



User Manual



SC1 One Door



SC2 Two Door



For your safety, follow ALL instructions in this User Manual to minimize the risk of fire, electric shock, exposure to ozone gas, property damage, personal injury, or loss of life.



For service, call ZONOsanitech™ 770-212-9201 Ext 3
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Version 4.18.2023 SW2023



Failure to follow the instructions in this User Manual will void the ZONO warranty.



Always keep the doors to the ZONO locked when not loading or unloading.



Smell ozone?

Turn the **Power Switch** to OFF or unplug the ZONO if you smell ozone.

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1. Welcome

Thank you for purchasing the ZONO™ disinfecting and sanitizing system (sanitizer).

Our ozone sanitizing technology is thoroughly tested and proven effective and safe when properly used. The ZONO saves countless hours of manual work to sanitize toys, equipment, protective gear, clothing, and other items. The ZONO kills 99.9% of common viruses+ and bacteria*. The ZONO heat unit has proven 100% effective at killing lice, bed bugs and their eggs.

This User Manual applies to the SC1 one door model and the SC2 two door model with or without the heat cycle. All instructions that refer to the “doors” apply to the one and two door ZONOs.

If you have any questions about your ZONO or your ZONO needs service, call ZONOsanitech™ at 770-212-9201 Ext 3.

+Disinfecting level (kills 99.9%): Norovirus, Influenza-A, and Respiratory Syncytial Virus on non-porous surfaces.

*Sanitizing level (kills 99.9%): Staphylococcus aureus, Methicillin-Resistant Staphylococcus aureus, Escherichia Coli, Streptococcus Pyogenes, Shigella dysenteriae, Salmonella Enteritidis, and Pseudomonas Aeruginosa on non-porous, semi-porous and porous surfaces.

2. Glossary

<p>Access Code</p>	<p>A sequence of numbers that must be entered on the Display before you can lock or unlock the ZONO doors or start a cycle</p> <p>Your Access Code is 1364.</p>
<p>Display</p>	<p>The touch-screen shows the current status of the ZONO. It is used to enter the Access Code and to select a SANITIZE or HEAT cycle or to lock and unlock the doors to the ZONO.</p> <p>The color of the Display indicates the status of the Magnetic Door Lock:</p> <ul style="list-style-type: none"> • GREEN when the doors are locked. • RED when the doors are unlocked.
<p>Door Gaskets</p>	<p>Seal around the doors that ensures ozone is contained within the ZONO</p>
<p>Engine</p>	<p>Located inside the ZONO at the top of the cabinet and produces ozone gas and allows cycles to run</p>
<p>Exterior Emergency Stop Button</p>	<p>Located on the front of the door</p> <p>Pressing the Exterior Emergency Stop Button immediately:</p> <ul style="list-style-type: none"> • Stops the ZONO from operating; • Stops the generation of ozone; • Begins to destroy existing ozone; • Allows the doors to be opened; • Does NOT turn the ZONO off. <p>See page 17 for details.</p>
<p>Green Push Button</p>	<p>Located inside the ZONO on the bottom of the Engine</p> <p>Must be pressed to start a SANITIZE or HEAT cycle or to lock the ZONO</p>
<p>Heat Unit</p>	<p>The Heat Unit uses high temperatures to kill lice, bed bugs and their eggs.</p> <p>The HEAT cycle is longer than the SANITIZE cycle and runs separately.</p>
<p>Interior Emergency Stop Button</p>	<p>Located inside the ZONO on the back of the door</p> <p>Pressing this button immediately:</p> <ul style="list-style-type: none"> • Stops the ZONO from operating; • Stops the generation of ozone; • Begins to destroy existing ozone; • Allows the doors to be opened; • Does NOT turn the ZONO off. <p>See page 18 for details.</p>

<p>Keypad F1 – F5</p>	<p>Located below the Display</p> <p>Pressing the directed keys on Keypad F1-F5 and then entering the Statistics Password on the Display allows you to determine the number of SANITIZE cycles that have been run.</p> <p>See page 63 for information on statistics.</p>
<p>Magnetic Door Lock</p>	<p>Prevents the doors from being opened during a SANITIZE cycle when the levels of ozone are high inside the ZONO. It also prevents the doors from being opened until the HEAT cycle is complete.</p> <p>Only operational when the ZONO has electrical power and Power Switch is “on”</p>
<p>Ozone Sensors</p>	<p>Continuously monitor ozone levels INSIDE and OUTSIDE of the ZONO during the SANITIZE cycle when Power Switch is “on”</p>
<p>Plug</p>	<p>Must be securely plugged into a grounded 120 V outlet with a minimum 15 amps capacity</p>
<p>Power Switch</p>	<p>Immediately turns electrical power to the ZONO “on” and “off.”</p> <p>Located on the upper front right corner of the machine</p> <p>If you turn the Power Switch on:</p> <ul style="list-style-type: none"> • Doors can be locked • SANITIZE or HEAT cycle can be started • Ozone Sensors work and ozone can be destructed <p>If you turn the Power Switch off:</p> <ul style="list-style-type: none"> • The ZONO will not operate and doors will be unlocked • Any destruction of ozone will be significantly slowed • The Ozone Sensors will not work
<p>Statistics Password</p>	<p>You must enter the Statistics Password on the Keypad F1-F5 to see the number of cycles that have been completed. See page 63 for instructions.</p> <p>The Statistics Password is always 100 and cannot be changed.</p>
<p>Water Reservoir, Shelf and Wick(s)</p>	<p>Water Reservoir should be filled with distilled water, one or two Wicks and sits on the Shelf under the Engine. The Water Reservoir is used when the when the ZONO is running a SANITIZE cycle. The Water Reservoir should be removed before starting a HEAT cycle.</p>

3. Ozone Safety Information

The ZONO provides the benefits of ozone gas sanitizing in a safe and effective environment when you follow the instructions in this User Manual.

Ozone has been used as a powerful organic sanitizer since the 1900s. In fact, most bottled water is treated using ozone, and ozonated water is used to treat fruit and vegetables. The ZONO is based on modern ozone sanitizing technology used in food industries.



For your safety, follow **ALL** instructions in this User Manual to minimize the risk of fire, electric shock, exposure to ozone gas, property damage, personal injury, or loss of life.

Ozone exposure limits and guidance

The U.S. Occupational Safety and Health Administration (OSHA) has established an 8-hour time-weighted average (TWA) limit of 0.1 parts per million (ppm) for worker exposure to ozone. In addition to that 8-hour TWA, California-OSHA has set a short-term exposure limit (STEL) of 0.3 ppm ozone averaged over a 15 minute period. The American Conference of Governmental Industrial Hygienists (ACGIH) recommends a 2-hour TWA limit of 0.2 ppm ozone.

Ozone sensors

For the ZONO to sanitize items, the ozone levels **INSIDE** the ZONO must be significantly higher than the legal and guidance limits for worker exposure. The ZONO is carefully designed to prevent human exposure to ozone. The cabinet door magnetic lock activates before the ZONO generates any ozone, the seals on the ZONO are designed to retain/trap the ozone produced in the cabinet, and the produced ozone is converted to oxygen before the **Magnetic Door Lock** is released.

As a precaution, the ZONO's **Ozone Sensors** continuously monitor the ozone levels both **INSIDE** and **OUTSIDE** the cabinet. In the unlikely event the outside sensor reports ozone at a level of 0.3 ppm, the ZONO will stop producing ozone and begin destructing it. While that situation needs to be investigated to ensure there is no problem with the ZONO, the most likely explanation is that the sensor picked up some other chemical that it cannot distinguish from ozone.

- **The Ozone Sensors only work when the ZONO is powered "on."**

Color and odor

Ozone is a colorless gas. The characteristic odor is often described as similar to the smell of electrical sparks or the fresh scent after a thunderstorm or heavy rain.

Effects of short-term, low exposure

Short-term low exposure to ozone can cause any of the following temporary effects: headaches, sore throats, and irritation in the eyes and nose.



DO NOT INHALE OZONE GAS!

Short-term inhalation of high ozone concentrations, and long-term inhalation of low ozone concentrations, can cause serious harmful physiological effects.

4. Heat Safety Information

This information applies to ZONO models with the **Heat Unit** option.

The HEAT cycle kills lice, bed bugs and their eggs. Do **NOT** use the HEAT cycle for any other reason. The ZONO does **NOT** sanitize or disinfect using the HEAT cycle.

Outside cabinet temperature

During the HEAT cycle, the temperature of the outside surface of the cabinet will rise, but the temperature will not exceed the ASTM C1055 recommendation, which calls for the exterior of devices to remain at or below 140 degrees.



Do not lean against the ZONO during the HEAT cycle.

Inside cabinet temperature

The temperature inside the ZONO may reach 150 degrees Fahrenheit during a HEAT cycle.

Make sure that any objects placed within the cabinet can withstand this temperature. See pages 30 and 31 for items acceptable and unacceptable for the HEAT cycle.



Do **NOT** run any potentially flammable items, such as paint, markers, items containing chemicals, etc. through a HEAT cycle.

Remove Water Reservoir

The **Water Reservoir** **MUST** be removed before operating a HEAT cycle.

5. Installation and Leveling the ZONO

The ZONO cabinets must be installed in accordance with these instructions.

Moving the ZONO

Take care when moving the ZONO cabinet. It contains light bulbs and electronic components which may break or be damaged.



Upon delivery, fully inspect your ZONO for any damage. Do **NOT** sign to receive your ZONO if you have any unaddressed concerns about its condition. The shipper must be notified of any exceptions within 48 hours of delivery.

Take care when unpacking, moving, and levelling the cabinet. It contains light bulbs and electronic components that may break or be damaged if dropped, jolted, turned over, or moved incorrectly.

Installation Location

The ZONO cabinet must be installed in a location that:

- Has a grounded 120V outlet with a minimum 15 amps capacity that can be reached without an extension cord;
- Permits the ZONO to be levelled (page 12);
- Can be evacuated for at least 15 minutes, if needed;
- Does **NOT** hide the standard U.S. EPA label on the right side of the cabinet. If this label is not visible after installation, tear off the back page of this User Manual and temporarily tape it on your ZONO where it can be clearly seen. Call 770-212-9201 Ext 3 to request a new permanent U.S. EPA label which must be affixed to the exterior of the ZONO, where it is visible.
- Is **NOT** used to store volatile organic compounds (VOCs) such as paints, alcohol swabs, paint thinner, etc. The external ozone sensor can be falsely triggered by VOCs.



A label required by the EPA is affixed to the right side of the cabinet. If this label is not visible after installation, see the instructions above.

Do **NOT** remove any labeling on the ZONO!

Level the ZONO™

1. Gather the required tools:
 - Safety glasses;
 - 2 foot level;
 - Adjustment wrench (ZONO-WRENCH), provided with the ZONO.
2. Locate the round foot under each corner of the cabinet. These feet can be raised or lowered by turning an adjustment nut with the provided ZONO-WRENCH.
 - Place the wrench completely on the nut before turning to avoid damage.
 - Turn clockwise to raise the corner of the cabinet away from the ground.
 - Turn counter-clockwise to lower the corner of the cabinet toward the ground.



3. Place the level on the floor inside the cabinet so it extends front to back.
4. Adjust the front-to-back angle of the cabinet using the corner feet.





It is preferable that the cabinet be slightly higher in front.

This angle helps seal the doors when closed and keeps carts from rolling toward the doors.

- Check the top of the doors. Ideally there will be an even gap from left to right, as shown below, but you may need to adjust the front left or front right feet.



- If the gap at the top of the doors is not even, raise and/or lower the appropriate feet:

Left side too low	Left side too high
	
<p>Left front corner foot: Turn clockwise to raise the left side of the cabinet.</p> <p>Right front corner foot: Turn counter-clockwise to lower the right side of the cabinet.</p>	<p>Left front corner foot: Turn counter-clockwise to lower the left side of the cabinet.</p> <p>Right front corner foot: Turn clockwise to raise the right side of the cabinet.</p>

- Use the ZONO-WRENCH to extend all feet until they touch the floor.
- Re-check the gap in the doors and make sure the doors open and close smoothly.

6. Familiarize Yourself With the ZONO™

The instructions in this User Manual will be easier to follow if you know where to find these controls:

Control	See page
Power Switch	15
Display	16
Door Open Notification	16
Exterior Emergency Stop Button	17
Interior Emergency Stop Button	18
Green Push Button	19

Power Switch

The **Power Switch** has two positions: **ON** and **OFF**.

Position	What will work			
	Display	Keypad	Ozone Sensors	Door Lock
ON	Yes	Yes	Yes	Yes
OFF	No	No	No	No

You will normally leave the **Power Switch** in the **ON** position at all times, unless directed to switch to the **OFF** position by the **Display** or this User Manual.

If you switch to the **OFF** position, the sensors may need to warm up before you can run a cycle. See Section 7 (Initial Startup).



Location

The **Power Switch** is located on the upper right side of the cabinet.



When the **Power Switch** is **OFF**, the **Magnetic Door Lock** does not work, the **Ozone Sensors** do not work, and the ZONO cannot destroy ozone in the cabinet.

The doors may be opened even if the ozone levels inside the ZONO are unsafe.

Display

The **Display** is a touch screen that shows the current status of the ZONO. It allows you to enter the **Access Code** and to control the operations of the ZONO. It is located near the top of the right door, at a height easily visible to adults.

It also includes a **Keypad** with five keys, labeled F1 through F5. These keys are not used for operating the ZONO, but for determining the number of SANITIZE cycles run as described on page 63.

Color meaning

The color of the screen shows the condition of the **Magnetic Door Lock**:

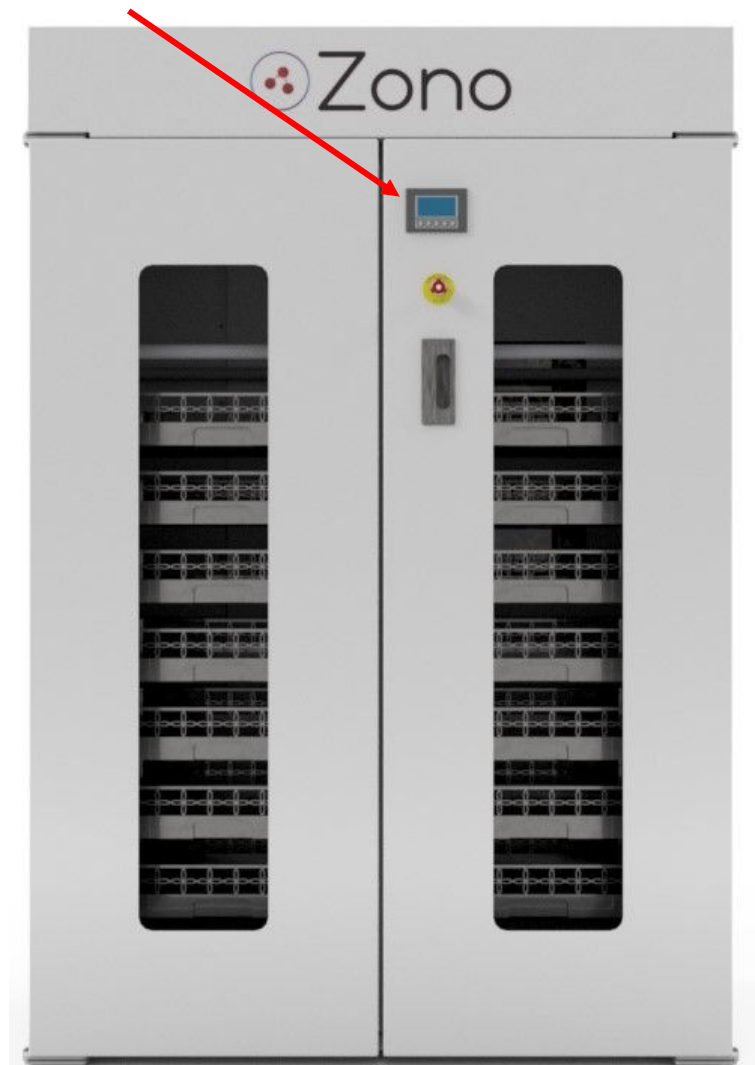
- **GREEN** = Locked
- **RED** = Unlocked

Location

The **Display** is located on the front of the cabinet.

Door Open Notification

The ZONO should be locked at all times unless items are being loaded or unloaded. A “beep” will sound if the door to the ZONO is unlocked for 5 minutes. To lock the doors, follow the instructions in Section 8 (Run a cycle and lock the doors).



Exterior Emergency Stop Button

When the **RED** Button is pressed:

- the doors unlock;
- the ozone destructor operates;
- you will hear the fan running even if there is not ozone inside the cabinet

The doors can be opened from either inside or outside of the ZONO.

Location

The **Exterior Emergency Stop Button** is located on the front below the **Display**.

Exterior Emergency Stop Button



When the **Exterior Emergency Stop Button** is pressed, the doors may be opened even if the ozone levels inside the ZONO are unsafe.

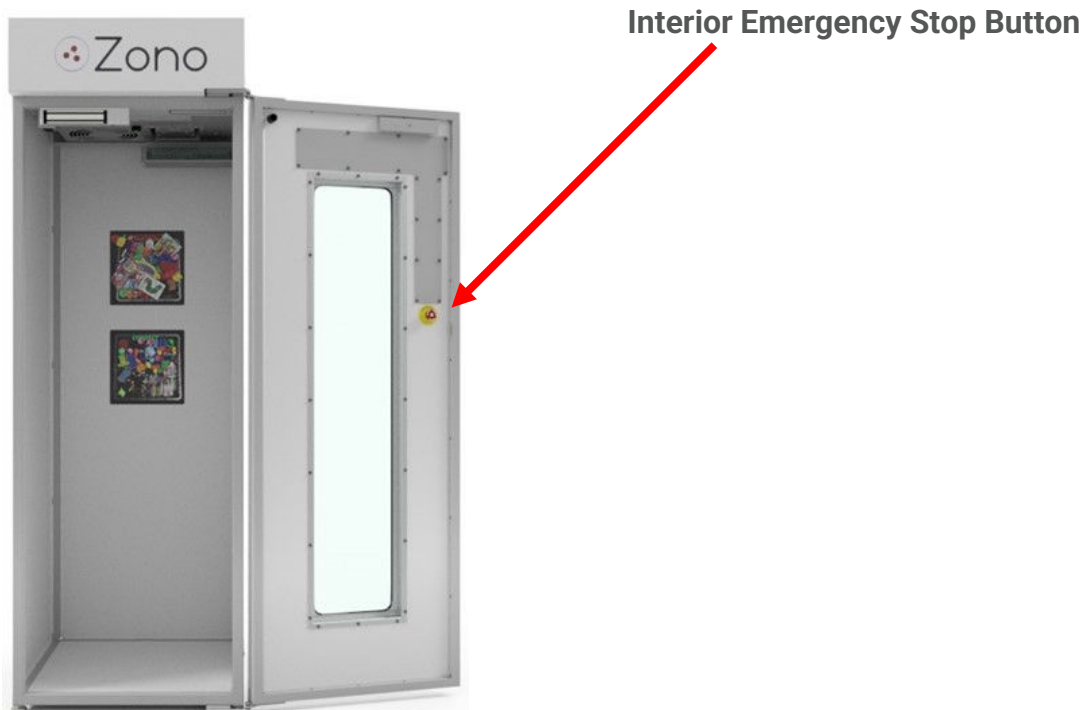
Interior Emergency Stop Button

When the **RED** button is pressed:

- the doors unlock;
- the ozone destructor operates if necessary;
- you will hear the fan running even if there is not ozone inside the cabinet.

Location

The **Interior Emergency Stop Button** is located inside the ZONO on the back of the right door.



When the **Interior Emergency Stop Button** is pressed, the doors may be opened even if the ozone levels inside the ZONO are unsafe.

Green Push Button

Pushing the **Green Push Button** located on the bottom of the **Engine** inside the ZONO prepares the ZONO to start a cycle or lock the door. You must close the doors and choose a cycle using the **Display** within 30 seconds of pressing the **Green Push Button**. If you do not make a selection within the 30 seconds you will be directed to start over.

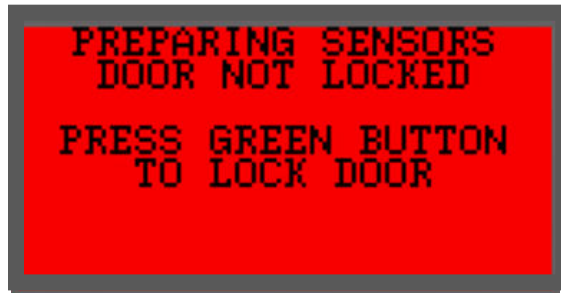


Location

The **Green Push Button** is located inside the ZONO on the bottom of the **Engine**.

7. Initial Startup

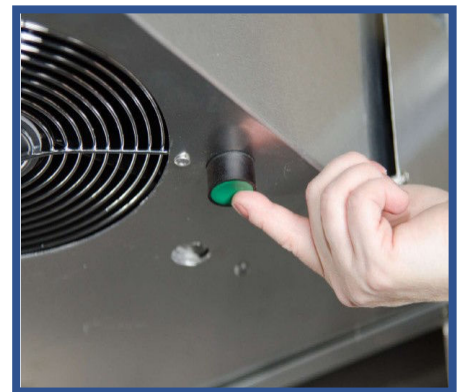
1. For your safety and the safety of others, before beginning the initial startup of the ZONO, read the entire User Manual and follow the instructions.
2. Turn the **Power Switch** to the **ON** position to begin the sensor preparation, which may take up to 12 hours.
3. Is the **Display** background color **RED** and does it say:
 - YES – Proceed to Step 4.



- NO – Check for these possible reasons and correct any that you find.

Is the Plug in an outlet?
Is the Power Switch in the ON position?
Has the circuit breaker in the building's main electrical box been tripped?
If the Display is still not RED , call ZONOsanitech.

4. The sensor preparation has started. It is the best practice to lock the ZONO during this preparation. To lock the doors, open the door of the ZONO and push the **Green Push Button** inside the ZONO, which prepares the ZONO for the door to be locked or to start a cycle. See page 19 for the location of this button. Make sure there is not a person or items inside the ZONO.



For your safety and the safety of others, READ THE INSTRUCTIONS IN THIS MANUAL BEFORE PERFORMING THE INITIAL STARTUP.

5. Once the **Green Push Button** is pushed, the **Display** will still be **RED** and will be shown as below. Press the numbers of your **Access Code** and then press enter.

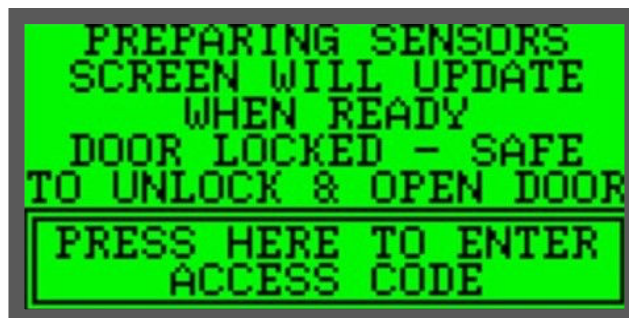


6. After the **Access Code** is entered, the **Display** will still be in **RED** and will be shown as below:

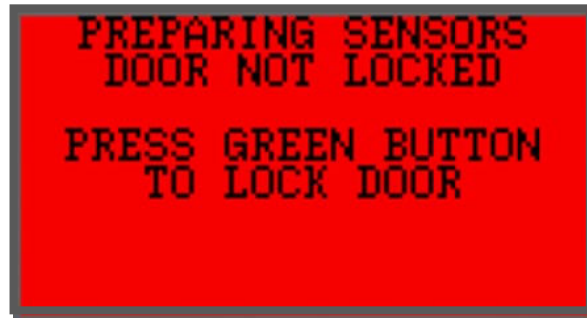


Press "Lock Door."

7. When you select "Lock Door" the **Display** will turn **GREEN** to indicate the doors are locked. The **Display** will say:



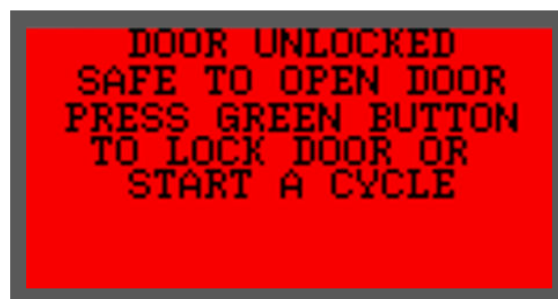
If you do not lock the door to the ZONO, the **Display** will remain **RED** while the sensors are being prepared and the **Display** will say:



8. When the door is locked and the sensors have been warmed up, the **Display** will remain **GREEN** and say:



If the door was not locked, and the sensors have been warmed up, the **Display** will be **RED** and say:



Both Displays indicate that the sensors are warmed up and you can proceed to step 9 to place the **Shelf, Water Reservoir** and **Wick(s)** into the ZONO.



The ZONO must complete the sensor preparation before starting a SANITIZE cycle.

Always keep the doors of the ZONO locked unless you are loading or unloading.

- Gather the **Water Reservoir**, **Shelf** and **Wick(s)**. The humidity **Wicks** are shipped in the plastic bag with the User Manual and other supplies. The **Shelf** and the **Water Reservoir** are wrapped and shipped in one of the plastic bins.



Water Reservoir

Wicks

Shelf

- Install the **Shelf** on the back wall in the right corner of the cabinet by lifting the back of the **Engine** and sliding the top of the **Shelf** onto the ledge under the **Engine**. See the photograph below. Check the stability of the **Shelf** after letting the **Engine** back down. If it is not stable, lift the **Engine** and reposition **Shelf**.



Engine

Ledge

Shelf

Operator lifting Engine to slide Shelf onto the ledge

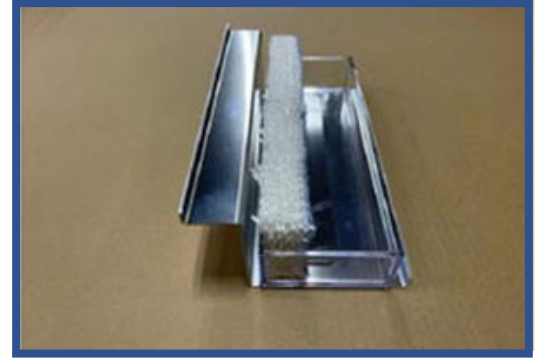


Shelf installed in ZONO

11. SC1 One Door ZONO: Put one **Wick** in the back of the **Water Reservoir**.

SC2 Two Door ZONO: Put two **Wicks** in the back of the **Water Reservoir**.

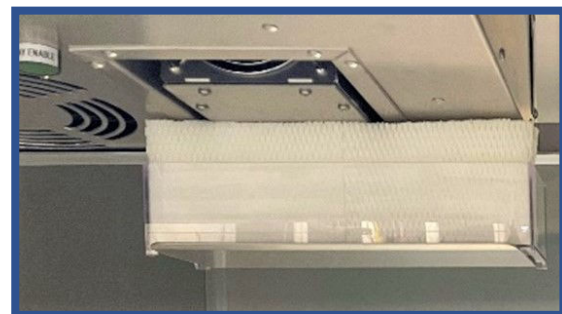
The picture to the right shows two **Wicks** side by side in the back of the **Water Reservoir** sitting on a **Shelf** but the **Shelf** is not installed in the cabinet.



12. Add distilled water up to the $\frac{3}{4}$ fill level in the **Water Reservoir**.
- Using distilled water ensures that there will be no mineral build up in the **Wicks** or on the **Water Reservoir**. Mineral build up can cause discoloration of the **Wicks** or deposits of rust inside the ZONO.
13. Place the **Water Reservoir** with one Wick (SC1 One Door) or two **Wicks** (SC2 Two Door) on the **Shelf** in upper right corner of the cabinet. See photograph below.
14. To remove the **Water Reservoir** to refill with distilled water simply left it off of the **Shelf**.



One Door ZONO with Water Reservoir with One Wick on the Shelf



Two Door ZONO with Water Reservoir with Two Wicks on the Shelf



Check the level of distilled water in the **Water Reservoir** weekly by removing the **Water Reservoir** from the **Shelf**.

Only add distilled water to the **Water Reservoir** to avoid mineral build up. Mineral build up can cause discoloration of the **Wicks** or deposits of rust inside the ZONO.

8. Use the ZONO™

This section describes how to use the ZONO to sanitize and heat items. It covers the following topics:

Topic	See page
General safety guidelines	26
Choose items for sanitization	28
Choose items for heating	30
Load items into the ZONO	32
Load Tray Carts	32
Load Mat Carts	34
Hang items and load large or bulky items	35
Run a cycle and lock the doors	36
What to do if the ZONO loses power	43



The F1 – F5 keys are not used to operate the ZONO.
They are used when running statistics, as described on page 63.



For your safety and the safety of others, READ AND FOLLOW THE INSTRUCTIONS IN THIS MANUAL BEFORE OPERATING THE ZONO.



Before operating the ZONO, make sure that you have:

- Installed the ZONO correctly (page **Error! Bookmark not defined.**);
- Read and followed the Initial startup instructions (page 20);

General safety guidelines

See the information below and on the next page for important rules on using the ZONO.

DO NOT

- Allow children to operate or play near the ZONO.
- Open the doors to the ZONO while it is operating unless a person is inside.
- Allow a person or animal inside the ZONO.
- Use an extension cord to power the ZONO.
- Cover any vents, holes, or passages in the ZONO.
- Put anything other than distilled water in the **Water Reservoir**.
- Share your **Access Code or Statistics Password** with anyone who has not read this User Manual.
- Climb, sit, lean, hang, or stand on the ZONO.
- Put items on top of the ZONO or use it for storage.
- Conduct any maintenance on or repair the ZONO, except as described on pages 60-62 (General Care Instructions and Maintenance sections).



Smell ozone?

Turn the **Power Switch** to OFF or unplug the ZONO if you smell ozone.

DO

- Check that no one is inside the ZONO before locking the doors or starting a cycle.
- Only plug the ZONO into a grounded 120V circuit with a minimum capacity of 15 amps.
- Keep the doors locked at all times when the ZONO is not being loaded or unloaded. The **Display** is **GREEN** when the doors are locked.
- Follow the instructions in these sections of the User Manual before starting a cycle:

Section	See Page
1. Installation and Leveling the ZONO	11
2. Initial Startup	20



At the initial startup of the ZONO and when the ZONO has been powered "OFF" or lost electricity, the sensors may need to warm up before a cycle can be started. See Section 7 (Initial Startup).

Choose items for sanitization

The tables on this page and page 29 provide examples of what **CAN** and **CANNOT** be placed in the ZONO for sanitization for various industries, but they are not a comprehensive list of all possibilities.

If you have a question about whether an item can be sanitized, call ZONOsanitech.

Acceptable items for the SANITIZE cycle

Items	Loading Method
A variety of plastic, glass, fabric, paper, leather, metal, and varnished wood items.	Various carts
Paper and cardboard products, including books and clipboards, art supplies (crayons, markers, glue bottles and sticks, scissors, paintbrushes, easels, dry erase and chalk boards)	Utility Cart and Tray Cart
Electronics including iPads/tablets, laptops, telephones, cellular phones, computer keyboards, mice, headphones, musical instruments, electronics with batteries	
Sports: Helmets, shoulder pads and other protective pads, cleats, shoes, balls, gloves/mitts, braces, knee pads, duffel bags	Helmet Cart, Pad Cart, Shoe Dryer, and Utility Cart
Gym: Weights, foam rollers, yoga mats, exercise balls	Utility Cart and Tray Cart
Childcare: Toys, dolls, stuffed animals, games, plush items, soft and hard blocks, stuffed animals, books, play food and kitchen accessories, covers, puppets, Lego® pieces, plastic figures, play dough, puzzle pieces, lacing cards, rattles, classroom chairs, tables, bookcases, baskets, containers, activity centers, doll houses, bead tables, mirrors, rocking toys, storage bins, crib mobiles, soft foam furniture, rugs, step stools, walkers, exercisers, bouncy seats, hats, dress-up clothes, costumes, pillows, cushions, blankets, rest mats, cots, crib mattresses, activity mats.	Tray Cart and Mat Cart
Industrial and Public Safety: Workwear, fabric and insulated garments, safety vests, coveralls, coats, jackets, public safety vests, hats, hard hats, shoes, boots, cleats, safety boots, gloves, face shields, ear muffs	Utility Cart and Garment Cart
Wheelchairs, walkers, canes and other exempt Class I medical devices	Utility Cart and Floor
Mops with no chemicals on them, brooms, buckets, etc.	Utility Cart and Floor

Unacceptable items for the SANITIZE cycle

Items	Unacceptable because
Humans or animals	Ozone exposure is potentially lethal.
FDA Regulated Medical Devices	The ZONO is ONLY approved as a sanitizer/disinfectant for exempt Class 1 medical devices.
Chemicals or any items that contain any chemicals	Ozone and/or heat can cause chemicals to react dangerously. Chemicals can also cause inaccurate ozone readings by the sensors and/or damage the Ozone Sensors .
Food, beverages, plates, cups, eating utensils	The ZONO sanitizes items, but it does not remove dirt, food, residue, etc. The ZONO is NOT certified for use in food preparation.
Natural rubber products	Ozone breaks down natural rubber in a process called “ozone cracking.” If in doubt about the composition of an item, check the manufacturer’s label.



The ZONO does not remove dirt from items.

Choose items for heating

The tables on this page and on page 31 provide examples from various industries of what **CAN** and **CANNOT** be placed in the ZONO for the HEAT cycle to kill lice, bed bugs and their eggs, but they are not a comprehensive list of all possibilities for the HEAT cycle.

For questions about whether an item can be treated in the HEAT cycle, call ZONOsanitech.



The temperature inside the ZONO during the HEAT cycle reaches 150 degrees Fahrenheit. Items that cannot withstand this temperature may be destroyed.

Items that can be heated in the HEAT cycle may not be acceptable for the SANITIZE cycle and vice-versa.

Acceptable items for the HEAT cycle

Items	Loading Method
A variety of fabric, glass, paper, leather, metal, rubber, and vanished wood items that can withstand 150 degrees Fahrenheit used in multiple industries.	Various carts
Childcare: Items with <u>organic</u> stuffing like pillows, cushions, bean bags, plush items and stuffed animals or soft blocks, fabric puppets, soft foam furniture, rugs, fabric hats, fabric dress-up clothes and costumes, pillows, cushions, blankets, non-plastic rest mats, cots, crib mattresses	Tray Cart and Mat Cart
Industrial and Public Safety: Workwear, fabric and insulated garments, safety vests, coveralls, coats, jackets, public safety vests, hats, hard hats, shoes, boots, cleats, safety boots, gloves, face shields, ear muffs	Utility Cart and Garment Cart
Sports: Helmets, shoulder and other protective pads, cleats, shoes, sports equipment, protective padding, knee pads, duffel bags	Helmet Cart, Pad Cart, Shoe Dryer, and Utility Cart



The ZONO does not remove dirt from items.

Unacceptable items for the HEAT cycle

Any items that cannot withstand 150 degrees Fahrenheit may be destroyed during the HEAT cycle. This includes any items made of plastic or that contain waxes or chemicals.

Items	Unacceptable because
Humans or animals	Heat exposure is potentially lethal.
A variety of glass, fabric, paper, leather, metal, rubber and varnished wood items that cannot withstand 120 degrees Fahrenheit in multiple industries.	Melting risk.
Plastic items or items that contain wax	Melting risk.
Items with <u>non-organic</u> stuffing like stuffed animals, bean bag pillows, cushions	Non-organic fill material may melt even if the outside cover can withstand the heat inside the ZONO.
<p>Childcare: Play Dough, plastic toys: Including toys, dolls, games, plastic blocks, play food and kitchen accessories, Leg[®] pieces, plastic figures, puzzle pieces, rattles.</p> <p>Classroom chairs, tables, bookcases, baskets, containers, activity centers, doll houses, bead tables, etc. made from or containing plastic or non-organic fill.</p> <p>Exercisers or bouncy seats with plastic parts.</p>	Melting risk.
Chemicals or Items that may contain any chemicals	Heat can cause chemicals to react dangerously
Electronics including iPads/tablets, laptops, telephones, cellular phones, computer keyboards, mice, musical instruments, electronic toys with batteries, and cell phones	<p>Melting risk.</p> <p>Electronic displays may “craze” when exposed to heat.</p>
Gym: Plastic covered weights, foam rollers, yoga mats, exercise balls	Melting risk.
Art Supplies (crayons, markers, glue bottles and sticks, scissors, paint brushes, easels, dry erase and chalk boards).	<p>Melting risk.</p> <p>Some art supplies contain volatile chemicals that should not be exposed to heat. Chemicals can also damage the ozone sensor and cause inaccurate ozone readings by the sensors.</p>
Mops, brooms, buckets made of plastic, either entirely or in part (handles).	Melting risk.
The ZONO does not sanitize or disinfect using the HEAT cycle.	

Load items into the ZONO™

This section (pages 32–35) describes how to load items typically found in a child care center in the Trays and Carts shown below.

For instructions on how to load items used in other industries in the trays and carts designed for them, see the industry specific addendum available upon purchase of those items.




See page 36 for instructions on locking and unlocking the doors and running a cycle.

Your ZONO system may include Trays, Tray Carts, and Mat Carts that can be used in the SANITIZE and HEAT cycles. These Accessories will enable you to maximize the number of items you can treat at one time and will ensure the proper air-flow between the items.

Load Tray Cart

The Trays provided with your ZONO do not require assembly.

Place items flat on the Trays. Do **NOT** stack or pile items on top of one another.

Examples		
CORRECT	CORRECT	WRONG
		



Do **NOT** stack or pile items on top of one another.

Without air flow, items will not be effectively sanitized.

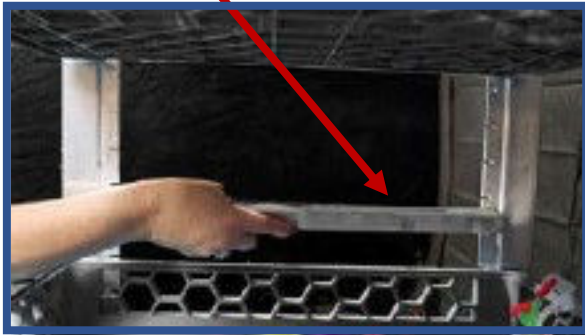


You can stack larger items in a Tray, as long as you can still slide it into the Tray Cart.

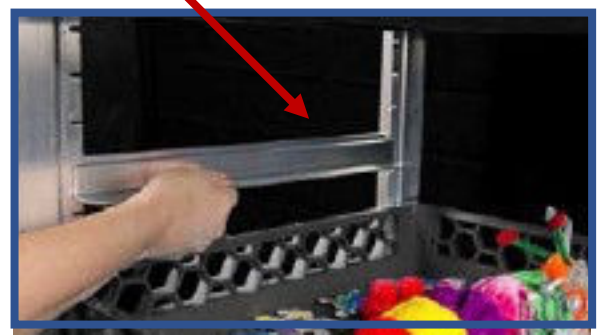
Tray Cart assembly instructions are provided in the box containing the Tray Cart parts.

1. The Tray Cart holds between seven (7) and nine (9) Trays (depending on the height of the Tray Cart) with the Tray Slides shown below at their normal positions. You can adjust the Tray Slides to allow more space if you have loaded larger / taller items in the Trays.

Tray Slides



Tray Slides



2. Load the Trays with items laid flat. Make sure the items don't stand so high that the Tray won't fit into the Tray Cart.
3. Slide a Tray into the first Tray Slides.
4. Repeat with remaining Trays.



5. To load the Tray Cart into the ZONO, place one foot at the base of the Tray Cart and pull back gently to raise the front wheels off the ground.
6. Push the Tray Cart over the bottom edge of the opening of the doors and into the ZONO.



Don't load items higher than the top of the Tray Cart. Doing so can inhibit loading the Tray Cart into the ZONO or cause it to tip over.

Load Mat Carts



The Mat Cart is specifically designed to allow air to flow around bulky objects.
Don't run a cycle for mats, cots, or mattresses without using the Mat Cart.

Each Mat Cart holds as many as seven (7) padded mats between metal "fingers." The Mat Cart allows air flow essential for proper sanitization.

Most crib mattresses fit in the Mat Cart, but since they are often thicker than mats, you may not be able to load seven. Make sure there is enough space between mattresses (or any other objects loaded in the Mat Cart) to allow air to flow between them.

1. Insert mats or other items upright, with or without sheets, into the fingers of the Mat Cart.
2. Place one foot at the base of the Mat Cart and pull back gently to raise the front wheels off the ground.
3. Push the Mat Cart over the bottom edge of the opening of the doors and into the ZONO.



Don't overload the Mat Cart.

Don't drape items on top of the Mat Cart after it is loaded.

Hang items and load large or bulky items

You can hang or drape items on the Tray Cart or Mat Cart, if air can flow between all items in the ZONO.

- Use hangers or clips on the Mat Cart or Tray Cart to hold clothes, hats, stuffed animals and similar items.
- Use hangers with clips on the Mat Cart or Tray Cart to hold books, spreading the pages like a fan to allow air to flow between them.
- Drape blankets, sleeping bags, or other items on an unloaded Tray Cart or Mat Cart.

Leave the top rack of the Tray Cart empty, and place large items, like bean bag chairs, on top of the Tray Cart after rolling the cart into the ZONO.

Remember to remove the large item before rolling the Tray Cart out of the ZONO. Never roll the Tray Cart in or out of the ZONO with an item loaded on top.

You can also place a Tray upside down on the floor of the ZONO and place a large item on top of it. The Tray allows for proper airflow below the item.

If the item already sits off the ground, like a bouncy seat, you can place it on the floor of the ZONO because air can still flow beneath it.

Use more than one loading option

You can combine loading options in the two door SC 2. For example, the SC 2 can accommodate a Toy Cart and a Mat Cart at the same time.

Run a cycle and lock the doors

Cycle	Time to complete
SANITIZE	38 minutes (Low humidity or dense items in cabinet may increase sanitizing time.)
HEAT	90 minutes



The F1 – F5 keys are not used to operate the ZONO.
They are used when reporting statistics, as described on page 63.

1. Make sure the **Power Switch** is **ON**. See page 15 for more information.
2. What color is the **Display**?
 - **GREEN** – Go to Step 3.
 - **RED** – Go to Step 6.
 - **BLANK** – The ZONO is not powered on. See page 20 (Initial Startup).

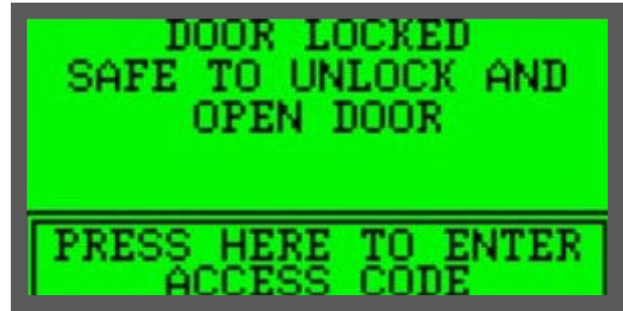


All **Display** messages that refer to a “Door” apply to the one and two door ZONOs.



The ZONO ozone sensors must be warmed up before a cycle can be started during the Initial Startup on page 20.

3. **GREEN** background: What words does the **Display** message include?
- **Door Locked Safe To Unlock And Open Door**– Go to Step 4.



- **Door Locked – Not Safe To Unlock And Open Door**– Wait until the current cycle finishes before starting a new one.



- **Any Other Message with a GREEN Background-** See Page 44 (Section 9. Additional Display Messages When Running the ZONO) or Page 52 (Section 10. Troubleshooting Messages That Require A User to Call ZONOsanitech).



NEVER interrupt a cycle unless a person is inside the ZONO. Opening the doors before a SANITIZE cycle finishes will release ozone.

4. Touch the Press Here To Enter Access Code text on the Display.

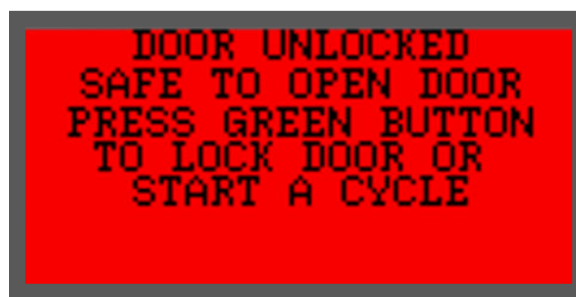


5. Touch the numbers of your **Access Code** on the **Display**, then press **ENTER**.

- The box in the upper right corner shows one asterisk * for every number you press.
- **START OVER** – Clears your current entries.
- **ESC** – Goes back to the previous screen on the **Display**.



6. If the doors are already unlocked or if you entered the **Access Code** correctly, the **Display** reads **Door Unlocked – Safe To Open Door – Press Green Button To Lock Door or Start a Cycle** on a **RED** background, as shown in the example below.



- **Any Other Message with a RED background-** See Page 44 (Section 9. Additional Display Messages When Running the ZONO) or Page 52 (Section 10. Troubleshooting Messages That Require A User to Call ZONOsanitech).

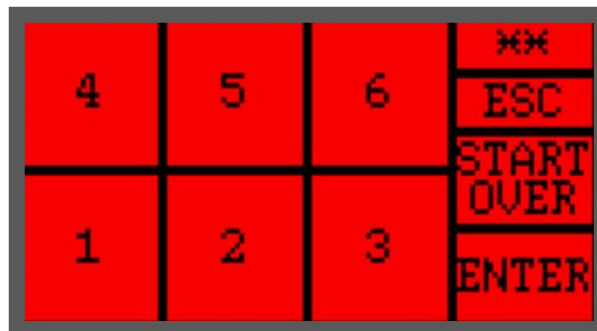
7. Open the doors and load items into the ZONO. See pages 32-35 for guidance on loading the ZONO or the Addendum to the User Manual that has loading instructions for industry specific carts applicable for your use.
8. Verify that there are no humans or animals inside the ZONO.
9. Reach inside the ZONO and push the **Green Push Button**. See page 19 for information on the location of this button. If you do not start a cycle or lock the doors within 30 seconds of pressing the **Green Push Button** you will be prompted to start over.
10. Close the doors.





NEVER push the **Green Push Button** if there are people or animals inside the ZONO.

11. The **Display** should still be **RED**. Press the numbers of your **Access Code** then press **ENTER**.



12. Choose the appropriate command on the **Display**:

Command	Use to
Lock Doors	<p>Lock the Magnetic Safety Doors without starting a cycle.</p> <p>The Display turns GREEN and reads Door Locked— Safe to Unlock And Open Door.</p> <p>You may want to use this command if you have not fully loaded the ZONO yet or want to run a cycle at a later time.</p> <p>ALWAYS lock the doors when you are not actively loading or unloading the ZONO.</p> <p>The ZONO “beeps” if doors are not locked for 5 minutes.</p>
Start SANITIZE cycle	Run a cycle that only has ozone sanitization and does NOT generate heat.
Start a HEAT cycle	Run a cycle that heats the interior but does NOT generate ozone.



If you don't press a command within 30 seconds of pushing the **Green Push Button**, the **Display** reverts to Step 6.

- 13. **HEAT Cycle Only:** The **Display** reminds you that the temperature inside the ZONO exceeds 150 degrees Fahrenheit. Within 30 seconds press “OK.”



The **Display** will then remind you to remove the **Water Reservoir** before running a HEAT cycle. Within 30 seconds, press **OK** and then remove the **Water Reservoir** by lifting the **Water Reservoir** off the **Shelf**. For more information on the **Water Reservoir**, see Section 7 (Initial Startup, page 20).



If you do not press **OK** to acknowledge the warnings within 30 seconds each, the doors will remain unlocked and the HEAT Cycle will be cancelled.

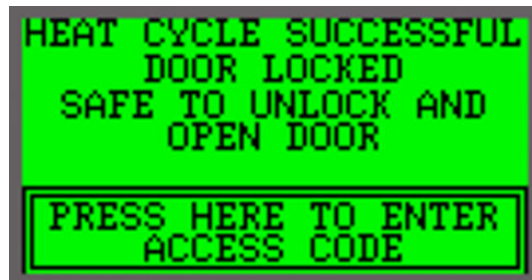
The **Display** will then revert to Step 6.

- 14. The cycle begins. The **Display** shows the current status:



15. The **Display** notifies you when the cycle is complete or successful. The background will be **GREEN** and the text will include all of these statements:

- Complete or Successful
- Door Locked
- Safe To Unlock and Open Door



16. The **Display** should be **GREEN**. Enter the **Access Code** again to unlock the doors.

17. Remove the items from the ZONO.

18. Close the doors.

19. Press the **Green Push Button** and enter your **Access Code** to lock the doors **BEFORE** walking away from the ZONO.



What to do if the ZONO™ loses power

This situation occurs if the electrical cord is unplugged, your building loses power, or if the **Power Switch** is turned to OFF by mistake.

1. Do **NOT** open the door. Without power, the **Magnetic Door Lock** does not work, and the doors can be opened even if there are high levels of ozone inside the cabinet.
2. Plug the electrical cord back into the outlet or set the **Power Switch** to **ON**. If all power to your building has been lost, wait until it is restored.
3. Wait 15 minutes to allow any ozone inside the ZONO to revert to oxygen before opening the door.
4. Assume items were **NOT** sanitized or the HEAT cycle was not successful.
5. If the ZONO has no electricity or is powered "off," the sensors may require warming up before a cycle is started. If that is necessary, when the ZONO has power again, the Display will say: **Preparing Sensors – Door Not Locked – Press Green Button To Lock Door**. See page 20 (Initial Startup) and follow the instructions to lock the door of the ZONO while the ozone sensors warm up.

If sensors do not need to warm up when the ZONO regains power, the **Display** will say: **Door Unlocked – Safe to Open Door – Press Green Button to Lock Door or Start a Cycle**. You can start a cycle or lock the doors. The best practice is to keep the doors locked when you are not loading or unloading.



If you leave the ZONO unattended after a power outage, make sure the door will not be opened for at least 15 minutes.

9. Additional Display Messages When Running the ZONO™

In addition to the normal operating messages in Section 8, you may see these messages when unloading, loading, and running the ZONO. The meaning of these messages is explained below.

Messages the User Can Resolve	See page
Emergency Stop Button Pressed – Door Unlocked – Safe To Open Door – Twist Red Buttons on Inside or Outside of Door to Reset	45
Emergency Stop Button Pressed – High Ozone In ZONO – Close Door If Open – Not Safe to Open	45
Emergency Stop Reset – High Ozone In ZONO – Not Safe to Open – Door Unlocked – Close Door if Open	46
Preparing Sensors – Door Not Locked – Press Green Button To Lock Door	46
Preparing Sensors – Screen Will Update When Ready – Door Locked – Safe to Unlock & Open Door	47
Preparing To Sanitize – Door Locked – Do Not Unlock and Open Door – Display Updates When Cycle Starts	47
Sanitizing Extended – Door Locked – Not Safe To Unlock And Open Door – Display Updates When Cycle Complete	48
Sanitizing Extended – Door Locked – Safe To Unlock And Open Door	48
Items Not Sanitized – Door Locked – Safe to Unlock and Open Door – Decrease Items In ZONO and Restart	48
Add Distilled Water or Wick to Reservoir – Safe to Unlock & Open Door – Press Emergency Stop Button To Open	49
Items Not Sanitized – Door Locked – Safe To Unlock & Open Door – Add Distilled Water Or Wick To Reservoir	49
Left Door Open – Safe To Open Door – Press Exterior Emergency Stop Button To Reset	49
Door Did Not Lock – Safe To Open Door – Press Exterior Emergency Stop Button To Reset	50
Door Not Closed – Safe to Open And Restart Cycle	50
Sanitizing Halted – High Ozone In ZONO – Not Safe to Unlock and Open Door – Do Not Turn Off ZONO	51
Heat Cycle Temp High – Door Locked – Do Not Open Door – Cool Down Ongoing	51

Additional Display Messages When Running the ZONO™

Emergency Stop Button Pressed – Door Unlocked – Safe To Open Door – Twist Red Buttons On Inside Or Outside Of Door To Reset

Either the **Interior Emergency Stop Button** or **Exterior Emergency Stop Button** was pressed. The stop may have been pressed by mistake or on purpose.

Corrective Action
1. Do NOT turn the Power Switch to “off.”
2. The doors are NOT locked and can be opened safely from either the inside or outside of the ZONO.
3. Open the doors. Remove the any items or any person from inside the ZONO.
4. Twist the Interior or Exterior Emergency Stop Button of the ZONO to reset the ZONO and start a cycle or lock the doors.
5. The error message will remain until the Emergency Stop Button is reset. Always keep the doors to the ZONO locked when you are not loading or unloading.

Emergency Stop Button Pressed – High Ozone In ZONO – Close Door If Open – Not Safe to Open

Either the **Interior Emergency Stop Button** or **Exterior Emergency Stop Button** was pressed during a SANITIZE cycle. The stop may have been pressed by mistake or on purpose.

Corrective Action
1. Do NOT turn the Power Switch to “off.” The ozone destructor will operate only when the ZONO is powered “on.” The ozone destructor will operate, and you will hear the fan running.
2. The doors are NOT locked. If there is a person inside the ZONO, open the doors, remove the person from the ZONO, then close the doors. Evacuate the room for at least 15 minutes and follow the instructions in “Emergency Procedures” on page 58 and follow the instructions in “Suspected or confirmed ozone exposure” and “First Aid Measures” on page 59.
3. If there is NOT a person inside the ZONO, make sure the doors are closed and do NOT open the doors because ozone inside the ZONO is high and you could be exposed to ozone.
4. When it is safe to open the doors, the Display will say: Emergency Stop Button Pressed- Door Unlocked- Safe to Open Door- Twist Red Buttons on Inside or Outside of Door to Reset. You may open the doors Remove the any items from inside the ZONO, but assume items are not sanitized.
5. Twist the Interior or Exterior Emergency Stop Button of the ZONO to reset the ZONO and start a cycle or lock the doors.
6. Always keep the doors to the ZONO locked when you are not loading or unloading.

Emergency Stop Reset – High Ozone In ZONO – Not Safe to Open – Door Unlocked – Close Door If Open

Either the **Interior Emergency Stop** or **Exterior Emergency Stop** was pressed by mistake or on purpose and it has been reset by twisting either button, but ozone is still high in inside the ZONO.

Corrective Action
1. Do NOT turn the Power Switch to “off.” The ozone destructor will operate only when the ZONO is powered “on.” The ozone destructor will operate and you will hear the fan running.
1. The doors are NOT locked. If there is a person inside the ZONO, open the doors, remove the person from the ZONO, then close the doors. Evacuate the room for at least 15 minutes and follow the instructions in “Emergency Procedures” on page 58 and follow the instructions in “Suspected or confirmed ozone exposure” and “First Aid Measures” on page 59.
2. If there is NOT a person inside the ZONO, make sure the doors are closed and do NOT open the doors because ozone inside the ZONO is high and you could be exposed to ozone.
3. When it is safe to open the doors, the Display will say: Door Unlocked- Safe to Open Door- Press Green Button To Lock Door Or Start A Cycle
4. Assume items are NOT sanitized.
5. Follow the instructions on the Display to start a SANITIZE or HEAT cycle or lock the door. Always keep the doors to the ZONO locked when you are not loading or unloading.

Preparing Sensors – Door Not Locked – Press Green Button To Lock Door

This message will be displayed when the ZONO is first switched to the “on” position or after the ZONO has been powered “off” and the doors are unlocked. The ZONO is warming up the ozone sensors, which may take up to 12 hours

Corrective Action
1. Do NOT turn the Power Switch to “off.” Turning the ZONO off will prevent the sensors from warming up, and it will take longer before the SANITIZE cycle can start.
2. It is safe to open the doors. The doors are NOT locked. Follow instructions on the Display to lock the ZONO as shown in the Initial Startup on page 20 while the sensors are warming up.
3. When the doors are locked the Display will be Green and say: Preparing Sensors- Screen Will Update When Ready- Door Locked- Safe to Unlock And Open Door . If you do not lock the doors, the Display will continue to remain RED and say: Preparing Sensors – Door Not Locked – Press Green Button To Lock Door . The sensors will warm up whether the door is locked or unlocked, but it is the best practice to always keep the doors to the ZONO locked when you are not loading or unloading. A cycle cannot be started until the warm up is complete.
4. When the sensors are warmed up, if the doors are locked the GREEN Display will say: Door Locked- Safe To Unlock and Open Door- Press Here to Enter Access Code . If the doors are unlocked, the RED Display will say:

Door Unlocked- Safe to Open Door- Press Green Button To Lock Door Or Start A Cycle.

If you are still in the initial startup of the ZONO, follow the instructions in Section 7 (Initial Startup) page 20 to install the **Water Reservoir, Shelf and Wicks**. If you have already completed all steps in Section 7 (Initial Startup) a cycle may be started.

5. Always keep the doors to the ZONO locked when you are not loading or unloading.

Preparing Sensors – Screen Will Update When Ready – Door Locked – Safe to Unlock And Open Door

This message will display when the ZONO is first switched to the “on” position or after the ZONO has been powered “off” and the doors are locked. The ZONO is warming up the ozone sensors, which may take up to 12 hours.

Corrective Action

1. Do **NOT** turn the **Power Switch** to “off.” Turning the ZONO off will prevent the sensors from warming up, and it will take longer before the SANITIZE cycle can start.
2. It is safe to unlock and open the doors by entering the **Access Code**, however. it is the best practice to always keep the doors to the ZONO locked when you are not loading or unloading.

A cycle cannot be started until the warm up is complete.
3. When the sensors are warmed up, the **GREEN Display** will say: **Door Locked- Safe to Unlock and Open Door- Press Here to Enter Access Code**. If you are still in the initial startup of the ZONO, follow the instructions in Section 7 (Initial Startup) page 20 to install the **Water Reservoir, Shelf and Wicks**. If you have already completed all steps in Section 7 (Initial Startup) a cycle may be started.
4. Always keep the doors to the ZONO locked when you are not loading or unloading.

Preparing To Sanitize – Door Locked – Do Not Unlock And Open Door – Display Updates When Cycle Starts

Corrective Action

1. Do **NOT** turn the **Power Switch** to “off.” Turning the ZONO off will stop the ZONO from preparing to start a cycle.
2. Do **NOT** unlock and open the doors because it will stop the ZONO from preparing to start a cycle.
3. When the cycle begins, the **Display** will say: **Sanitizing- Door Locked- Not Safe to Unlock and Open Door**.

Sanitizing Extended – Door Locked – Not Safe To Unlock And Open Door – Display Updates When Cycle Complete

Corrective Action
1. Do NOT turn the Power Switch to “off.” High ozone is still in the ZONO. The ozone destructor will operate only when the ZONO is powered “on.” The ozone destructor will operate, and you will hear the fan running.
2. Do NOT unlock and open the doors because ozone inside the ZONO is high and you could be exposed to ozone.
3. When the SANITIZE cycle is complete, the Display will say: Sanitizing Complete – Door Locked – Safe to Unlock And Open Door . Always lock the doors of the ZONO when not unloading and loading.

Sanitizing Extended – Door Locked – Safe To Unlock And Open Door

Corrective Action
1. Do NOT turn the Power Switch to “off.”
2. The extended sanitizing has completed. Items are sanitized.
3. It is safe to unlock and open the doors by entering the Access Code . Always lock the doors of the ZONO when not unloading and loading.

Items Not Sanitized – Door Locked – Safe To Unlock And Open Door – Decrease Items In ZONO And Restart

This message is on the **Display** when there are too many items in the ZONO.

Corrective Action
1. Do NOT turn the Power Switch to “off.”
2. It is safe to unlock and open the doors. Press the “ Press Here to Reset ” box on the Display to get to the screen to enter the Access Code to open the doors. After the doors are opened, the Display will say: Door Unlocked-Safe to Open Door- Press Green Button To Lock Door Or Start A Cycle
3. Items are not sanitized. Remove some items from the ZONO and restart the SANITIZE cycle.
4. Always lock the doors of the ZONO if you do not restart a SANITIZE cycle



Add Distilled Water Or Wick To Reservoir – Safe To Unlock & Open Door – Press Emergency Stop Button To Open

Items Not Sanitized – Door Locked – Safe To Unlock & Open Door – Add Distilled Water Or Wick To Reservoir

These messages are shown on the **Display** when the **Water Reservoir** is low and/or one or two **Wicks** need to be added before the cycle is started or after the cycle is completed.

Corrective Action
1. Do NOT turn the Power Switch to “off.”
2. It is safe to unlock and open the doors by pressing the “ Press Here to Reset ” box on the Display to get to the screen to enter the Access Code to open the doors.
3. Remove the Water Reservoir that sits on the Shelf located in the back right hand corner of the cabinet.
4. Check to see if <u>distilled water</u> is in the Water Reservoir . If there is no <u>distilled water</u> , or if the <u>distilled water</u> does not reach the $\frac{3}{4}$ fill level, add <u>distilled water</u> to the $\frac{3}{4}$ fill level as shown in the Initial Startup in Section 7 on page 20.
5. Step 1. One Door ZONO- Check to see if there is one humidity Wick in the Water Reservoir . If there is not one humidity Wick in the Water Reservoir , as shown in the Initial Startup on page 20, add one Wick . Two Door ZONO- Check to see if there are two humidity Wicks in the Water Reservoir . If there are not two humidity Wicks , as shown in Initial Startup on page 20, add the correct number of Wicks to have two Wicks in the Water Reservoir . Step 2. Place the Water Reservoir back on the Shelf. Step 3. Restart the SANITIZE cycle. Step 4. When the SANITIZE cycle begins, the Display shows: Sanitizing – Door Locked – Not Safe to Unlock And Open Door .
6. If, after completing steps 1-5 above, the message reoccurs, call ZONOsanitech. Always keep the doors to the ZONO locked when you are not loading or unloading.

Left Door Open – Safe To Open Door – Press Exterior Emergency Stop Button To Reset

This message is shown on the **Display** on the two door ZONO when the left door is not latching.

Corrective Action
1. Do NOT turn the Power Switch to “off.”
2. It is safe to open the doors.

3. Press and twist the **Exterior Emergency Stop Button** to reset the ZONO so that the doors can be locked, or a cycle can be started. The **Display** will say: **Door Unlocked- Safe To Open Door- Press Green Button To Lock Door Or Start A Cycle**. Always lock the doors of the ZONO when not unloading and loading.

4. If, after completing step 3 above, the message reoccurs, call ZONOsanitech.

Door Did Not Lock – Safe To Open Door – Press Exterior Emergency Stop Button To Reset

This message is shown on the **Display** when the doors are not latching.

Corrective Action

1. Do **NOT** turn the **Power Switch** to “off.”

2. It is safe to open the doors.

3. Press and twist the **Exterior Emergency Stop Button** to reset the ZONO so that the doors can be locked or a cycle can be started. The **Display** will say: **Door Unlocked- Safe To Open Door- Press Green Button To Lock Door Or Start A Cycle**. Always lock the doors of the ZONO when not unloading and loading.

4. If, after completing step 3 above, the message reoccurs, call ZONOsanitech.

Door Not Closed – Safe to Open And Restart Cycle

This message is shown on the **Display** when the doors are not latching.

Corrective Action

1. Do **NOT** turn the **Power Switch** to “off.”

2. It is safe to open the doors.

3. Press the “**Press Here to Reset**” box on the **Display** to get to the screen enter the **Access Code**. Once you have entered the Access Code the **Display** will say: **Door Unlocked- Safe To Open Door- Press Green Button To Lock Door Or Start A Cycle**. Always lock the doors when you are not loading or unloading the ZONO.

4. If, after completing step 3 above, the message reoccurs, call ZONOsanitech.



Sanitizing Halted – High Ozone in ZONO – Not Safe to Unlock and Open Door – Do Not Turn Off ZONO

Corrective Action
1. Do NOT turn the Power Switch to “off.” High ozone is still in the ZONO. The ozone destructor will operate only when the ZONO is powered “on.” The ozone destructor will operate, and you will hear the fan running.
2. Do NOT unlock and open the doors because ozone inside the ZONO is high and you could be exposed to ozone.
3. When it is safe to open the door, the Display will say: Error- Door Locked- Safe To Unlock And Open Door- Call ZONOsanitech And Report Code 104 . Always lock the doors of the ZONO when not unloading and loading.
4. Assume items were NOT sanitized.

Heat Cycle Temp High – Door Locked – Do Not Open Door – Cool Down Ongoing

Corrective Action
1. Do NOT turn the Power Switch to “off.”
2. Do NOT unlock and open the doors because the temperature inside the ZONO is high.
3. When the temperature inside the ZONO reaches the correct level, the Display will say: Heat Cycle Successful- Door Locked- Safe to Unlock And Open Door . Always keep the doors to the ZONO locked when you are not loading or unloading.

10. Troubleshooting Messages That Require A User to Call ZONOsanitech™

In addition to the normal messages, you will see when loading, unloading and running the ZONO in Section 8 and the messages in Section 9, the **Display** can show messages that help the user and ZONOsanitech to correct the problem:

Messages that Require the User to Call ZONOsanitech	See page
Ozone Detected In Room – Turn Off ZONO Immediately – Leave Room Now – Call ZONOsanitech	53
Machine Fault – Not Safe to Unlock and Open Door – Do Not Turn Off ZONO – Call ZONOsanitech	53
Machine Fault – Door Not Locked – Do Not Turn Off ZONO – Call ZONOsanitech – Do Not Open Door	54
Sanitizing Extended – Door Locked – Not Safe To Unlock & Open Door – Call ZONOsanitech And Report Code 101	54
Sanitizing Extended – Door Locked – Safe To Unlock & Open Door – Call ZONOsanitech And Report Code 101	54
Items Sanitized – Door Locked – Safe To Unlock And Open Door – Call ZONOsanitech And Report Code 101	55
Items Not Sanitized – Door Locked – Safe To Unlock And Open Door – Call ZONOsanitech And Report Code 102	55
Sanitizing Extended – Door Locked – Not Safe To Unlock & Open Door – Call ZONOsanitech And Report Code 103	56
Sanitizing Complete – Door Locked- Safe to Unlock & Open Door – Call ZONOSanitech And Report Code 103	56
Error – Door Locked – Safe to Unlock And Open Door – Call ZONOsanitech and Report Code 104	56
Heat Unit Error – Safe To Unlock And Open Door – Call ZONOsanitech and Report Code 107	57
Error – Not Sanitized – Door Locked –Not Safe To Unlock And Open – Call ZONOsanitech And Report Code 108	57



Ozone Detected In Room – Turn Off ZONO Immediately – Leave Room Now – Call ZONOsanitech

Either ozone or an irritant is present in the room. An Alarm will sound.

Corrective Action
1. TURN the Power Switch to “Off.” Turning the ZONO off will prevent the ZONO from continuing to create ozone if it is creating ozone. Do NOT open the door of the ZONO.
2. Exit the Room Where the ZONO Is Located. Allow at least 15 minutes for any potential ozone to revert to oxygen before reentering the room in which the ZONO is located.
3. Follow the instructions in “Suspected or confirmed ozone exposure” or “First Aid Measures” on page 59.
4. Call ZONOsanitech at 770-212-9201 Ext 3 and report ozone detected in room.
5. Assume items were NOT sanitized.
6. Do NOT use the ZONO until told to do so by ZONOsanitech.

Machine Fault – Not Safe to Unlock And Open Door – Do Not Turn Off ZONO – Call ZONOsanitech

Corrective Action
1. Do NOT turn the Power Switch to “off.” High ozone is still in the ZONO. Turning the ZONO off will prevent the ZONO from destructing any ozone inside the ZONO. The ozone destructor will operate, and you will hear the fan running.
2. Do NOT unlock and open the doors because ozone is high inside the ZONO and you could be exposed to ozone.
3. Call ZONOsanitech at 770-212-9201 Ext 3 and report machine fault.
4. Assume items were NOT sanitized.
5. Do NOT use the ZONO until told to do so by ZONOsanitech.

Machine Fault – Door Not Locked – Do Not Turn Off ZONO – Call ZONOsanitech – Do Not Open Door

Corrective Action
1. Do NOT turn the Power Switch to “off.”
2. The door is NOT locked. Do NOT open the doors of the ZONO.
3. Call ZONOsanitech at 770-212-9201 Ext 3 and report machine fault.
4. Assume items were NOT sanitized.
5. Do NOT use the ZONO until told to do so by ZONOsanitech.

Sanitizing Extended – Door Locked – Not Safe To Unlock & Open Door – Call ZONOsanitech And Report Code 101

Corrective Action
1. Do NOT turn the Power Switch to “off.” Turning the ZONO off will prevent the ZONO from destructing the ozone. The ozone destructor will continue to operate, and you will hear the fan running.
2. Do NOT unlock and open doors of the ZONO because ozone inside the ZONO is high and you could be exposed to ozone.
3. Call ZONOsanitech at 770-212-9201 Ext 3 and report code 101.
4. Assume items were NOT sanitized.
5. Do NOT use the ZONO until told to do so by ZONOsanitech
6. When it is safe to open the door, the Display will say: Sanitizing Extended – Door Locked – Safe To Unlock And Open Door – Call ZONOsanitech And Report Code 101 . Always keep the doors to the ZONO locked when you are not loading or unloading the ZONO.

Sanitizing Extended – Door Locked – Safe To Unlock & Open Door – Call ZONOsanitech And Report Code 101

Corrective Action
1. Do NOT turn the Power Switch to “off.”
2. It is safe to unlock and open the doors by entering the Access Code and remove items. Always lock the doors of the ZONO when not unloading and loading.
3. Call ZONOsanitech at 770-212-9201 Ext 3 and report code 101.

4. Items were sanitized.
5. Do NOT use the ZONO until told to do so by ZONOsanitech

Items Sanitized – Door Locked – Safe To Unlock And Open Door – Call ZONOsanitech And Report Code 101

Corrective Action
1. Do NOT turn the Power Switch to “off.”
2. It is safe to unlock and open the doors by entering the Access Code and remove items inside the ZONO. Always lock the doors of the ZONO when not unloading and loading.
3. Call ZONOsanitech at 770-212-9201 Ext 3 and report code 101.
4. Items were sanitized.
5. Do NOT use the ZONO until told to do so by ZONOsanitech.

Items Not Sanitized – Door Locked – Safe To Unlock And Open Door – Call ZONOsanitech And Report Code 102

Corrective Action
1. Do NOT turn the Power Switch to “off.”
2. It is safe to unlock and open the doors by entering the Access Code and remove items. Always keep the doors to the ZONO locked when not unloading and loading.
3. Call ZONOsanitech at 770-212-9201 Ext 3 and report code 102.
4. Items were NOT sanitized.
5. Do NOT use the ZONO until told to do so by ZONOsanitech.

Sanitizing Extended – Door Locked – Not Safe To Unlock & Open Door – Call ZONOsanitech And Report Code 103

Corrective Action
1. Do NOT turn the Power Switch to “off.” Turning the ZONO off will prevent the ZONO from destructing the ozone. The ozone destructor will operate and you will hear the fan running.
2. Do NOT unlock and open the ZONO doors because ozone inside the ZONO is high and you could be exposed to ozone.
3. Call ZONOsanitech at 770-212-9201 Ext 3 and report code 103.
4. Items were sanitized.
5. Do NOT use the ZONO until told to do so by ZONOsanitech
6. When it is safe to unlock and open the door the Display will say: Sanitizing Complete – Door Locked – Safe to Unlock And Open Door – Call ZONOsanitech And Report Code 103. Always keep the doors to the ZONO locked when not unloading and loading.

Sanitizing Complete – Door Locked – Safe to Unlock & Open Door – Call ZONOsanitech And Report Code 103

Corrective Action
1. Do NOT turn the Power Switch to “off.”
2. It is safe to unlock and open the doors by entering the Access Code and remove items. Always keep the doors to the ZONO locked when you are not loading or unloading the ZONO.
3. Call ZONOsanitech at 770-212-9201 Ext 3 and report code 103.
4. Items were sanitized.
5. Do NOT use the ZONO until told to do so by ZONOsanitech.

Error – Door Locked – Safe to Unlock and Open Door – Call ZONOsanitech and Report Code 104

Corrective Action
1. Do NOT turn the Power Switch to “off.”
2. It is safe to unlock and open the doors by entering the Access Code and to remove items. Always keep the doors to the ZONO locked when you are not loading or unloading the ZONO.
3. Call ZONOsanitech at 770-212-9201 Ext 3 and report code 104.

- | |
|--|
| 4. Assume items were NOT sanitized. |
| 5. Do NOT use the ZONO until told to do so by ZONOsanitech. |

Heat Unit Error – Safe To Unlock And Open Door – Call ZONOsanitech and Report Code 107

Corrective Action
1. Do NOT turn the Power Switch to “off.”
2. It is safe to unlock and open the doors by entering the Access Code . Always keep the doors to the ZONO locked when you are not loading or unloading the ZONO.
3. Call ZONOsanitech at 770-212-9201 Ext 3 and report code 107.
4. Assume the HEAT CYCLE did NOT kill lice, bed bugs and their eggs.
5. Do NOT run a HEAT Cycle until told to do so by ZONOsanitech. A SANITIZE cycle may be run or the door may be locked.

Error – Not Sanitized – Door Locked – Not Safe To Unlock And Open – Call ZONOsanitech And Report Code 108

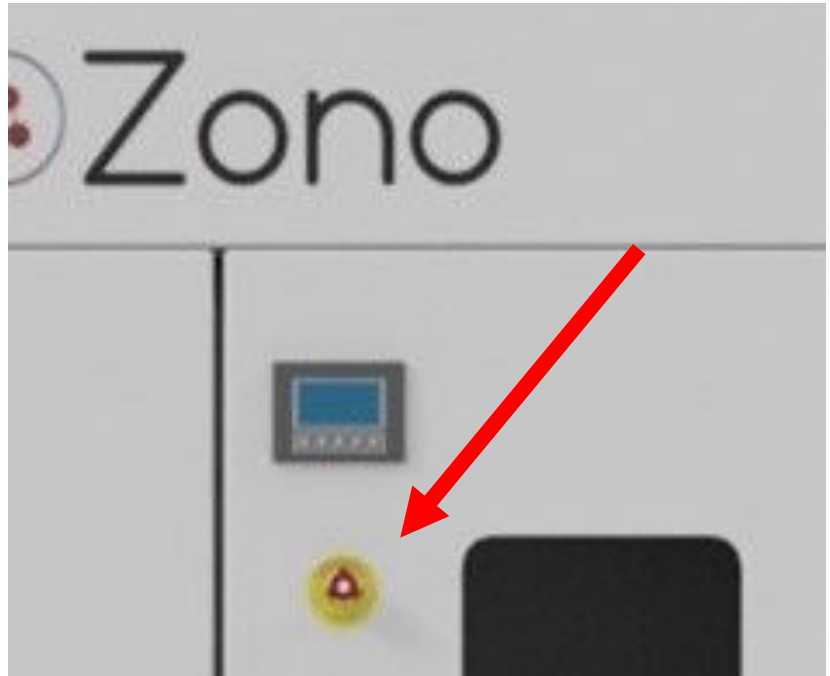
Corrective Action
1. Do NOT turn the Power Switch to “off.” Turning the ZONO off will prevent the ZONO from destructing the ozone. The ozone destructor will continue to operate, and you will hear the fan running to destruct ozone.
2. Do NOT unlock and open the ZONO doors because ozone inside the ZONO is high and you could be exposed to ozone.
3. Call ZONOsanitech at 770-212-9201 Ext 3 and report code 108.
4. Assume items were NOT sanitized.
5. Do NOT use the ZONO until told to do so by ZONOsanitech.

11. Emergency Procedures

Person inside the ZONO™ during a cycle

ZONOsanitech has never been notified of an incident involving a person inside a cabinet. Safety measures to help prevent such an incident include the requirement to open the doors to press the **Green Push Button**, glass doors allowing visibility inside the ZONO, and the location of the controls at a height inaccessible to children. However, if you see or suspect that someone is inside the ZONO during a cycle:

1. Press the **Exterior Emergency Stop Button**. If there is ozone inside the ZONO, the ozone destructor will immediately begin destructing ozone.
2. Do **NOT** turn the **Power Switch** to **OFF**. The ZONO must have power to destroy any existing ozone inside the ZONO.
3. Open the ZONO doors.
4. Remove the person from the ZONO and close the doors promptly.
5. If the person was in the ZONO during a SANITIZE cycle, the message **Ozone Detected In Room – Turn Off ZONO Immediately – Leave Room Now** appear on the **Display**.



Call ZONOsanitech may

6. If a SANITIZE cycle was running when the door was opened evacuate the room for at least 15 minutes to allow any ozone that escaped from the cabinet when the door was open to revert to oxygen because it is unknown how much ozone escaped into the room when the doors was opened.
7. Seek medical attention for the person inside the ZONO and follow the instructions in “Suspected or confirmed ozone exposure” and “First Aid Measures” on page 59.
8. Assume items were **NOT** sanitized.

Suspected or confirmed ozone exposure



Follow these instructions if **ANY** of the following situations occur:

- Anyone in the vicinity of the ZONO smells electrical sparks, lightning, or the fresh scent after a thunderstorm or heavy rain;
- Anyone in the vicinity of the ZONO experiences headache, sore throat, or irritation in the eyes and nose;
- You believe that ozone gas is coming from the ZONO.

1. Turn the ZONO **Power Switch** “off” or unplug the ZONO.
2. Evacuate the room where the ZONO is located.
2. Do **NOT** open the ZONO doors.
3. Seek medical attention for headache, coughing, dry throat, shortness of breath, or irritation of the respiratory tract, eyes, or skin.
4. Allow at least 15 minutes for any suspected ozone to revert to oxygen before reentering the room in which the ZONO is located.
5. Assume items were **NOT** sanitized.
7. Call ZONOsanitech at 770-212-9201 Ext 3.
8. Do **NOT** operate the ZONO until told to do so by ZONOsanitech.

First Aid Measures

Route of Entry	Symptoms	First Aid Measure
Skin Contact	Irritation	Rinse with water
Eye Contact	Irritation	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Ingestion	Not an expected route of exposure	
Inhalation	Headache, cough, heavy chest, shortness of breath	Remove to fresh air

For severe cases, or if symptoms don't improve, seek medical help.

12. General Care Instructions



Do **NOT** remove or open any cover or access port on the ZONO **Engine** unless you have been authorized in writing to do so by ZONOsanitech.

Doing so voids the warranty.

Only ZONOsanitech-approved technicians may inspect or repair the ZONO.

Cleaning

Use a commercial stainless steel cleaner on all aluminum surfaces.

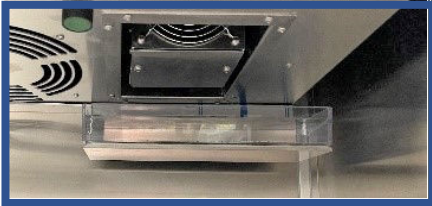

You may see black aluminum oxide residue on your cloth. This residue is normal.



Do **NOT** clean the door gaskets. They may be damaged by abrasion or chemicals.

Weekly Care Tasks

There are two weekly tasks the operator is asked to perform.

Component	Check	Photos
<p>Water Reservoir</p>	<p>Check water level.</p> <ol style="list-style-type: none"> 1. Remove the Water Reservoir from the Shelf under the ZONO Engine. 2. Fill the Water Reservoir to the $\frac{3}{4}$ full line with clean distilled water and securely return it to its Shelf. <p>Failure to maintain the water level can result in damage to the ZONO or failure to sanitize items!</p>	
<p>Door Gaskets</p>	<p>Inspect the Door Gaskets attached to both doors (or single door) to ensure they are not torn or damaged.</p> <p>The gaskets are located along the top, sides and bottom of the inside of the doors (or one single door). In the photograph to the right, the area where the gaskets are located on the doors are highlighted in red.</p> <p>Do NOT:</p> <ul style="list-style-type: none"> • Clean the Door Gaskets. They may be damaged by abrasion or chemicals. • Operate the ZONO if the gaskets are damaged. Call ZONOsanitech. <p>REPORT ANY TORN OR DAMAGED GASKETS TO ZONOSANITECH AND DO NOT USE THE ZONO.</p>	

13. Maintenance

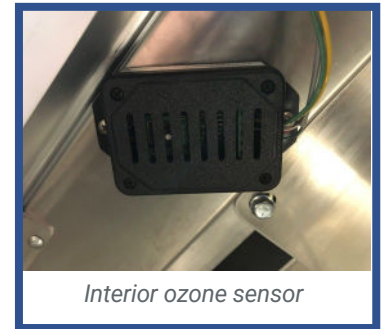
Moving the ZONO™

Take care when moving the ZONO cabinet. It contains light bulbs and electronic components which may break or be damaged.

Ozone sensor maintenance

The ZONO is equipped with two **Ozone Sensors** that monitor the ozone level.

- **Interior Ozone Sensor:** Located on the bottom of the **Engine**.
- **Exterior Ozone Sensor:** Located outside of the sealed cabinet of Single and Double Doors ZONOs



Replacement of Interior and Exterior Sensors

The **Ozone Sensors** are critical to the function of the ZONO. The **Ozone Sensors** used in the ZONO are expected to last for more than five years. When a sensor is no longer working properly, the ZONO will show one of several messages that will direct you to call ZONOsanitech. ZONOsanitech will assist you in determining if a new sensor is needed.

ZONOsanitech will provide you with new **Ozone Sensors** should they fail within the three-year warranty period of your ownership of the ZONO. You are responsible for the cost of **Ozone Sensor** replacement after three years, unless you purchase an extended warranty or service plan.

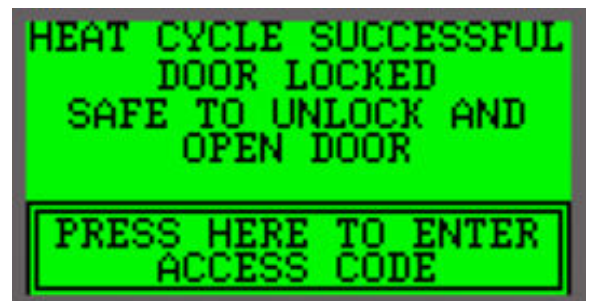
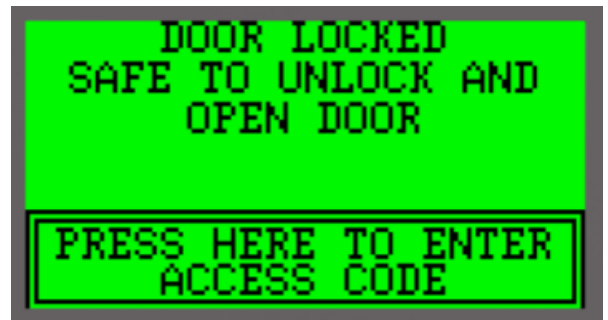
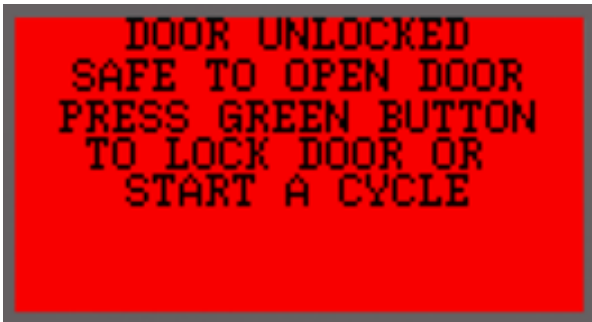
Contact ZONOsanitech at 770-212-9201 Ext 3 to purchase replacement **Ozone Sensors**.

14. Statistics (Number of cycles run)

You can see the number of times a ZONO SANITIZE cycle has been run for: (1) the current day, (2) the previous 7 days, (3) the previous 30 days, and (4) the previous 12 months. Follow these instructions:

1. Does the **Display** show one of the screens below?

- Yes – Go to Step 2. You can safely view statistics while a SANITIZE cycle is running or no cycle is running, as shown below. Viewing the Statistics will not interfere with the cycle.
- No – You cannot view statistics. Wait until one of the below screens appears.



2. Press **F1** on the **Keypad**.

- The **Statistics Password** screen appears. This screen works the same way, whether the background is **GREEN** (machine locked) or **RED** (machine unlocked).



- Enter **100** using the numbers on the touch screen and then touch **ENT**. You cannot change this **Password**.
- The **Statistics** screen appears, showing the total number of **Cycles Completed** during the time periods.

CYCLES TODAY	5
PREV 7 DAYS	30
PREV 30 DAYS	75
PREV 12 MONTHS	535
	535

- Record these numbers. They will change every time the ZONO runs and are not stored.
- Press **F5** on the **Keypad**. You will return to the screen that was being displayed previously unless a cycle completed while you were checking the statistics. In that case, you will see the "Sanitizing Cycle Complete" or "Heat Cycle Successful" screen.

15. Safety Data Sheet (formerly MSDS)

Human Hazards and Precautionary Statements – see Section 2

Physical or Chemical Hazards and Precautionary Statements – see Section 2

Environmental Hazards and Precautionary Statements – See Section 2

Product Name: Ozone
Chemical Name/Synonyms: Triatomic Oxygen, Trioxygen, CAS Registry Number 10028-15-6
Company: ZONOsanitech
147 Technology Parkway
Peachtree Corners, GA 30092
Product Use: This SDS is limited to ozone generated by an EPA-regulated pesticide device (which includes an ozone generator inside of a sealed cabinet) used for disinfecting/sanitizing items placed in the device.
In emergency, call 911.
24-Hour Emergency Contact: CHEMTREC +1 800-424-9300
For information about this SDS, during normal business hours, contact: 770-212-9201, Ext 3.

Section 2: Hazard(s) Identification

2.1 Classification of the substance or mixture -- GHS Classifications in accordance with OSHA Hazard Communication Standard (29 CFR 1910.1200)

Oxidizing gas, Cat. 1
Acute toxicity, Cat. 1
Eye damage, Cat. 1
Skin corrosion, Cat. 1B
STOT RE, Cat. 1
Acute aquatic toxicity, Cat.1

2.2 Label Elements

Signal word: Danger

Hazard Statements:

May cause or intensify fire; oxidizer
Fatal if inhaled
Causes severe skin burns and eye damage
Causes damage to organs through prolonged or repeated exposure
Very toxic to aquatic life

Precautionary Statements:

Keep away from readily combustible materials and reducing agents.
Keep reduction valves/valves and fittings free from oil and grease.
In case of fire: Stop leak if safe to do so.
Do not breathe gas.
Use in well-ventilated place. Keep unit tightly closed when gas is present.
If inhaled or exposed, or you feel unwell: Remove person to fresh air, keep comfortable for breathing and immediately call a poison center or physician.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Pictograms:

- Flame over circle
- Skull and crossbones
- Health hazard
- Corrosion
- Aquatic Toxicity



Section 3: Composition/ Information on Ingredients

3.1 Hazardous Substance

Chemical Name	Synonym	CAS#	Concentration
Ozone	Triatomic Oxygen, Trioxygen	10029-15-6	Max. approx. 25 ppm

Section 4: First-Aid Measures

Route of Entry	Symptoms	First Aid Measure
Skin Contact	Irritation	Rinse with water
Eye Contact	Irritation	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Ingestion	Not an expected route of exposure	
Inhalation	Headache, cough, heavy chest, shortness of breath	Remove to fresh air

For severe cases, or if symptoms don't improve, seek medical help.

Section 5: Fire-Fighting Measures

5.1 Extinguishing media

Ozone itself is not flammable. As a strong oxidant it may accelerate, even initiate, combustion, or cause explosions. Use whatever extinguishing agents are indicated for the burning materials.

5.2 Special hazards arising from the substance or mixture

May accelerate existing fire. May initiate fire/explosion in combustible materials. May react explosively with alkenes, aromatic compounds, bromine, combustible gases, diethyl ether, hydrogen bromide, hydrogen iodide, isopropylidene compounds, and other oxidizable materials.

Section 6: Accidental Release Measures

The ZONO is designed to prevent accidental releases. Should one occur, immediately shut down the ZONO, and evacuate and ventilate the area until ozone levels subside to a <0.1 ppm 8 hour TWA and .03 ppm 15 minute TWA. Determine and repair/remedy the source of the accidental release before further use of the unit.

Section 7: Handling and Storage

The ZONO is designed to generate ozone on demand. The ozone is generated and contained within the closed unit and eliminated before the unit is reopened to remove treated items.

Section 8: Exposure Controls/Personal Protection

8.1 Control parameters for Ozone

Permissible Exposure Limits

Fed-OSHA 8-hr TWA PEL	Cal-OSHA 8-hr TWA PEL	Cal-OSHA 15-min. TWA Ceiling Limit PEL	NIOSH Immediately Dangerous to Life or Health (IDLH)	
0.1 ppm 0.2 mg/m ³	0.1 ppm	0.3 ppm	5 ppm	

ACGIH-TLVs

TLV–TWA (8 hours), 0.05 ppm (0.1 mg/m³), Heavy work

TLV–TWA (8 hours), 0.08 ppm (0.16 mg/m³), Moderate work

TLV–TWA (8-hours), 0.10 ppm (0.2 mg/m³), Light work

TLV–TWA (≤ 2 hours), 0.2 ppm (0.39 mg/m³), Heavy, moderate, or light workloads

8.2 Exposure controls

Engineering Controls. ZONO is designed to maintain the door(s) closed while ozone is present and to eliminate the ozone before the door(s) is/are reopened.

Respiratory protection. Should never be needed. Use either a chemical air filtering respirator or self-contained breathing apparatus approved by NIOSH for the condition of use whenever ventilation is not adequate to maintain exposures below the applicable occupational exposure limit.

No PPE (Hand protection, Eye protection or Skin and body protection) should be needed because all ozone should be eliminated before the ZONO door(s) is/are opened to remove treated items.

Section 9: Physical and Chemical Properties

Form: gas

Odor: distinct pungent odor

Odor threshold: 0.02 to 0.05 ppm; exposure causes desensitization

pH: Not applicable

Melting point/melting range: Not applicable

Boiling point/boiling range: -112°C/-169°F

Flash point Not applicable

Evaporation rate: Not applicable

Flammability: Not flammable but strong oxidizer

Upper/lower flammability or explosive limits: Not applicable

Auto ignition temperature: Not applicable

Danger of explosion: not explosive but strong oxidizer

Vapor pressure: Not applicable

Vapor density: Vapor density 1.6 (air = 1)

Relative density: Not applicable

Solubility in/Miscibility with water: 570 mg/L @20°C & 100% O₃; 0.64 mg/L @0°C

Section 10: Stability and Reactivity

Reactivity: Ozone is a strong oxidizer

Chemical stability: Unstable

Conditions to avoid: Do not place reducing agents in the ZONO

Incompatible materials: Reducing agents.

Hazardous decomposition products: None, decomposes to oxygen.

Section 11: Toxicological Information

Potential Routes of Exposure and Potential Health Effects

- a. **Likely routes of exposure:** Inhalation, eyes, and skin exposure.
- b. Effects of Acute Exposure: Discomfort, including headache, coughing, dry throat, shortness of breath, irritation of respiratory tract and possibly skin and eyes. Higher levels of exposure intensify symptoms.
- c. Effects of Chronic Exposure: Similar to effects of acute exposure, with possible development of chronic breathing disorders, including asthma.

d. Numerical measures of toxicity (such as acute toxicity estimates)

- Inhalation: LC50 -- Mice, 12.6 ppm for 3 hours; Hamsters, 35.5 ppm for 3 hours; meets criteria for Acute toxicity, Cat. 1.
- Skin: ECHA dossier for ozone includes the following discussion:

Effects of ozone on antioxidant levels and lipid peroxidation were observed in the murine and human skin at a concentration of 1 ppm in air after exposure of up to 2 hours. This leads to the assumption that prolonged exposure to high concentrations of ozone can cause irreversible and corrosive damage to the skin. This is further supported by its physicochemical properties as a strong oxidizing agent as well as by a large amount of inhalation studies showing that acute exposure to ozone at 1-2 ppm already causes lung injury in animals in vivo. Based on this argumentation, it is concluded that highly concentrated ozone is corrosive to tissues of living animals, and it is not ethical to perform additional, in vivo experiments for classification of the pure substance.

<https://echa.europa.eu/registration-dossier/-/registered-dossier/22480/7/4/1>

Eye: Under REACH, testing for eye irritation is not performed on substances known or predicted to be corrosive to skin. Such substances are automatically considered to be severely damaging to the eye.

<https://echa.europa.eu/registration-dossier/-/registered-dossier/22480/7/4/1>. This SDS follows that approach.

Carcinogenic effects (NTP, IARC, OSHA): **No**.

Mutagenic effects: ozone is not considered genotoxic.

Reproductive toxicity: No, based on the available data per the ECHA dossier for ozone.

<https://echa.europa.eu/registration-dossier/-/registered-dossier/22480/7/9/1>

Sensitization: No, based on the available data per the ECHA dossier for ozone.

<https://echa.europa.eu/registration-dossier/-/registered-dossier/22480/7/5/1>

Target organs: respiratory system, eyes and, to a lesser extent, skin.

Section 12: Ecological Information (non-mandatory)

Per the ECHA dossier:

The lowest LC₅₀ value after a 96 hr. continuous exposure of fish juveniles to ozone reported in the scientific literature was ca 0.008 mg/L. Ozone has to be classified as acute aquatic toxicity category 1. The lowest NOEC value after a 3 months partial chronic testing of freshwater fish juveniles to ozone reported in the scientific literature was 2 µg/L. For marine fish only a 21-d study is available, where fish were exposed to ozone and ozone produced oxidants. The derived NOEC is 60 µg/L. Both values are below the threshold of 1 mg/L hence ozone is classified as chronic aquatic toxicity category 1.

<https://echa.europa.eu/registration-dossier/-/registered-dossier/22480/6/2/1>

Section 13: Disposal Considerations (non-mandatory)

Off-gassing ozone is captured within the ZONO and drawn through an ozone destruct unit that breaks ozone down to oxygen before release into the atmosphere.

Section 14: Transport Information (non-mandatory)

NOT APPLICABLE, as ozone is created and broken down to oxygen within the ZONO.

Section 15: Regulatory Information (non-mandatory)

US Federal Regulations

SARA Title III Section 302 EHS TPQ: 100 lbs.

SARA Title III Section 304, EHS RQ: 100 lbs.

SARA Section 313 (specific toxic chemical listings): > 10,000 lbs. used/year

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs):

TSCA (Toxic Substances Control Act):

Section 16: Other Information

Disclaimer: ZONOsanitech provides the information contained in this SDS in good faith and it is believed to be accurate and complete as of the effective date shown on this SDS. This SDS is intended solely as a guide to aid in the safe handling and use of the ZONO product by properly trained personnel. ZONOsanitech makes no representation or warranty, express or implied, as to the accuracy or completeness of the information contained in this SDS, and makes no representation or warranty, express or implied, as to the merchantability or fitness of the ZONO product for any purpose. ZONOsanitech is not responsible for SDSs obtained from any source other than ZONOsanitech. If you have obtained an SDS from another source or if you are not sure that the SDS you have is current, please contact us for the most current version. The user is responsible for determining whether the ZONO product is suitable for user's method of use or application. ZONOsanitech will not be responsible for any damages or loss resulting from the use of, or reliance upon, the information in this SDS, or the use of the ZONO product. It is the buyer's/user's responsibility to ensure that its/his/her activities comply with all federal, state, and local laws.

SDS date of preparation/update: March 2, 2023

16. End User Limited Warranty Certification

Your End User Limited Warranty Certificate is shown on the following page. Read it carefully to ensure understanding of your rights and obligations to keep your warranty intact.



LIMITED WARRANTY CERTIFICATE

Warranty Provider: ZONO Sanitech™, LLC
147 Technology Parkway Ste. 100, Peachtree Corners, GA 30092
Phone (404) 394-2232; Email service@zonosanitech.com

End User: _____

Warranty Period: **Three-year**

Model: _____

Warranty Start Date: _____

YOU (THE "END USER") HAVE PURCHASED THIS MANUFACTURER'S LIMITED WARRANTY ("WARRANTY") IN CONNECTION WITH THE PURCHASE OR RENTAL OF YOUR ZONO OZONE DISINFECTING & SANITIZING CABINET ("ZONO") AND ACCESSORIES. THE ZONO IS A FEDERALLY REGULATED PEST-CONTROL PRODUCT THAT UTILIZES A COMBINATION OF PROCESS CONTROL, OZONE CONCENTRATION, HUMIDITY, AND TIME TO ACHIEVE CONSISTENT AND U.S. LABORATORY CONFIRMED DISINFECTION AND SANITIZATION LEVELS. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES AND PROVIDES THE SOLE WARRANTY AND SERVICE OBLIGATIONS APPLICABLE TO YOUR PURCHASE OR RENTAL OF THE ZONO IN (A) THE UNITED STATES, OR (B) WORLDWIDE (EXCLUDING THE UNITED STATES), TO THE FULLEST EXTENT PERMITTED BY LAW. WARRANTY PROVIDER, FOR ITSELF AND ITS MANAGERS, AGENTS, ATTORNEYS, AFFILIATES, AND ASSIGNS (COLLECTIVELY, "ZONO PARTIES"), EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, EVEN IF INFORMED OF SUCH PURPOSE. AS AN EXPRESS CONDITION OF THIS WARRANTY, END USER WAIVES ANY RIGHT AS A REPRESENTATIVE OR MEMBER IN ANY CLASS OR REPRESENTATIVE ACTION ("CLASS ACTION") TO ASSERT ANY CLAIM AGAINST ZONO PARTIES EXCEPT WHERE SUCH WAIVER IS PROHIBITED BY LAW OR DEEMED BY A COURT OF LAW TO BE AGAINST PUBLIC POLICY. TO THE EXTENT END USER IS PERMITTED BY SUCH COURT TO PROCEED WITH A CLASS ACTION AGAINST A ZONO PARTY OR PARTIES, (D) END USER SHALL NOT BE ENTITLED TO RECOVER ATTORNEYS' FEES OR COSTS ASSOCIATED WITH PURSUING THE CLASS ACTION (NOTWITHSTANDING ANY OTHER PROVISION IN THIS AGREEMENT); AND (H) THE PARTY WHO INITIATES OR PARTICIPATES AS A MEMBER OF THE CLASS AGREES THAT IT WILL NOT SUBMIT A CLAIM OR OTHERWISE PARTICIPATE IN ANY RECOVERY SECURED THROUGH THE CLASS ACTION.

WARRANTY OF PERFORMANCE. During the Warranty Period, Warranty Provider warrants that, when used as directed in the User Manual, the ZONO will kill (A) 99.9% of Common Bacteria on non-porous, semi-porous and porous surfaces where "Common Bacteria" means *Staphylococcus aureus*, *Medicillin-Resistant Staphylococcus aureus*, *Escherichia Coli*, *Streptococcus Pyogenes*, *Shigella dysenteriae*, *Salmonella Enteritidis*, and *Pseudomonas Aeruginosa*, and (B) 99.9% of Common Viruses on non-porous surfaces where "Common Viruses" means Norovirus, Influenza-A, and Respiratory syncytial virus. The optional Heating Unit (sold separately) kills lice, bed bugs, and their eggs. Subject to the warranties set forth herein, End User is solely responsible for the use of and the results from ZONO.

The ZONO is designed to be used as part of a comprehensive infection prevention and control program. No claim is made with respect to the overall results or efficacy of the ZONO in connection with any specific infection prevention and control program, the success of which will depend on multiple factors beyond the control of the Warranty Provider. A comprehensive user manual ("User Manual") is included with your ZONO purchase or rental. If you do not have a copy of the User Manual, contact the Warranty Provider for a replacement.

THE ZONO MUST ONLY BE OPERATED AS DIRECTED IN THE USER MANUAL. FAILURE TO FOLLOW INSTRUCTIONS IN THE USER MANUAL MAY COMPROMISE THE SAFETY OF THE USER AND OTHERS AND WILL VOID THIS WARRANTY.

US WARRANTY SERVICE (for ZONOs located in the United States only): The ZONO as purchased or rented shall be free of defects in material and workmanship for the Warranty Period. Warranty Provider shall diagnose covered issues, if any, reported by End User and, in Warranty Provider's sole discretion, repair or replace the ZONO as it shall deem necessary at Warranty Provider's sole expense, including parts, labor, and shipping. Warranty Provider may repair or replace the ZONO at End User's location or require that End User return items or components to a repair center designated by Warranty Provider at Warranty Provider's cost. Following the Warranty Period, End User may obtain additional service on a fee-for-service basis.

WORLDWIDE WARRANTY SERVICE (for ZONOs located OUTSIDE the United States only): The ZONO as purchased or rented shall be free of defects in material and workmanship for the Warranty Period. Warranty Provider shall assist your ZONO distributor ("Distributor") or a designated technician, via email, in English, regarding diagnosis of covered issues, if any, reported to Warranty Provider. Warranty Provider will provide and ship replacement parts under the terms of the applicable Distributor agreement. Following the Warranty Period, Distributor or End User may obtain additional service on a fee-for-service basis. For non-US sales, Warranty Provider's obligations hereunder are solely to Distributor. In such sales, Warranty Provider supports Distributor in its provision to its customers of the warranty services set forth herein. Warranty Provider provides no direct end-user support outside the United States other than to Distributor.

END USER OBLIGATIONS. During Warranty Period, End User shall promptly report to Warranty Provider (US machines only) or Distributor (Worldwide machines only) any apparent ZONO malfunction or any service alert indicated on the ZONO's display screen. Warranty Provider will diagnose performance issues and determine any need for service, repair, or replacement of covered items. If Warranty Provider ships a replacement part to End User or provides End User with a "loaner" part or ZONO to be used while End User's covered part or ZONO is repaired, End User shall pay Warranty Provider's full retail price, plus shipping, upon invoice, for any such part or ZONO if End User fails or refuses to return the damaged or loaner part or ZONO, as applicable, upon Warranty Provider's request and at Warranty Provider's expense.

WARRANTY LIMITATIONS. This Warranty is personal to and benefits only the End User and is expressly limited to defects in materials and workmanship during the applicable Warranty Period. The Warranty Period shall terminate, and all remaining warranties and service obligations shall be void, without refund, if Warranty Provider determines, in its sole discretion, that (i) any damage to ZONO is the result of abuse, accident, modification, misuse, neglect, failure to perform standard recommended maintenance, vandalism, theft, fire, water, or casualty; (ii) repair has been attempted without Warranty Provider's written permission (including opening machine for inspections) by any person other than Warranty Provider or its authorized technician; or (iii) the ZONO is no longer the property of the End User set forth above. Scratches in sheet metal, glass or polycarbonate doors, or other cosmetic damage, including surface corrosion (e.g., from detergents, cleaners, lubricants, or other chemicals) are not covered. Warranty Provider is not responsible for End User's loss of use or income under any circumstances during such time as the ZONO is nonfunctioning, under repair, or awaiting replacement. The sole remedy of End User (or Distributor as applicable) against Warranty Provider for any covered claim shall be the ZONO's repair or replacement, in Warranty Provider's sole discretion. Warranty Provider is not responsible for any damages, claims or losses, including, without limitation, consequential damages, exemplary damages, attorney's fees or defense costs, arising out of, in connection with, or related to End User's operation, maintenance and use of the ZONO, including, without limitation: (A) any sickness, injury or death resulting from use of the ZONO in a manner for which it was not designed or intended or in any manner contrary to the User Manual or any direction or instruction by manufacturer, distributor, service technician, or Warranty Provider; (B) any sickness, injury or death resulting from End User's failure to report malfunctions or to properly secure or maintain the ZONO; (C) any sickness, injury or death resulting from improper use of the ZONO or any use of the ZONO by any person not trained by End User in the use of the ZONO as required in the User Manual; (D) any modification of the ZONO performed without Warranty Provider's written authorization; (E) any third party claim against End User or its employees or agents, or in connection with any ZONO under End User's jurisdiction or control.



17. EPA Label

The Environmental Protection Agency requires that the information contained in the label on the rightside of your ZONO cabinet be visible at all times. If after installation, this label is not visible, contact ZONOsanitech for a replacement label at 770-212-9201 Ext 3.

The following page contains a temporary label.

Until your permanent replacement label arrives, remove the temporary label from the User Manual and affix it to your ZONO cabinet where it is clearly visible.

When your replacement label arrives, you may discard the temporary version and affix the permanent label to your ZONO where it is clearly visible.



KKT inc DBA Lockwood Manufacturing Company
31251 Industrial Road
Livonia, MI 48150



EPA Est. 89639-MI-1

Active Ingredients: Ozone (20 ppm) and water (75% RH). The ZONO generates Ozone and humidifies the atmosphere using water during operation leaving no or trace amounts of water. The ZONO contains no ingredients during shipping. It kills 99.9% of common bacteria* on porous, semi porous, and non-porous surfaces and viruses[†] on non-porous surfaces .

WARNING: The levels of ozone gas within the ZONO during the sanitization cycle can be harmful or fatal. Do not place people or animals inside the ZONO. Only items identified in the ZONO OWNERS MANUAL may be placed in ZONO. Only unlock and open door of ZONO when the panel screen reads: "SAFE TO UNLOCK OR SAFE TO OPEN DOOR". Attempting to or unlocking or opening the door of the ZONO during operation could be harmful or fatal.

DIRECTIONS FOR USE: These directions for use must be followed. ALL PERSONS MUST READ THE OWNERS MANUAL BEFORE OPERATING THE ZONO AND OPERATE THE ZONO IN ACCORDANCE WITH THE OWNERS MANUAL.

*Staphylococcus Aureus, Methicillin-Resistant Staphylococcus Aureus, Escherichia Coli, Streptococcus Pneumoniae, Streptococcus Pyogenes, Shigella Dystenriae, Salmonella Enteritidis, and Pseudomonas Aeruginosa.

[†]Norovirus, Influenza A and RSV.

