



# OPERATIONS MANUAL



**International Ozone Technologies Group, Inc.**  
Delray Beach, Florida USA  
2019

*"Manufactures Of Environmental Products That Solve Problems"*

**Titan**  
**1000 & 2000 & 4000**

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### For Your Records

The serial number for this product is located on the back right bottom of the case. Write the model number, serial number and the original date of purchase in the spaces below for future reference for warranty or insurance purposes.

Product Name: ***Titan Hydroxyl Generator***  
 Model Number: \_\_\_\_\_  
 Serial Number: \_\_\_\_\_  
 Purchase Date: \_\_\_\_\_

## Glossary

Bacteria	Disease causing microscopic organism.
BOD	Biological Oxygen Demand
CFM	Cubic Feet Per Minute
COD	Chemical Oxygen Demand
Corona	Arcing halo around an electrical discharge.
EPA	Environmental Protection Agency
Fungus Example = mushroom.	A plant without leaves, flowers or roots.
Germ	Disease causing microbe.
Half-life substance to decay.	The time it takes for half the atoms in a
Mildew environments.	A type of destructive fungus that grows in moist
Milligrams Per Hour	Amount of ozone produced, and measured by weight, by a given ozone generator under certain conditions.
Mold	A fungoid growth caused by dampness.
OSHA	Occupational Safety & Health Administration.
Oxidize	To transform a substance by changing its chemical structure. Fire and rust are forms of oxidation.
Ozone	A triatomic form of oxygen with a pungent odor.
PPM thousand gallon tanker truck is an example of one part per million.	Parts per million. One shot glass in a ten
RMA Number	Returned Merchandise Authorization Number
Virus	Disease causing sub-microscopic organisms.
VOC	Volatile organic compound.



WITH BUSINESS RELATIONSHIPS, OR OTHER COMMERCIAL LOSS, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

2. ANY OTHER DAMAGES, WHETHER INCIDENTAL, CONSEQUENTIAL OR OTHERWISE.
3. ANY CLAIM AGAINST THE CUSTOMER BY ANY OTHER PARTY.

**Effect of state law:**

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow limitations on implied warranties and/or do not allow the exclusion of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

**Sales outside the U.S.A.:**

For **Titan** products sold outside of the U.S.A., contact your **Titan** dealer for warranty information and service.



## OPERATIONS MANUAL

### Model 1000 & 2000 & 4000

International Ozone Technologies Group, Inc.



Important Safeguards	3
Warnings and Precautions	4
Theory of Operation	5
General Use Guidelines	6
Trouble Shooting	8
Applications	7
Maintenance	9
Specifications	10
Dimensions	11
Front & Back Views Of Your Titan	12
Purifier or Scrubber???	13
Titan Testing	14
Warranty	15
Glossary	17



## LIMITED WARRANTY

### Titan Hydroxyl Generators

#### What the warranty covers:

**International Ozone Technologies Group, Inc.** warrants its products to be free from defects in material and workmanship during the warranty period. If a product proves to be defective in material or workmanship during the warranty period, **International Ozone Technologies Group, Inc.** will, at its sole option, repair or replace the product with a like product. Replacement product or parts may include remanufactured or refurbished parts or components.

#### How long the warranty is effective:

The **Titan Hydroxyl Generator** is warranted for one (1) years for all parts and one (1) year for all labor from the date of the first consumer purchase.

#### Who the warranty protects:

This warranty is valid only for the first consumer purchaser.

#### What the warranty does not cover:

1. Any product on which the serial number has been defaced, modified or removed.
2. Damage, deterioration or malfunction resulting from:
  - a. Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
  - b. Repair or attempted repair by anyone not authorized by **International Ozone Technologies Group, Inc.**
  - c. Any damage of the product due to shipment.
  - d. Removal or installation of the product.
  - e. Causes external to the product, such as electric power fluctuations or failure.
  - f. Use of supplies or parts not meeting **International Ozone Technologies Group, Inc.** specifications.
  - g. Normal wear and tear.
  - h. Any other cause which does not relate to a product defect.
  - i. Shipping & Handling to or from **International Ozone Technologies Group, Inc.**
3. Removal, installation, and set-up service charges.

#### How to get service:

1. For information on obtaining warranty service, call **International Ozone Technologies Group, Inc.** The customer support telephone numbers are: U.S. and Canada 1-877-406-9663. Internet address <http://www.internationalozone.com>
2. To obtain warranty service, you will be required to provide (a) the original dated sales slip, (b) your name, (c) your address, (d) a description of the problem, and (a) the serial number of the product. Obtain a RMA# (Returned Merchandise Authorization) from **International Ozone Technologies Group, Inc.**
3. Take or ship the product prepaid in the original container to **International Ozone Technologies Group, Inc.** at 1100 SW 10th. Street, Ste J, Delray Beach, Florida 33444.

#### Limitation of implied warranties:

THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION CONTAINED HEREIN INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

#### Exclusion of damages:

**International Ozone Technologies Group, Inc.**'s LIABILITY IS LIMITED TO THE COST OF REPAIR OR REPLACEMENT OF THE PRODUCT. **International Ozone Technologies Group, Inc.** SHALL NOT BE LIABLE FOR:

1. DAMAGE TO OTHER PROPERTY CAUSED BY ANY DEFECTS IN THE PRODUCT, DAMAGES BASED UPON INCONVENIENCE, LOSS OF USE OF THE PRODUCT, LOSS OF TIME, LOSS OF PROFITS, LOSS OF BUSINESS OPPORTUNITY, LOSS OF GOODWILL, INTERFERENCE



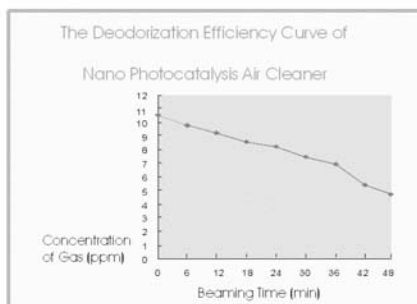
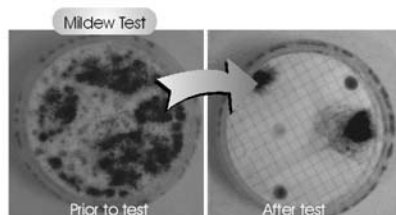
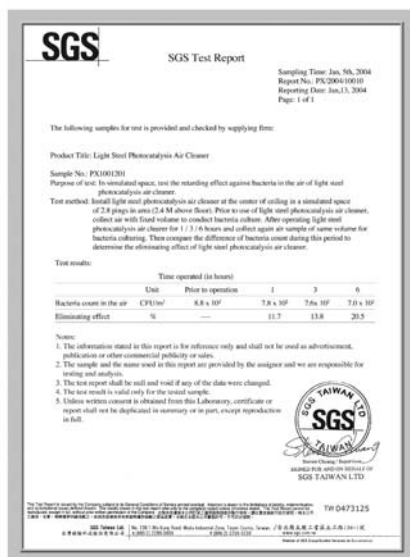
## Titan Testing

This testing was done on a model that is equal to the Titan #1000

Test on Organic Gas Deodorization Effectiveness of Nanotechnology Photocatalysis Air Cleaner

Power factor of Light tube	Chemical formula of Organic Gas	Operating time (min)	Beginning Concentration (ppm)	Concentration after catalyst (ppm)	Elimination efficiency (%)
32W	$\text{CH}_3\text{COOC}_2\text{H}_5$	48	10.56	4.76	54.92

- The sample to be test is placed in a 400 liters reaction system for cyclic test (5 L/Min)
- The data is the measuring results by applying most update precision instrument. The data is provided by Chungshan Institute of Science and Technology.
- Photocatalysis Negative Ion Multi-function Air Cleaner is also effective to the treatment of organic exhaust gas.
- Powerful waste gas treatment effect allows the organic carcinogen in the air reduced effectively by regular use.



International Ozone Technologies Group, Inc along with many of its dealers have tested *Titan* on many odors such as cigarette smoke, dead body odor, urine odor, garbage odor, and airborne VOCs, just to name a few, and have come out “Smelling Like A Rose” every time.

## Important Safeguards

- Do not operate equipment before reading and familiarizing yourself with all instructions, procedures, cautions and warnings contained in this manual.
- Save these instructions for later reference
- Follow all warnings and cautions marked on the product and contained herein.
- Do not use this product near water or in a moist environment.
- Operate equipment only with the correct electrical power specified on the backside of the case.
- Do not attempt to service this product yourself as opening or removing the enclosure may expose you to dangerous voltage or other hazards.
- Do not put foreign objects inside the equipment.
- Do not operate equipment with a damaged cord or plug, if fans fail to rotate, after the equipment malfunctions or if it has been dropped or damaged in any manner. Return equipment to manufacturer for examination, electrical or mechanical adjustment or repair. (See warranty for information.)
- Do not block air flow through equipment. Set equipment at least 6 inches from walls or any structure that could block the air intake.
- Do not use equipment in a flammable or explosive atmosphere.
- Do not run cord under carpeting. Do not cover cord with throw rug, runner, or similar coverings. Do not route cord under furniture or appliances. Arrange cord away from traffic area and where it will not be tripped over.

**Caution:**

As with all electrical devices this equipment should not be operated in a wet or damp environment.

This equipment should only be operated using a properly grounded electrical outlet.

International Ozone Technologies Group, Inc. assumes no liability for damages or injuries incurred by misuse of this equipment.

# ***Titan #4000***

**Is it an Air Purifier  
That Scrubs The  
Air  
Or  
An Air Scrubber  
That Purifies The  
Air?**





**Model #1000**Washable  
Foam Filter100 CFM  
Ball Bearing Fan  
&  
1 - 8" Diameter  
High Output  
TiO<sub>2</sub> / UVA Photocatalytic  
LampFront Mounted  
On/Off Switch**Model #2000**Washable  
82% Efficient  
Electrostatic Filter900 CFM  
Ball Bearing Fan  
&  
2 - 8" Diameter  
High Output  
TiO<sub>2</sub> / UVA Photocatalytic  
Lamps and 2 TiO<sub>2</sub> Coated  
Super Reactor ScreensRear Mounted  
On/Off Switch5,000 CFM  
Ball Bearing Fan  
&  
4 - 8" Diameter  
High Output  
TiO<sub>2</sub> / UVA Photocatalytic  
Lamps**Model #4000**20" x 20" x 1/2"  
Permanent  
Washable  
Electrostatic Filter  
82% EfficientResettable  
Circuit Breaker**Theory of Operation**

UV Rays in the 365 to 385 nanometer wavelength, which are safe to look at and let shine on your skin, are emitted from Titan's TiO<sub>2</sub> Photocatalytic Lamp and shine on the 23" Nano TiO<sub>2</sub> Coated Super Reactor Screen. As a result, electron hole pairs are formed that react with H<sub>2</sub>O and O<sub>2</sub> in the air and produce free electrons and hydroxyl radicals that when dispersed by the fan will decompose organic and inorganic gases and air pollutants into carbon dioxide and water.

Titan will produce larger amounts of purifying agents when used in high humidity situations.

Titan is safe to use at any time with or without people or animals in the treatment area.

**NOTE: 60%+ humidity is required for optimum performance.**

**Operational Tip:**

Set a 5 gallon bucket of water 2 feet behind the Titan and it will work much better.

You don't have to raise the humidity in the entire building, just in the air going through the machine.

Or better yet - Purchase a Hydroxyl Maximizer Ultrasonic Cold Vapor Injector.



## General Use Guidelines

Determine the source of the odor and remove any odor causing substance that can be found.

Determine the size of the area that will be purified or deodorized. Multiply the width by the length by the height to determine the total cubic feet of the area.

The following suggestions are general. The actual time it will take to remove an odor or to purify an area depends on many variables such as pollutant load, temperature, humidity, etc.

Examples for 1000 cubic feet (100 Square feet with 10 foot ceilings) with lite to moderate odor:

Titan 1000 = 4 Hours

Titan 2000 = 2 Hours

Titan #4000 = 1 Hour

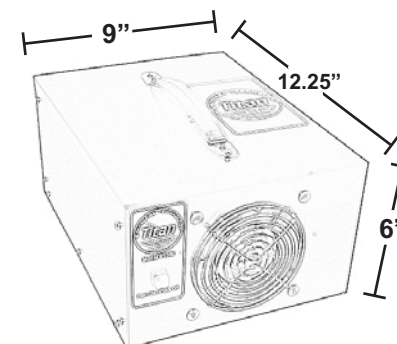
As stated above, these are just general guidelines. In some cases you will have to go longer and in other cases you will go shorter. Once you have become experienced with using your Titan for odor removal you will be able to determine the treatment times from your past experiences.

Set your Titan anywhere in the area to be treated and turn it on.

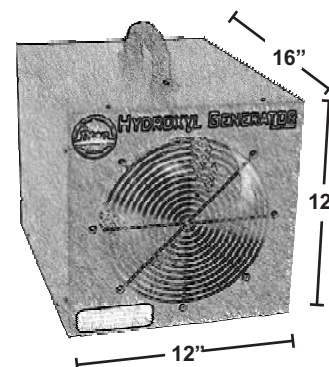


## Dimensions

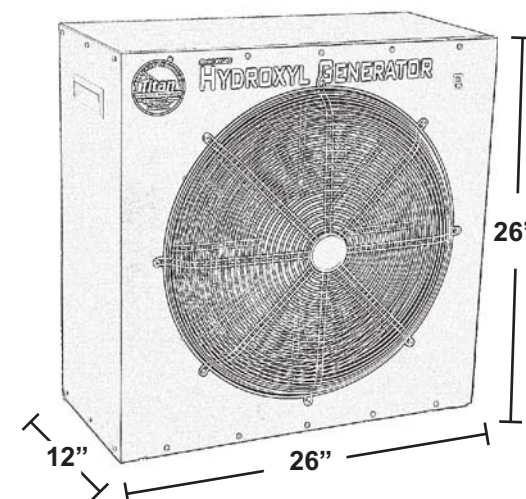
**#1000**



**#2000**



**#4000**





<b>Model</b>	<b>#1000</b>	<b>#2000</b>	<b>#4000</b>
<b>Size</b>	<b>12 1/4" x 9" x 6"</b>	<b>12" x 12" x 16"</b>	<b>26" x 26" x 12"</b>
<b>Weight</b>	<b>8 lbs.</b>	<b>20 lbs.</b>	<b>38.5 lbs.</b>
<b>Process</b>	<b>Titanium Dioxide &amp; UVA Based Photo Catalytic Oxidation</b>	<b>UVA/Titanium Dioxide Based Photo Catalytic Oxidation</b>	<b>UVA/Titanium Dioxide Based Photo Catalytic Oxidation</b>
<b>Filtration</b>	<b>4" Washable Foam Filter</b>	<b>10" x 10" x 1/2" Permanent Washable Electrostatic Filter</b>	<b>20" x 20" x 1/2" Permanent Washable Electrostatic Filter</b>
<b>Air Movement</b>	<b>100 CFM</b>	<b>900 CFM Max.</b>	<b>5000 CFM Max.</b>
<b>Max. Treatment Area</b>	<b>10,000 Cu. Ft.</b>	<b>20,000 Cu. Ft.</b>	<b>40,000 Cu. Ft.</b>
<b>Volts / Amps</b>	<b>110 / 1</b>	<b>110 / 2</b>	<b>110 / 4</b>
<b>Hertz</b>	<b>50 / 60</b>	<b>50 / 60</b>	<b>50 / 60</b>
<b>Case Material</b>	<b>Anodized Aluminum .060 / 14 Gauge</b>	<b>Anodized Aluminum .060 / 14 Gauge</b>	<b>Anodized Aluminum .060 / 14 Gauge</b>
<b>Finish</b>	<b>Industrial Powder Coat</b>	<b>Industrial Powder Coat</b>	<b>Industrial Powder Coat</b>
<b>Warranty</b>	<b>One Year Parts &amp; Labor</b>	<b>One Year Parts &amp; Labor</b>	<b>One Year Parts &amp; Labor</b>

Adult Day Care Centers & Nursing Homes  
 Air Conditioning Contractors  
 Apartment Complexes  
 Auto Dealerships  
 Auto Detailers  
 Automobile Rentals  
 Beauty Parlors & Nail Salons  
 Bowling Alleys  
 Bus Lines  
 Business Opportunity  
 Businesses  
 Carpet Cleaners & Installers  
 Chemical Supply  
 Child Care Centers  
 Cocktail Lounges & Bars  
 Condominium Associations  
 Country / Golf Clubs  
 Cruise Ships  
 Doctors, Dentist & Chiropractors and Medical Clinics  
 Dry Cleaners  
 Duct Cleaning Companies  
 Equipment Rental Companies  
 Fire & Water Damage Restoration  
 Florists  
 Funeral Homes  
 Garbage/Dumpsters Rooms  
 Grocery Stores, Meat Markets and Fish & Seafood Markets  
 Health Clubs & Gyms  
 Home Owners  
 Hotels  
 Insurance Companies  
 Janitorial Companies  
 Janitorial Supply  
 Karate Studios  
 Limousine Services  
 Marinas / Boats  
 Motorhome / Recreational Vehicle Rentals  
 Movie Theaters  
 Painting Contractors  
 Pest Control Companies  
 Police Departments  
 Pool Supply Companies  
 Print Shops  
 Public Rest Rooms  
 Realtors  
 Restaurants  
 Schools  
 Sick Building Syndrome  
 Trucking Companies  
 Vegetable & Fruit Preservation  
 Warehouse / Storage Facilities



## Trouble Shooting

Problem	Possible Cause	Remedy
Unit does not turn on	Power Cord Not Plugged In	Plug Power Cord Into Suitable Outlet With Correct Voltage
	Circuit Breaker In Building Tripped	Reset Circuit Breaker At Panel Box
	Faulty Power Outlet	Try Another Outlet
	Fuse or Circuit Breaker is Blown On back Of Unit	Replace Fuse Or Reset Circuit Breaker
Unit Keeps Tripping Circuit Breaker	Electrical Short Circuit	Return Unit To Manufacturer For repair



## Maintenance

Your **Titan Hydroxyl Generator** was engineered, designed and built to require very little maintenance. The only maintenance necessary to keep your **Titan** running at peak performance is to wash the electrostatic filter located on the back of the unit with soap and water, air dry, then re-install. If you ever feel that your **Titan** is not working as well as it did when it was new, call the factory for an RMA number and ship the unit back. We will inspect and diagnose the problem. If the equipment only needs adjustments or cleaning to bring it back into specifications we will gladly service and re-certify your equipment **free of charge**, you only pay shipping and handling. **Titan's Photo Catalytic Lamps** are self-cleaning and will perform at their optimum for a period of 8000 hours (24 Hours Per Day - 7 Days A Week - For 1 Year) at which time they may need to be replaced.

### Removing & Re-Installing Filter

(#1) Slide fingers under frame of the filter. (#2) Using your thumb to push against the case, pull the corner of the filter free and remove from case.  
 (#3) Place the bottom of the filter into the bottom and completely to the back of the opening.  
 (#4) Using the palms of your hands push down on the filter as you push it into the opening.  
 (#5) Grab the outside of the case with your fingers and use your thumbs to push the corners of the filter to seat the filter completely into the opening. Repeat #5 on the bottom corners of filter.

