

BIO3BLASTER®

HYDROXYL GENERATOR

User & Operator Manual

Full Product Line

Hydroxyl Blast • Hydroxyl Max • Hydroxyl Max 2X
Hydroxyl HVAC In-Duct Unit

Read this manual completely before operating your equipment.
Save for future reference.

Oxyzone Enterprises, LLC

d/b/a Bio3Blaster®

Hand-built in Elyria, Ohio, USA since 2009

professionalozone.com • 1-800-240-8514

BBB Accredited since 2009

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1. Welcome & Product Overview

Thank you for choosing a Bio3Blaster® Hydroxyl Generator. Since 2009, Bio3Blaster has manufactured professional air-treatment equipment in Elyria, Ohio for restoration contractors, property managers, and commercial cleaning professionals across all 50 states and Canada.

This manual covers the complete Bio3Blaster hydroxyl generator product line. Locate your specific model in Section 3 (Product Specifications) for the exact performance figures and physical dimensions that apply to your unit. Sections on setup, operation, safety, maintenance, and troubleshooting apply to all models unless otherwise noted.

1.1 What Is a Hydroxyl Generator?

A hydroxyl generator produces hydroxyl radicals ($\bullet\text{OH}$) — a naturally occurring cleaning molecule found in the Earth's atmosphere. In nature, hydroxyl radicals are generated when UV light from the sun interacts with water vapor and oxygen. They are responsible for breaking down most of the pollution and organic contaminants in our outdoor air.

Your Bio3Blaster hydroxyl generator recreates this natural process indoors using a UV light source and a catalytic reaction chamber. As room air passes through the chamber, hydroxyl radicals are produced and released back into the space, where they oxidize odor molecules, VOCs (volatile organic compounds), bacteria, viruses, mold spores, and other airborne contaminants.

1.2 Hydroxyl vs. Ozone — Knowing When to Use Each

Bio3Blaster manufactures both hydroxyl generators and ozone generators because each technology has strengths the other does not. Understanding the difference is critical to using your equipment correctly.

Characteristic	Hydroxyl Generator	Ozone Generator
Use around people/pets/plants	YES — safe for occupied spaces	NO — unoccupied only
Speed of treatment	Slower (continuous)	Faster (intense shock)
Best for	Ongoing air quality, light to medium odors, sensitive environments	Severe smoke, fire, mold odors, deep surface penetration
Leaves no residue	Yes	Yes (after ventilation)
Damages rubber/plants	No	Yes with prolonged exposure
Requires vacating space	No	Yes
Typical run time	Hours to continuous	15 min – 24 hr (site dependent)

NOTE

Many Bio3Blaster customers own both technologies: hydroxyl for ongoing air quality in occupied rooms, and ozone for deep-clean shock treatments between occupancy. Never operate an ozone generator in a space that is occupied by people, pets, or plants.

1.3 Typical Applications

- Occupied hotel rooms, offices, apartments, and short-term rentals
- Hospitals, medical offices, nursing homes, dental offices
- Restoration sites where occupants remain on-site
- Cannabis grow facilities and food-processing areas
- Gyms, locker rooms, funeral homes, daycare centers
- Vehicle interiors, boats, RVs, buses
- Whole-house HVAC treatment (Hydroxyl HVAC in-duct model)

2. Safety Information

Hydroxyl generators are among the safest professional air-treatment technologies available — that is a central reason Bio3Blaster manufactures them. However, any powered equipment installed in occupied environments carries responsibilities. Read this section completely before using your equipment.

2.1 Safety Signal Words

Throughout this manual, the following signal words are used:

- **WARNING:** Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
- **CAUTION:** Indicates a hazardous situation which, if not avoided, could result in minor injury or equipment damage.
- **NOTE / IMPORTANT:** Indicates information that is important but not hazard-related.

2.2 General Safety Rules

WARNING

Do not operate a damaged unit. If the power cord, housing, UV lamp, or reaction chamber shows any sign of damage, disconnect power and contact Bio3Blaster.

Do not open the housing with the unit plugged in. UV lamps and internal components carry high voltage and UV energy that can cause burns and eye injury.

Never look directly at an energized UV lamp. Prolonged direct viewing of UV light can cause eye damage (photokeratitis).

Do not operate the unit in standing water, rain, or direct spray. These are indoor air-treatment devices only.

2.3 Occupied-Space Safety

Bio3Blaster hydroxyl generators are designed and intended for use in occupied spaces. Hydroxyl radicals produced by the photocatalytic reaction have an extremely short atmospheric lifetime (typically under one second) and do not accumulate to harmful levels in a ventilated indoor space.

CAUTION

Individuals with severe respiratory conditions, chemical sensitivities, or compromised immune systems should consult a physician before prolonged exposure to any air-treatment device.

If any occupant experiences throat irritation, watery eyes, or headache while the unit is operating, reduce run time, increase ventilation, or relocate the unit further from the occupied zone.

2.4 Electrical Safety

- Plug only into a properly grounded 120V / 60Hz outlet (North America). Do not remove the ground prong.
- Do not use with an extension cord unless it is rated for the amperage of the unit and kept as short as practical.
- Do not run the power cord under carpet, through doorways where it could be pinched, or near heat sources.
- Unplug the unit before performing any cleaning or maintenance.
- Do not operate if the unit has been dropped, splashed with liquid, or shows any physical damage to the housing or cord.

2.5 UV Lamp Safety

WARNING

UV lamps used in hydroxyl generators emit UV-A and/or UV-C light. Direct skin or eye exposure can cause burns and eye injury.

The reaction chamber is designed so that UV light stays contained inside during normal operation. Never bypass, disable, or modify the interlock or lamp housing.

When replacing the UV lamp, always unplug the unit and allow the lamp to cool for at least 10 minutes before handling.

Some UV lamps contain a small amount of mercury. Handle with care. If a lamp breaks, follow the disposal instructions in Section 6.

2.6 Mercury / End-of-Life Disposal

UV lamps used in hydroxyl generators may contain a small amount of mercury. Do not dispose of used UV lamps in household trash. Take used lamps to a hazardous-waste collection facility or a lamp-recycling program. Most home-improvement retailers accept fluorescent and UV lamps for recycling at no charge.

2.7 FDA / FTC Compliance Statement

IMPORTANT

Bio3Blaster hydroxyl generators are air-treatment devices. They are not medical devices and have not been evaluated by the FDA.

No claims are made that Bio3Blaster equipment treats, cures, prevents, or diagnoses any disease, illness, or medical condition.

Always follow CDC, EPA, and local health-department guidance for infection control and building health. This equipment is a supplement to, not a replacement for, proper cleaning, source control, and ventilation.

3. Product Specifications

The Bio3Blaster hydroxyl generator product line offers four units covering portable room treatment through whole-building HVAC integration. Locate your model below.

CAUTION

Specifications are subject to continuous improvement. For the latest published specifications, see professionalozone.com or call 1-800-240-8514. If values on your unit's serial plate differ from those below, the serial plate values prevail.

3.1 Hydroxyl Blast™

Entry-level portable hydroxyl generator designed for single-room treatment, vehicles, hotel rooms, offices, and small restoration sites. Compact and lightweight for easy transport between jobs.

Specification	Value
Model	Hydroxyl Blast
Coverage area	Up to 800 sq ft (single room)
UV technology	Photocatalytic UV-A with TiO ₂ catalyst
Reaction chamber	Anatase titanium dioxide (TiO ₂) coated reactor grid
Airflow	Built-in axial fan, approximately 130 CFM
Power	120V / 60Hz, < 2A
Timer	Continuous / 24-hour solid-state
Housing	Powder-coated steel
Safety	Grounded 3-prong cord; sealed reaction chamber
Made in	Elyria, Ohio, USA
Warranty	1-year limited warranty

3.2 Hydroxyl Max™ Vertical Tornado

Mid-range unit engineered for larger occupied spaces including apartment turnovers, mid-size commercial spaces, restoration job sites, and hospitality use. Patented vertical tornado airflow design draws room air through the reaction chamber efficiently.

Specification	Value
Model	Hydroxyl Max Vertical Tornado
Coverage area	Up to 2,500 sq ft

Specification	Value
UV technology	High-output photocatalytic UV with TiO ₂ catalyst
Reaction chamber	Enhanced anatase TiO ₂ reactor grid (larger surface area)
Airflow	Industrial blower, approximately 1,850 CFM
Power	120V / 60Hz
Housing	Powder-coated steel
Airflow design	Patented vertical tornado pattern (US Patent #8685333 B2 family)
Made in	Elyria, Ohio, USA
Warranty	1-year limited warranty

3.3 Hydroxyl Max 2X Vertical Tornado™

Flagship portable unit with dual reaction chambers and dual UV arrays for maximum hydroxyl output. Engineered for large commercial spaces, whole-house applications, severe odor situations in occupied settings, and professional restoration contractors.

Specification	Value
Model	Hydroxyl Max 2X Vertical Tornado
Coverage area	Up to 4,000 sq ft
UV technology	Dual photocatalytic UV arrays with TiO ₂ catalyst
Reaction chamber	Dual anatase TiO ₂ reactor grids
Airflow	Industrial blower, approximately 1,850+ CFM
Power	120V / 60Hz
Housing	Powder-coated steel
Airflow design	Dual vertical tornado pattern
Made in	Elyria, Ohio, USA
Warranty	1-year limited warranty

3.4 Bio3Blaster Hydroxyl HVAC™ (In-Duct)

Permanent-install unit designed to mount inside a residential or light-commercial HVAC air handler. Treats the entire conditioned space on a continuous basis by generating hydroxyls inside the duct whenever the air handler is running. Combined hydroxyl + bipolar ion generation.

Specification	Value
Model	Hydroxyl HVAC (in-duct)
Coverage area	3,000 – 4,000 sq ft whole-building
Mounting	Inside HVAC air handler; 24V tie-in to blower circuit
Technology	Hydroxyl + bipolar ionization combination
Target contaminants	Powdery mold, mildew, bacteria, viruses, odors, VOCs
Power	24V from HVAC blower circuit (low voltage)
Installer requirements	HVAC professional or qualified person with electrical knowledge
Origin	Assembled in Elyria, Ohio, USA
Warranty	1-year limited warranty

 WARNING

The Hydroxyl HVAC unit must be installed by a licensed HVAC technician or a qualified person with electrical experience. Improper installation may void the warranty and create electrical or fire hazards.

3.5 Common Construction Details

All Bio3Blaster hydroxyl generators share the following construction standards:

- Powder-coated steel housing engineered for daily contractor use
- Anatase titanium dioxide (TiO₂) photocatalytic reactor — the industry-standard catalyst for hydroxyl production
- Short-proof UV ballast design for long lamp life and service reliability
- Hand-built and inspected in Elyria, Ohio
- BBB Accredited since 2009
- Backed by Oxyzone Enterprises, LLC, holder of US Patent #8685333 B2

4. Unpacking & Initial Setup

4.1 What's in the Box

Your Bio3Blaster hydroxyl generator ships with the following items. Inspect all contents immediately upon receipt. If any item is missing or damaged, contact Bio3Blaster within 7 days of delivery.

- Bio3Blaster hydroxyl generator (your model)
- Power cord (integrated or detachable depending on model)
- User & Operator Manual (this document)
- Warranty registration card
- Hydroxyl HVAC model only: mounting bracket, self-tapping screws, wire nuts, low-voltage tap-in harness

4.2 Inspection Checklist

1. Check the shipping carton for damage before opening. Photograph any visible damage.
2. Verify the model name and serial number on the rear serial plate match your invoice.
3. Inspect the housing for dents, scratches, or stress cracks.
4. Verify the power cord is intact with no cuts, crushes, or exposed wire.
5. Verify the reaction chamber access door is closed and secured.
6. Record your serial number in Section 13 (Warranty & Service Record) of this manual.

CAUTION

Report any shipping damage to Bio3Blaster within 7 days. Claims filed after this window may not be covered.

4.3 Choosing a Location

For best performance, place the hydroxyl generator:

- On a level, dry, solid surface — never on a bed, couch, or soft material that could obstruct airflow
- At least 3 feet from walls and large furniture to allow full air circulation
- Near the center of the room being treated, where possible
- Elevated (on a table or shelf) when treating whole rooms — hydroxyls disperse more evenly from height
- Away from water sources — sinks, showers, aquariums, and humidifiers can over-saturate the reaction chamber

NOTE

Hydroxyl generators perform best at 40–70% relative humidity. In very dry environments (<

30% RH), adding a small amount of ambient moisture improves hydroxyl production. Do not spray water directly into the unit.

4.4 First-Time Power-Up

1. Place the unit in your chosen location.
2. Verify the ON/OFF switch is in the OFF position before plugging in.
3. Plug the power cord directly into a grounded 120V outlet.
4. Move the switch to ON. The power indicator light should illuminate.
5. Listen for the fan to come up to speed smoothly within 2–3 seconds.
6. Observe the UV indicator or reaction chamber viewport (if equipped) to verify the UV lamp is illuminated. A faint blue-violet glow is normal.
7. Allow the unit to run for 15 minutes before first use. A faint, fresh “after-rain” smell during initial run-in is normal.

5. Operating Your Hydroxyl Generator

5.1 Before Every Use

- Verify the unit is on a dry, stable surface
- Verify the intake and exhaust vents are clear — no objects, dust blankets, or fabric covering them
- Verify the filter (where equipped) is clean and properly seated
- Verify the power cord is in good condition and fully inserted in the outlet

5.2 Standard Operating Procedure (Portable Models)

The following procedure applies to the Hydroxyl Blast, Hydroxyl Max, and Hydroxyl Max 2X. The Hydroxyl HVAC model follows a different procedure (see Section 5.4).

Step 1 — Prepare the Space

- Close windows and exterior doors to contain hydroxyl treatment to the target area
- Interior doors may remain open when treating multiple rooms with one unit
- Remove or cover items with strong competing odors (wet laundry, soiled diapers, garbage) if you want the hydroxyls to focus on embedded odors
- HVAC may remain on (recommended) to help circulate treated air

Step 2 — Position the Unit

- Portable hydroxyl generators are safe for occupied spaces. Occupants, pets, and plants may remain during treatment.
- For whole-room treatment, place the unit at about waist height near the center of the room
- For vehicles, place the unit on the driver's seat or passenger floor, either with a hose running out of a slightly cracked window (if equipped) or with the unit left inside and the car closed

Step 3 — Run Time

Hydroxyl treatment is a continuous, gradual process. Unlike ozone (which achieves rapid shock treatment), hydroxyl radicals work by ongoing oxidation. The following run times are general guidance:

Application	Typical Run Time
Light odors (cooking, general freshening)	1 – 4 hours
Medium odors (pet, smoke residue, locker room)	4 – 12 hours
Heavy embedded odors (cigarette, mildew)	24 – 72 hours continuous
Restoration site (between ozone treatments)	Continuous during occupancy
Ongoing air quality (offices, homes, grow rooms)	Continuous 24/7

** NOTE**

Unlike ozone generators, hydroxyl generators are designed to run continuously. Severe or deeply embedded odors may benefit from an initial ozone shock treatment (in an unoccupied space) followed by hydroxyl treatment for ongoing control when occupants return.

Step 4 — Post-Treatment

- No ventilation waiting period is required. Hydroxyls convert back to water vapor and trace carbon dioxide.
- Turn the unit OFF when the desired odor reduction is achieved, or leave it running continuously for ongoing air quality.
- Wipe the housing with a dry cloth as needed.

5.3 Operating Controls (By Model)

Control layouts vary by model. Refer to the illustrations on your unit's rear panel:

- Power / ON-OFF switch — primary power to the unit
- Hydroxyl indicator light — illuminates when the UV lamp is active
- Timer (some models) — 24-hour solid-state timer or continuous mode
- Variable fan speed (Max and Max 2X) — allows adjustment of airflow to match the size of the treatment area

5.4 Hydroxyl HVAC In-Duct Operation

Once the Hydroxyl HVAC unit is installed per the installer's instructions included in the box, the unit operates automatically whenever the HVAC blower is running. Recommended fan settings:

- Set the thermostat fan to "ON" (not "AUTO") for continuous whole-building treatment
- If left on "AUTO", the hydroxyl unit only runs during heating/cooling cycles (still effective but less continuous)
- Confirm the unit's indicator light is visible through the access panel and illuminated when the blower is on

5.5 Running Alongside an Ozone Generator

Bio3Blaster recommends a two-stage approach for severe contamination:

1. Remove occupants, pets, and plants from the space.
2. Run an ozone generator (per the ozone manual) for the site-appropriate shock-treatment duration.
3. Ventilate thoroughly — minimum 30–60 minutes with windows open.

4. Return occupants to the space.
5. Run the hydroxyl generator continuously for 24–72 hours to neutralize any remaining odors and provide ongoing air quality while occupants are present.



WARNING

Do not run ozone generators at the same time as hydroxyl generators in occupied spaces. Ozone is not safe for occupied-space use, regardless of any other equipment running in parallel.

6. Maintenance

Regular maintenance keeps your Bio3Blaster hydroxyl generator performing at rated output and extends the service life of the UV lamp and catalytic reactor.



WARNING

Always unplug the unit from the outlet before performing any maintenance. Allow the UV lamp to cool for at least 10 minutes.

6.1 Maintenance Schedule

Interval	Task
Every use	Inspect cord, housing, intake/exhaust vents
Weekly (heavy commercial use)	Wipe housing; check filter
Monthly (normal use)	Clean or replace intake filter; inspect reaction chamber access door
Every 6 months	Visual inspection of UV lamp and reactor grid
Every 12 months (or 8,000–10,000 operating hours)	Replace UV lamp
Every 12–24 months	Clean or replace TiO ₂ reactor grid if available as a replacement part
As needed	Professional service for repeated faults

6.2 Cleaning the Housing

1. Unplug the unit.
2. Wipe the external housing with a dry or slightly damp (water only) microfiber cloth.
3. For stubborn marks, a mild household cleaner applied to the cloth — never sprayed directly on the unit — is acceptable.
4. Do not use abrasive pads, bleach, or solvents. These will damage the powder-coat finish.
5. Allow to fully air-dry before plugging in.

6.3 Cleaning / Replacing the Intake Filter

Models equipped with a foam or pleated intake filter should have the filter cleaned or replaced on the schedule above.

1. Unplug the unit.
2. Locate the filter access panel (rear or side of unit).
3. Slide out the filter.

4. For foam filters: rinse under lukewarm water, squeeze dry gently, allow to fully air-dry (24 hours) before reinstalling.
5. For pleated filters: replace with a new filter of identical size and grade. Contact Bio3Blaster for replacement filters.
6. Reinstall, close the access panel, verify it is fully seated, then plug in.

6.4 UV Lamp Replacement

The UV lamp is the primary consumable in your hydroxyl generator. UV output gradually diminishes over time, even while the lamp continues to visibly illuminate. Replace the lamp every 12 months, or approximately every 8,000–10,000 operating hours — whichever comes first.

WARNING

UV lamps may contain a small amount of mercury. Handle carefully. Wear gloves.

If a lamp breaks: clear the area of people and pets, ventilate for 15 minutes, collect fragments with stiff paper (not a vacuum), place in a sealed container, and dispose per local hazardous-waste regulations.

Lamp Replacement Procedure

1. Unplug the unit and allow the lamp to cool at least 10 minutes.
2. Remove the access panel per the rear-panel instructions on your specific model.
3. Note the lamp's orientation (which end connects to the ballast).
4. Gently rotate and slide the old lamp out of the sockets.
5. Without touching the glass of the new lamp (skin oils shorten lamp life), insert the new lamp into the sockets in the same orientation.
6. Replace the access panel and secure all fasteners.
7. Plug in and verify the lamp illuminates.
8. Record the replacement date in Section 13 of this manual.

NOTE

Always use Bio3Blaster-specified replacement lamps. Third-party UV lamps may not produce the correct wavelength for hydroxyl generation and may void your warranty. Contact 1-800-240-8514 for genuine replacement parts.

6.5 Reaction Chamber (TiO₂ Grid) Care

The titanium dioxide reactor grid is engineered for long service life. Under normal use it does not require cleaning. If the grid becomes visibly fouled with dust or smoke residue (typical in heavy restoration use):

1. Unplug the unit and remove the UV lamp per Section 6.4.

2. Carefully remove the grid per the rear-panel diagram.
3. Gently blow off loose dust with compressed air at low pressure.
4. Do not wipe, wash, or apply solvents to the grid — the photocatalytic coating is engineered, not a surface dirt layer.
5. Reinstall grid and lamp. Run the unit 30 minutes to verify normal operation.

6.6 Long-Term Storage

If the unit will be unused for more than 30 days:

- Unplug and clean the housing
- Remove the intake filter and store separately
- Store in a dry, temperature-controlled location (50–90°F)
- Cover loosely with a breathable cloth (not plastic) to prevent dust accumulation

7. Troubleshooting

Use the guide below to resolve the most common issues. If a problem persists after working through the relevant row, contact Bio3Blaster at 1-800-240-8514 or support@professionalozone.com.

Symptom	Likely Cause	Action
Unit will not power on	No power at outlet; damaged cord; tripped GFCI	Test outlet with another device; inspect cord; reset GFCI; try a different outlet
Fan runs but UV lamp is dark	Lamp burned out; ballast failure; lamp loose in socket	Unplug, open access panel, reseal lamp; if no result, replace lamp (Section 6.4)
UV lamp lit but weak odor reduction	Lamp end-of-life (aged); low humidity; filter clogged; space too large for model	Replace UV lamp; check RH (target 40–70%); clean filter; verify model coverage vs. room size
Chemical / sharp odor at unit	Lamp over-producing; possible ozone leakage; reactor grid contamination	Turn unit off, unplug, ventilate; contact Bio3Blaster service
Fan noise, rattling, or vibration	Loose fastener; debris in fan; bearing wear	Unplug, inspect fan intake for debris; verify all panel screws are tight; if rattle persists, contact service
Unit shuts off unexpectedly	Thermal cut-off triggered; blocked airflow; undersized extension cord	Verify intake and exhaust are clear; eliminate extension cord; allow unit to cool 30 min before restart
Occupants report irritation (dry throat, eyes)	Unit too close to occupied zone; space too small for model; very low humidity	Relocate unit further from occupants; reduce run time; add ambient humidity; verify model matches space size
Hydroxyl HVAC unit not producing	Thermostat fan on AUTO (unit only runs during heat/cool); 24V tap failed; lamp out	Set fan to ON at thermostat; have HVAC tech verify 24V tie-in; check lamp (Section 6.4)
Timer not advancing	Mechanical timer jammed; solid-state timer defective	Rotate timer knob fully clockwise then to desired setting; if solid-state, contact service

7.1 When to Contact Bio3Blaster Service

Contact Bio3Blaster service (1-800-240-8514) if any of the following occurs:

- The unit emits a burning-electrical smell at any time
- You see smoke, sparks, or arcing from any opening
- The housing becomes excessively hot (too hot to touch briefly) during normal operation

- The power cord insulation is cut, cracked, or damaged
- The unit has been dropped or splashed with liquid
- Any issue in the troubleshooting table above persists after the listed action



WARNING

Do not open the housing beyond accessing the UV lamp and filter compartments. Internal high-voltage ballast circuits must only be serviced by Bio3Blaster-authorized technicians. Unauthorized repair voids the warranty.

8. Application Guide

The following real-world usage guidance reflects the field experience of Bio3Blaster customers — restoration contractors, property managers, hoteliers, and automotive professionals — since 2009.

8.1 Hotel & Hospitality

- Place in occupied rooms between stays to neutralize odors from prior guests
- Run continuously in lobbies and high-traffic common areas
- Use Hydroxyl HVAC in the air handler for whole-property treatment
- Safe to run during occupancy — does not require vacating the room

8.2 Restoration Contractors

- Deploy hydroxyl units on active restoration sites where occupants or homeowners remain on-site
- Use as the “between jobs” maintenance tool after an initial ozone shock treatment of an unoccupied space
- Position in the affected area; run continuously through the drying and demolition phases
- For fire restoration: pair a Hydroxyl Max 2X with a Bio3Blaster VHT ozone generator for the complete two-stage process

8.3 Property Management & Rentals

- Use between tenants to neutralize pet, smoke, and cooking odors
- Hydroxyl HVAC installation provides ongoing whole-property odor control
- Shorter turnaround versus chemical deodorizing sprays — no residue, no waiting for fumes to clear

8.4 Automotive (Cars, RVs, Boats, Aircraft)

- Hydroxyl Blast is sized for single-vehicle interior treatment
- Place the unit on the floor or seat, run 1–4 hours for light odors, 12–24 hours for heavy smoke or mildew
- Occupants, pets, and sensitive interior materials (leather, electronics) are safe during treatment
- Unlike ozone, hydroxyl treatment does not risk rubber or adhesive degradation on extended run times

8.5 Healthcare, Senior Living, Childcare

CAUTION

Always confirm compliance with local health department, facility-management, and insurance requirements before deploying air-treatment equipment in healthcare or childcare

facilities. Hydroxyl generators are supplemental devices, not medical equipment.

- Safe for spaces that cannot be vacated — nursing homes, hospice, childcare
- Use in patient or client rooms between occupancy to reduce odor and bioburden
- Supplement, do not replace, routine cleaning and ventilation protocols

8.6 Cannabis, Grow, and Agricultural Facilities

- Hydroxyl Max and Max 2X are widely used for ongoing odor control in cultivation spaces
- Safe for plants and workers on-site (unlike ozone, which damages plant tissue)
- Hydroxyl HVAC in-duct unit provides whole-facility treatment through the existing air handler

9. Frequently Asked Questions

Can I really stay in the room while my hydroxyl generator is running?

Yes. That is the primary advantage of hydroxyl technology over ozone. Hydroxyl radicals have an extremely short lifetime and do not accumulate to harmful levels in a normally ventilated indoor space. Occupants, pets, and plants may remain during treatment.

How long until I notice a difference?

Light odors typically improve within 1–4 hours. Medium odors improve over 4–12 hours. Heavy embedded odors (cigarette smoke, severe mildew) may require 24–72 hours of continuous operation. Hydroxyl treatment is gradual — it is not designed as a shock treatment the way ozone is.

How does hydroxyl treatment compare to an air purifier with HEPA or carbon filter?

HEPA and carbon filters are passive — they only capture contaminants that physically pass through the filter. Hydroxyls are active — they travel through the entire air volume of the room and oxidize contaminants wherever they are. The two technologies complement each other. Many high-end restoration setups pair hydroxyl generators with HEPA air scrubbers.

Will the unit damage my plants, pets, or electronics?

No. Hydroxyl treatment does not damage plants, pets, rubber, leather, electronics, or artwork. This is a key difference from ozone, which can degrade these materials with prolonged exposure.

Can I leave it running 24/7?

Yes. Bio3Blaster hydroxyl generators are engineered for continuous duty. Many customers run them 24/7 in commercial settings, hotel lobbies, restoration sites, and HVAC systems. Plan on annual UV lamp replacement with continuous operation.

Does the unit make ozone?

A properly functioning Bio3Blaster hydroxyl generator produces minimal ozone as an incidental by-product of the photocatalytic reaction — well below OSHA occupational exposure limits in a normally ventilated space. If you smell a strong sharp chemical odor near the unit, turn it off, ventilate, and contact Bio3Blaster service.

What's the lifespan of the unit?

With routine maintenance (annual UV lamp replacement, filter service, and occasional grid cleaning), Bio3Blaster hydroxyl generators typically provide 10+ years of service. The UV lamp is the primary consumable; the steel housing, ballast, fan, and TiO₂ reactor are designed for long service life.

Can I use the unit on a timer?

Yes. Any standard 120V outlet timer (up to the unit's amp rating) can be used to schedule run times. This is common for commercial customers who run the unit after-hours only.

Where is the unit manufactured?

All Bio3Blaster equipment is hand-built in Elyria, Ohio, USA. Oxyzone Enterprises, LLC d/b/a Bio3Blaster has manufactured professional air-treatment equipment in Elyria since 2009 and has been BBB Accredited for the same period.

Does Bio3Blaster claim the unit kills COVID / flu / mold / other pathogens?

No. Bio3Blaster hydroxyl generators are air-treatment devices. They are not medical devices and have not been evaluated by the FDA. No claims are made that this equipment treats, cures, prevents, or diagnoses any disease, illness, or medical condition. Always follow CDC, EPA, and local health-department guidance.

10. Limited Warranty

10.1 Coverage

Oxyzone Enterprises, LLC d/b/a Bio3Blaster (“Bio3Blaster”) warrants each new hydroxyl generator to be free from defects in material and workmanship under normal use and service for a period of ONE (1) YEAR from the original date of delivery to the original purchaser.

10.2 What This Warranty Covers

- Manufacturing defects in the housing, ballast, fan, transformer, and UV lamp socket
- Manufacturing defects in the TiO₂ reactor grid
- Labor to repair or replace defective components at the Bio3Blaster Elyria facility

10.3 What This Warranty Does NOT Cover

- Damage caused by misuse, neglect, accident, or operation outside the specifications in this manual
- Damage caused by operation at improper voltage or with damaged extension cords
- Damage from liquid spillage, submersion, or operation in wet environments
- UV lamp burnout from normal use (consumable item)
- Cosmetic damage to powder-coat finish from handling, scratching, or abrasive cleaning
- Damage caused by unauthorized repair, modification, or use of non-Bio3Blaster replacement parts
- Shipping costs to return the unit to Bio3Blaster for warranty service
- Consequential or incidental damages of any kind
- Hydroxyl HVAC: damage caused by improper installation by unqualified personnel

10.4 How to Obtain Warranty Service

1. Contact Bio3Blaster at 1-800-240-8514 or support@professionalozone.com.
2. Describe the issue and provide your serial number and proof of purchase.
3. A service representative will issue an RMA (Return Merchandise Authorization) number if return is required.
4. Package the unit securely and return with the RMA clearly marked on the outside.
5. Bio3Blaster will repair or replace the unit at its discretion and return it to you at no charge for parts or labor (customer pays return shipping to Bio3Blaster only).

10.5 Disclaimer

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. BIO3BLASTER’S LIABILITY UNDER THIS WARRANTY IS LIMITED TO REPAIR OR

REPLACEMENT OF THE PRODUCT. BIO3BLASTER SHALL NOT BE LIABLE FOR ANY INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights. You may also have other rights that vary from state to state.

11. Regulatory & Compliance Information

11.1 Intended Use

Bio3Blaster hydroxyl generators are designed and sold for air-treatment use in commercial, industrial, residential, and automotive applications. They are not medical devices. They are not intended to diagnose, treat, cure, mitigate, or prevent any disease or health condition. They are not intended for use as a replacement for cleaning, proper ventilation, or source control of contaminants.

11.2 FCC / Electrical Compliance

Bio3Blaster hydroxyl generators comply with applicable FCC Part 18 rules for industrial, scientific, and medical equipment. Electrical components are sourced from UL-listed suppliers and assembled in accordance with National Electrical Code (NEC) standards. Consult the serial plate on your specific unit for model-specific compliance markings.

11.3 Ozone By-Product Note

All UV-based photocatalytic hydroxyl generators produce a small amount of ozone as a by-product of the reaction. Bio3Blaster units are engineered so that ozone levels in a normally ventilated room remain well below the 0.05 ppm occupied-space limit recognized by OSHA and ASHRAE for long-duration occupational exposure. For heightened-sensitivity environments (neonatal care, allergy sufferers, asthma), position the unit further from the occupied zone and/or operate intermittently rather than continuously.

11.4 Disposal

At end of service life, dispose of the unit in accordance with local electronic-waste (e-waste) regulations. UV lamps must be separated and recycled at a hazardous-waste or lamp-recycling facility due to mercury content.

12. Service, Parts, and Contact Information

12.1 Contact

Bio3Blaster (Oxyzone Enterprises, LLC)

Elyria, Ohio, USA

Phone: 1-800-240-8514

Website: professionalozone.com

Email: support@professionalozone.com

Hours: Monday – Friday, 9:00 AM – 5:00 PM Eastern

12.2 Genuine Replacement Parts

Order genuine Bio3Blaster replacement parts directly from Bio3Blaster. Non-genuine parts may reduce performance, create safety hazards, and void your warranty.

- Replacement UV lamps (model-specific)
- Intake filters (foam and pleated)
- TiO₂ reactor grids
- Replacement power cords
- Housing panels and access covers

12.3 Extended Warranty

Extended warranty and service coverage options are available for Bio3Blaster hydroxyl generators. Contact sales at 1-800-240-8514 or visit the Warranty & Service products on professionalozone.com for current options and pricing.

12.4 Training & Certification

Bio3Blaster offers a Professional Ozone Contractor Certification Course (IAOPAC) for restoration professionals, property managers, and commercial contractors who want to grow a compliant, effective odor-removal business. Visit professionalozone.com/ozone-business for current course offerings.

13. Warranty & Service Record

Complete the fields below and retain this manual for your records. Please have this information ready when contacting Bio3Blaster for warranty service or parts.

Purchase Information

Model Name: _____

Serial Number: _____

Date of Purchase: _____

Purchased From (Dealer or Bio3Blaster Direct): _____

Invoice / Order Number: _____

Installation / Deployment

Installation Date: _____

Installed By (if HVAC model): _____

Primary Location / Use: _____

Service Log

Record each UV lamp replacement, filter change, and service event below.

Date	Hours	Service Performed	Performed By

BIO3BLASTER®

Hand-built in Elyria, Ohio, USA since 2009

Questions? Service? Parts?

Call 1-800-240-8514

professionalozone.com

support@professionalozone.com

Oxyzone Enterprises, LLC d/b/a Bio3Blaster®

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Manual revision: 2026.1 • Subject to change without notice.