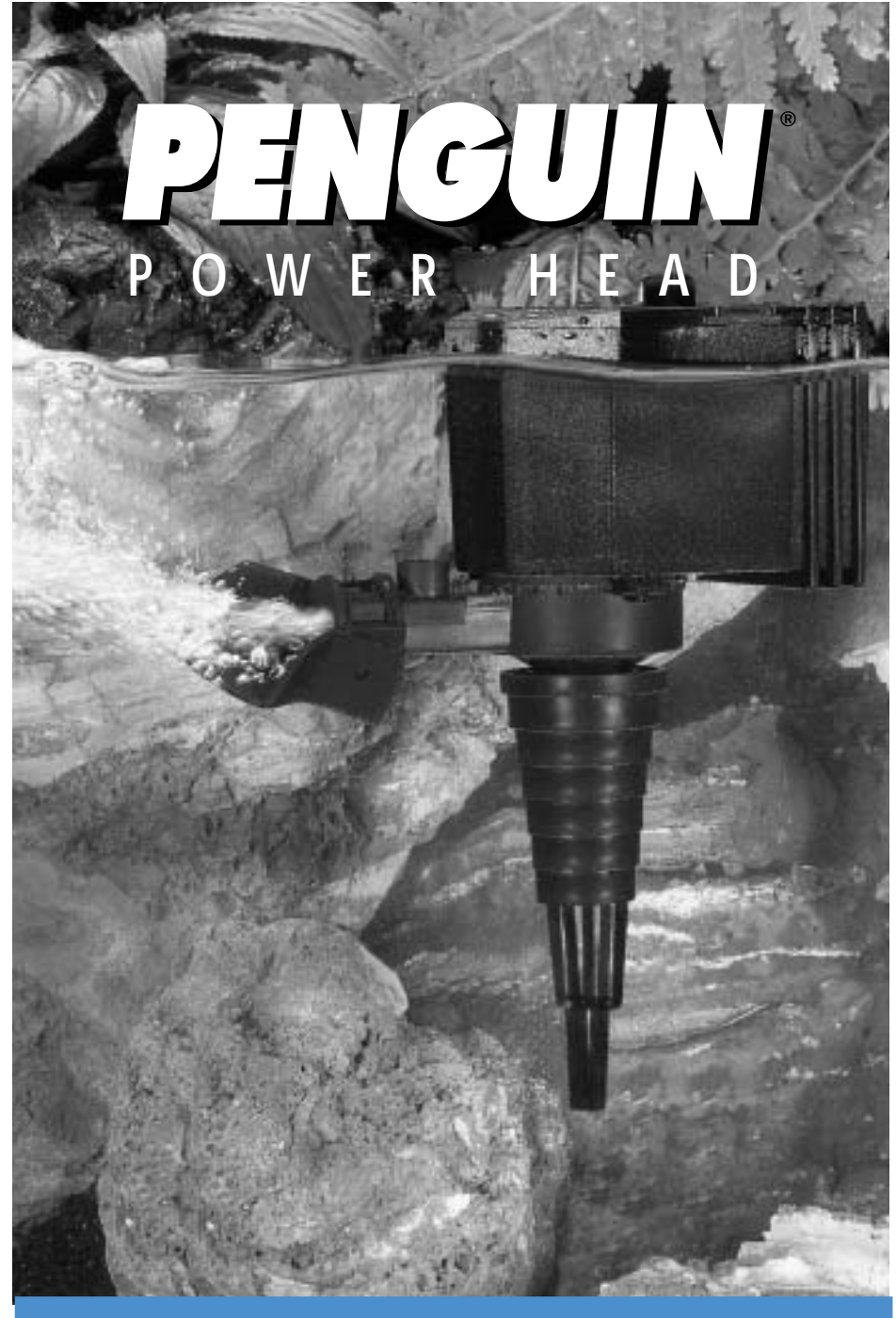


 **MARINELAND**  
Aquarium Products  
Moorpark, CA 93021

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## OWNER'S MANUAL

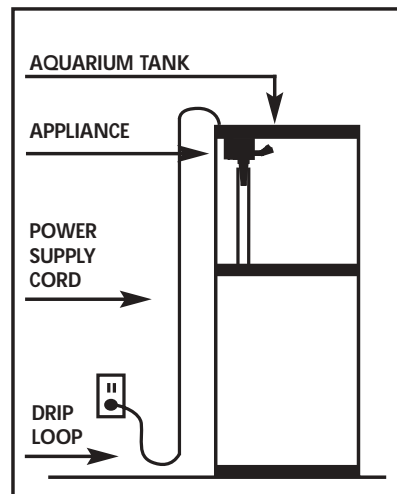
# IMPORTANT SAFEGUARDS

**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. Return the appliance to an authorized service facility for service or discard the appliance.

1. A. If the appliance shows any sign of abnormal water leakage, immediately unplug from the power source.  
B. Do not operate any appliance if it has a damaged cord or plug, or if it is malfunctioning or if it is dropped or damaged in any manner.  
C. To avoid the possibility of the appliance plug or receptacle getting wet, position aquarium stand and 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 figure at right, should be arranged by the user for each cord connecting an aquarium 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 from 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 an appliance mounted on a tank 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 amperes 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 has a polarized plug (one blade is wider than the other). As a safety feature, this plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician. Never use with an extension cord unless plug can be fully inserted. Do not attempt to defeat this safety feature.

## SAVE THESE INSTRUCTIONS

# PARTS IDENTIFICATION

*Silent, Safe, Reliable.*

## Penguin Power Heads

Undergravel filters perform best when water flow through the gravel bed is consistent and predictable, creating surface agitation for tank oxygenation. Air pumps and airstones can deteriorate or clog. As a result, they become noisy and ineffective...frequently requiring replacement and/or service.

Penguin Power Heads deliver constant flow with fully adjustable aeration and increased surface agitation...and they remain silent at all times. Penguin's Certified Accurate Flow Rate is your assurance of proven reliable performance.

### **Easy to Set Up, Easy to Install**

The unique Penguin mounting system provides total mounting versatility and the Lift Tube Adapter fits all popular diameters and heights. Penguin's single moving part construction means no messy assembly, no oiling and virtually no maintenance.

### **Worry-Free, Safety Engineered**

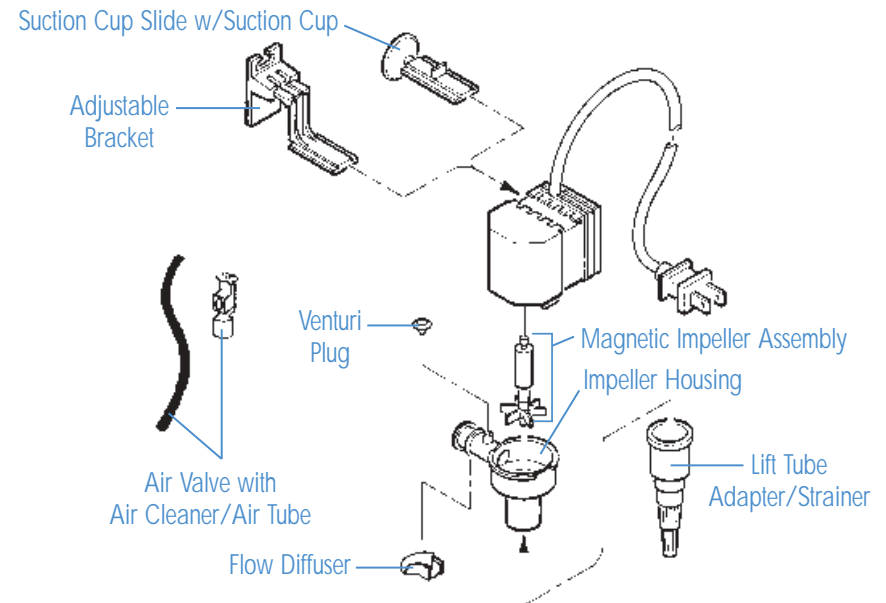
The Penguin epoxy-sealed, moisture-proof motor and electrical components ensure safe operation in both fresh and saltwater.

### **Customer Service Information**

If parts are unavailable from store where power head was purchased, call our Customer Service Department at (800) 322-1266, Monday - Friday from 8AM - 5PM (Pacific Time). Please have your manual and MasterCard or VISA ready when ordering.

## Penguin Power Heads 550, 660, 1140

| Description                         | 550 Part # | 660 Part # | 1140 Part # |
|-------------------------------------|------------|------------|-------------|
| Air Valve with Air Cleaner/Air Tube | PR1270     | PR1270     | PR1270      |
| Adjustable Bracket                  | PR1271     | PR1271     | PR1271      |
| Impeller/Magnet Assembly            | PR1273     | PR1282     | PR1266      |
| Flow Diffuser                       | PR1274     | PR1274     | PR1274      |
| Lift Tube Adapter/Strainer          | PR1276     | PR1276     | PR1269      |
| Suction Cup Slide with Suction Cup  | PR1277     | PR1277     | PR1277      |
| Impeller Housing                    | PR1278     | PR1278     | PR1279      |
| Venturi Plug (pkg. 2)               | PR1283     | PR1283     | PR1283      |



# ASSEMBLY 550, 660, 1140

*Please Read All Instructions Completely Before Assembly!*

**NOTE:** Assembly/Operational and Maintenance instructions for model 550, 660 and 1140 Power Heads are virtually identical. For this reason (and in the interest of avoiding confusion), the sections that follow feature diagrams for the 550 model only. You will find that the steps pictured are readily applicable to 660 and 1140 models.

Most parts are preassembled and do not require disassembly prior to installation. We recommend that you read the Maintenance section that follows to familiarize yourself with the overall operation of your Penguin Power Head.

## Step 1. Install Adjustable Diffuser

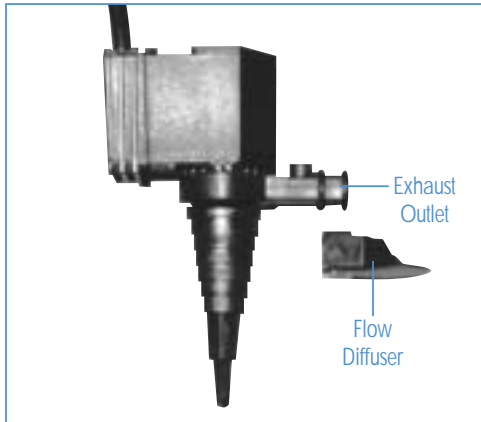


FIGURE 1

Snap rotating **Flow Diffuser** onto outside of Power Head **Exhaust Outlet** (FIGURE 1).

## Step 2. Install Adjustable Bracket

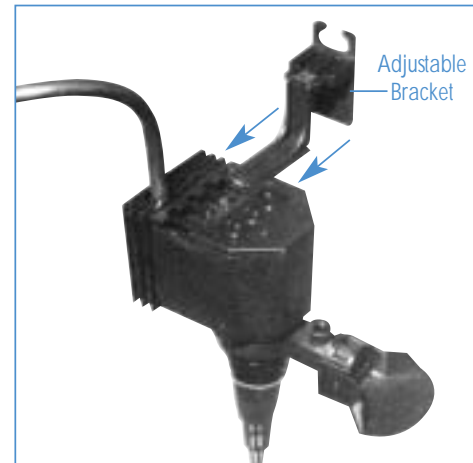


FIGURE 2

Slide **Adjustable Bracket** into channel on top of Power Head (fits from either side to accommodate right or left mounting (FIGURE 2).

## Step 3. Install Power Head

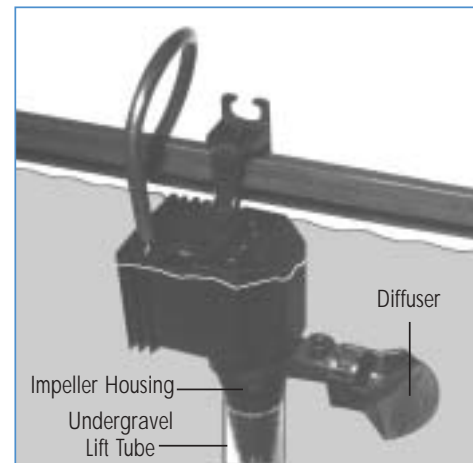


FIGURE 3

Locate Power Head over the **Undergravel Lift Tube**, to determine the proper height.

**NOTE:** When considering height allowance, keep in mind that **Impeller Housing and Diffuser** must be completely submerged to operate properly.

For maximum aeration and circulation, position Power Head so flow slightly breaks water surface. Cut Undergravel Lift Tube as needed. Make certain Lift Tube Adapter seals properly and Power Head remains level (FIGURE 3).

#### Step 4. Adjust Lift Tube Adapter/Strainer

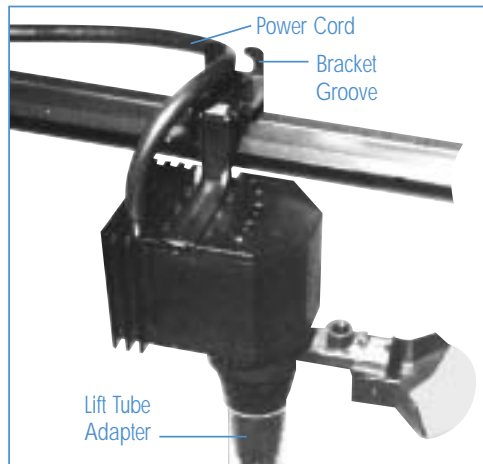


FIGURE 4

Slightly twist and slip **Lift Tube Adapter** down into Undergravel Lift Tube until properly seated. Adjust Adapter (pull down or push up) to ensure proper sealing at Undergravel Lift Tube. Position Power Cord snugly in **Bracket Groove** (FIGURE 4).

#### Step 5. Install Air Control Valve and Tube

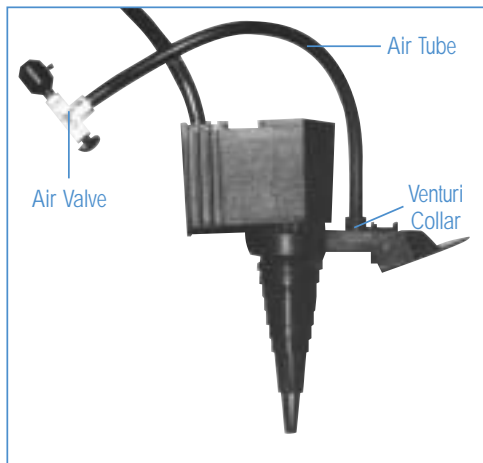


FIGURE 5

Push **Air Valve** onto one end of **Air Tube** and press other end firmly into **Venturi Collar**. Press assembled Air Tube into Bracket Groove (on Adjustable Bracket only) alongside Power Cord.

**NOTE:** If no air is desired, do not install Air Tube. Cover hole with enclosed **Venturi Plug**. Failure to plug hole will present a danger to fish.

#### Step 6. Plug In Unit

Use a standard 115 volt polarized receptacle. Do not force plug into a non-polarized receptacle. Adapters are available at your local hardware store.

**CAUTION:** Do not allow a Marineland Power Head to operate dry at any time.

#### Step 7. Optimize Flow

Pivot Exhaust Outlet from side to side and adjust Flow Diffuser. Fine tune air flow by adjusting Air Valve. Clockwise for less air, counterclockwise for more air.

Set Diffuser to agitate surface of water. Never point diffuser directly up. If water evaporates and tank water level drops, water could be pumped out of the aquarium (FIGURE 6).

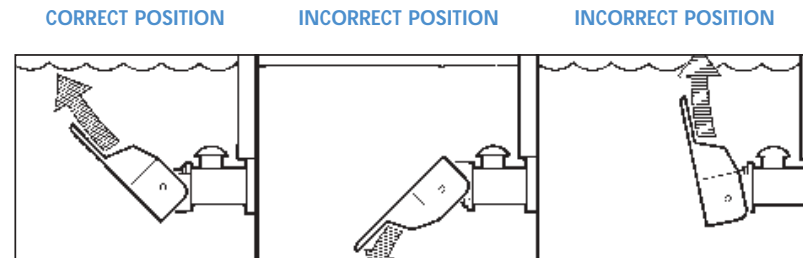


FIGURE 6

**IMPORTANT NOTE:** The Penguin Reverse Flow Adapter Kit (PH-RFK) will convert your Marineland Power Head into a Power Sponge Filter (ideal for turtle/amphibian tanks) or a Reverse Flow unit.

A Power Sponge Filter efficiently traps the heavy waste associated with Turtle and Amphibian habitats. Great for increasing oxygenation and circulation, it can also be used to create unique waterfall effects.

In reverse flow operation, oxygenated, prefiltered water is pumped *down* the UGF Lift Tube, beneath the filter plate and *up* through the deepest layers of the gravel bed delivering oxygen to nitrifying beneficial bacteria.

## MAINTENANCE

**CAUTION:** Unplug unit before performing maintenance.  
**Never** use soap, detergents or any non-recommended cleaning agents around an aquarium.  
**Always** rinse parts with cold water after cleaning.

To ensure optimum performance, we recommend the following complete maintenance procedure for the Penguin Power Head at least every four weeks.

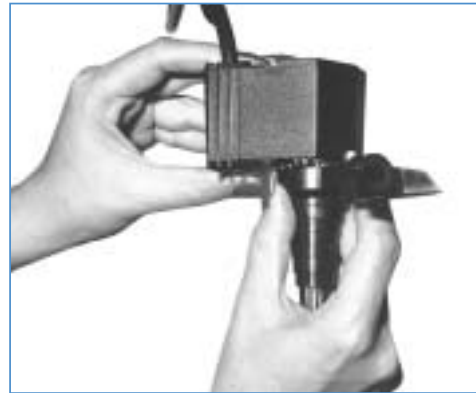


FIGURE 7

1. Unplug Power Head. Slip unit up and off aquarium frame. Rotate Exhaust Outlet (FIGURE 7) and gently uncouple Impeller Housing from power unit (FIGURE 8).



FIGURE 8



# TROUBLESHOOTING GUIDELINES

| Symptom  | Comments/Solution   |
|--|---|
| <b><i>If Power Head fails to pump water...</i></b> | <p><i>Make certain</i> outlet has power and is functioning properly by first unplugging electrical cord momentarily, then reconnecting to power source.</p> <p><i>Check</i> to see that Impeller Housing is properly attached to power unit and is aligned correctly.</p> <p><i>Remove</i> Impeller Housing and make sure Impeller Assembly is free to rotate. A particle of carbon or gravel may be interfering.</p> |
| <b><i>If Power Head fails to aerate...</i></b>     | <p><i>Make certain</i> that unit (especially Impeller Cavity) is completely clean.</p> <p><i>Turn</i> Air Valve knob counterclockwise to ensure that Air Valve is open.</p> <p><i>Check</i> to make sure that Air Cleaner on Air Valve is clean and dry. If not, replace with small amount of household cotton.</p>   |
| <b><i>If Impeller shows excessive wear...</i></b>  | <p><i>Check</i> to see that power head is not ingesting fine grit or gravel. Gravel bed should be Siphon Kleened regularly.</p>   |

## Limited Warranty

Within one year from the date of original purchase, Marineland Aquarium Products will repair or replace, at its option, any Penguin Power Head which is deemed defective in workmanship or materials.

Please return the unit, together with proof of date of purchase, to your Marineland dealer or send unit (postage paid) to:

### Marineland Aquarium Products

6100 Condor Drive  
Moorpark, CA 93021

Damage or injuries resulting from negligence or misuse are not covered by this warranty. This warranty gives you specific legal rights. You may also have other rights which vary from state to state.