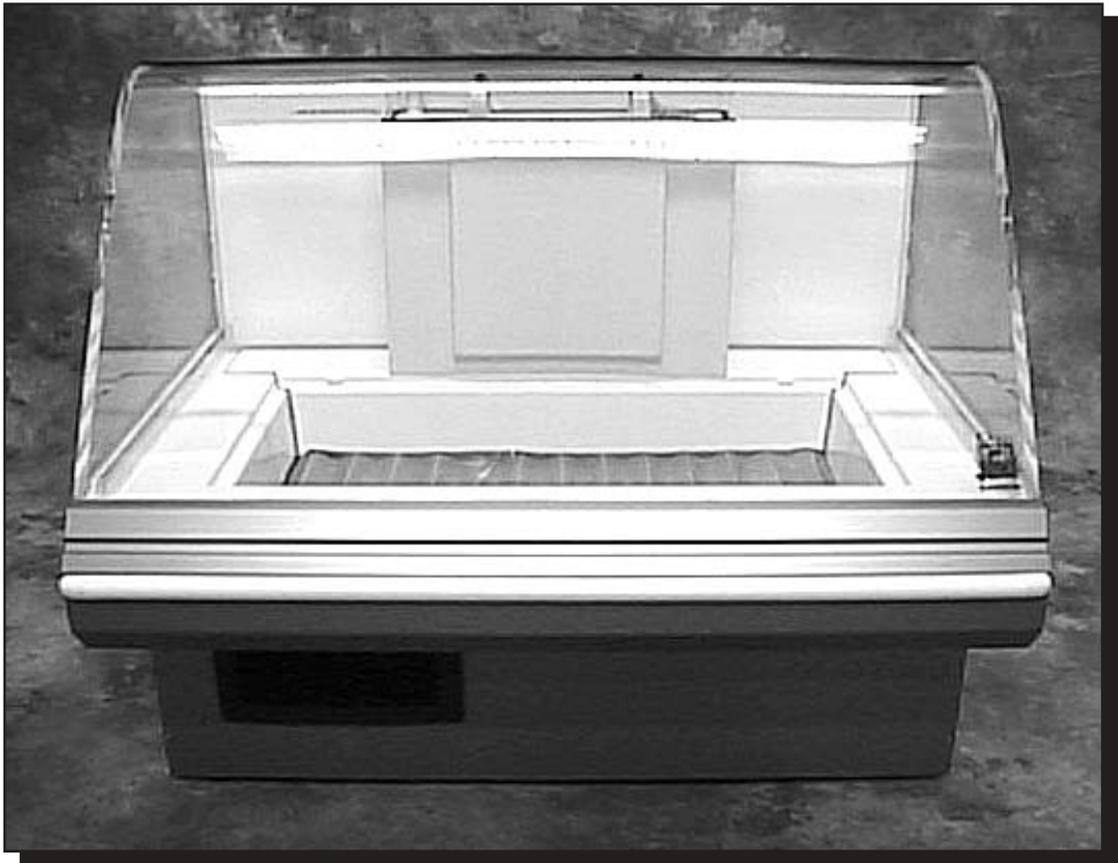


OPERATING MANUAL

REFRIGERATED LIVE SEAFOOD DISPLAY AND HOLDING SYSTEMS

CG-50 SERIES



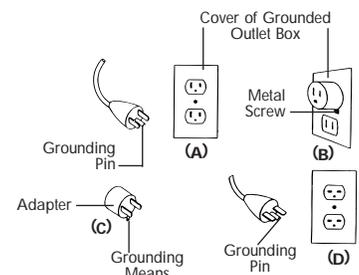
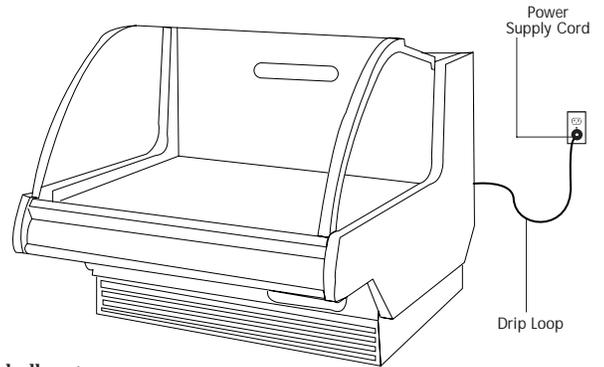
IMPORTANT SAFEGUARDS

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.

- 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 unit get wet, unplug this equipment immediately.
 - B. If the equipment shows any sign of abnormal water leakage, immediately turn off power at main disconnect.
 - C. Carefully examine the equipment after installation. It should not be plugged in if there is water on parts not intended to be wet.
 - D. Do not operate any equipment 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 plug or receptacle getting wet, position tank 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 by the user for each cord connecting equipment 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 equipment 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 this equipment 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 this equipment 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 equipment where it will be exposed to the weather or to temperatures below freezing.
7. Make sure any appliance mounted on a tank is securely installed before operating it.
8. Read and observe all the important notices on the equipment.
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 equipment rating may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.
10. This equipment should be grounded to minimize the possibility of electric shock. This unit 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.
 - (A) Grounding Pin
 - (B) Adapter
 - (C) Adapter
 - (D) Grounding Pin
11. This equipment 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.
 - (A) Cover of Grounded Outlet Box
 - (B) Metal Screw
 - (C) Adapter
 - (D) Grounding Pin



SAVE THESE INSTRUCTIONS

THE MARINELAND CG-50



This manual will provide you with the information you need to successfully operate and maintain your new CG50 System. Please read it carefully and keep it for future reference.

The Marineland CG (Curved Glass) systems are easy-to-maintain refrigerated systems for displaying and holding large loads of live seafood. Your new system comes complete with everything you need to become fully operational:

- Consumables:
- Biological Filter Material #1 (#C0401)
 - Biological Filter Material #2 (Dolomite #C0402)
 - Black Diamond Premium Activated Carbon (#PA0370)
 - Prepacked Carbon Filter Tray
 - Filter Pads (#CSFP24)
 - Extra Airstones (#C1506)
 - Bottle of Marineland Beneficial Bacteria (#C1569)
 - Bottom Prefilter Pads (#FP24)
 - 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).*

SPECIAL FEATURES

- **Reverse Flow Filtration** prevents compacting of filter bed, ensuring cleaner water and eliminating the need for periodic filter bed maintenance.
- The thermostatically controlled **Refrigeration Unit** is capable of maintaining tank temperatures of 45° - 70° F and can be preset to the temperature required by the system.
- The **Foam Fractionator** 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 container.

Inside the CG-50 System...

In this closed system, refrigerated water is drawn from the enclosed sub-chamber up through the Air Stack Tubes and into the Carbon Filter Tray. As water passes through the Carbon Filter Box, mechanical and chemical filtration is provided by a polyfiber filter pad and eight ounces of Black Diamond Premium Activated Carbon. The carbon adsorbs dissolved organic compounds which cause odor and discoloration.

Filtered water flows through the Foam Fractionator, spills into the display tank and is drawn through the filter bed where biological filtration occurs. A thriving culture of beneficial nitrifying bacteria efficiently oxidizes all ammonia and nitrite on contact. Filtered water then re-enters the sub-chamber for recirculation.

THE SYSTEM

CG-50 SPECIFICATIONS

Dimensions:

50" Long*

Capacity:

100 Gallons*

Shipping Weight:

725 lbs.*

Recommended Load:

Lobster: 100 - 125 lbs.

Trout: 35 lbs.

Catfish: 50 - 60 lbs.

* approximate

***Power
Requirements:***

15 Amps, 115 V, 60 Hz

Refrigeration:

1/3 HP Compressor with
Helical Heat Exchanger

Filtration:

Mechanical Filtration:

One Polyfiber Filter Pad

Chemical Filtration:

Black Diamond Premium
Activated Carbon

Biological Filtration:

Biological Filter Material #1

Biological Filter Material #2

Marineland Beneficial
Bacteria (Liquid)

***Installation
Connections:***

Electric Supply:

115 VAC., 60 Hz, 15 AMP

Recommendation:

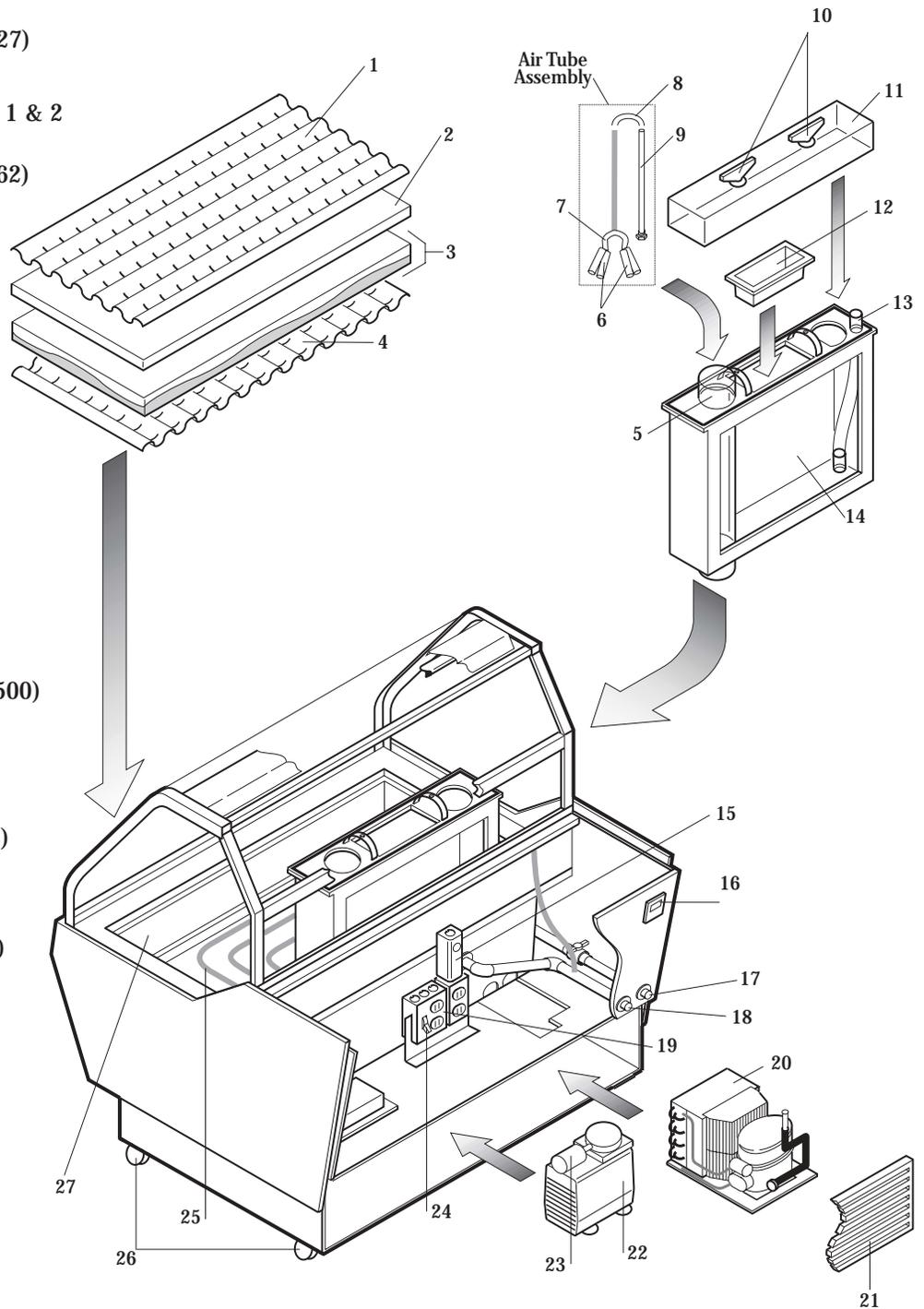
20 AMP Dedicated Circuit

Tank Drain:

1" Flexible Tubing

CG-50 EXPLODED VIEW

- 1 - Upper False Bottom (#CP1527)
- 2 - Prefilter Pad (#CSFP24)
- 3 - Biological Filtration Material 1 & 2 (#CS0401 & #CS0402)
- 4 - Lower False Bottom (#CP1562)
- 5 - Air Stack Tube (#CP1843)
- 6 - Airstones (#CS1506)
- 7 - "Y" Connector (#CP1515)
- 8 - Vinyl Tubing (#CP1509)
- 9 - Air Tube with 1/2" Threaded PVC Plug (#CP1513)
- 10 - Wing Bolt Connectors (#CP1844)
- 11 - Acrylic Access Lid
- 12 - Carbon Basket Housing (#CP1535)
- 13 - Foam Drain Tube
- 14 - Foam Fractionator
- 15 - Thermostat (#CP1558)
- 16 - Digital Thermometer (#CA1500)
- 17 - Drain Tube
- 18 - Foam Drain Tube
- 19 - Junction Box
- 20 - Refrigeration Unit (#CP1828)
- 21 - Vent Panel (#CP1548)
- 22 - Air Pump (#CP1550)
- 23 - External Air Filter (#CP1554)
- 24 - On/Off Switch
- 25 - Refrigeration Coils
- 26 - Casters (#CP1548)
- 27 - Sub-Chamber



INSTALLATION

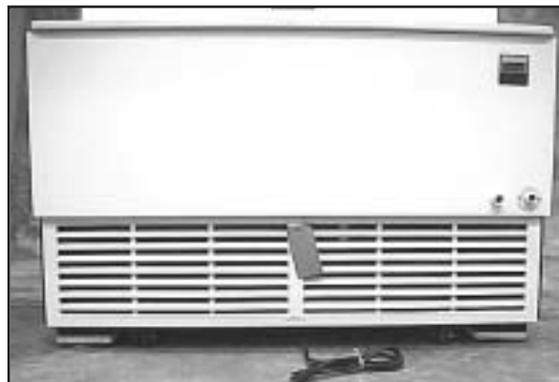
The following simple steps are required to get your system up and operational. Consult Exploded Views (pg. 5) for any necessary clarification.

Tank Preparation

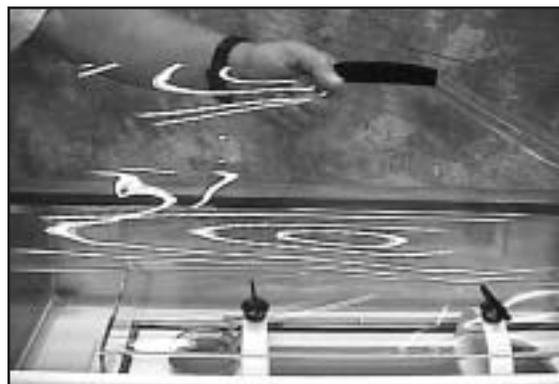
1. Locate unit near a 110–120 volt grounded outlet with a 15 Amp dedicated circuit.

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

2. Make sure Vented Panel is not obstructed. This panel allows cooling air to reach compressor. It also provides access to filters, thermostat, on/off switch, drains and other components. To avoid overheating, we recommend keeping an adequate distance between the vent and any barriers to ventilation. Similarly, do not remove casters or otherwise block vent slots in tank bottom.



3. Remove clear vinyl System Cover (optional) and unpack all accessories, supplies and Upper False Bottom from tank.

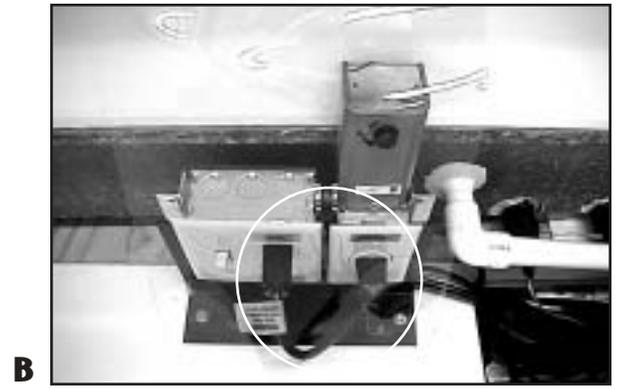


4. Attach Foam Drain Tube to drain outlet or position it over a dedicated bucket or floor drain.

NOTE: The Foam Drain Tube is specifically designed to drain off excess liquids and foam (including those from your service shelf).



5. Raise Service Shelf to access Junction Box and Thermostat (A). Make sure system components are plugged into Junction Box (B).



6. Set Thermostat at 55°F. Leave it at that setting for six weeks to allow for bacterial growth. Then reset the temperature to 45°F. See pg. 15 for details.



7. Close Service Shelf.



FILTRATION PREPARATION

IMPORTANT: Your CG50 System contains four 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* – Special BIO-Mix in the tank bottom to help remove toxic ammonia and nitrites and help maintain pH balance.
4. *Protein* - Foam Fractionator to remove dissolved organic matter from water.

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.

DO NOT OVERLOAD YOUR TANK...every filter requires a break-in period which allows beneficial bacteria to take hold and grow.

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.

Prior to system startup, follow the few easy steps outlined below to get your system ready for operation. Refer to the Exploded View (pg. 5) for additional clarification.

Filter Bed Setup

1. Pour one inch of Biological Filter Material #2 (Dolomite) onto Lower False Bottom (A) and spread evenly over entire surface (B).



2. Add Biological Filter Material #1 (A), covering the layer of Dolomite completely (B).



3. Add more Biological Filter Material #2 until the top layer is within one inch from the top of the filtration well (A). Make certain that all carbon is covered and the top layer is level (B).



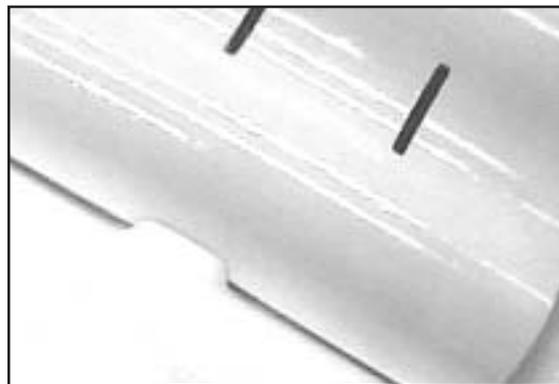
4. Place blue polyfiber Prefilter Pad (blue side up) over top layer.



5. Open Drain Valve (A) and run cold, clean water through the filter bed to flush out all Dolomite dust. Be careful not to expose any carbon - it will float until saturated. *NOTE: To avoid spillage, attach a hose or position System Drain over a floor drain. Close drain valve (B) when finished.*

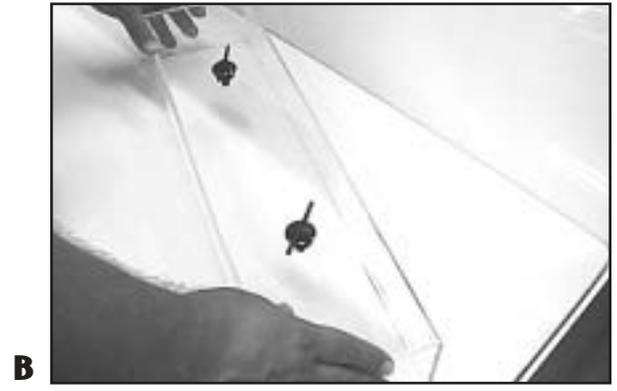
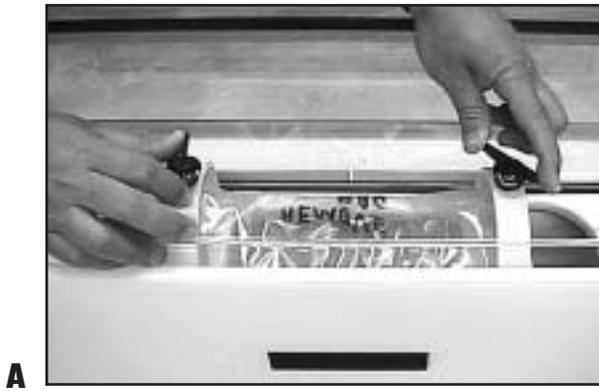


6. Place Upper False Bottom over Prefilter Pad (A). Make sure the Upper False Bottom fits securely and that no pad edges protrude (B).

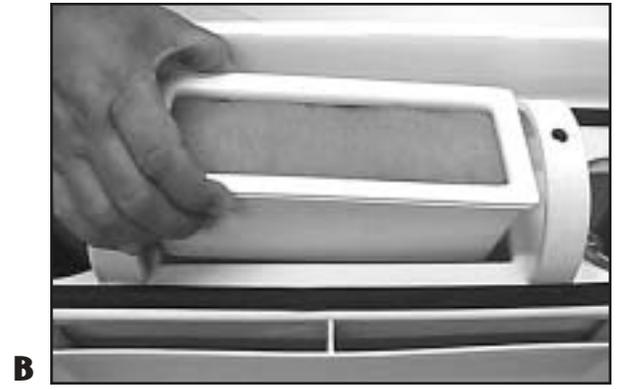


NOTE: Models constructed after January 1, 1995 have locking “tabs” for the purpose of holding the Upper False Bottom in position. Make sure the Upper False Bottom fits under these tabs.

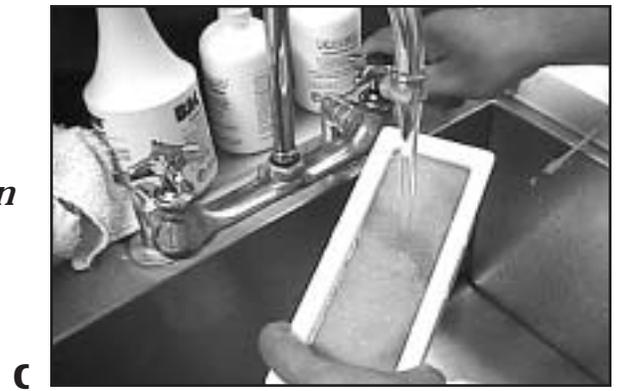
7. Unscrew Wing Bolts (A) and remove clear Acrylic Access Lid (B).



8. Unwrap Carbon Filter Basket (A) and place inside Carbon Basket Housing (B).



NOTE: Before installing, gently shake Carbon Filter Basket to distribute carbon. Rinse carbon thoroughly until water runs clear (C).



9. Replace Access Lid and screw down Wing Bolt Connectors.

SYSTEM STARTUP

For Saltwater Systems Only: Add approximately 28 lbs. of Instant Ocean® Lobster Salt to tank. Save the remainder to adjust salinity at a later time.

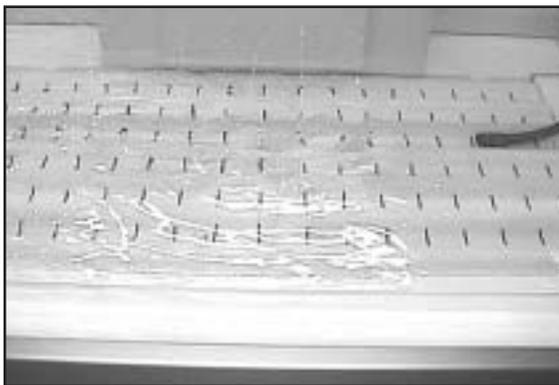
NOTE: When filling tank, run water through salt to dissolve it faster.

1. Make sure Drain Valve is closed (perpendicular to flow tube).



2. Fill display tank (A). Carbon and Dolomite dust may cause some cloudiness. This will clear in a few hours.

NOTE: Never allow water level to go below "Water Level" line on side glass (B).

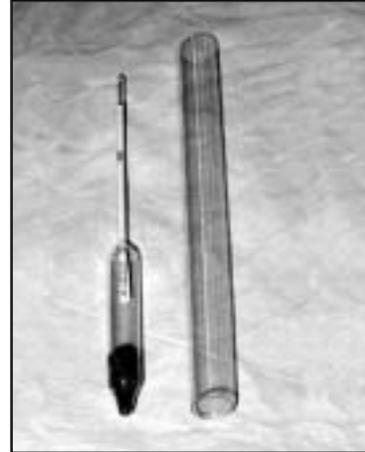


3. Start system. Plug power cord into 110-120V dedicated outlet and turn switch on. *Never attempt to plug in unit unless hands and plug are absolutely dry.*

MEASURING SALINITY

After your 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).

STARTING YOUR BIOLOGICAL FILTER

1. After the tank has been running for an hour or two and your Hydrometer reads between 1.020 and 1.025, pour 4 ounces ($\frac{1}{2}$ bottle) of Marineland Beneficial Bacteria into the filled tank. Wait 15 minutes before introducing animals.

NOTE: Bacteria require a food source to grow. Lobster waste (ammonia) is their food source. The break-in period begins when lobsters are placed into the system.



FOR BEST RESULTS... We recommend that you take an old filter pad from an established tank and ring it out into the new tank. This will add thousands of live, healthy bacteria to your tank and will make your break-in period more successful. If no established tanks are handy, then try to get a filter pad or some gravel from an established tank of a local pet store (saltwater tank for lobsters/crabs, freshwater tank for trout/catfish).

2. Add an additional ounce of Marineland Beneficial Bacteria every third day during your break-in period until the bottle is empty.

NOTE: You may occasionally need to add an extra tablespoon of liquid bacteria to your system. This may be necessary after a complete water change or extreme fluctuation in loading, e.g. adding a heavy load after a sellout. Contact Marineland or your service representative for an additional supply.

ADDING ANIMALS

Your living biological filter is not capable of handling large loads in the beginning. It requires a six week “break-in” period for the bacteria to develop and cover the available surface area in the filter bed. **This process cannot be rushed.** For this reason, we recommend very light loads for the first few weeks. Exceeding initial recommended capacity can lead to ammonia overload within 7-14 days.

RECOMMENDED LOADING SCHEDULE

Week 1: no more than 25% capacity

Week 2: no more than 25% capacity

Week 3: no more than 30% capacity

Week 4: no more than 50% capacity

Week 5: no more than 75% capacity

Week 6: 100% capacity

In Case of Ammonia Overload...change 100% of water only.

DO NOT change pads or carbon. **DO NOT** wash gravel. **DO NOT** turn system off.

Lobsters

Set salinity. Adjust water temperature (50°F). Before introducing new lobsters into the system, dip each lobster and rinse it thoroughly in a bucket of saltwater. Dipping removes accumulated shipping debris and prevents lobsters from fouling tank.

Never use freshwater for lobster dips...it will kill the lobsters.

For best results, rinse water should be taken from the established display tank, discarded after use and replenished (pg. 13).

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



Fin Fish

Because fin fish are susceptible to temperature shock, it is important to avoid placing new fish in water much colder than that in which they were shipped.

One day prior to the arrival of new fish, water in the display tank should be set to the expected temperature of the water in the delivery vehicle. After the fish are added, reset the thermostat and bring water temperature down to proper setting of 50°F.

NOTE: Due to water conditions in some areas, it may be necessary to perform weekly water changes for freshwater tanks.

Recommended temperature setting is for American Lobster (*Homarus Americanus*) and some fin fish. When using tanks for other species, 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. This could lead to premature failure of some components and loss of stock. We recommend setting up a maintenance log to track procedure completion.

Daily

Check tank for fatalities and weak or damaged stock.

Remove immediately.

Every Two Weeks

Change Carbon Filter Pad and Carbon

Clogged filters do not collect waste. Uncollected waste is returned to the tank and will reduce system efficiency. In addition, carbon filters out dissolved pollutants, odors, chlorine, toxic gas and proteins. As with any filtering media, it is eventually exhausted and must be changed.

To change carbon, follow the steps below.

1. Remove clear Acrylic Access Lid.
Remove Carbon Filter Basket.



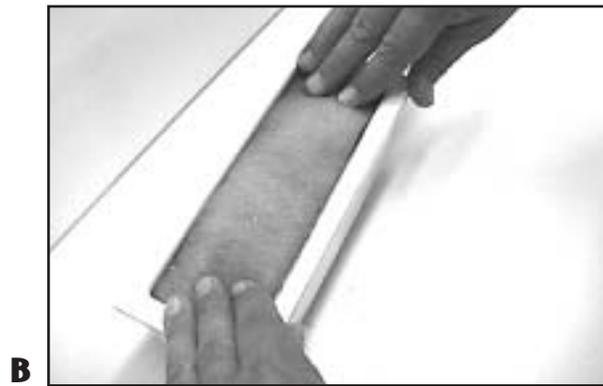
2. Discard used carbon and Carbon Filter Pad. Rinse out Carbon Basket. Tear or cut a new Carbon Filter Pad in half to fit the Carbon Basket.

3. Tuck new Carbon Filter Pad into Carbon Filter Basket (blue side down). Pad should cover bottom, sides and back with enough left on top to fold over the newly added carbon.

Pour eight ounces of Black Diamond Premium Activated Carbon into padded tray.



4. Cover new carbon with top of Carbon Filter Pad (A) and tuck pad under lip of Carbon Filter Basket (B). Reinstall Carbon Filter Basket.



Wipe down all exterior casing surfaces.

A vinegar/water solution (three tablespoons vinegar to a pint of water) may be used with a clean rag or paper towel. *Never* use chemicals, soaps, detergents or harsh abrasive on any part of the system. ***Do not use cleaners inside or near the system at any time.***

Warning: Never spray insecticides within 20 feet of your system. The resulting contamination could destroy your product as well as your biological filter. If you must use insecticides, be careful to turn off and cover the system with a plastic tarp until the odor has cleared from the area completely. And don't forget to turn the system back on.

Inspect display tank and sump for algae growth.

Algae spores enter the system naturally via tank inhabitants and light allows them to grow. The more light you have, the greater the potential for algae growth. To remove algae, simply wipe the inside tank surface with a cloth, algae scraper or acrylic cleaning pad. ***NEVER*** use soap or metal scouring pads. Keep a dedicated cloth for cleaning the inside viewing area surfaces. It should be kept clean and isolated from other departments so that it does not get contaminated by multiple task use.

Every Month to Six Months

Replace airstones

Airstones are a very important part of your system's filtration and circulation system. Within the system, they dramatically increase water flow and provide added surface area for oxygen exchange. The turbulent bubbling action also helps to neutralize toxic gases like carbon dioxide.

Airstones may become clogged due to algae growth, mineral deposits, and/or organic deposits. The occurrence of factors varies depending on the amount of light hitting the tank, the hardness of the local water supply, and general maintenance practices. When airstones become clogged, they must be changed...and all of them must be changed at the same time.

To change airstones, follow the steps below.

1. With the system pump running, remove Clear Acrylic Access Lid. Remove $\frac{3}{16}$ " Vinyl Tubing from Air Stack Tube. Disconnect air tube at the single-outlet "Y" Connector and remove the white rigid tube with airstones attached.



2. Test for clogs by blowing through the white rigid tube. Air should pass easily through the stones. If you find yourself blowing too hard, the airstones are clogged and need to be replaced.

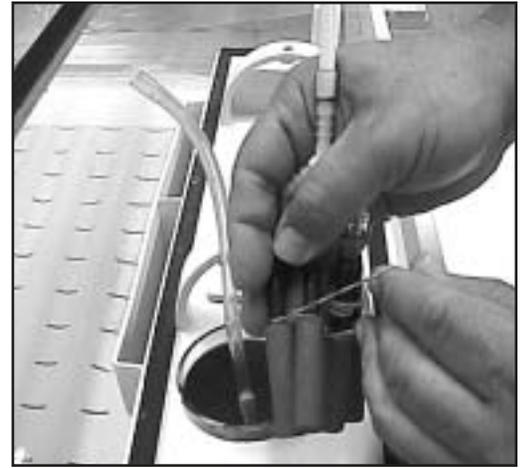
3. Pull the clogged airstones off the "Y" Connector at the end of the rigid white tube.

NOTE: Replacement "Y" Connectors (Part #C1515) can be ordered by calling the 24-Hour Marineland Hotline at (800) 322-1266.



- Place the new airstones on each open end of each “Y” Connector. With a rubber band, wrap each pair of airstones together.

NOTE: We recommend you use only Marineland airstones. They last longer and provide more bubbles for aeration.



- Re-insert white rigid tube into Air Stack Tube (A) and reattach flexible connector tube (B). *Do not push airstones all the way to the bottom of the tank.*



A



B

Clean Refrigeration Unit Condenser Intake Screen

To guard against overheating and system failure, your system's Refrigeration Condenser Intake Screen should be brushed or vacuumed clean. This eliminates accumulated dust and prevents clogging.



Every Three to Six Months

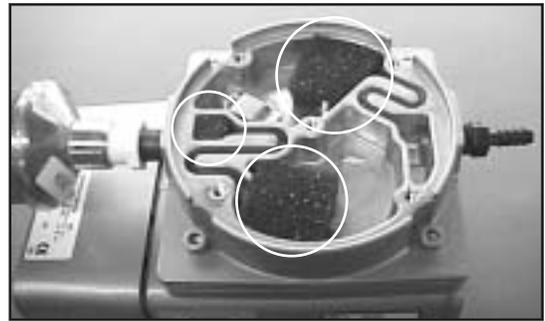
Clean External Air Filter

The External Air Filter is the brown muffler-like appendage sticking out from the top of the pump. To clean, unscrew the filter from the pump head. Then rinse it in warm water (no soap).



Clean Internal Air Filters

There are three internal foam air filters located under the round plate on top of the pump. To remove the plate and gasket, unscrew the five top screws. The three filters are in the internal air chambers of the pump. To clean, simply lift out the three foam filters and rinse them in warm water (no soap). After cleaning, replace the filters, gaskets and top.



Never Run Pump Dry.

This will cause it to fail and results in costly replacement.

Change Bottom Filter Pad

Over time, your tank's filter bed accumulates so much debris that the flow through it is reduced. This will have an adverse effect on your animals, since a reduction in flow means less oxygen available to the biological filter, which in turn reduces ammonia consumption.

The length of time required to reach this condition will depend on how well you have followed the preceding maintenance procedures and on the loads kept in the tank. On average, your filter bed should remain unrestricted for at least six months. Time expectation will vary in accordance with how well you have followed the general maintenance and loading procedures which precede this section.

NOTE: This condition can also result from clogged airstones and blocked air pump filters, so be sure to check for these conditions first.

To Change the Bottom Filter Pad...

1. Remove animals. Place lobsters in a box and put the box in a cooler. Place fin fish in a clean container which has been filled with water from the tank. Aerate water using white rigid tube and airstones from tank.

2. Slowly remove Upper False Bottom.



3. Gently roll up Bottom Filter Pad. Try to keep as much dirt as possible in the pad as you roll. Remove and discard.



4. Agitate Filter Bed by hand or with a clean tool. This will open up any blockage.

5. Place new pad in tank. *NOTE: To prevent air bubbles from being trapped in pad, "snake" pad over edge of tank...or roll pad up underwater and wring out air bubbles before covering Filter Bed.*



6. Replace Upper False Bottom, Carbon Tray, Splash Guard and Air Stack Tube.

Every Six Months

Clean Filter Bed

IMPORTANT: This process, although vital to the health of your filter bed, can be very detrimental to your filter if done incorrectly. Please pay particular attention to the “NEVERS” at the end of this section.

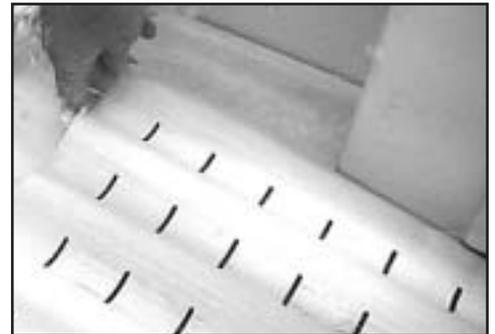
1. Remove animals. Place lobsters in box and put box in cooler. Place fin fish in clean container which has been filled with water from the tank. Aerate water with white rigid tube and airstones from tank.

2. Drain tank using drain hose in side of tank.

NOTE: Attach a garden hose to the drain fitting or roll the tank to a floor drain.



3. Remove Upper False Bottom and Bottom Filter Pad.



4. Wash gravel bed by agitating with a strong, hard stream of cold water. Try to penetrate the gravel with the stream to dislodge any accumulated debris.



CAUTION: Do not use soap, cleaners or hot water. Do not permanently remove gravel from tank. These actions will destroy the bacteria in your filter.

5. Move gravel to one end of tank, exposing half of the bottom grid. Hose the grid to flush out any particles trapped in the holes. Repeat the process for the other half of the grid. When done, spread gravel back evenly over the entire grid.



6. After hosing out filter bed, immediately fill tank. For lobster, add salt and water immediately as directed on pages 12-13.

IMPORTANT: The entire “washout” procedure should take no longer than 10-15 minutes. In lobster tanks, the saltwater bacteria must not be exposed to freshwater for more than five minutes or they will start to die.

NOTE: In areas where tap water is over 70°F, it is recommended that ice be used when refilling the tank.

7. Put fresh carbon in the Carbon Box to eliminate any chlorine in the newly changed water. Check salinity and temperature. Allow tank to operate for one hour before reintroducing animals.

NEVER overload your system.

NEVER wash gravel with hot water.

NEVER wash gravel with soap or cleaners.

NEVER remove gravel from tank.

NEVER allow gravel to dry out.

NEVER expose lobster tank gravel to fresh water for more than 5 minutes.

NEVER turn off system (even when temporarily out of animals).

NEVER feed animals.

NEVER use insecticides near system.

TROUBLESHOOTING GUIDELINES

CAUTION: *Some of the corrective procedures recommended below may require professional attention. For a service referral, call Marineland Customer Service (800) 322-1266.*

If entire system abruptly shuts down...

- Reset circuit breaker in main electrical panel.
- Check to make sure unit is plugged in.
- Make sure Master Switch is turned on.

If water turns yellow or odors develop...

- Replace Carbon Filter Pad and carbon.

If water flow from Air Stack Tube is reduced...

- Inspect airstones for blockage. Change if necessary.
- Make sure air pump filter is not obstructed. Clean if necessary.

If water temperature is too low or too high...

- Check Thermostat setting.

NOTE: Thermostat reading may differ from measured Holding Tank temperature... adjust thermostat as required and monitor Holding Tank temperature with thermometer, allowing 3-4 hours for temperature to stabilize before checking again.

- Make sure that power cord to Refrigeration Unit is plugged into proper outlet.
- See that Thermostat is at desired temperature level and is not damaged.
- Inspect Intake Vents and Condensing Screen. Clean if necessary.
- Call Customer Service if Thermostat or Refrigeration Unit is malfunctioning.

If you experience product loss shortly after arrival...

- *Don't panic.* Remove from tank.
- Check water salinity.
- Monitor water temperature. Confirm correct setting.

If fish roll, spin, swim belly up, behave erratically when introduced to tank...

- Adjust water temperature to match that of shipping water. Keep at this temperature for 24 hours, then lower to 50°F.

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

- Change water and replace carbon immediately.
- Remove any metal objects that may have been introduced into system, e.g. pennies, brass, etc.
- Make sure that insecticides or other industrial poisons are not being used near the aquarium.

If a large amount of product is lost and water is hazy...

- Check for restricted Filter Bed. If restricted, take appropriate measures (pg 20 - 23). Change water and clean Filter Bed.
- Reduce load (if exceeds recommended capacity - pg 15).
- Make sure water temperature is not too high. Adjust Thermostat as required and monitor tank temperature with thermometer, allowing 3 - 4 hours for temperature to stabilize before checking again.
- Check for fish caught under Upper False Bottom.
- Make sure system is operating in accordance with recommended six-week loading schedule (pg 15).
- Inspect airstones for blockage. Change if necessary.
- Make sure air pump filter is not obstructed. Clean if necessary.

CUSTOMER SERVICE

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

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

REGULAR USE ITEMS:

1. Prefilter Pads	CSFP24
2. Black Diamond Carbon	PA0370
3. Airstones	C1506
4. Biological Filter Material #1	C0401
5. Biological Filter Material #2	C0402
6. Bottom Prefilter Pads	FP24
7. Liquid Bacteria	C1569
8. Instant Ocean® Lobster Salt	CS0309

SERVICE ITEMS:

1. Hydrometer	CA1501
2. Thermometer	CA1502
3. Lobster Rake	CA1503

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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