



S.A.G.E. AT HOME

MICRO (CONSUMER) USER MANUAL

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WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

IMPORTANT SAFETY INSTRUCTIONS

- Read these instructions prior to operating the unit.
- Keep and follow all instructions.
- Heed all warnings. Failure to use the equipment in the manner specified may impair the unit from providing the desired protection.
- Plug unit into a grounded outlet. Ensure proper conditions for operation. The unit is designed to operate under normal conditions indoors (temperature 5-40 degrees Celsius, RH less than 80% (non-condensing), at an altitude <2000m and main supply fluctuations +/- 10% of nominal voltage, overvoltage Category II.
- Allow unit to complete pre-programmed cycles prior to unplugging or shutting off power. This allows it to enter safe mode.
- Do not allow the unit to get wet or be used in or near water.
- Do not block any ventilation openings. Use in accordance with these instructions.
- Do not attempt to open or tamper with the unit.
- Do not place or store the unit near any flammable materials or liquids.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the unit.
- Unplug this unit during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the unit has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the unit, the unit has been exposed to rain or moisture, does not operate normally, or has been dropped.
- Unit is designed to operate only when the room is unoccupied. There are redundant safety systems to ensure the unit does not activate while the room is occupied as the UV light is not recommended for excessive exposure. If the sensor in the system fails, the system will shut down.
- Do not look directly at the unit due to the brightness of the light. UV light does not significantly penetrate standard glass, therefore, incidental exposure on the other side of a window or wall does not present any significant risk.

THIS PRODUCT IS NOT A TOY. KEEP AWAY FROM CHILDREN.

PRODUCT FEATURES

Built-in motion sensor will actively monitor the space and only allow the unit to activate when the space is unoccupied.



Micro uses Pulsed Xenon technology to deploy powerful bursts of UV-C, UV-B, UV-A, and violet-blue light with 180° of coverage.

OPERATION OF THE UNIT

1. Position the unit in the targeted cleaning area.
 - It is recommended that you place the unit approximately 2 meters (~6 1/2 feet) or less away from the priority areas. The length of time necessary to run the unit increases with the distance from targeted area.
 - Leverage reflective surfaces in your space, including standard glass, as the UV light will reflect off of these surfaces. However, surfaces such as paint will absorb the photons, minimizing effects of the unit, so avoid placing the unit too close to walls in your area.
 - Minimize any shadowed areas as unit can only kill germs where the light touches, either directly or by reflection.
2. Plug the unit into a standard 110V power outlet. At its peak, the unit will draw less than 3.5 amps at 110V for 4 second intervals. Avoid exceeding maximum amp draw available on your breaker.
3. While the unit is operational, all persons should leave the room during the cleaning cycle. Exit the room within 60 seconds for optimal functioning of the unit. The unit is programmed to operate for 30-minutes per cycle. See page 4 for more information on recommended cleaning protocols. The unit's redundant safety systems will stop the unit from operating if motion is detected in the space. The unit will resume operation approximately 60 seconds after room is unoccupied and no additional motion is detected.
4. The unit will run a safety test to ensure unit is functioning properly and that there is no motion detected in the space. If successful, unit will run its pre-programmed operational cycle as described in step 3.
5. Allow the unit to complete its entire cycle before unplugging the unit. This allows the unit to enter safe mode. If necessary to unplug the unit prior to completion of cleaning cycle, be sure to keep unit away from water for optimal safety.
6. After each disinfection cycle, it is recommended that you allow the unit to cool down for 15 minutes prior to operating another cycle.

Disclaimer: The S.A.G.E. UV unit is not intended for use as a medical device and people should not be directly exposed to the light generated by the unit. The actual disinfection rates on a specific space will vary.



BATHROOM

Micro can help disinfect counters, toilets, sinks and showers. With Micro on its long side, position Micro on the counter (or other elevated position, like small table or tray), so it faces the area you want to sanitize. Be sure to keep Micro away from water, so don't place it close enough to fall into water, such as the toilet. Plug Micro in and leave the room. Let the unit run it's pre-programmed 30-minutes cycle.

Micro is also great at killing mold and fungus in showers and bath tubs. When the area is dry, place Micro on its long side on either floor of the shower or on an elevated surface above the tub. Let it run for 30-minutes. Mold and fungus is now dead and you can rinse it away. A soft brush may be needed to gently loosen the mold and fungus prior to rinsing.



ELECTRONIC DEVICES

At close range, Micro can help sanitize your cell phone, tablet, remote, or other object you'd like to disinfect. With Micro on its long side, place the targeted device or other object about 6 inches away. Plug the unit in and leave the room. At close distances, Micro can kill germs more quickly.

After about 15 minutes, come back, flip over the objects, and leave the room again. Micro will automatically resume its cleaning cycle in about 60 seconds. Let the unit complete the rest of its cleaning cycle to disinfect the other side of the objects.



KITCHEN

Micro can be used after your normal cleaning to ensure all bacteria, such as *E. coli* or Salmonella are dead. This is especially helpful after preparing raw meat, such as chicken, pork, beef, raw eggs, etc.

Place Micro on its long side on a counter so it faces toward the area you want to clean. Plug the unit in, leave the room, and return in 30-minutes to a disinfected kitchen. Be sure to keep Micro clear of water.



BEDROOMS & OTHER LIVING SPACES

Micro can help disinfect rooms up to 10' x 10'. Imagine you or a loved one has been home sick in bed. Disinfect the rooms that they have been in - living room, bedroom, children's room, dining room, etc. Place Micro in the room so that it is facing the area you would like to kill bacteria or viruses. Plug the unit in and let it run for 30-minute cycle.

This is also a great option when you want to take Micro on the road with you and disinfect your hotel room upon arrival.

RECOMMENDED CLEANING PROTOCOLS

For most situations, the general cleaning procedures can be used to operate the Micro unit. However, there are special instructions recommended for blood spills, or when certain organisms, such as *C. diff* are known or suspected to be present.

GENERAL CLEANING

1. Complete standard cleaning procedures to remove any visible dirt, grease, or other debris from space.
2. Activate the Micro unit per operational instructions on page 2.
3. Upon returning to space, look at indicator light. Solid green light indicates cleaning cycle completed. If motion was detected prior to observing the indicator light, the indicator light will turn red. If you want to determine if unit completed the last cycle, prior to unplugging, stand out of range of the motion sensor for 60 seconds. The light will resume solid green if cycle was completed. Otherwise, it will resume operation.

CLEANING WHEN BLOOD OR BODILY FLUIDS ARE PRESENT

UV light has the ability to penetrate liquid blood, which has not formed a dried crust and/or bodily fluids up to a 1/16" thickness as long as there is no tissue or solid material present. Therefore, UV light may be used to help protect you before and after you manually clean away the blood or bodily fluids.

1. Activate the Micro unit prior to commencing any cleaning procedures. If the blood has already dried, apply hydrogen peroxide solution prior to running the unit.
2. Utilize normal procedures, including appropriate safety protocols to clean the space, including removal of blood and bodily fluids.
3. Activate a second cycle of the Micro unit to target any remaining bacteria and viruses.

CLEANING WHEN *C. DIFF* IS OF CONCERN

Clostridium difficile (*C. diff*) is a bacteria that is extremely difficult to kill (hence its name) as it is able to survive in unfavorable conditions. Furthermore, it is an anaerobic, endosporic organism, which means it can survive without oxygen and form dormant spores to survive harsh conditions. With the risk of severe illness associated with *C. diff*, it is recommended that you use a combination of approaches to reduce the risk of contracting *C. diff* in your facility.

1. Utilize your facility's adopted environmental cleaning and disinfection strategy for dealing with *C. diff*.
2. Activate the Micro unit for two consecutive 30-minute cycles at a range of less than 1 meter for best results.

For additional questions or guidance about recommended protocols, please contact customer service at Violet Defense at 407.433.1104.

Each Micro unit has an indicator light that helps you determine the status of the unit.



| Color of Light | Meaning |
|----------------|--|
| Flashing Green | Unit is ready to begin cleaning when room becomes unoccupied. |
| Solid Green | Unit has successfully completed its cleaning cycle. If unit detects motion, the unit will change to solid red, even if cycle completed. |
| Solid Red | Unit was interrupted during the cleaning cycle. Cleaning will resume when room becomes unoccupied again during the programmed times for operation. |
| Flashing Red | One of the safety sensors has detected an issue. Please see troubleshooting section for further information. |

TROUBLESHOOTING

1. If unit is flashing red, then an issue was detected by the unit. Unplug the unit.
2. Plug the unit back into the wall. Exit the room within 60 seconds.
3. When you return to the room, identify the color of light on the sensor indicator. If unit is green or solid red, the unit is working properly. If unit is still flashing red or is not responding at all when plugged in, contact customer service at Violet Defense at 407-433-1104.
4. If unit is non-responsive (i.e. no indicator light showing), please contact Violet Defense for technical support.

CLEANING THE UNIT

- Do not use abrasive cleaners to clean the unit.
- To clean the unit, wipe down the metal plates with stainless steel polish using a microfiber cloth.

UV SAFETY OVERVIEW

Given the correct combination of user protocols and the built-in safety features of the S.A.G.E. UV units, there are minimal risks of any harmful effects from using the S.A.G.E. UV unit.

RECOMMENDATIONS

- If in the vicinity of the S.A.G.E. UV unit during operation, do not look directly at the light. This is similar to how you would avoid harmful effects from the sun by not looking directly at it.
- UV light does not significantly penetrate standard glass. It is okay to be behind a window or wall while the unit is operational.
- Per the built-in safety features described below, the unit is designed to not operate while a room is occupied. When ready to use the unit, please be sure you and any other family members leave the area. The unit takes about 60 seconds to start operating, but it won't activate if it senses motion still in the room.

SAFETY FEATURES

The S.A.G.E. UV units have four primary aspects to their built-in safety features to ensure the safety of anyone operating or in the vicinity of a unit.

Limited Exposure Risk

Due to the nature of the programming on the S.A.G.E. UV unit, over a 30-minute cycle time for the unit, the actual exposure to UV (if there were no other safety systems in place) would be no more than two seconds of exposure.

Motion Detection

The S.A.G.E. UV unit has a built-in passive infrared (PIR) sensor used to detect motion in a space. The sensor is programmed to detect individuals walking into the deployment space. The unit will not resume operation of the cleaning cycle until it has successfully detected the space is free of motion.

Safe Stop

The third layer of protection built into the S.A.G.E. units is to ensure that if the motion sensors or other components of the unit experience technical issues, the unit will safe stop by cycling the unit off. The unit will flash red indicating that you should contact Violet Defense for technical support. The unit will not resume operation until the issue detected has been resolved and should only be serviced by Violet Defense personnel. If unit is non-responsive (i.e. non-operational or no indicator light), contact Violet Defense.

Frequency of Flashes

The S.A.G.E. UV units will flash every 6 seconds during operation. Violet Defense collaborated with the Epilepsy Foundation when designing the product to ensure that the frequency of flashes will not cause any issues for someone with photosensitive epilepsy.

For more information about UV and/or the safety features of your Micro unit, please contact the team at Violet Defense at info@violetdefense.com or 407.433.1104.

Occupational Safety and Health Administration (OSHA)

The Occupational Safety and Health Administration (OSHA) does not have any mandated exposure limits to ultraviolet light. OSHA only provides technical guidance regarding protecting employees from ultraviolet laser exposure. While general information about ultraviolet contained in that guidance is described below, it is important to note that Violet Defense Technology does not currently deploy ultraviolet lasers. For more information on OSHA's guidelines, visit https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=24755.

Ultraviolet radiation is divided into three regions: UV-A: 315-400 nanometers (nm), UV-B: 280-315 nm, and UV-C: 100-280 nm. UV can be associated with adverse health effects due to prolonged exposure and the wavelength of light.

According to OSHA's guidelines, "exposure in the shorter UV-C and longer UV-A ranges seems less harmful to human skin. The shorter wavelengths are absorbed in the outer dead layers of the epidermis and the longer wavelengths have an initial pigment-darkening effect followed by erythema if there is exposure to excessive levels."

"The hazards associated with skin exposure are of less importance than eye hazards." Exposure to light may cause photokeratitis or cataracts.

National Institute for Occupational Safety and Health (NIOSH)

The National Institute for Occupational Safety and Health (NIOSH) recommends limits to exposure determined by the wavelength of UV light and intensity. NIOSH recommends that the time of exposure to an intensity of 100 microwatts per square centimeter at wavelength 254 nm not exceed 1 minute. Per the programming, UV exposure from S.A.G.E. unit for a 30-minute cycle is less than two seconds. For more information, view the recommended standards from NIOSH (<https://www.cdc.gov/niosh/docs/73-11009/pdf/73-11009A.pdf>).

Environmental Protection Agency (EPA)

The Environmental Protection Agency (EPA) is the governmental agency responsible for regulating ultraviolet light products. It regulates chemical disinfectants along with devices, such as equipment that generates UV light, used to control pests like bacteria and making antimicrobial claims. For more information about EPA guidelines, visit <https://www.epa.gov/safepestcontrol/pesticide-devices-guide-consumers>.

Food and Drug Administration (FDA)

The Food and Drug Administration (FDA) only regulates devices that are classified as medical instruments, machines, and devices used to treat diagnosed medical conditions. Therefore, Violet Defense does not fall under FDA guidelines.

STATEMENT OF LIMITED WARRANTY FOR VIOLET DEFENSE S.A.G.E. PRODUCTS

04/2020

Thank you for purchasing your Violet Defense S.A.G.E Product (the "Product").

THE TERMS OF THE ONE (1) YEAR LIMITED WARRANTY (THE "WARRANTY") APPLICABLE TO THE PRODUCT ARE SET FORTH BELOW.

HOW CONSUMER LAW RELATES TO THIS WARRANTY

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE (OR BY COUNTRY, PROVINCE OR OTHER JURISDICTION). OTHER THAN AS PERMITTED BY LAW, VIOLET DEFENSE, LLC ("VIOLET DEFENSE") DOES NOT EXCLUDE, LIMIT OR SUSPEND OTHER RIGHTS YOU MAY HAVE, INCLUDING THOSE THAT ARISE FROM NONCONFORMITY OF THE PRODUCT. FOR A FULL UNDERSTANDING OF YOUR RIGHTS, YOU SHOULD CONSULT THE LAWS OF YOUR COUNTRY, PROVINCE, STATE OR OTHER JURISDICTION.

WARRANTY LIMITATIONS AND DISCLAIMERS (SUBJECT TO CONSUMER LAW)

TO THE EXTENT PERMITTED BY LAW, THIS WARRANTY AND THE REMEDIES SET FORTH HEREIN ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES AND CONDITIONS, WHETHER ORAL, WRITTEN, STATUTORY, EXPRESS OR IMPLIED. VIOLET DEFENSE DISCLAIMS ALL STATUTORY AND IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND WARRANTIES AGAINST HIDDEN OR LATENT DEFECTS, TO THE EXTENT PERMITTED BY LAW. IN SO FAR AS SUCH WARRANTIES CANNOT BE DISCLAIMED, VIOLET DEFENSE LIMITS THE DURATION AND REMEDIES OF SUCH WARRANTIES TO THE WARRANTY PERIOD (AS DEFINED BELOW) AND, AT VIOLET DEFENSE'S OPTION, THE REMEDIES SET FORTH HEREIN. SOME STATES (COUNTRIES, PROVINCES AND OTHER JURISDICTIONS) DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY (OR CONDITION) MAY LAST, SO THE LIMITATION DESCRIBED ABOVE MAY NOT APPLY TO YOU.

WHO MAY USE THIS WARRANTY?

Violet Defense extends this Warranty only to the end-user purchaser who originally purchased the Product from Violet Defense or a Violet Defense authorized distributor or reseller. This Warranty is non-transferable and is not intended for the benefit of any person or entity other than the original end-user purchaser.

WHAT DOES THIS WARRANTY COVER?

VIOLET DEFENSE WARRANTS THE VIOLET DEFENSE PRODUCT TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP WHEN USED NORMALLY IN ACCORDANCE WITH VIOLET DEFENSE'S PUBLISHED GUIDELINES FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF ORIGINAL RETAIL PURCHASE BY THE END-USER PURCHASER, AS EVIDENCED BY THE PROOF OF PURCHASE (THE "WARRANTY PERIOD").

WHAT DOES THIS WARRANTY NOT COVER?

This Warranty does not apply to any appliance, assembly, or product other than the Product, even if the Product is incorporated in, or packaged or sold with, any such appliance, assembly or other product. This Warranty does not apply to any condition or damage due to external causes such as: (1) acts of nature; (2) physical damage; (3) exposure to water either through submersion or water entering the unit; (4) exposure to adverse or hazardous chemicals, including the use of reactive cleaning agents or harsh chemicals to clean the Product; (5) environmental conditions; (6) vandalism; (7) fire; (8) power failure,

improper power supply, power surges or dips; (9) induced vibration; (10) negligence or more culpable conduct by the purchaser, its employees, contractors, representatives or other users of the Product; (11) improper or unauthorized use, installation, handling, storage, alteration, maintenance or service, including failure to abide by any product classifications or certifications, unauthorized repair, or failure to comply with any applicable standards, codes, recommendations, product specification sheets, instructions, and safety warnings; (12) use of the Product(s) with other products, equipment, processes or materials supplied by any end user or third party; (12) transportation; (13) normal wear and tear; (14) accidents; or (15) events or occurrences beyond Violet Defense's control.

WHAT IS THE PERIOD OF COVERAGE?

This Warranty starts on the date of the original purchase of the Product by an end-user purchaser, and lasts for one (1) year. The Warranty Period is not extended if we replace the Product. Violet Defense may change the availability or terms of this Warranty at its discretion, but any changes will not be retroactive.

WHAT ARE YOUR REMEDIES UNDER THIS LIMITED WARRANTY?

During the Warranty Period, if the Product fails to conform to the foregoing Warranty, Violet Defense, at its sole discretion, will replace the Product (or the defective portion thereof). The foregoing Warranty excludes labor and equipment required to remove the non-conforming Product (or part(s) thereof) and/or re-install the replacement Product(s) (or part(s) thereof).

HOW DO YOU OBTAIN WARRANTY SERVICE?

Warranty claims must be submitted in writing to Violet Defense within thirty (30) days of the discovery of the nonconformity, or the nonconformity will be deemed to have been waived. To obtain Warranty service, you must call 407.433.1104 during the Warranty Period to obtain a Return of Materials Authorization ("RMA" number. No Warranty service will be provided without an RMA number.

The nonconforming Product(s) may be required to be returned to Violet Defense for inspection and verification of the nonconformity. Violet Defense will not be responsible for any costs and expenses incurred in connection with shipment of the nonconforming Product(s) (or part(s) thereof) to Violet Defense, however, Violet Defense shall bear the expenses of shipping the replacement Product(s) (or part(s) thereof) to the end-user purchaser in the event that Violet Defense replaces the Product(s) (or part(s) thereof).

SOLE REMEDIES; LIMITATION OF LIABILITY

THE REMEDIES DESCRIBED ABOVE ARE YOUR SOLE AND EXCLUSIVE REMEDIES AND OUR ENTIRE RESPONSIBILITY FOR ANY BREACH OF THIS WARRANTY. OUR LIABILITY SHALL UNDER NO CIRCUMSTANCES EXCEED THE ACTUAL AMOUNT PAID BY YOU FOR THE NONCONFORMING PRODUCT. EXCEPT AS PROVIDED IN THIS WARRANTY AND TO THE MAXIMUM EXTENT PERMITTED BY LAW, WE ARE NOT LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, OR UNDER ANY OTHER LEGAL THEORY, INCLUDING BUT NOT LIMITED TO LOSS OF USE; LOSS OF REVENUE; LOSS OF ACTUAL OR ANTICIPATED PROFITS (INCLUDING LOSS OF PROFITS ON CONTRACTS); LOSS OF THE USE OF MONEY; LOSS OF ANTICIPATED SAVINGS; LOSS OF BUSINESS; LOSS OF OPPORTUNITY; LOSS OF GOODWILL; LOSS OF REPUTATION; OR ANY INDIRECT OR CONSEQUENTIAL LOSS OR DAMAGE HOWSOEVER CAUSED INCLUDING THE REPLACEMENT OF EQUIPMENT AND PROPERTY. SOME STATES (COUNTRIES, PROVINCES AND OTHER JURISDICTIONS) DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

GENERAL

No Violet Defense distributor, reseller, agent, or employee is authorized to make any modification, extension, or addition to this Warranty. If any term is held to be illegal or unenforceable, the legality or enforceability of the remaining terms shall not be affected or impaired. This Warranty is governed by and construed under the laws of the country in which the Product purchase took place.

