



**Orochi™**

**USER MANUAL**

**English**

## Table of Contents

Safety	3
Unpacking	9
Customer Support	9
Limited Warranty	10
Benefits of UV-C Technology	11
UV-C Disclaimer	11
General Guidelines	12
Technical Specifications	13
Fixture Overview	14
How do I use my Orochi?	15
Timer Setup/Recommended Times	17
Cleaning	18
Replacing Radiators	18

# Safety



HIGH INTENSITY ULTRAVIOLET LIGHT RISK OF EXPOSURE TO ULTRAVIOLET RADIATION AVOID DIRECT EYE AND SKIN EXPOSURE



**WARNING:** This product can expose you to chemicals including mercury, which is known to the State of California to cause cancer. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



**All Nemesis™ units are built and registered under our EPA™ registered facility #99690 as a Risk Group 3 UV-C product under 40 CFR 156**

## IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed including the following:

### **READ AND FOLLOW ALL SAFETY INSTRUCTIONS**

### **SAVE THESE INSTRUCTIONS**

a) UV radiation can pose a risk of personal injury. Overexposure can result in damage to eyes and bare skin. To reduce the risk of overexposure this equipment must be installed in accordance with the manufacturer’s site planning recommendations. This may include instructions on the relative location of each germicidal system component, the minimum distances between UV-generating devices and other objects or surfaces, and protection from line-of-sight exposure to UV radiation in occupied spaces located above the equipment mounting area (e.g., upper floor balconies, open staircases, etc.)



**WARNING**

b) Maintenance and servicing of this UV generating equipment shall be performed by authorized personnel. Service personnel must wear appropriate Personal Protective Equipment (PPE) if the equipment will be in operation during the maintenance or servicing work. Contact Nemesis UV-C for PPE recommendations and guidance.

**WARNING**



c) When replacing lamps, replace them only with the lamps for which the equipment is marked and intended.



d) The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.



e) Do not use this equipment for other than intended use.



## SAVE THESE INSTRUCTIONS

Never allow humans, animals or plants to have direct exposure of UV-C light without proper PPE. Since UV-C is not visible light, the fixtures have safety protocols built-in to avoid exposure. Many studies have been done on the effects of UV-C and the results show minimal effect in the short term. Studies have shown short term, temporary damage to the eye can be an effect of exposure to UV-C light. Long term exposure may produce fading or degradation of some materials. Amounts of degradation are completely dependent on types and quality of materials and if they have UV-C protection built-in. The FDA approved waivers on UV-A, UV-B and UV-C, more information is available from the FDA at: <https://www.fda.gov/media/136533/download>



For the proper, safe, and effective use of your device it is ESSENTIAL that the user follows all guidelines and instructions in this manual. Proper installation and use is essential for the effectiveness and safety of this product.



Disconnect the device from power source before cleaning the device or replacing radiators (see page 18 for detailed instructions)

CAUTION

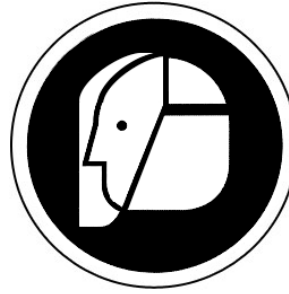


There are no serviceable parts inside the unit. DO NOT attempt to do any repairs beyond basic cleaning and lamp replacement. Any attempts to repair the unit will void the warranty. Nemesis is not responsible for any damages or harm caused by your repairs. Please contact Nemesis at: (469) 466-2UVC for repair assistance.



**WARNING: To guard against injury, basic safety precautions should be observed, including the following:**

1. Read and save all notices, warnings and safety instructions received with equipment.



2. Avoid exposure to direct or reflected germicidal ultraviolet rays. Germicidal ultraviolet rays are harmful to the eyes and skin.



**⚠ WARNING**

3. Always disconnect power to the equipment and unplug before performing any service or maintenance.



**⚠ CAUTION**

**⚠ WARNING**

4. Do not operate without proper electrical ground.



**⚠ DANGER**

5. To prevent the risk of severe or fatal electrical shock, special precautions must be taken.

6. Equipment is intended for indoor use only.
7. Do not alter the construction or design. Do not remove safety labels or devices
8. Do not use equipment for other than its intended purpose, as described in the equipment manual.
9. Keep inlet and outlet vents, clean and clear of objects.

**CAUTION**

10. **Over time germicidal ultraviolet rays may break down plastic, rubber, or other non-metallic materials, can fade colors, and can be damaging to plant life. Shield all plastic, rubber, or other non-metallic parts, plant life, etc. which may be exposed to direct or reflected germicidal ultraviolet rays.**
11. Do not operate equipment if the power cord and/or plug are damaged, or if any other damage to the unit is visible or suspected.
12. Utility power must match power requirements listed on the unit label.
13. Equipment should be protected from the elements and from temperatures below freezing.
14. Do not exceed equipment's maximum rated flow capacity and/or operating pressure.

## Safety Warnings

All occupants and personnel should be alerted to the potential hazards indicated by the product safety labeling on this unit.

The following conventions are used to indicate and classify precautions and on product safety labeling. Failure to observe precautions could result in injury to people or damage to property.



**This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.**

**▲ DANGER**

**Danger indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.**

**▲ WARNING**

**Warning indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.**

**▲ CAUTION**

**Caution indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.**

**CAUTION**

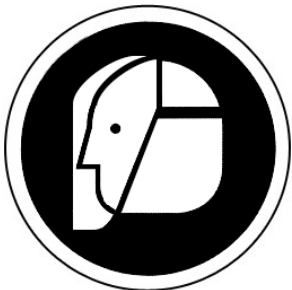
**Caution used without the safety alert symbol indicates a potentially hazardous situation, which, if not avoided, may result in property damage.**



**This symbol / pictorial is used to identify an ELECTRICAL SHOCK or ELECTROCUTION hazard.**



**This symbol / pictorial is used to identify an ULTRAVIOLET LIGHT hazard.**



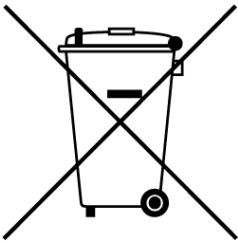
**This symbol / pictorial is used to identify the need to wear approved ultraviolet resistant face shield.**



The symbol / pictorial is used to identify the need to wear approved ultraviolet resistant eyewear.



This symbol / pictorial is used to identify the need to wear protective gloves.



\*This symbol / pictorial is used to identify components which must not be disposed of in the trash.

**Product safety labels should be periodically inspected and cleaned, as necessary, to maintain good legibility. Always replace illegible safety labels. Contact the factory to obtain replacement safety labels.**

**These instructions do not purport to cover all details or variations in equipment nor to provide every possible contingency to meet in connection with installation, operation, or maintenance. Should further information be desired, or should particular problems arise which are not covered sufficiently for the purchaser's or owner's purposes, this matter should be referred to Nemesis Customer Service.**

**Failure to follow any of these instructions could void product warranties. For a complete listing of product Terms and Conditions, please visit [www.nemesisuvc.com](http://www.nemesisuvc.com)**



**Nemesis UV-C, LLC. assumes no responsibility for claims arising out of improper or careless installation or handling of its products.**

**\*Hg – RADIATORS CONTAIN MERCURY, manage in accord with disposal laws; see: LampRecycle.org OR contact Nemesis: Email: support@nemesisuvc.com Phone: (469)-466-2UVC (M-F, 9AM-5PM CST) and ask about our lamp recycling program.**

## **Unpacking**

Your Cerberus Quarter Rack has been sent out in perfect working order. Inspect your unit for any damages that may have occurred during shipping. If the packaging appears damaged, carefully inspect your unit. If you find any damage, contact customer support before attempting to operate your unit.

Contents:

Nemesis Orochi™

Power cable

Manual

**ATTENTION:** Operator MUST READ ENTIRE MANUAL before attempting to operate the Tower. Failure to follow instructions/guidelines laid out in this manual will void the warranty and could lead to physical harm.

## **Customer Support**

The customer support line is available for any inquiries on your product. Visit <https://www.nemesisuvc.com/> or call (469) 466-2UVC, 8am-5pm CST M-F

For 24/7 support, contact: support@nemesisuvc.com

For servicing or repairs, contact: (469) 466-2UVC, or go to: <https://www.nemesisuvc.com/>

## Limited Warranty

Terms and Conditions: This limited warranty is subject to the terms listed below.

For warranty service - Call: (469) 466-2UVC, M-F, 8am-5pm CST

1. This warranty is void if:
  - a. The product serial number and/or labels are altered or removed
  - b. The product is modified in any manner that affects the reliability of the product
  - c. The product has been repaired or serviced by anyone other than a trained Nemesis technician
  - d. The product is damaged because it is not properly maintained as set forth in the product instructions, guidelines and/or user manual.
2. This is not a service contract, and this warranty does not include routine cleaning or periodic check-up.
3. Nemesis reserves the right to make changes in design and/or performance improvements upon its products without any obligation to include these changes in any products theretofore manufactured.
4. This is the only written warranty applicable to this product and supersedes all prior warranties and written descriptions of warranty terms and conditions heretofore published
5. Warranty is limited to 1 year from date of purchase.

## Activate Your Warranty:

**Send the following information to: [support@nemesisuvc.com](mailto:support@nemesisuvc.com)**

Name/Company	Where Purchased
Product Model/Name	Physical Address
Date of Purchase	Email Address

Activating your warranty signifies that you have read and understand the limited warranty listed above. **YOU MUST ACTIVATE YOUR WARRANTY WITHIN TWO WEEKS OF THE PURCHASE DATE**

## **Benefits of UVC Technology:**

- UVC radiation has been proven to be effective against waterborne and airborne pathogenic micro-organisms including those responsible for cholera, hepatitis, polio, typhoid, giardia, cryptosporidium and many other bacterial, viral and parasitic diseases
- UVC installations have low capital and operation cost
- UVC technology is environmentally friendly
- UVC installations are easy to operate and to maintain
- UVC radiation works instantly and the effectiveness does not depend on the temperature
- UVC disinfection is a physical process: no substances are added
- The UVC disinfection effect is directly related to the UV dose (which is the product of intensity and exposure time of the micro-organisms) so it's effectiveness can be simply measured once the system design is validated

## **UV-C Disclaimer**

The products being sold pursuant to this Agreement must be installed correctly and used properly to be effective. Nemesis is not responsible for improper installation, usage or damages caused by the end user. Nemesis makes no representations, guarantees or assurances as to the final effectiveness of using a UV-C lighting system for sanitization. Nemesis warrants that with proper installation and usage, scientific evidence exists proving the efficacy of UV-C sanitation. Nemesis does not warrant that 100% of viruses, bacteria and germs shall be eliminated. Effective UV-C sanitation times are calculated by information provided by the specific radiator manufacturer. Times vary according to radiator, distance, dosage and type of viruses, bacteria, germ or mold to be eliminated. Customer understands and accepts that the use of UV-C lighting can cause fading and discoloration of some materials over extensive prolonged exposure and that Nemesis is not responsible for any damages whatsoever to any materials or equipment due to the use of the products.

## **General Guidelines:**

FOLLOW ALL SAFETY GUIDELINES OUTLINED IN THIS MANUAL. FAILURE TO DO SO COULD CAUSE HARM TO PERSONS OR EQUIPMENT

DO NOT attempt any repairs on the Orochi™. Anything beyond replacing the radiators and basic cleaning must be done by a trained technician. Attempts to repair the device will void the warranty.

Avoid touching the radiators. Oils and moisture from the skin can cause the coating on the radiator to deteriorate. Take extreme care when replacing radiators.

Check all fixtures in the Orochi™ for dust and other contaminants monthly. Cleaning can be done with a fresh, dry, lint-free cloth or with an air compressor on very low psi. See page 18 for more detailed instructions.

Take care when cleaning debris from broken radiators. DO NOT dispose with household waste, follow your local hazardous waste guidelines.

For any questions or concerns, contact the Nemesis Customer Service Line 24/7 at:

(469) 466-2UVC or email: [support@nemesisuvc.com](mailto:support@nemesisuvc.com)

## **Technical Specifications:**

### Features:

- Portable high output UV-C disinfection of equipment of all varieties in a compact solution
- High energy use of UV-C for disinfection of equipment of any kind.
- Emits germicidal wavelength of 254nm
- Visual alerts during use
- Heavy duty case construction
- Utilizes 3 High Output Nemesis UV-C radiators for efficient and effective disinfection.

Lamp Source: TUV 55 W HO lamp technology

Dimensions: 42" x 16" x 13

Weight: 45lbs

Input voltage:

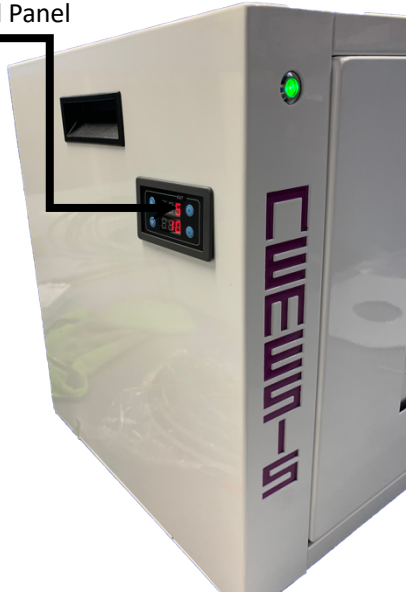
AC 120V 60Hz

2 amps @ 120v

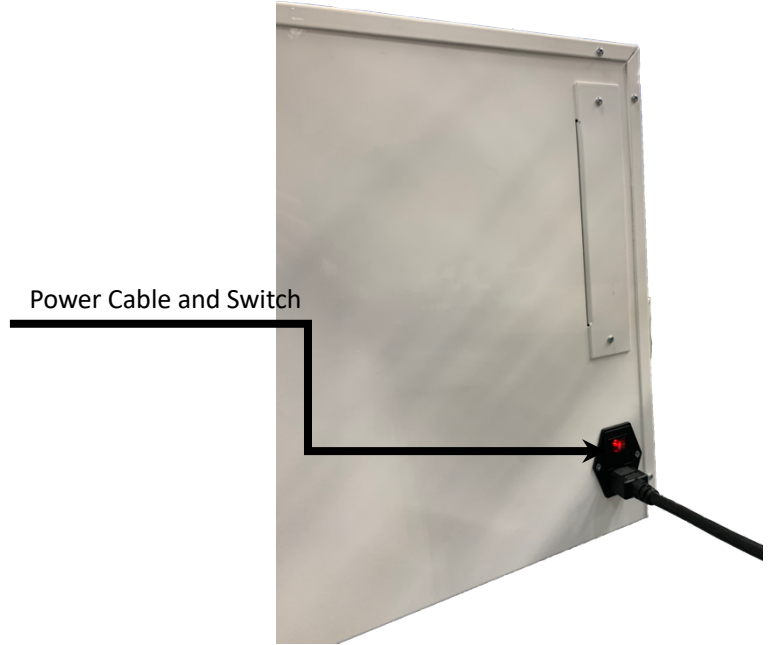
Rating: Indoor use only

# Fixture Overview

Timer Control Panel



Power Cable and Switch



## **How do I use my Nemesis Orochi™?**

Step 1: Unpack your unit.

Step 2: Plug in the included power cable into the Orochi™. The input is located under the switch on the lower right-hand side of the unit. Align the power cable and firmly press it into the receptacle. Once the power cable is inserted, make sure the power switch is in the “On” position, and is illuminated in order to power the Orochi™. The green LED on the front of the unit will illuminate when the unit has power. The Timer Control Panel will NOT be powered unless door is COMPLETELY closed. If the Timer is not powered, press firmly on the top corners of the door to ensure it is fully closed.

Step 3: Ensure your timer is set to the correct settings for your application. For detailed instructions, see full manual. NOTE: The door of the Orochi™ must be COMPLETELY closed in order for the Timer Control Panel to function. Ensure there is power to the unit and that the doors are completely shut before attempting to set your timer.

Step 4: Once your timer is set, insert the shelves as desired and place any items you would like to disinfect in the Orochi™.

Step 5: Close the door, and the Timer Control Panel will power back on. Simply press “Start/Go” on your timer, and the countdown will begin. The UV-C radiators will activate. NOTE: If at any point the door is opened during the disinfection process, power will be disconnected from the timer, the Timer Control Panel will shut off and the UV-C radiators will turn off. When the doors are closed, power will return to the Timer Control Panel, and the process can be restarted. You will have to press “Start/OK” before the UV-C radiators will re-energize.

Step 6: Once the countdown is complete, the UV-C radiators will turn off. The disinfection process is complete, and your items are ready to remove from the Orochi™.

## Timer Setup Instructions:

The timer is set by the manufacturer on your Orochi™ for a start delay of 3 seconds, and 180 seconds (3 Minutes) of disinfection time. In order to change the settings on your timer:

Please pay attention for your first use. You need wait 6s after you set the data, the module will save the data you have set after 6s.

There are two ways to save data after setting: 1>. Waiting for 6S and the screen stop flash. The system automatically saves the setting time; 2>. Press button 'SET'.

Long press the 'SET' button to start the Parameter Setting Mode. There are three parameters to set: P0, P1 and P2. You can select P0, P1 or P2 by short pressing the 'SET' button. Under the parameter P0, P1, P2, you can see and set the parameter by the button+ and button-(LOWER).

- \* P0: Set the time range
- \* P1: Work mode
- \* P2: Display screen brightness adjustment

P0--0: Timing time mode: 0--999ms. Accuracy 0.1s.

**P0--1: Timing time mode: 0--999s. Accuracy 1s.**

P0--2: Timing time mode: 0--999min. Accuracy 1min.

P0--3: Timing time mode: 0--999h. Accuracy 1h.

P1--0: Relay will ON after delay T1

P1--1: Relay will OFF after delay T1

**P1--2: Relay will ON after delay T1. Then Relay will OFF after delay**

P1--3: Relay will OFF after delay T1. Then Relay will ON after delay T2. Then Stop.

P1--4: Relay will ON after delay T1. Then Relay will OFF after delay T2. Then cycle.

P1--5: Relay will OFF after delay T1. Then Relay will ON after delay T2. Then cycle.

P2--0 to P2--5 is used to adjust brightness of screen

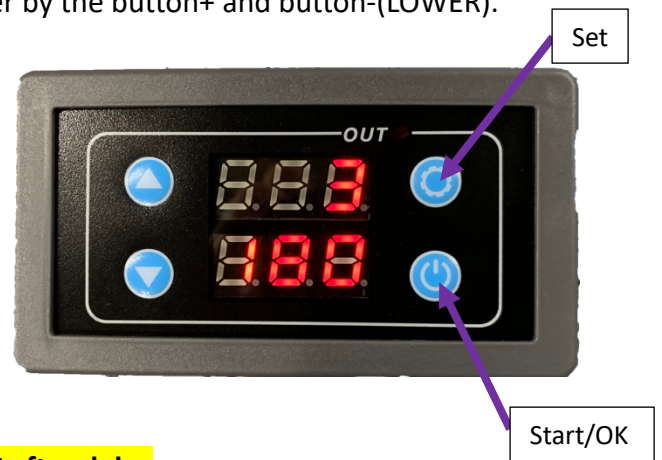
P2--OFF: Low-power mode User can set P2--OFF mode, the system will automatically turn off the display after 10s, enter the low-power mode, press any button to wake up.

(SET) T2. Then Stop.

Confirm key:

Function 1: Press 'Confirm key' to save the parameters which have been set. If the 'Confirm key' is pressed during operation, the Module will stop function and power OFF. Press 'Confirm key' again to restore the timing function.

Function 2: Triggers the function again after the timer finishes work normally. If needs to work again, please short press the 'Confirm key' to restart the timer.





Nemesis Orochi™ V1

Short press the 'SET' button to start the Time Setting Mode and the upper screen will flash. Please set time T1 during flash. Press button 'SET' and screen will flash again. Set time T2 (LOWER) during flash.

**The highlighted sections are the factory settings on your unit. T1 is set for 3 seconds and T2 is set for 180 seconds. P0 is set at 1 and P1 is set at 2. It is set so that T1 is the start delay, and T2 is the disinfection time. Once the countdown completes, the UV-C lamps will power off, and the Timer will reset.**

**Recommended Timings:**

**180s – Extreme Clean**

**120s – Deep Clean**

**60s – Standard Clean**

**30s – Quick Clean**

**NOTE: If the door of the Orochi™ is opened during operation the Timer Control Panel will lose power and the UV-C radiators turn off. When the doors are fully closed, the Timer Control Panel will regain power, and the disinfection cycle can be restarted.**

## Cleaning:

- Check all fixtures on the Orochi™ monthly for dust and other contaminants
- Unplug fixture from AC power before performing any maintenance
- Never use alcohol or solvents to clean radiators
- Use a lint-free cloth to remove dust or other contaminants from the grates, fixtures and radiators
- Clean exterior and selves with a moist, lint-free cloth
- **Dust radiators lightly with a dry, lint-free cloth, DO NOT touch radiators with bare hands**



## Replacing Radiators:

- Ensure the device is disconnected from power and open the Orochi™.
- Remove all selves from the Orochi™
- **WARNING: DO NOT touch radiators with bare hands, oils from the skin will deteriorate the coating on the outside of the glass, use sterile gloves and eye protection when working with radiators**
- Twist both ends of the radiator ¼ turn to 'unlock' the radiator from the socket, you will hear a click
- Carefully remove the old radiator
- Place one end of the new radiator into the socket, gently apply pressure to depress the socket and allow the other end of the radiator to slide into place in the opposing socket
- Twist both ends of the radiator ¼ turn to 'lock' it into place, you will hear a click
- Once the needed radiator(s) are replaced, close the door on the Orochi™ and run one disinfection cycle to ensure the Orochi™ is working properly.
- After the cycle is complete, open the Orochi™ and replace the shelves.
- For any issues, contact Nemesis Customer Support at: (469) 466-2UVC





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[www.nemesisuvc.com](http://www.nemesisuvc.com)

(469) 466-2UVC