



The MaxBlaster Ozone Generator

Owner's Manual

Version X2010

Thank You!

First of all we'd like to thank those of you who've purchased one of our MaxBlaster Ozone Generators. We appreciate your business and look forward to helping with your odor & mold removal project.

Remember you can always contact us direct if you have a question, comment, or suggestion. We're proud to be one of the easiest ozone companies to reach by phone or email.

For those still considering purchasing, who've printed this manual from our website... thank you too! We're glad to have the chance to earn your business.

About this Manual

This manual is written in a very easy to read manner. Because our business is geared towards the everyday Do-It-Yourself customer we try not to make it too complicated, or so informative that it becomes confusing or complicated.

Using our MaxBlaster to remove odors & mold is NOT too difficult. So we'll give you the basics here, and point you in the right direction should you need more than that.

The "I don't have the patience to read this entire manual" Manual

If you're impatient like us and don't feel like reading a 12-page manual before getting started here it is...

The Cliff's notes, one-sentence, all you *really* need to know version...

"Get the living things out of the room, turn on your MaxBlaster & let it run for about 1hr for every 100sq/ft, then turn it off & air the room back to normal oxygen, return the living things, and all the while be careful not to breathe more ozone than your nose tells you is comfortable".

Got it? Great. It's not much more complicated than that.

But if that's not enough, just keep reading.

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Before Getting Started

The Science of Ozone Treatment... How the MaxBlaster Works

The MaxBlaster, like all ozone generators, eliminates odor (and kills bacteria's & mold) by converting oxygen (O₂) into ozone (O₃) which oxidizes all the volatile organic compounds (VOC's) in a room or space at the molecular level.

This is the airborne (gas) equivalent of how chlorine or bleach is used as a liquid cleaning agent.

The advantage the MaxBlaster has over most ozone generators is that it produces extreme amounts of ozone... much more than the average ozone generator... over a given period of time (see mghr below).

Because the overall concept of how a shock ozone generator works is to produce enough ozone to saturate an entire space in high concentrations for a long enough period of time (to oxidize ALL the VOC's in that given space) the MaxBlaster is capable of handling much larger/stronger odor & mold problems than the average generator.

And it can handle the smaller projects in less amount of time.

Shock Ozone Treatment vs. Ozone Air Purifiers

If you are new to ozone, you've probably seen a ton of ozone generators being sold online and may be confused as to the differences between each one. So we'll make it easy for you...

Air purifiers that produce small amounts of ozone (mghr in the hundreds) are used to pump just enough ozone into the room to make it smell a little better while people are present in the room at the time. These machines produce levels of ozone that are considered safe to breathe.

On the other hand High-Output (SHOCK) Ozone Generators (mghr in the thousands) like the MaxBlaster produce enough ozone to saturate an entire room with high enough concentrations to oxidize & *treat* the source of the odor (or mold & bacteria) itself.

Think of the difference between the two as the difference between treating the symptoms & the cause of odor.

MGHR... What you should know about this term you see on all ozone generators

By now you've most likely seen the term 'MGHR' several times and may be wondering what it means.

MGHR means 'milligrams per hour', or the amount of ozone (in milligrams) an ozone generator produces over a given period of time (one hour). The higher the milligrams per hour the more ozone it produces over an hour's time.

Because ozone has a half-life of about 30 minutes (it starts converting back to oxygen) there is a relationship between MGHR and the size of the room you may treat. Without getting too scientific, just understand that the higher the MGHR the larger the room (and/or the more problematic the odor or mold) you may treat.

Again, because the MaxBlaster produces such extreme amounts of ozone, it is capable of handling complete home, commercial-grade, large size applications in less amount of time than the average ozone generator.

*note: the MaxBlaster does not have a dial to turn down the output... instead, if you have a smaller space you simply allow it to run for less time. Ozone is ozone... to decrease the output all you need to do is decrease the time it runs.

We say this because people often confuse higher MGHR as the ozone being stronger... which is not exactly true.

Operating Instructions

Preparing for Treatment... What to do before turning your MaxBlaster on.

1 Remove the 3 P's

Prior to treating any room or space you must vacate the room of the 3 P's (People, Pets, and Plants) as too much ozone is considered unsafe to breathe. It is best to consider vacating the entire property during treatment. *if you intend on operating your MaxBlaster in one part of the home while people are present in other areas of the home, please seal off the room being treated by shutting (and sealing the bottom of) doors, closing vents, and taking any other necessary measures to limit the ozone gas from escaping into other parts of the home.

2 Cover & Remove Valuables

Although there is much conflicting information online about the effects of ozone on certain materials (rubber, electric wiring) we err on the side of caution by recommending you cover or remove any item from the treated room that is of high value to you. For example, we have read that ozone will not damage a computer... however, given it only takes a minute to cover (or remove) a computer, we recommend taking the time to do so.

The extra energy required to cover or remove an item is often worth the peace of mind knowing there is 0% chance it can be negatively affected by ozone.

That being said, we have not encountered a situation where ozone did damage to any solid materials if used as described in this owner's manual. So it is not necessary to go overboard and remove everything from each room... only the items you cannot afford to be affected should you be the *first* to experience such a problem.

We suggest computers and valuable electric devices be removed. Leave the clothes, furniture, and everyday items.

3 Allow for Oxygen Supply

In order to convert to ozone, the MaxBlaster needs a supply of oxygen to enter the room being treated. So a window or two should be left slightly (1") open during treatment to allow for fresh oxygen to enter the room.

For those who've purchased the Spout Outlet & Tube attachment* leave the MaxBlaster in an oxygen rich area and push the ozone into the treatment room via the tube.

(*this will be explained in more detail later in the Special Project Instructions section)

4 Place for Treatment

You will want to place your Maxblaster in a central location in the room being treated. This makes sense because it is producing a gas, and the overall idea is to allow the gas to penetrate and saturate the entire space.

In addition to placing it in a central location that will allow the gas to eventually fill the entire space, you will want to place your MaxBlaster as high in the room as possible*. Because ozone is heavier than oxygen its' natural tendency will be to make its way to the lower parts of the room. So place the MaxBlaster on a ladder, or other stationary fixture in the room to keep it as high as possible. You may need an extension cord to do this.

*this isn't a make or break rule... but it is recommended for most efficiency.

***A Note on Complete Home Ozonation...**

One of the most efficient ways to complete treatment for an entire home at once is to run your MaxBlaster through the central air system. This helps to circulate the ozone evenly throughout the home and it allows the ozone to treat inside the vents, which may contain the source of odor itself. To complete treatment in this manner face the MaxBlaster into the air return and turn the AC fans on at a low setting.

5 Minimize Humidity

Humidity levels greater than 50% will work against the effectiveness of ozone. So effort must be taken prior to treatment to minimize the humidity levels of the room or space to be treated.

First, any source of moisture (which may have caused the odor or mold to begin with) must be contained and ceased. Effort must be made to clean and dry this affected area first before using the MaxBlaster.

In addition, using a de-humidifier to help dry the room or space prior to treatment will greatly improve your chances for success.

Special Note on Preparing your Site for Treatment*

While each project will be slightly different, the overall success of every application will rely on your ability to do one thing... saturate your space with the highest concentrations of ozone gas for an extended period of time.

For sake of time we cannot give you specific instructions for every possible application, but if you understand the concept described above, you can use your D.I.Y. skills and a little creativity to discover the most effective ways to treat your specific odor or mold.

Completing Treatment... How long should you run your MaxBlaster?

As mentioned above, and as each project is different with various factors to be considered, it is impossible for us to give you specific instructions down to the minute of how long you should run your MaxBlaster.

We can give you our suggestions though... and an outline of a time-chart to follow.

But understand each project will rely on your own trial & error as much as anything else.

That being said, here is a simple chart to get you started...

	Degree of Odor	Light	Moderate	Heavy
Size of Room	100sq/ft	1 hour	2 hours	4 hours
	250sq/ft	2 hours	4 hours	8 hours
	500sq/ft	3 hours	6 hours	12 hours
	1000sq/ft	4 hours	8 hours	16 hours
	1500sq/ft	5 hours	10 hours	20 hours

How to follow this Time-Chart...

Classify each project according to degree of odor and calculate the size in square feet (sq/ft):

Light Odors: barely noticeable, non-toxic, no health risks, mildly unpleasant at worst (ex: mild cigarette odor)

Moderate Odors: obvious & noticeable, unpleasant, cannot comfortably live in space (ex: musty odors)

Heavy Odors: pose health risk, unlivable conditions, potent odor (ex: mold, pet urine)

Use the chart to determine the relative degree of odor present then operate your MaxBlaster according to the chart for the first treatment. After the first treatment is complete turn off your machine and return the room to normal oxygen levels (open windows and doors to vent if possible- see How to Finish Treatment section)

If after the first treatment is complete you still notice some of the original odor it will be necessary to repeat the process. Complete the same treatment again (and again if necessary) until the odor is non-existent.

For areas 100sq/ft or smaller...

Many projects, such as automobiles, boats, and closets may be smaller than 100sq/ft. For such projects we recommend using the MaxBlaster Spout Outlet & Tube accessory for best results. (see Special Projects below)

For areas bigger than 1500sq/ft...

To complete a home or space that is bigger than 1500sq/ft we recommend either using more than one MaxBlaster at once (1 per 1500sq/ft) or dividing the treatment over separate applications.

If a home is 3000sq/ft for example, seal off the home into 2 sections (shut doors, vents, etc) and complete each section one at a time. This allows the concentrations of ozone to exceed levels necessary for oxidation.

Notes on Mold Treatment...

Mold should be considered a heavy odor. In fact, when dealing with mold, we highly recommend erring on the side of over ozonating as opposed to trying to complete the project in the least amount of time. In other words, there is no harm in over doing it... especially considering mold is a health risk... so plan on operating your MaxBlaster for as long is as convenient to vacate the property (ex: run it 24 hours over 2-4 treatments if possible). In addition, you should use additional cleaning methods to scrub any visible mold from your property. Please call us if you have questions finding additional steps to use in combination with ozone to effectively eliminate mold and mold spores.

Additional (random) notes on Completing Treatment...

Pet urine, specifically Cat Urine, is very problematic and should be considered a Heavy odor. We recommend using ozone in combination with an enzyme cleaner to allow the greatest chance for removal.

For odors that are confined to only a portion of a room (ex: spot carpet odor, one spot pet urine, spot fire damage) we recommend using a plastic (painter's) tarp to cover only the affected area leaving a space of about 18" between the floor and the affected area. Face the outlet end of MaxBlaster under the tarp to allow for high concentration levels of ozone only under the tarp. Since it is the only area that needs to be treated you need not waste the ozone escaping throughout the entire room and can thus focus it's concentration only on the affected area.

*note: to completely eliminate the risk of over exposure to ozone please use a protective/ventilated face mask

Special Project Instructions... how to use MaxBlaster Accessories

There are several accessories we sell for your MaxBlaster to help with your individual project needs.

Here's a basic idea of how each accessory works...

Automatic On/Off Timer

This is a simple timer (think Christmas light timer) that plugs into a regular wall socket. You plug the MaxBlaster into this timer and program the time of day you wish the machine to turn on and off automatically. This timer is great for those who wish to use their MaxBlaster on a regular basis to complete home odor applications and who do not wish to have to be present to actually turn the MaxBlaster on and off.

Spout Outlet & Tube Attachment

This is a very important tool for those who wish to push the outflow of ozone from their MaxBlaster into a small confined space. For example, auto detailers use the Spout Outlet & Tube so they can leave the MaxBlaster outside a vehicle and push the flow of ozone in through a window of the car.

Why is this effective? Because by leaving the MaxBlaster outside a small confined area it is allowed to breathe only fresh oxygen on the inlet end to convert to ozone as opposed to breathing ozone gas once the space has filled with O₃. This accessory also works well for those who wish to push ozone into a wall (mold) by drilling a small hole into the wall and pushing ozone into the hole via the tube.

MaxLock Protection

We build a secure bracket into your MaxBlaster so you can attach and lock it to your job site. This must be ordered along with your MaxBlaster when you first buy.

MaxBox Target Ozone System

One of the fastest growing segments of the ozone industry deals with eliminating bacteria from sports equipment. With that application in mind we developed a very basic version of the devices used for this application that are now being sold online by other companies for thousands of dollars.

The basic idea is simple.

The MaxBox is a closet type device that allows you to place sports gear, clothing, shoes, gloves, or any other smaller item inside the unit which then attaches to the MaxBlaster via the Spout Outlet & Tube.

By limiting the space in which these items are contained and by pushing only high concentrations of ozone into the device you are concentrating extreme amounts of ozone on the items.

Running your MaxBlaster for an extended period into the MaxBox offers you sterilization and bacteria removing capabilities normally available only to the pro's.

*additional accessories available on our website include protective/ventilated face mask for total protection

Finishing Treatment... what to do when finished running your MaxBlaster

1 Prepare to Enter & Exit Quickly

Now that you've run your MaxBlaster for several hours to oxidize the odors in a room, it's time to turn the machine off. To do so, knowing the room is now filled with high concentrations of ozone you must prepare to enter and exit the room without breathing too much ozone (remember, a little bit won't harm you).

One way to do this is to hold your breath when entering the room, turn off your MaxBlaster, open a window or two if possible, and exit the room quickly. This can be accomplished in 20 seconds if you are prepared.

Another way to do this would be to turn off the power to breaker switch that is powering your MaxBlaster (this is a little more cautious and only recommended for those not physically capable of entering & exiting quickly)

Finally, for those who purchased the Automatic on/off timer... none of this is necessary as you've already programmed your MaxBlaster to turn off automatically.

*for absolute protection against over exposure to ozone please use a protective/ventilated face mask- see our site.

2 Air Room back to Oxygen

Now that your MaxBlaster is off... you simply need to wait until it returns to normal oxygen levels before returning the 3 P's (people, pets, plants) to the room. If you were able to open some windows, the process will take less time.

How can you tell if it's OK to re-enter the room? Listen to your body (& nose). Remember, it's OK to breathe a little ozone, and if you are breathing too much your nose should tell you. So use common sense... examine and inspect the room, and if it smells as if the ozone has decreased to a pleasant level... it most likely has and you can enter the room again.

If you were not able to open some windows, don't worry... the ozone will naturally convert back to oxygen on it's own (due to its' half-life...see below)

3 30-Minute Half-Life

Ozone has a 'half-life' of about 30 minutes. This is the scientific way of saying after thirty minutes half of the ozone will convert back to oxygen. Then in another 30 minutes half of that remaining ozone will have converted back to oxygen, and so on until the room completely converts back to oxygen naturally.

Opening the windows, running some fans, and pushing fresh oxygen into a room will certainly help speed up the process of returning the room back to normal oxygen levels. Just know though that even if you do nothing other than turn off your MaxBlaster, the ozone will naturally convert back to oxygen over time.

*a simple guide to follow is that for every hour you run your MaxBlaster that's how many hours it will take to convert back to oxygen if you DO NOT open the windows to vent the room.

Final Notes on Finishing Treatment

If the original odor still persists you may need to repeat the cycle once or twice more. And once the original odor has been oxidized you may want to consider doing a maintenance treatment every so often (once a month for example) to guarantee the odors or mold do not return.

Health & Safety

Breathing Ozone... How much is too much?

One of the big warnings that come with SHOCK ozone generators, like the MaxBlaster, is that you MUST vacate the room being treated of all living things... or as we like to say... the 3 P's (People, Pets, and Plants).

While this rule is true, and you should definitely follow it, it should not scare or intimidate you.

The fact is, ozone is safe to breathe in low quantities (it is naturally produced during a thunderstorm).

And, at higher quantities, your body will tell you how much is too much.

For example, when you turn on the MaxBlaster, within seconds you will notice the overwhelming presence of ozone.

It is not going to harm you to breathe in this ozone for a short amount of time (few seconds). However, if you breathe too much of it, your nose, and throat may begin to feel discomfort (scratchy, sore, irritated).

So, very simply, don't breathe too much of it. And don't breathe more than your body tells you it wants to handle. But remember, once you are no longer exposed to the ozone, the symptoms will begin to go away. And understand you are not going to 'catch' something by breathing in ozone which will lead to further problems down the road.

Instead, take precaution by properly preparing your space for treatment to minimize the amount of time you could be exposed to ozone... removing all the people, pets, and plants so they will not be present during treatment. But don't worry so much that breathing *any* small amount of ozone during treatment will do serious harm to you, your pets, or any other valuables in your home.

Listen to what your body is telling you... if you think you may be breathing in too much ozone, you may just be.

Get to an area with fresh oxygen and the symptoms of ozone exposure should quickly go away.

*for absolute protection against over exposure to ozone please use a protective/ventilated face mask- see our site.

EPA

You should be aware that the EPA does not give their 100% support towards the use of ozone generators.

Without getting too political, we'll just say their findings are open to debate.

We interpret their findings to mean (1) ozone generators that produce safe levels of ozone to breathe are not effective at eliminating odors & (2) ozone generators that ARE effective at eliminating odors are NOT safe.

These are both true... which is why we instruct you to use a SHOCK ozone generator without people present.

We also know that ozone generators are effectively used all over the world by hundreds of different companies including many government level projects and medical grade uses.

So you should interpret the EPA findings only as you see fit.

To review, please visit...

www.epa.gov/iaq/pubs/ozongen.html

Electrical Device

Because the MaxBlaster is an electrical device please take appropriate safety measures while operating this device.

Do not operate near water.

Do not operate near children or let them operate it.

Do not allow loose, flammable materials to enter the inlet end of the machine
& Do not operate on or near any flammable materials.

Do not open either end of the MaxBlaster with the purpose of inspecting the inside components.
(it may be necessary to remove an end piece to clean the filter... this should only be done by an adult)

Do not allow continuous operation without inspecting the status of a job at least once every 24hr period.
(turn off after each 24 hour period and return room to normal oxygen before continuing beyond 24 hr treatment)

Overall, please use 'common-sense' pre-caution when using the MaxBlaster. If you have any questions about potential risks of using this electrical device please contact us before beginning treatment.

Oxides of Nitrogen

In the Corona Discharge process of converting oxygen (O₂) into ozone (O₃) a bi-product is produced called oxides of nitrogen. To prevent these nitrous oxides from potentially creating their own odor problem (which could be equally as difficult to remove as the original odor problem you are trying to eliminate) please follow this rule:

DO NOT OPERATE the MaxBlaster continuously for several days without turning the machine off, and returning the room to normal oxygen levels after each 24 hour period.

Some projects will require more than 24 hours treatment cycle time... however, please turn off your machine after each 24 hour period, return the room to regular oxygen levels, and inspect the basic progress of your treatment. In other words... don't let the MaxBlaster run for days on end without checking on the overall status of your job.

Final notes on Health & Safety

The MaxBlaster is a safe machine to use if you follow the basic guidelines above.

In the thousands of MaxBlaster's sold up to the time of this printing, we are happy to report zero cases of personal or property damage as a result of using the MaxBlaster.

However, we still recommend using extreme caution when using this electric device.

Most of the warnings above are just that... warnings.

They should not intimidate you or prevent you from using your MaxBlaster with confidence.

If you have any questions, please contact us direct.

We are easy to reach by phone or email.

Other Stuff

Maintenance

The only regular maintenance required of you is to periodically (every 100-200 hours use) remove the white filter on the inlet end of your MaxBlaster and rinse it under some cold water to clean it.

(For best instructions on how to do this please visit our website at www.maxblasterusa.com)

Service

The MaxBlaster, like every ozone generator, will need more advanced service at some future point. The most common service repair calls for a replacement generator pack. The generator pack is the internal (mica plate) assembly that is used to convert oxygen to ozone.

How will you know when it needs this service?

Easy. If you no longer notice the extreme presence of ozone gas when you turn on your MaxBlaster, it most likely needs servicing. Another way you can tell it needs service is if you look into the outlet end of the machine and no longer notice the purplish glow of the generator pack (the lights need to be off in your room to notice this glow).

*Other Potential Service Issues**

Fan- loud noise, vibrating... may be touching another internal part when spinning

Fuse-unit no longer turns on and fuse needs replacing

Transformer- unit no longer turns on- may need replacement transformer

*the most common service repair is for replacement generator packs and each month this happens in less than half of one percent of the units we've sold. The other service repairs are far less likely. Overall you should expect years of use before any major service is required.

Our Service Policy

At MaxBlaster, we take pride in being one of the only ozone generator companies with a fully functional in-shop service department you can count on should you need some work done.

You simply send the unit back to us along with the Service & Repair form that comes with your unit.

If service is required within the first year of ownership the cost is covered under our Unlimited 1-Year warranty.

If service is required after the warranty period we charge one flat-rate service fee for an all-inclusive repair which brings your MaxBlaster back to new condition with a new generator pack and any other necessary repairs.

Storage

To prolong the lifespan of your MaxBlaster please store it indoors, in a temperature controlled environment with the least amount of humidity. We recommend storing it the Protective Storage & Carry case sold on our website.

***Please visit our new website (launching Feb 2010) to read more about Maintenance, Service & Warranty**
(www.MaxBlasterUSA.com or www.OzoneGeneratorsUSA.com)

Disclaimer

The information provided in this manual was learned by working with customers just like you.

After several years and thousands of successful applications, we feel qualified to offer this advice.

However, we'd like to mention that we are not doctors, scientists, or laboratory technicians.

And we do not claim the MaxBlaster will cure or prevent any diseases, or perform any miracles.

Instead, we are hard-working people just like you, and we've discovered the benefits of ozone and how to manufacture an ozone generator that produces tons of ozone for not a lot of money.

That being said...

We ask you to complete your own independent study & research of ozone generators before using our equipment.

We also ask you to be aware of the potential dangers of ozone generators before using the MaxBlaster.

Please use a protective/ventilated face mask if you have any concerns of over exposure to ozone.

We are not responsible for the work you perform in yours or anyone else's home using ozone generators.

And we do not dispute the findings of the EPA or any other government agencies regarding ozone generators.

Please use caution when using the MaxBlaster, and remember to call us first if you have any questions.

We are happy to provide you with the most accurate answers available to us based on our experiences!

Thank You

Thank you for choosing MaxBlasterUSA!

We look forward to helping with your odor & mold removal project.

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