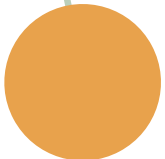
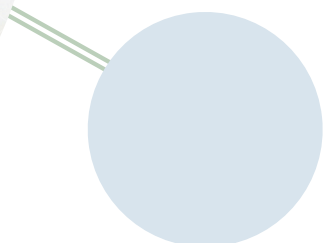
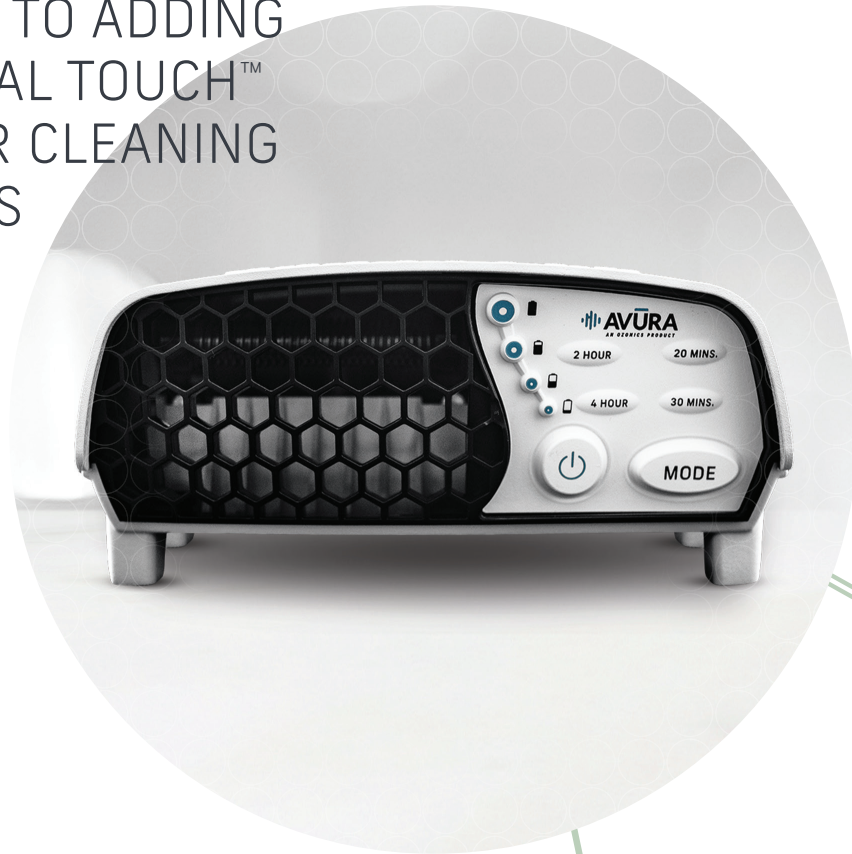




To prevent DEATH, SERIOUS INJURY or PROPERTY DAMAGE, you should read, understand and follow the warnings and instructions in this manual. **Keep for future reference.**

AVURA PULSE USER MANUAL

A GUIDE TO ADDING
THE FINAL TOUCH™
TO YOUR CLEANING
PROCESS



A MESSAGE FROM THE TEAM

Thank you for your recent purchase of the Avura Pulse ozone generator. We appreciate your business and look forward to helping you sanitize and remove unwanted odors from indoor spaces.

This User Manual is intended to provide you with the information you need for using, maintaining and storing the Pulse safely and effectively. It is important that you read this manual and strictly follow the instructions included in this User Manual. Our goal is to help simplify and demystify the process of oxidation as a powerful step in the sanitization process, and our team is here to help if you have any questions along the way. Please reach out to us at 641.450.1043 or info@avura.com with any questions.



To prevent DEATH, SERIOUS INJURY or PROPERTY DAMAGE, you should read, understand and follow the warnings and instructions in this manual. **Keep for future reference.**

WARNING

ONLY use the Avura Pulse in unoccupied spaces.

ALWAYS wait for at least 30 minutes after the run cycle has finished before re-entering the enclosed space.

Always clear the enclosed space of people and pets before turning on the machine and throughout the entire duration while the machine is in use. By not re-entering the enclosed space for at least 30 minutes after the run cycle is finished, the risk of exposure to ozone levels in excess of any EPA or OSHA guidelines is significantly reduced.

If you experience any symptoms like a scratchy throat or watery eyes, give the enclosed space more time to air out before re-entering the enclosed space.

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HEALTH AND SAFETY

The Avura Pulse is designed for use in unoccupied spaces only. The Pulse should only be used as intended and as detailed in this User Manual. The Pulse is effective at removing odors, viruses and harmful bacteria only if used properly and as instructed in this User Manual.

Training

When used in an occupational setting, your employer should provide training to you about how to use the Pulse and the potential health hazards associated with exposure to ozone. This training should include a review of the ozone safety data sheet, which is available on our website at avura.com/safetydatasheet.

If you have any questions, please contact us directly at 641.450.1043 or info@avura.com.



WARNING

Prolonged exposure to high concentrations of ozone may cause mucous membrane or respiratory irritation.

To prevent serious injury or death:

- DO NOT operate any ozone generator, including the Avura Pulse if you have any breathing or lung related issues, especially asthma.
- The Avura Pulse is NOT a medical device. DO NOT stop or alter any medical therapy programs or medications without the advice of your physician.
- ONLY use the Avura Pulse in unoccupied spaces.
- ALWAYS use the hangtag to alert others that ozone may be present in the area when machine is in use.
- ALWAYS wait for at least 30 minutes after the run cycle has finished before re-entering the enclosed space.

About Ozone

Safety is our number one priority. It is important to use the Pulse as designed for the pre-set durations and only in unoccupied spaces. Ozone is safe to breathe in low concentrations. Over exposure to higher concentrations of ozone may cause coughing, sore throat, difficulty breathing, headache or watery eyes. If you experience any of these symptoms, immediately move to fresh air.

NOTE: The EPA neither certifies nor recommends particular brands of air filters or home air-cleaning devices including portable air cleaners or purifiers. Learn more on the EPA Indoor Air Quality webpage available at [epa.gov/indoor-air-quality-iaq](https://www.epa.gov/indoor-air-quality-iaq).

Avura understands the EPA's findings to mean: (1) ozone concentrations that are considered safe levels of ozone to breathe are not effective at eliminating odors or killing unwanted bacterial and viral pathogens, and (2) ozone concentrations that are effective at eliminating odors, unwanted bacterial and viral pathogens are not safe for humans to breathe.


Based on this understanding, the Pulse has been designed to sanitize enclosed spaces safely, with highlights that include:

- The Pulse is designed for use only in unoccupied spaces, where people and pets are not present. This allows the Pulse to be effective at killing unwanted bacteria, odors and viral pathogens while eliminating human contact or exposure during the run cycle.
- The Pulse has four (4) modes of ozone output, which can be selected depending on the size of the room or enclosed space, making it more effective than ozone generators using either too little or too much ozone.
- The Pulse uses a patented pulsating output to better modulate ozone concentrations during a run cycle.
- The Pulse's automatic shut-off keeps people from having to enter a space with an increased ozone concentration.
- Guidelines to wait for an additional period of time (30 minutes) to allow the ozone to dissipate before re-entering the space.
- Should users experience any symptoms after re-entering the space, like a scratchy throat or watery eyes, users should either ventilate the space by opening windows and/or clear the space of people and pets again and wait a longer period of time for the ozone to dissipate.

Electrical Device

Because the Pulse is an electrical device, please take appropriate steps while operating this device to prevent the risk of electric shock.

WARNING

 **Electric Shock Hazard.**
The Pulse operates in excess of 10,000 volts.

To prevent serious injury or death:


- DO NOT operate near water.
- DO NOT operate near children or let them operate it.
- DO NOT allow loose flammable materials to enter the inlet end of the machine.
- DO NOT operate near any flammable gases or other flammable materials.
- DO NOT immerse in water or use any chemicals to (e.g., gasoline, kerosene, acetone, etc.) to clean the housing or battery.
- DO NOT modify in any way. Do not sand, drill, file or remove parts from Avura Pulse.
- DO NOT open the Avura Pulse with the purpose of inspecting the components. There are no user serviceable parts inside the unit. Opening the Avura Pulse will void your warranty.

Use “common sense” pre-caution when using the Pulse. If you have any questions about potential risks of using this electrical device, please contact our Customer Service line at 641.450.1043 before beginning treatment.

Lithium-Ion Battery Pack

Because the Pulse is an electrical device, please take appropriate steps while operating this device to prevent the risk of electric shock.

WARNING

 **Risk of Fire and Electric Shock.**
No User Serviceable Parts

To prevent serious injury or death:

- DO NOT charge unattended.
- ONLY use original lithium-ion battery packs.

- DO NOT use the battery pack or charger for any use other than its intended purpose. The battery pack voltage must match the battery charger voltage.
- DO NOT expose to rain or allow any liquids on or inside the Pulse. The risk of electric shock and the potential for fire are increased should the unit, charger or battery pack be exposed to water or submerged in liquid of any kind.
- DO NOT charge the Pulse when ambient temperatures are below 32°F (0°C) or higher than 100°F (38°C). Do not charge in direct sunlight.
- ALWAYS inspect the battery charger and cords prior to each use. If dropped or damaged, do not use the charger and discard immediately.
- DO NOT use if the battery pack is dropped, punctured, crushed and/or dented. Contact Avura to order a replacement battery pack.
- DO NOT modify battery pack any way.
- DO NOT use the battery pack if it shows visible damage. The battery pack may emit smoke or gases if it becomes damaged or is used incorrectly. Respiratory tract irritation may occur, and users should seek medical attention if they experience any adverse effects. Do not allow any others to approach the Pulse. For assistance, please call 641.450.1043 or email info@avura.com.
- Battery leakage may occur under extreme usage or temperature conditions. Avoid contact with skin and eyes. Battery liquid is caustic and could cause chemical burns. If battery liquid comes in contact with skin, wash quickly with soap and water. If the liquid contacts your eyes, immediately flush eyes with water for several minutes and seek medical attention.
- DO NOT force the battery pack into the Pulse. The battery pack should not be excessively difficult to insert or to remove.
- Battery charging times may increase with battery age and usage.
- ONLY grab the charger by the plug and not the cable when plugging and unplugging from the wall.
- DO NOT place the charger or the battery pack near flammable materials. Ensure the battery pack is completely dry and the Pulse is placed on a fireproof surface before charging. There is a risk of fire due to the heat generated during charging.
- ALWAYS keep the battery pack and charger away from children.

BEFORE GETTING STARTED

THE SCIENCE OF OZONE TREATMENT: HOW THE AVURA PULSE WORKS

The Pulse is designed to reduce and/or remove volatile organic compounds (VOCs), odor, mold and harmful bacteria like E. Coli by first converting oxygen (O_2) into ozone (O_3). Ozone is the airborne (gas) equivalent of how chlorine or bleach is used as a liquid cleaning agent.

The advantages of ozone over bleach are that a) ozone is a stronger oxidizing agent than bleach; b) unlike chemical disinfectants, ozone does not leave behind any residue; and, c) gaseous ozone can reach in, under and around places that liquid bleach simply cannot reach. Current research shows that ozone can also sanitize against viruses like influenza, norovirus and rotavirus SARS-CoV-2 (responsible for COVID-19).

The advantage the Pulse has over all other ozone generators is that it produces enough ozone to deodorize and sanitize, but not concentrations high enough to cause damage to surfaces, fabrics and other materials. It does so through our patent-pending PulseTech, delivering scaled concentrations of ozone over set durations.

The patented Pulse is designed to effectively deodorize and sanitize without degrading and destroying materials like bleach can sometimes do. The unit can be used in a variety of environments, including rooms, offices, hotel spaces, automobiles, small boats, RVs, closets and for athletic apparel sanitization.

WHAT'S INCLUDED

The following items are included with the Pulse:

- Avura Pulse
- Power supply

OPERATING INSTRUCTIONS

First Time Set Up

1. Unpack the Pulse and power supply.
2. Insert the power supply cord into the power port in the rear of the Pulse.
3. Connect the power supply to a standard outlet (110v) to use.

Powering Pulse

The Pulse can be powered by plugging the unit into an electrical outlet (110V, AC) or using the lithium-ion rechargeable battery (sold separately). The Pulse can also be used while the battery pack is charging and the unit is plugged into an electrical outlet.

An optional lithium-ion rechargeable battery pack is sold separately. A fully charged battery pack will power the Pulse for approximately seven (7) hours of run time.

The four (4) battery level indicator lights show what percentage of charge remaining in the battery.

Charging Times

- 4 lights - 100% charge or ~ 7 hours
- 3 lights - 75% charge or ~ 5 hours
- 2 lights - 50% charge or ~ 3.5 hours
- 1 light - 25% charge or ~ 1.5 hour

NOTE: Battery packs are sold separately and are available for purchase at avura.com/battery.

Turning the Pulse On and Off

To turn on the Pulse, press and hold the power button for three (3) seconds. The MODE, power and battery level indicator will all light up.

To turn off the Pulse manually, press and hold the power button for three (3) seconds. The MODE and power button will light up, and the low battery level light will blink as the unit goes through the power down cycle. The Pulse will turn off automatically after completing a full run cycle.

Modes of Operation

The Pulse has four (4) built-in settings for duration-based modes of operation.

- **20-Minute:** Delivers a pulsed combination of high and low output concentrations of ozone throughout the 20-minute cycle. Use to treat smaller enclosed spaces, such as closets.

Designed for use with the Avura Bag to treat textiles for odors and sanitize personal protective equipment. However, an Avura Bag is not required for use.

- **30-Minute:** Delivers a pulsed combination of high and low output concentrations of ozone throughout the 30-minute cycle.

Designed for use with the ONE Locker to treat textiles for odors and sanitize personal protective equipment. However, a ONE Locker is not required for use.

- **2-Hour:** Runs in high output for the full two-hour cycle. Use to treat medium-sized enclosed spaces up to 400 sq. feet.

- **4-Hour:** Runs in high output for the full four-hour cycle. Use to treat larger enclosed spaces up to 800 sq ft.

To change the mode, press the MODE button until the desired cycle is selected indicated by an LED light. The light will remain lit while the Pulse is running. The Pulse will automatically turn off after the selected cycle is complete.

Pulse Technology

Avura's patent-pending PulseTech releases alternating concentrations of ozone during a set duration to help protect textiles and certain polymers/ rubber products that may be affected by oxidant overexposure.

USING AVURA PULSE

SANITIZING AN ENCLOSED SPACE: 3-STEP PROCESS

Follow our three-step process for sanitizing and deodorizing an interior enclosed space.

1. Stop the Source and Prepare the Space
2. Run the Pulse
3. Ventilate the Enclosed Space

Learn more about each step of the process below.

Remove the Odor Source and Prepare the Space

Before running the Pulse, first identify the source of the odor, bacteria or other pathogen and remove it from the room or enclosed space. For example, if the unwanted odor is caused by burnt food, remove the burned items before running the Pulse.

The Pulse is designed to provide a complementary Final Touch™ to your cleaning process. Wipe down any hard surfaces using your preferred EPA-approved cleaning products to sanitize surfaces within reach. The Pulse will further sanitize areas that liquid disinfectants cannot reach, such as television remotes, bed linens, upholstery, drapes and the air in the room or enclosed space without leaving behind any chemical residue.

WARNING

Prolonged exposure to high concentrations of ozone may cause mucous membrane or respiratory irritation.

To prevent serious injury or death:

- DO NOT operate any ozone generator, including the Avura Pulse if you have any breathing or lung related issues, especially asthma.
- The Avura Pulse is NOT a medical device. DO NOT stop or alter any medical therapy programs or medications without the advice of your physician.
- ONLY use the Avura Pulse in unoccupied spaces.

- ALWAYS use hangtag to alert others that ozone may be present in the area when machine is in use.
- ALWAYS wait for at least 30 minutes after the run cycle has finished before re-entering the enclosed space.

Run the Avura Pulse

Mold, Odor and Volatile Organic Compounds (VOCs) Removal

While each space to be treated is different with many variables to be considered, the following guidelines have been developed for removing VOCs and odor-causing bacteria to maximize effectiveness and minimize ozone exposure. In many cases, a properly prepared space that has the bulk of the odor-causing material disposed of or wiped up, you may only need one or two 20 – 30-minute treatments to remove the odor. Difficult to remove odors, such as pet urine, can take up to 2 – 4 hours to be effective.

Bacteria and Virus Sanitization

Ongoing scientific research demonstrates ozone's efficacy to reduce and possibly eliminate bacteria and viruses such as COVID-19. When used properly, in concert with EPA-approved disinfecting cleaning products, the Avura Pulse provides a higher level of sanitization than only using a liquid cleaning product.

Below are our recommendations to maximize effectiveness and safety:

- Properly disinfect surfaces with an EPA-approved cleaning product such as bleach on solid surfaces, including bathtubs, toilets and tile flooring.
- To sanitize areas that bleach and other similar cleaning products cannot reach, such as television remotes, bed linens, upholstery, drapes and air in the room or enclosed space, we recommend running the Avura Pulse for 20 minutes – 4 hours, depending on the size of the enclosed space.
- Always close all windows and doors before starting a run cycle.

Positioning and Placement

When positioning the Pulse in an enclosed space, do not obstruct the airflow to the device. It is important to position the Pulse so that air from the room can flow freely into and out of the machine. If possible, turn off the Heating, Ventilation and Air Conditioning (HVAC) system. Otherwise, place the Pulse as far away from the return air vent as possible.

NOTE: It is recommended to place the Pulse at least 5 ft. off the ground when treating the entire enclosed space.

When spot treating a specific area, such as a rug soiled with pet urine, place the Pulse within 1 – 2 ft. of the source to target the treatment.

Turn off the Heating, Ventilation and Air Conditioning (HVAC) system and any fans to help keep ozone contained in the enclosed space.

Always close all windows and doors to an enclosed space before starting a run cycle.

Space/Room Size	Time	Mode
≤100 sq. ft.	20 minutes	20-Minute
≥100 – 400 sq. ft.	30 minutes – 2 hours	30-Minute
≥400 – 800 sq. ft.	2 hours – 4 hours	2-Hour
800 sq. ft.	4 hours	4-Hour

Turning On the Pulse

Press the power button and hold for three (3) seconds to turn on the Pulse. Press the MODE button to select the desired setting. See Modes of Operation section for more details.

 WARNING

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To prevent serious injury or death:

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- ONLY use the Pulse in unoccupied spaces.
- ALWAYS use hangtag to alert others that ozone may be present in the area when machine is in use.
- ALWAYS wait for at least 30 minutes after the run cycle has finished before re-entering the enclosed space

The Pulse will automatically turn off after the selected cycle time has elapsed.

Ventilate the Enclosed Space



ALWAYS wait 30 minutes before re-entering the enclosed space.

Opening windows, exterior doors and turning on the HVAC system or a fan will help further ventilate the enclosed space after the 30 minutes have passed.

Final Notes

If the original odor persists after running the Pulse, you may need to repeat the cycle once or twice more. Once the original odor has been oxidized you may consider doing a periodic maintenance treatment to help ensure the odor or the mold does not return.

Additional Information

Maintenance

Periodically (every 100 – 200 hours of use) use moisture-free, compressed air to blow any accumulated dust or debris off the coil and the fan.

To clean, wipe with a dry rag to remove external dirt or dust.



DO NOT immerse in water or use any chemicals to (e.g., gasoline, kerosene, acetone, etc.) to clean the housing or battery.

For additional instructions, please visit our website at avura.com.

Service

Eventually your Pulse will need a replacement coil. The coil is an internal assembly used to convert oxygen to ozone.

If you no longer detect the presence of ozone or if it is greatly reduced when you turn on your Pulse, it most likely needs servicing. Another way to determine if it needs service is to look into the outlet side of the unit on the front, while it is running in a dark room (lights off) and if you notice dark spots on the coil or no longer observe a purplish glow of the coil, then the unit needs to have the coil replaced.

At Avura, we provide the end consumer a fully functional in-shop service department you can count on should you need to have your unit serviced. Simply request our Service & Repair form (RMA) via email and send the unit to us with the completed form.

Call our Customer Service line at 641.450.1043 or visit our website for warranty information at avura.com.

Storage

Store your Pulse indoors, in a temperature-controlled environment. Properly storing the Avura Pulse will impact its life cycle. Please keep it safe and dry.

210 ABNER JACKSON PARKWAY
SUITE 200
LAKE JACKSON, TEXAS 77566

641.450.1043

AVURA.COM