at both ends, position Rubber Lamp Sockets inside Socket Caps. Making sure that Rubber Lamp Sockets are seated securely, join Socket Caps to threaded ends of Compression Nuts and finger tighten.
14. Replace UV Disinfection Unit Cover.
15. Turn on Master Switch. Replace Electrical Access Panel(s).

TROUBLESHOOTING GUIDELINES

CAUTION: Some of the corrective procedures recommended below may require professional attention. For a service referral, call the 24-Hour Marineland Hotline at:

(800) 322-1266

If entire system abruptly shuts down...

- Reset circuit breaker in main electrical panel.
- Make sure Master Switch is turned on.
- Check to make sure unit is plugged in.
- Check Pump Intake Strainer in Sump for obstructions.

If water turns yellow or odors develop...

- Replace Carbon Filter Pack(s).
- Make sure UV Disinfection Unit is operating properly.
- Check Protein Skimmer for clogged Discharge Tube.

If BIO-Wheel fails to rotate...

- Inspect Prefilter Pad and Carbon Filter Pack for clogging. Clean or change as needed.
- See if BIO-Wheel is obstructed. Clean bearings, check for unimpeded rotation and reinstall.
- Make sure that Sump is not overfilled. Check Return Tube for obstruction.
- Check Pump Intake Strainer in Sump for obstructions.

If water flow to BIO-Wheels or display tank stops or flow is sluggish...

- Inspect Pump Intake Strainer in Sump. Clean and/or remove any debris or obstructions.
- Remove Front Electrical Access Panel and make sure System Pump is plugged in, motor fan is turning.
- Call for service if problem persists.

If water temperature in Display Tank is too low or too high...

- Check Thermostat setting.
NOTE: Thermostat reading may differ from measured Display Tank temperature... adjust thermostat as required and monitor Display Tank temperature with thermometer, allowing 3-4 hours for temperature to stabilize before checking again.
- Make sure power cord to Refrigeration Unit is plugged into proper outlet.
- Inspect intake vents and clean if necessary.
- Call for service if Thermostat or Refrigeration Unit is malfunctioning.

If large amounts of air bubbles are evident in Display Tank...

- Check water level in Sump. If below desired level, add water via Replenishment Valve and check frequently.
- Make sure Pump Inlet Strainer is fitted firmly in place (slots down).
- Call for service if problem persists.

IF UV Lamp goes out (UV Operation Display Light goes off)...

- Remove Access Panel and confirm that UV power cord is plugged into appropriate outlet.
- Replace UV Lamp (see instructions, pg 16). If problem persists after Lamp is replaced, call the Marineland 24 Hour Hotline for replacement part and/or further assistance.

IF water is leaking from UV Lamp Housing...

- Reinstall Quartz Sleeve according to directions.

IF one or two lobster die shortly after arrival...

- Don't panic. Remove product from tank.
- Check water salinity. Adjust if necessary.
- Monitor water temperature carefully. Adjust if necessary.

IF a large amount of product is lost and water is clear...

- Change water and replace Carbon Filter Pack immediately.

CUSTOMER SERVICE

**Should you experience problems with your system,
call the 24 Hour Marineland Hotline at (800) 322-1266.**

To order any of the replacement items listed below, call (800) 322-1266

WEEKLY USE ITEMS:

- | | |
|--------------------------|--------|
| 1. Prefilter Pads – Blue | CS1859 |
| 2. Carbon Filter Pack | CS1826 |

SERVICE ITEMS:

- | | |
|---------------------------------------|---------|
| 1. Marineland UV Lamp Replacement Kit | CA1975 |
| 2. UV Lamp | CP1976 |
| 3. Replacement O-Rings | CP1977 |
| 4. Dolomite Filter Pack | CP1978 |
| 5. Hydrometer | CA1501 |
| 6. Tank Thermometer | CA1502 |
| 7. Lobster Rake | CA1503 |
| 8. Instant Ocean® Lobster Salt | CS 0309 |

LIMITED WARRANTY

Marineland warrants their systems for one year against defects in materials or workmanship. This warranty applies only to the system and does not cover water quality, live product, replacement parts or maintenance supplies.

If your system is found to be defective - and has not been modified, damaged or misused - call Marineland Commercial Aquariums (toll free) at (800) 322-1266 or fax us at (805) 529-3030. All calls received during regular business hours (8am - 5pm, Pacific Time) will be responded to within 24 hours. Please have your manual and the system serial number ready.

In most cases, the problem will be resolved by a simple maintenance procedure, recommendation or repair authorization. Upon authorization, and in instances where outside repair or replacement of parts is necessary, Marineland will absorb all appropriate costs.

Damage or injuries resulting from negligence, misuse or user modification are not covered by this warranty. Incidental or consequential damages are specifically excluded.* This warranty gives you specific legal rights. You may also have other rights which vary from state to state.

* Because some states do not allow the exclusion of incidental or consequential damages, this exclusion may not apply to you.



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