

# Triad Aer

## Owner's Manual



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# Welcome/Records

Welcome to the joys of cleaner air and a healthier life. You are the owner of one of the most technologically-advanced purification systems available—the Triad Aer.

The combination of three innovative technologies, Photo Catalytic Oxidation (PCO), Carbon Fiber Brush Ionization, and Scalable Purification, sets the Triad Aer apart from similar air purifiers on the market. The Triad Aer uses these technologies to reduce particles and inactivate microbes in the output radius creating a healthier living space with pristine air quality.

The Triad Aer is designed to provide years of trouble-free service when it is properly maintained. Keep this manual. It will guide you through the steps to operate your machine and the maintenance procedures which will keep your Triad Aer in tip-top shape for years to come. Even when properly cared for, some parts of the unit will need to be replaced periodically. Replacement parts can be purchased from your authorized Triad Aer distributor.

We hope you enjoy your Triad Aer and the overall healthier living environment it creates.

## Records

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Purchase Date: \_\_\_\_\_

Model Number: \_\_\_\_\_

Serial Number: \_\_\_\_\_

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

Distributor Phone: \_\_\_\_\_

## Warranty

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Please visit [www.triadaer.com/warranty](http://www.triadaer.com/warranty) to register your product and view your warranty information.

## Specifications

### Unit

Size: 12" high x 9" wide x 10 3/4" deep

Weight: 10.2 lb.

Coverage: 250ft<sup>2</sup> to 3000ft<sup>2</sup> (23m<sup>2</sup> to 279m<sup>2</sup>) \*

\* Depending on variables such as the severity and frequency of pollution, flow of air in the environment, humidity and temperature.

Input: 100-240VAC 50/60Hz 2.5A

### PCO Cell

Normal Mode Output: < 0.02 ppm ozone (ambient room concentration)

### Purification Plate

High Mode Output: 25-360mg ozone per hour

### Ionization

24 to 30 KV, 20-30 Khz Ion Generation Pulsator

6 KV DC Needle Ion Generator

## Warnings

**Review this list before use and performing any maintenance or cleaning of your unit.**



**WARNING:** Never operate unit near heat source, open flame or flammable/combustible fluids.



**WARNING:** Do not operate unit unless all parts (including PCO Cell, Purification Plate, Rear Filter Assembly and Rear Cover) are properly installed.



**CAUTION:** Directly viewing the lamp inside unit for an extended period (longer than 20 min.) may result in eye damage.



**CAUTION:** Never adjust setting to exceed square footage of ventilated space being treated.



**CAUTION:** Do not use SANI+BOOSTER in occupied spaces. Short term exposure to ozone levels exceeding 0.5 ppm can cause temporary adverse reactions.



**CAUTION:** Unit should be powered OFF and Power Cord should be disconnected when Cleaning/Disassembling/Reassembling/Service.

# Product Introduction

## Benefits

The Triad Aer air purifier system brings the most advanced air purification technology into the comfort of your space. Unlike other air purifiers, the Triad Aer does more than simply filter the air in your space. Incorporating technology like photo catalytic oxidation, high level negative ionization, scalable purification and electrostatic filtration allows the air purification system to provide tangible benefits to your home or workspace by:

- Destroying pollution from the air, embedded in walls, ceilings, floors, carpets, furniture, etc.
- Reducing or eliminating odors such as cigarette smoke, mildew, food, etc.
- Contributing to the sanitization of all surfaces.

The whisper quiet five-speed fan disguises the power encapsulated in the advanced air purification system. Having the Triad Aer in your space will not only improve the quality of air, but, most importantly, it will improve the quality of life.

## Ease of Use

The Triad Aer is your hassle-free provider for clean air and healthy living. With proper care and maintenance (see “CLEANING” page 12), the Triad Aer will operate with the same robust power and efficiency for several years beyond the date of purchase. With the push of a button the Triad Aer starts working to eliminate the biological contaminants and dangerous pathogens in your home or office. Enhancing your overall quality of life has never been this easy.

## Availability of Support

This Owner’s Manual will provide comprehensive information regarding all aspects of your Triad Aer. If you experience any technical issues with your device, refer to the Troubleshooting section of this booklet. The solution for many of the commonly reported problems is listed in detail in the Troubleshooting section (page 13). If the problem you are experiencing is not listed in the Owner’s Manual and/or you need additional support, please feel free to email us at [TriadDirect@gmail.com](mailto:TriadDirect@gmail.com).

# Three Technologies



## **Filtration**

The washable pleated filter inside the Triad Aer is an essential component of the three purification technologies. The washable pleated filter passively removes a wide range of particles from the breathing space and holds them until the unit is cleaned. Besides removing particles from the air, the washable pleated filter also prevents them from being deposited inside the machine which helps your Triad Aer last longer and perform at optimum efficiency.



## **Electrostatic Filtration**

An advanced electrostatic filter is included with Triad Aer to help keep the purifier clean while at the same time filtering out particles. Unlike expensive HEPA filters, the electrostatic filter is washable and can be used over and over again.



## **Carbon Fiber Brush Ionization**

The Triad Aer generates a continuous stream of millions of negative ions that circulate throughout the home. These ions charge particles (such as dust, dander or bacteria) causing them to attract other particles and clump together. As more and more particles come together, they become heavier, making them easier to pull into the home's HVAC air filter or just fall to the floor to be vacuumed up. Unlike HEPA filters that can only filter out particles of .5 microns or larger, the ionizer in the Triad Aer can reduce ultra-fine, even nano particles, that are much more dangerous than the larger particles you can actually see.

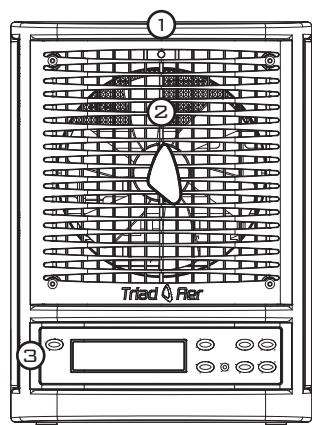


## **Advanced Photo Catalytic & Scalable Oxidation**

Both the Advanced Photo Catalytic Oxidation (PCO) and Scalable Oxidation work to destroy biological contaminants as well as odors, mold, bacteria and viruses. PCO Cells have been proven to reduce dangerous pathogens by more than 99% in less than 24 hours through a process called molecular disassociation which actually breaks down the molecules instead of simply covering up the source. Scalable Oxidation ensures your Triad Aer will perform at the maximum efficiency specific to its environment at the time of use. In High Mode, the purification plate generates activated oxygen to assist in breaking down contaminants which cause odors. For faster cleanup, Triad Aer can be set to Sani+Booster which has a programmable auto-shutoff timer feature. This allows the machine to generate maximum output when the room or home is unoccupied.

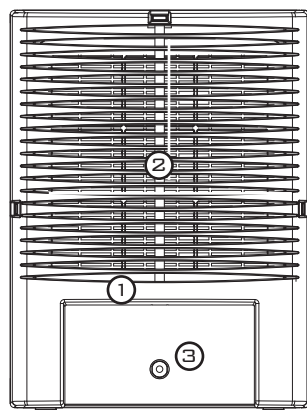
# Diagrams (Unit)

**Front of Unit**



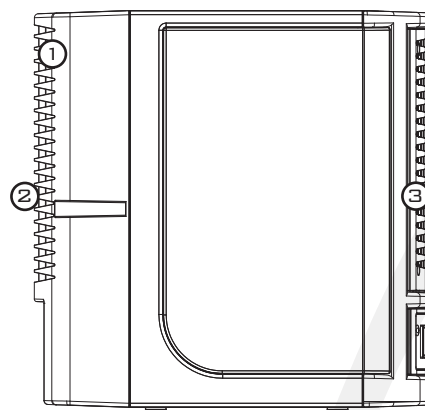
- ① Ionization Brush
- ② Front Grille
- ③ Control Panel

**Rear of unit**



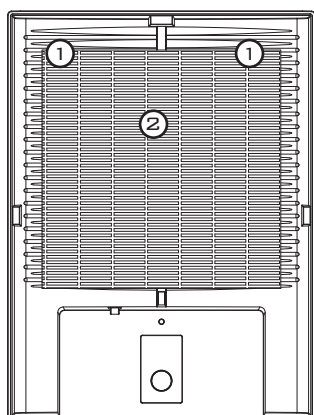
- ① Rear Cover Screw
- ② Rear Cover Clasps
- ③ Power Adapter Inlet

**Side of Unit**



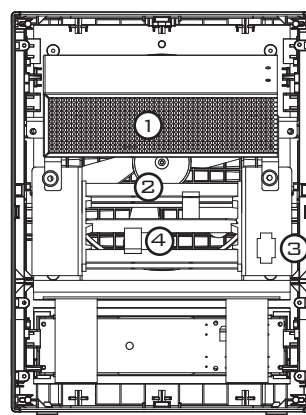
- ① Rear Cover
- ② Unit Rear
- ③ Unit Front

**Rear of Unit  
(Rear Cover Removed)**



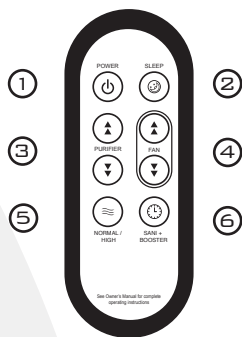
- ① Brass Thumbscrews
- ② Filter Assembly

**Rear of Unit  
(Filter Assembly Removed)**



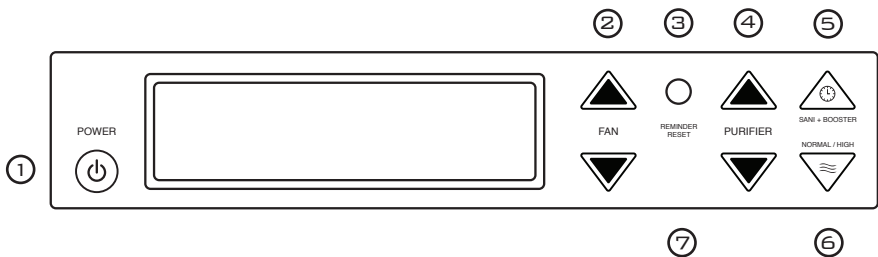
- ① PCO Cell
- ② PCO Cell Nuts
- ③ PCO Cell Connector
- ④ Purification Plate

## Remote



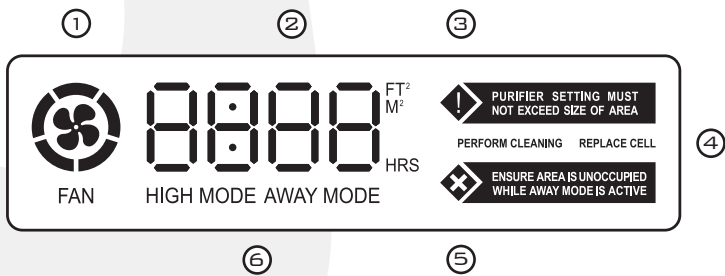
- ① Power Button
- ② Sleep Button
- ③ Purification Level Control
- ④ Fan Level Control
- ⑤ Normal/High Mode Button
- ⑥ Sani + Booster Control

## Control Panel



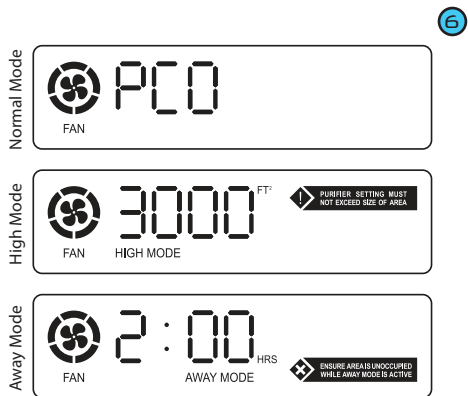
- ① Power Button
- ② Fan Speed Control
- ③ Reminder Reset Button
- ④ Purifier Level Control
- ⑤ Sani + Booster Toggle
- ⑥ Normal/High Mode Button
- ⑦ Infrared Receiver

## Control Panel Screen



- ① Fan Speed Indicator
- ② Purification Level Indicator
- ③ Purification Level Warning
- ④ Maintenance Reminders
- ⑤ Away Mode Warning
- ⑥ Mode Indicator

## Mode Specific Display



- ⑥ Mode Specific Display
  - Normal - Technology Indicator (PCO)
  - High - Square Footage Indicator
  - Away - Mode Duration Indicator (hours:minutes)

# Setup

## Ideal Placement

**There are several important factors to consider when selecting a location for your Triad Aer:**

- Make sure the location you choose is as far away from the HVAC air return duct as possible. This will ensure that the purification produced by the Triad Aer is optimally circulated.
- Place the unit on top of something tall such as a bookcase, a shelf or a mounting bracket, leaving only 12 to 24 inches between the unit and the ceiling.
- To ensure the unit works properly, there should be as much space as possible in front of your Triad Aer so that it can efficiently process the air in the area.
- Never place an operating unit on the floor.

## Initial Setting

Before using the unit you will need to find the area (or square footage) of the environment. To do this accurately, take into account all connected rooms with open doorways (the purification does not flow readily through closed doors). The Triad Aer can purify up to 3,000 square feet of space.

For example: Suppose you have a 2500 square foot house. The living room is attached to the kitchen, three bedrooms, the den and a laundry room. The kitchen and three bedrooms' doors remain open the majority of the time but the laundry room and den usually remain closed off from the rest of the house. Together, the laundry room and den have a combined area of 500 square feet. The area of the environment you would want to set your Triad Aer and purify would be 2000 square feet.

**Once you have determined an ideal location for your unit and calculated the area of the environment:**

1. Connect the *Power Cord* into the unit.
2. Insert the *Power Plug* into the wall outlet.
3. Turn the unit on and set it to NORMAL mode (see *CONTROLS: page 7*)
4. Leave the unit on Normal mode for at least 7 DAYS to begin with.
5. After 24 hours, set the unit to HIGH mode and set the square footage to 250 square feet.
6. Gradually increase the square footage setting every 24 hours until you reach the accurate square footage of your area which you calculated in the beginning steps). Note: Using the purifier at a setting less than the square footage of the area being treated is acceptable and may be desirable in an environment relatively free of pollutants.



## Operating the Unit

### Turning the Unit On/Off

Press the *Power Button* on the *Control Panel* or *Remote* to turn the unit on. The unit will initially be set to *Normal Mode*. Press the *Power Button* once more to turn the power off.

### Using Normal Mode

Press *Normal/High* button until “*Normal*” is shown in the lower right of the *Display*.

- Square Footage not available in “*Normal*” (see “*INITIAL SETUP: Initial Settings*” page 8).
- To control the fan speed: Use *Fan Up/Down* buttons.

### Using High Mode

Press the *Normal/High* button and verify that “*High*” is shown in the lower right of the *Display*.

- To set the square footage on the *Display*:
- Use *Purifier Up/Down* buttons (see *INITIAL SETUP: Initial Settings*” page 8).
- To control the fan speed: Use *Fan Up/Down* buttons.

**CAUTION:** Never adjust setting to exceed square footage of ventilated space being treated.

### Using Sani+Booster

Press the *Sani+Booster* button and verify that “*Away*” is shown in the lower right of the *Display*.

- To set the *Sani+Booster Timer*: press the *Sani+Booster* button. Each press of the *Sani+Booster* button increases the running time of the *Sani+Booster*.
- Select 2:00, 4:00, 6:00, or 8:00 hours. Press *Sani+Booster* once more to switch the unit back to *Normal Mode*.

## LCD Reminders

### Replace Plate

When “*Replace Plate*” appears, the *Purification Plate* has reached the end of its useful life and must be replaced. To order a replacement, contact your distributor. Once a replacement has been obtained, follow the instructions in “*DISASSEMBLY/ASSEMBLY*” (pages 10-11) to replace your old *Purification Plate* with your new one.

### Replace PCO Cell

When “*Replace PCO Cell*” appears, the *PCO Cell* has reached the end of its useful life and must be replaced. Contact your distributor to order a replacement. Once a replacement has been obtained, follow the instructions in “*DISASSEMBLY/ASSEMBLY*” (pages 10-11) to replace your old *PCO Cell* with your new one.

### Perform Cleaning

“*Perform Cleaning*” will display once the 30 day operation cycle between cleanings has passed and the unit requires a complete cleaning. Follow the instructions in “*CLEANING*” (page 12) then see “*Resetting Reminders*” (below) to reset the reminders. The *Perform Cleaning* reminder will appear again after 30 day of operation.

### Resetting Reminders

After replacing the *Purification Plate* or the *PCO Cell*, the corresponding reminders will reset themselves. After performing a cleaning of the unit (see “*CLEANING*” page 12) you should reset the reminders by holding down the *Reminder Reset* button on the *Control Panel* of the unit. The reminder has been reset when *Perform Cleaning* no longer appears.

# Dissassembly

## Tools Required

You will need a #2 Phillips screwdriver.

## Workspace Recommendations

A countertop or flat surface is ideal for disassembling/assembling your unit. You will need 2 ft. x 3ft. of clean, accessible workspace. It is recommended to use a small bowl or cup to hold any screws so they are not lost during the disassembly/assembly process.

## Disassembly Instructions

1. Turn the unit off.
2. Remove the *Power Cord* from the wall and rear of the unit.
3. Clean exterior of unit if necessary (see “*CLEANING: Unit Exterior*” page 12).

## Removing the Rear Cover:

1. Using your screw driver, remove the *Rear Cover Screw* from the *Rear Cover* (above the *Power Cord Port*). Place the *Rear Cover Screw* where you will find it easily during reassembly.
2. Squeeze the tabs on both sides of the *Rear Cover* (where the grooves are) until they release and tilt the *Rear Cover* upwards until the top tab releases. Clean with compressed air or a damp cloth. Set the *Rear Cover* aside.

## Removing the Filter Assembly:

1. Remove *Brass Thumbscrews* from the top corners of the *Filter Assembly*. Place *Brass Thumbscrews* where you will find them easily during reassembly.
2. Grasp the top of the *Filter Assembly* and tilt away from the unit. Clean if necessary (see “*CLEANING: Filter Assembly*” page 12) and set the *Filter Assembly* aside.

## Removing the Purification Plate:

Grasp the *Purification Plate* on the ceramic and gently pull it out of the grooves on the sides. Clean (see “*CLEANING: Purification Plate*” page 12) and set the *Purification Plate* aside.

## Removing the PCO Cell:

1. Locate the *PCO Cell Power Connector* on the right of the rear of the unit (beside the *Purification Plate* slot). Squeeze the tabs on the top and bottom of the *PCO Cell Power Connector* and pull gently until free from the *PCO Cell Power Connector Outlet*.
2. Remove the *Thumb Nuts* from the *Screw Posts* on the right and left below the *PCO Cell*. Place the *Thumb Nuts* where you will find them easily during reassembly.
3. Gently slide the *PCO Cell* out of the unit. Clean (see “*CLEANING: PCO Cell*” page 12) and set the *PCO Cell* aside. Clean the interior of the unit (see “*CLEANING: Unit Interior*” page 12).

## Tools Required

You will need a #2 Phillips screwdriver.

## Installing the PCO CELL:

1. Position the *PCO Cell* inside the unit so that the two tabs are on the bottom (and interior side) of the *PCO Cell*. Ensure the holes in the two tabs fit over the two *Screw Posts*. Screw the *Thumb Nuts* onto the *Screw Posts* until they are snug.
2. Align the *PCO Cell Power Connector* to the *PCO Cell Power Connector Outlet* and insert gently until the tabs at the top and bottom of the *PCO Cell Power Connector* snap into place, holding it in the *PCO Cell Power Connector Outlet*.

## Installing the PURIFICATION PLATE:

Holding the *Purification Plate* by the ceramic, slowly insert it into the *Purification Plate Slot*, ensuring that the *Purification Plate* is sliding into the grooves on either side.

**NOTE:** About halfway in, the *Purification Plate Connectors* are parted. Continue sliding the *Purification Plate* into the *Purification Plate Slot* until there is approximately one inch of the *Purification Plate* remaining outside of the *Purification Plate Slot* and significant resistance is met. Be careful not to force the *Purification Plate* further into the *Purification Plate Slot* as this could seriously damage your unit.

## Installing the FILTER ASSEMBLY:

1. Hold the *Filter Assembly* with the larger flat side facing the interior of the unit. A sticker reading, "Caution: Reinstall Filter After Cleaning," is located on the opposite side of the *Filter Assembly*. This sticker should be visible when you install the *Filter Assembly*.

2. Insert the bottom of the *Filter Assembly* into the tabs on the rear of the unit and then seat the *Filter Assembly* on the rear of the unit. (NOTE: If the user fails to insert the *Filter Assembly* into the tabs appropriately, disassembling the unit in the future could be extremely difficult.)
3. Screw the two *Brass Thumbscrews* into their holes at the top corners of the *Filter Assembly*.

## Installing the Rear Cover:

1. Place the tab at the top of the *Rear Cover* into the hole at the top of the *Filter Assembly* then lay the *Rear Cover* flat against the rear of the unit until the tabs on the sides of the *Rear Cover* click into place on the unit.
2. Carefully insert the *Rear Cover Screw* into its hole on the *Rear Cover* (above the *Power Cord Port*) and tighten.

## Installing the POWER CORD:

1. Insert the *Power Adapter Plug* into the rear of the unit.
2. Ensure the *Power Cord* is properly connected to the *Power Adapter*.
3. Insert the *Power Plug* into a wall outlet.

## Turning the unit on:

Press the power button.

Ensure that the unit's settings are adjusted to suit the environment (see "Operations" on page 9).

# Cleaning

**Your unit should be cleaned monthly to be kept running at peak performance, but depending upon the pollution or odor levels present during initial setup, it is advisable to clean the unit more frequently (weekly or bi-weekly) until the environment has been treated.**

## Cleaning the Unit (Exterior):

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Wipe down the exterior with a damp cloth or use compressed air or a vacuum cleaner to remove dust. Use an alcohol-based cleaning product to clean the surfaces of your unit.

### **Cleaning the Filter Assembly**

You may use clean water or compressed air to clean your *Filter Assembly* once it has been disassembled (see “*Disassembly: Removing the Filter Assembly*”).

### **Cleaning the Ionization Brush**

Use compressed air to blow off any dust that may accumulate near the ionization needle.

### **Cleaning the PCO Cell**

Using a compressed air or a vacuum cleaner, blow and/or vacuum the dust out of the *PCO Cell*. Do not use any liquid to clean the *PCO Cell*.

### **Cleaning the Purification Plate**

Using a 50/50 mix of warm water and clear ammonia (100% white vinegar can be used in place of water and ammonia), soak the *Purification Plate* for 8-10 hours but do not exceed 12 hours. Using a soft-bristle brush, scrub the wire mesh to remove debris lodged inside the mesh. Rinse thoroughly. Allow the purification plate to dry completely before reinstalling. After reinstalling, use a soft cloth and rubbing alcohol to clean the contacts on the interior of the unit that touch the *Purification Plate*.

## Cleaning the Unit (Interior)

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Using a damp cloth, a clear alcohol-based cleaner, compressed air or a vacuum cleaner, carefully clean the walls and components inside of the unit only after completing the *Disassembly* procedures.

## **The Unit Fails to Turn On**

1. Verify that the *Power Plug* is plugged into an operational wall outlet.
2. Ensure that the *Power Adapter Plug* is fully seated in the receptacle on the back of the unit.
3. Verify the *Power Button* has been activated on the *Control Panel*.
4. If the *Power Button* on the *Control Panel* fails, use the *Power Button* on the *Remote Control*. If the *Control Panel* fails, contact your Triad Aer distributor.

## **The Unit is Operating in High Mode or Away Mode, but No Noticeable Purification is Being Produced**

1. Ensure that the *Purification Plate* is clean (see “*CLEANING: Purification Plate*” page 12).
2. The *Purification Plate* may not be working because it needs to be replaced. Try installing a new *Purification Plate*.
3. Check the electrical contact arms which touch the plate to ensure that they are making proper contact with the metal weave on the *Purification Plate*.
4. Ensure the electrical contact arms which touch the plate are clean. Clean them with a soft cloth and rubbing alcohol.
5. Turn the lights off in the room and look through the *Front Grille* at the *Purification Plate*. If it is operating properly, it will produce a dim purple glow.

## **The Purification Plate Generates an Electrical Arc, an Arcing Noise or a Burning Odor**

1. This means the *Purification Plate* is damaged and must be replaced. The unit may or may not display the *Replace Plate LCD* reminder. To order a replacement, contact your Triad Aer distributor.

## **The PCO Cell is Not Lighting Up:**

1. Ensure the *PCO Cell Power Connector* is properly seated in the *PCO Cell Power Connector Outlet* (see “*DISASSEMBLY/ASSEMBLY*” pages 10-11).
2. If the PCO still fails to operate, it needs to be replaced. Contact your Triad Aer distributor.

## **The Ionization Needle Creates an Electrical Arc:**

1. The *Ionization Brush* needs to be cleaned (see “*CLEANING: Ionization Brush*” page 12). Be sure to complete all of the cleaning procedures (see “*CLEANING*” page 12) every 30 days of operation.

## **The Fan Does Not Operate Properly:**

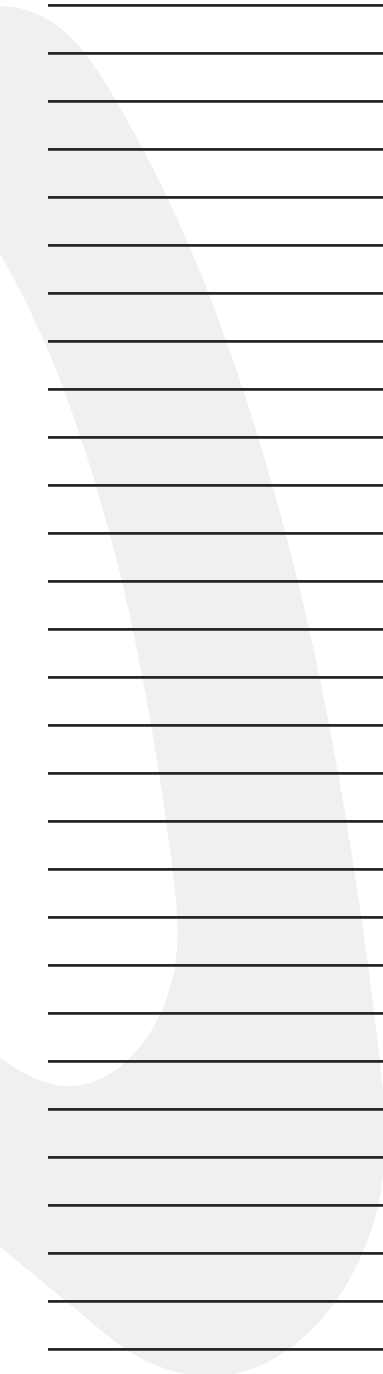
1. Try adjusting the fan speed using the *Control Panel* or *Remote Control*.
2. If the *Fan* continues to operate improperly or not at all, contact your Triad Aer distributor.

## **The Unit Makes a Rattling Noise When Taken Out of Packaging**

1. Remove the back panel of the unit (see “*DISASSEMBLY/ASSEMBLY*” pages 10-11). Check to ensure the two brass *Thumb Screws* holding the *Filter Assembly* are in their proper place. If they are properly installed, remove the *Thumb Screws* and *Filter Assembly* (see “*DISASSEMBLY/ASSEMBLY*” pages 10-11) and check the *PCO Cell* to ensure the two brass *Thumb Screws* securing the *PCO Cell* are installed properly.

# Notes

A series of horizontal lines for writing notes, with a light blue header bar and a decorative gray wave on the right side.



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*Triad*  *Aer*