

Sanidyne®

PORTABLE AREA SANITIZER



Installation,
Operation
& Maintenance

ATLANTIC **ULTRAVIOLET**
CORPORATION®

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ultraviolet.com



Shown with storage cover

Owner's Manual

TABLE OF CONTENTS

SAFETY WARNINGS	3
SAFETY INSTRUCTIONS	3
PRODUCT APPLICATION	4
CONSTRUCTION	4
PRINCIPLE OF OPERATION	4
LIMITATIONS	4
UNPACKING	4
INSTALLATION	5
DIMENSIONAL DATA	5
UNIT PLACEMENT.....	5
SET-UP.....	6
LAMP INSTALLATION.....	6
TIMER CONFIGURATION	7
TIMER FEATURES.....	7
TESTING	7
DETERMINING TREATMENT TIME	8
TREATMENT CYCLE	8
TECHNICAL ASSISTANCE	9
MAINTENANCE	9
GERMICIDAL LAMP CLEANING.....	9
LAMP REMOVAL	9
BREAKAGE	9
DISPOSAL OF MERCURY ADDED LAMP.....	9
TROUBLESHOOTING	10
FUSE REPLACEMENT.....	10
TECHNICAL SPECIFICATIONS	11
OPTIONAL ACCESSORIES	11
REPLACEMENT PARTS	11
USER ASSISTANCE	12
WARRANTY	12
PATENT NOTICE.....	12

These instructions generally describe the installation, operation and maintenance of the *Sanidyne*® Portable Area Sanitizer. Questions that are not specifically answerable by these instructions should be directed to the factory. Atlantic Ultraviolet Corporation takes all possible precautions when packaging equipment to prevent damage. Carefully inspect and report all damages. Do not install damaged equipment. Follow all instructions on any labels or tags. Carefully inspect all packing materials before discarding to prevent the loss of accessories, mounting hardware, spare parts or instructions.

The information and recommendations contained in this publication are based upon data collected by the Atlantic Ultraviolet Corporation® and are believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. Specifications and information are subject to change without notice.



SAFETY WARNINGS

- All 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 in this manual 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.



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

DANGER

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



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

WARNING

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



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

CAUTION

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



This symbol/pictorial is used to identify the need to wear approved ultraviolet blocking eyewear.

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 the need to wear protective gloves.

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

SAFETY INSTRUCTIONS

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

1. Read and follow **ALL** safety instructions.



⚠ WARNING: Avoid exposure to direct or strongly reflected germicidal ultraviolet rays. Germicidal ultraviolet rays are harmful to the eyes and skin.

2. Intended for indoor use only.
3. Do not alter the construction or design.
4. Do not use this sanitizer for other than its intended purpose, as described in this manual.
5. Do not use this sanitizer in occupied areas. The supplied “**DANGER - DO NOT ENTER...**” sign(s) must be clearly displayed to warn against entering the area during the disinfection cycle without proper personal protection equipment.
6. **CAUTION:** 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.
7. Do not remove any labels or devices.
8. **⚠ CAUTION:** Do not operate without proper electrical ground.
9. Do not operate the sanitizer if the power cord and/or plug are damaged, or if any other damage to the sanitizer is visible or suspected.
10. Utility power supplied, to the sanitizer, **MUST** match power requirements listed on the sanitizer label.
11. **⚠ WARNING:** Always disconnect power to the sanitizer and unplug before performing any service or maintenance.
12. Read and follow all notices and warnings on the sanitizer.
13. **SAVE THESE INSTRUCTIONS.**

PRODUCT APPLICATION

CONSTRUCTION

The **Sanidyne®** Portable Area Sanitizer consists of:

- Germicidal ultraviolet lamps (05-0592) - Deliver ultraviolet energy at the specific wavelength of 254 nanometers (nm). This wavelength is highly effective against microbes including: virus, bacteria, and mold spores.
- Electronic ballasts - available in 120v 50/60Hz or 230v 50/60Hz.
- Timer - A microprocessor controller provides easy programmable treatment times in minutes and hours (up to 24 hours), to suit a variety of room sizes.
- Exit Warning and Time Delay - Provides an audible warning for 3 minutes after the start button is pushed, allowing the operator time to leave the area before the disinfection cycle begins.
- Elapsed Time Indicator - A non-resettable display of the operating hours. Useful for scheduling and recording maintenance and lamp replacement.
- Power Cord - For 120VAC 50/60Hz single-phase standard household current, a NEMA 5-15, three-prong plug is provided for a properly grounded outlet. 230VAC 50/60Hz models use a CEE 7/7 (Schuko type) plug.
- Storage Cover - Protects the germicidal lamps from breakage while transporting and/or storing the sanitizer and provides a way to safely test the ultraviolet lamp operation.
- Sight Ports - Located on the top cover, allow observation of the germicidal lamps without the risk of ultraviolet exposure when the storage cover is on.
- Lamp Guard Assembly - Protects lamps from damage during normal operation.
- All electronics and wiring are housed in an enclosure constructed of stainless steel. Stainless steel construction provides strength, durability and will withstand most harsh environments.

PRINCIPLE OF OPERATION

The **Sanidyne®** design has been carefully conceived to provide direct germicidal ultraviolet exposure for air or surface disinfection. The ultraviolet disinfection dosage is a function of time and the intensity exposed to the air and surrounding surfaces.

LIMITATIONS

- Safety procedures should be implemented to prevent ultraviolet exposure of personnel to direct or reflected ultraviolet rays. Exposure to germicidal ultraviolet rays will result in the irritation of the eyes and reddening of the skin.
- Personal protection equipment is required when entering the irradiated space with the germicidal lamp(s) operating. Personal protection equipment includes skin and eye protection such as gloves, long sleeves with no gaps between cuff and gloves, and an ultraviolet blocking faceshield (included with the purchase of the **Sanidyne®**).

UNPACKING

- Remove the **Sanidyne®** from its shipping carton.
- Atlantic Ultraviolet Corporation takes all possible precautions when packaging this unit to prevent damage. Carefully inspect the unit, power cord and plug for damage, report all damage immediately. Do not assemble or operate if there is any damage, visible or suspected.
- Germicidal lamps are packed separately, to ensure maximum protection for the lamps. Keep the lamps aside until ready for installation.
- Carefully inspect all packing materials to prevent the loss of accessories, spare parts or instructions.
- Do not discard packing materials until unit is assembled, checked and confirmed.

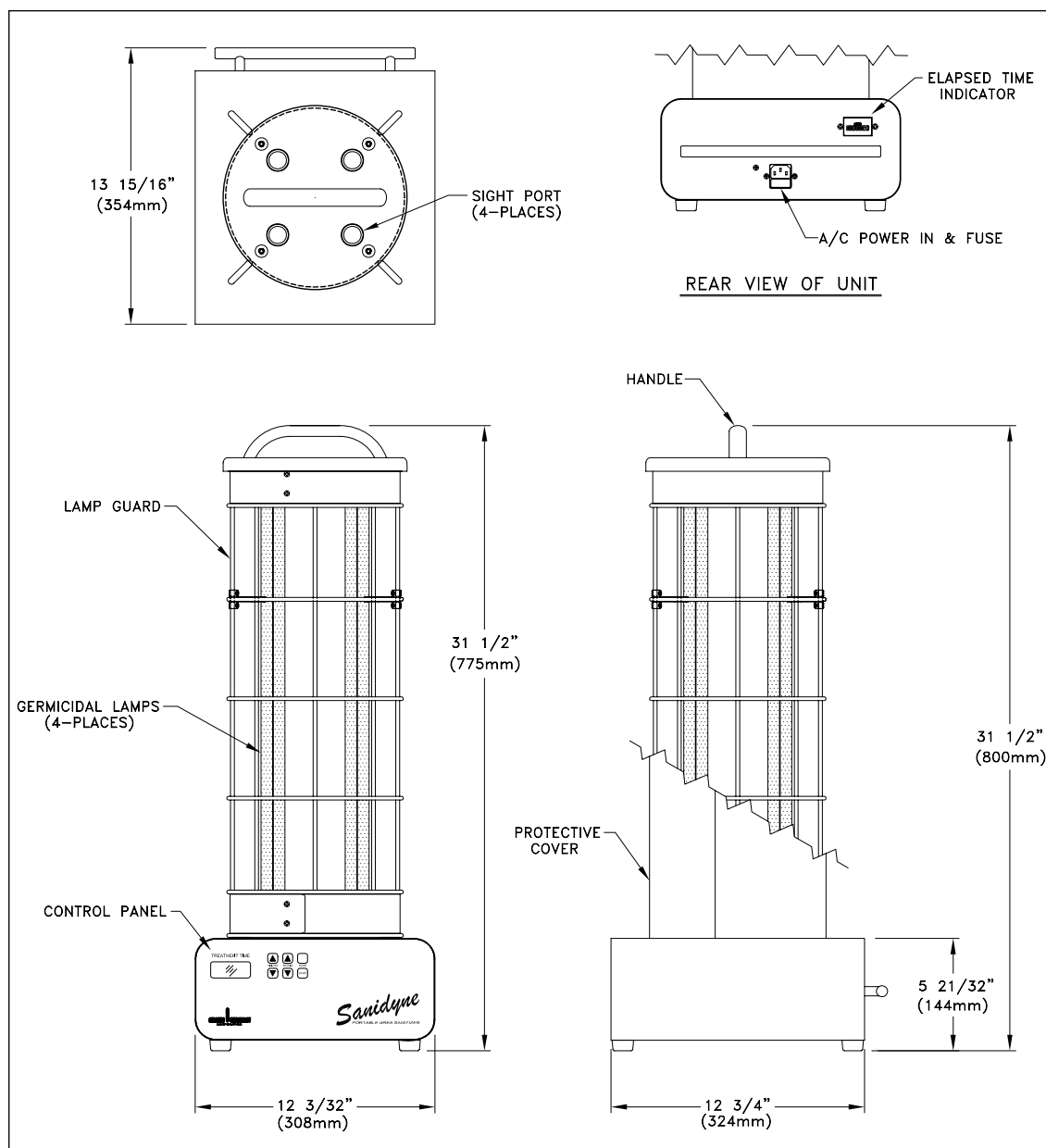
The **Sanidyne®** Portable Area Sanitizer includes:

- 1 - Four lamp unit with power cord - Includes a microprocessor controller with a time display and push button controls.
- 4 - Germicidal ultraviolet lamps (05-0592)
- 1 - Adjustable headgear with ultraviolet blocking faceshield
- 1 - Operating Instructions
- 2 - Laminated Warning Signs
- 1 - Storage Cover

INSTALLATION

DIMENSIONAL DATA

Figure 1 - Dimensional Data



All specifications, dimensional data, etc are approximate and subject to change without notice.

UNIT PLACEMENT

- The **Sanidyne®** Portable Area Sanitizer does not require professional installation.
- For maximum efficiency the **Sanidyne®** should be located as centrally as possible, away from the corners of the treatment area. The **Sanidyne®** Portable Area Sanitizer is most effective when it is located in the vertical center of the room and the ultraviolet rays are unobstructed.
- Access to the room **MUST** be avoided while the **Sanidyne®** is operating.

SET-UP INSTRUCTIONS



Step 1 - Disconnect Power Cord



Step 2 - Release Latches



Step 3 - Loosen Four Thumbscrews

⚠ CAUTION: Germicidal lamps are easily damaged. Exercise care when handling lamps. (See step 1 under Lamp Installation)

1. Disconnect power cord.
2. Remove protective storage cover by releasing the three latches on the storage cover.
3. Remove the top cover after loosening the four thumbscrews.

LAMP INSTALLATION



**Step 1 - Hold lamp by Top
& Guide Lamp into
Lamp Guard Assembly**



Step 2 - Insert Lamp into Socket



Step 3 - Snap into Lamp Guide

1. Holding the lamp vertically by its base, carefully insert the lamp into the lamp guard assembly.
2. Align the connector pins on the lamp base with the socket below.
3. Carefully insert the lamp into the socket.
4. Snap into the lamp guide located on the lamp guard assembly.
5. Install the remaining three lamps.
6. Re-install the top cover and tighten the four thumbscrews.
7. Replace the storage cover and secure using the three latches.

Figure 2 - Timer Configuration



TIMER FEATURES

Treatment Time

- Displayed in **Hours : Minutes** and indicates how much time is left until treatment is concluded. During the treatment, the display counts down until treatment is complete and the lamps switch off. The time display will then restore to last setting.

Hour Buttons

- Selecting up and down arrows sets treatment from 0 to 24 hours.

Minute Buttons

- Selecting up and down arrows sets treatment from 0 to 59 minutes.

Power Indicator

- Red **POWER** indicator light glows red when power is applied.
- Pulses after start button has been pushed to show a warning during the 3-minute exit time. Pulses again during the last minute of the treatment time.

Start Button

- Press to start, pause or to restart the treatment time.

Automatic Exit Timer

- Provides 3-minute delay after “**START**” button has been pushed, to allow the operator to exit the treatment area.
- Flashes Red **POWER** indicator during the 3-minute delay and during the last minute of the treatment time.
- Provides a pulsing audio alarm during the 3-minute delay and the last minute of the treatment time.

TESTING



Wear personal protection equipment; Gloves, long sleeve shirt with no gaps between cuffs and an ultraviolet blocking face shield should be worn to cover all exposed skin.

1. Although the cover **MUST** be fitted before testing the **Sanidyne®**, the operator must also put on the safety face shield as an extra precaution.
2. Connect the power cord.
3. The **POWER** indicator should light.
4. Use the Hours and Minutes buttons to set the treatment time to display a short time, 00:02 (2 minutes).
5. Press the **START** button. The **POWER** lamp will flash an exit warning and the audible alarm will beep.
6. Press the **START** button to pause the exit warning. Confirm that the flashing and beeping stops.
7. Press the **START** button again to restart the exit time.
8. At the end of the three minute exit time, the audible alarm will stop and the **POWER** indicator light will stop flashing. The pulsing audible alarm and flashing light will start again at the start of the last remaining minute of the treatment time (when the treatment time indicates 00:00) and will stop when the treatment time ends.
9. Ensure that all four lamps are lit through the sight ports in cover.

The power plug may be removed when treatment is finished.

Keep the protective storage cover in place when the **Sanidyne®** is not in use.

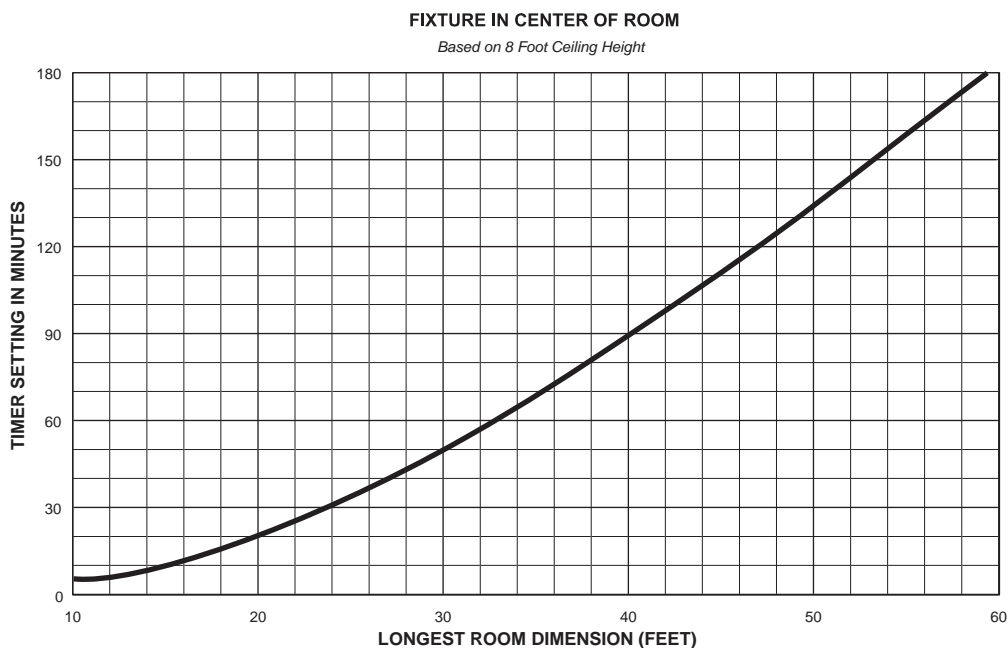
DETERMINING TREATMENT TIME

Using Figure 3- “Recommended Treatment Time for Room Sizes”

Treatment times are based on an ultraviolet dose of 30,000 microwatt-seconds per square centimeter at 254nm.

1. Along the horizontal axis, “**Longest Room Dimension (Feet)**”, locate the room's longest dimension.
2. Follow up the vertical line until it intersects the heavy black curve.
3. From the intersection follow back along the horizontal line to the vertical axis, “**Timer Setting In Minutes**”, note the recommended treatment time.

Figure 3- Recommended Treatment Time for Room Sizes



TREATMENT CYCLE

1. When the treatment time has been determined, set the unit on a cleared table or on the floor in the center of the room to be treated. (Treatment is most effective when the unit is in the vertical center of the room and the ultraviolet rays are unobstructed.)
2. Post the warning sign(s) outside the entrance(s) to the area being treated and notify the appropriate personnel that the area **should not** be entered until the disinfection cycle is complete.
3. Connect power to the unit and the red **POWER** indicator should light.
4. Remove the protective storage cover.
5. Set the required time using the **HOURS** and **MINUTES** up and down buttons. When the Treatment time is displayed correctly, the **START** button can be pushed. An audio alarm will start beeping and the power indicator light will flash as a warning.
6. Pressing the **START** button again will pause the timer and allow a change of the time settings if required. Push again to reset and restart the exit time.
7. Leave area quickly (within three minutes) to avoid ultraviolet exposure.
8. After the three minutes exit period, the beeper will stop and the treatment time will commence.
9. At the start of the last remaining minute of the treatment time (when the treatment time indicates 00:00), the pulsing audible alarm and flashing light will start again and will stop when the treatment time ends.



Wear personal protection equipment; Gloves, long sleeve shirt with no gaps between cuffs and an ultraviolet blocking face shield should be worn to cover all exposed skin.

If it is necessary to re-enter the treatment area before the end of the treatment cycle, protective clothing, gloves and ultraviolet blocking faceshield must be worn!

NOTE: Following the end of a treatment cycle, there is a delay of up to two minutes before a fresh treatment cycle can be started.

MAINTENANCE

- The **Sanidyne®** is designed to operate with a minimal amount of maintenance. Occasional ultraviolet measurements should be made to ensure that germicidal ultraviolet intensities in the treated areas remain within the allowable exposure limits and above minimum levels.
- A regular cycle of cleaning, the germicidal lamp, should be established based on visual inspection and experience. The frequency of cleaning will vary with the conditions surrounding each installation. It is recommended that the germicidal lamp(s) and interior reflectors be cleaned at least once every three (3) months.
- The germicidal ultraviolet lamp(s) used in the **Sanidyne®** unit have a manufacturer's rated average effective life of 10,000 hours. Lamps may operate longer than their rated effective life, but the reduction in ultraviolet output will make it impractical to use past the manufacturer's rated life. For maximum efficiency lamp replacement is recommended every 10,000 hours of operation or about one (1) year of continuous use.
- Unless lamp replacement is due to failure or breakage, it is recommended that all lamps be replaced at the same time.



Personal protection equipment, such as gloves; long sleeves with no gaps between cuffs and gloves, and ultraviolet resistant face shield, is required when entering the irradiated space.

⚠ WARNING: Always disconnect power to the unit before performing any service or maintenance.

LAMP INSTALLATION, REPLACEMENT OR CLEANING

⚠ WARNING: Always disconnect power, to the unit before performing any service or maintenance.

⚠ CAUTION: Germicidal lamps are easily damaged. Exercise care when handling lamps.

1. To remove lamps follow the steps in “**Set-Up and Lamp Installation**” on page 6 in reverse order.
2. Moisten a clean, lint-free cloth with denatured alcohol and wipe down the outer surface of the lamp.
3. When lamp has been removed and cleaned, then safely set aside, remove any loose dust or dirt from the interior of the unit with a soft dry cloth, or vacuum.
4. To reinstall lamps follow the steps in “**Set-Up and Lamp Installation**” on page 6.
5. Re-install the top cover and tighten the four thumbscrews.
6. Replace the storage cover and secure using the three latches.
7. Reconnect unit to utility power, and restart unit.



⚠ WARNING: Avoid exposure to direct or strongly reflected germicidal ultraviolet rays. Germicidal ultraviolet rays are harmful to the eyes and skin.

8. Verify operation by viewing lamp, use of personal protection equipment is required. If the unit is not operating properly, go to “**Troubleshooting**” section.

BREAKAGE

⚠ CAUTION: Broken Quartz is SHARP.



Wear protective gloves when handling broken ultraviolet lamps.

In the event of breakage, **DO NOT** use a household vacuum cleaner to pick up fragments of the lamp. Sweep up debris into a plastic bag and dispose of properly.

DISPOSAL OF MERCURY ADDED LAMPS

Germicidal ultraviolet lamps, like standard fluorescent lamps contain small amounts of mercury. Mercury added lamps should not be placed in the trash. Dispose of properly.

For further information regarding the disposal and recycling of lamps containing mercury, along with Federal and State requirements visit <http://www.lamprecycle.org>. Product Data Sheets for germicidal ultraviolet lamps can be found in the “PDF Library for **Ster-L-Ray®** Germicidal Ultraviolet Lamps” section of <http://www.ultraviolet.com>.

TROUBLESHOOTING

⚠ WARNING: Always disconnect power to the unit before performing any service or maintenance.



Wear personal protection equipment; Gloves, long sleeve shirt with no gaps between cuffs and an ultraviolet blocking face shield should be worn to cover all exposed skin.

- **IMPORTANT:** This unit is to be serviced **ONLY** by qualified and factory authorized personnel.

Table 1 - Troubleshooting

Problem	Possible Cause	Corrective Action
Sanidyne® not operating . . .	Power disconnected...	Check connections.
	Fuse . . .	Remove power connector to check and replace fuse if necessary.
Lamp not operating . . .	Germicidal lamp fault...	Swap suspect lamp, with lamp known to be good. If suspect lamp does not operate, replace lamp
	Germicidal lamp not properly seated...	Check lamp socket and re-install lamp if necessary.
	Loose Connection...	Inspect for loose or disconnected wires.
Sanidyne® fails to shut off . . .	Timer assembly faulty...	Wearing protective clothing and face shield, enter area, and disconnect power to unit. Call factory for technical service.

FUSE REPLACEMENT

The fuse is contained in a small plastic tray at the bottom of the power connector.

1. Remove the power connector from the back of the **Sanidyne®**. A screwdriver can be used to access the fuse by inserting the blade in one of the horizontal slots and gently twisting the handle to bring the tray forward.
2. A spare fuse is accessible, clipped in front of the active fuse.



**Step 1 - Insert Screwdriver
& Bring Tray Forward**



Step 2 - Open Tray
(Spare Fuse is Clipped in Front of the Active Fuse)

TECHNICAL SPECIFICATIONS

Table 2 - Technical Specifications

Model:		40-0625A1	40-0625A2	40-0625A3
Volts:		120V	220-240V	220-240V RoHS
Amps:		2.25A	1.3A	1.3A
Hertz:		50/60Hz	50/60Hz	50/60Hz
Maximum Treatment Time: ①		24 hours		
Maximum Room Size:		58' L x 58' W x 20' H		
Weight:		22 lbs.		
Dimensions:	Length: (Inches)	12 3/4"		
	Width: (Inches)	12 3/32"		
	Height: (Inches)	30 1/2"		
Lamp Data:	Lamp Model:	05-0592		
	Number of Lamps:	4		
	Power Consumption: ② (Watts/Lamps)	55W (220W Total)		
	Ultraviolet Output: ② (Watts/Lamps)	21W (84W Total)		
	Average Effective Life: ③ (Hours)	10,000		

① Treatment times are based on ultraviolet dose of 30,000 microwatt-seconds per square centimeter at 254nm.

② Wattage is lamp watts only and does not include ballast loss.

③ Ultraviolet output at 254nm at 100 hours and 80°F (approximate).

All specifications, dimensional data, etc are approximate and subject to change without notice.

OPTIONAL ACCESSORIES

Zenith™ Ultraviolet Meter

A sensitive, hand-held, ultraviolet meter; used to check the intensity of aging germicidal ultraviolet lamps.

The **Zenith™** Part No. 30-0081-R is the recommended meter for this application.

REPLACEMENT PARTS

Table 3 - Replacement Parts

ITEM NO.	DESCRIPTION	120V 50/60Hz		Non-RoHS 220-240V 50/60Hz		RoHS 220-240V 50/60Hz	
		QTY	PART NO.	QTY	PART NO.	QTY	PART NO.
1	Germicidal Lamp	4	05-0592	4	05-0592	4	05-0592
2	Ballast	4	10-0137	4	10-0136	4	10-0035C-R
3	Protective Storage Cover	1	40-0616A	1	40-0616A	1	40-0616A
4	Power Cord	1	35-1754	1	35-1767	1	35-1767
5	Adjustable Headgear	1	00-0094	1	00-0094	1	00-0094
6	Face Shield	1	00-0095	1	00-0095	1	00-0095
7	Warning Sign: 8.5" x 11"	2	00-0098	2	00-0098	2	00-0098
8	Fuse & Spare Fuse	2	35-0644	2	35-0664	2	35-0664

Other replacement parts are available. Consult the Atlantic Ultraviolet Corporation for specific requirements.

USER ASSISTANCE

Atlantic Ultraviolet Corporation makes every effort to ensure that the **Sanidyne®** Portable Area Sanitizer is a product of superior quality and workmanship. This manual describes the installation, operation and maintenance of the **Sanidyne®** Portable Area Sanitizer.

Please read and become familiar with the contents of this manual before installing or using this unit. If after reading the manual you still have questions, or concerns, regarding the installation or use of this unit, contact our offices, weekdays between 8:30 am and 5:00 pm Eastern Time, at:

Atlantic Ultraviolet Corporation
375 Marcus Boulevard
Hauppauge, New York, 11788

Tel: 631.273.0500
Fax: 631.273.0771

E-mail: info@ultraviolet.com
Website: www.ultraviolet.com

Please REGISTER your product immediately - you can do this in a number of ways. Go online to Ultraviolet.com and on the bottom left of each page either click on "Fill out Warranty Reg. Form on-line!" complete and hit submit or click on "Download a PDF of the Warranty Reg. card" which you can print, fill out and mail in. If you prefer to register over the telephone please call 631-273-0500.

Atlantic Ultraviolet Corporation takes all possible precautions when packaging equipment to prevent damage. Carefully inspect and report all damage. **Do not** install damaged equipment. Follow all instructions on any labels or tags. Carefully inspect all packing materials before discarding to prevent the loss of accessories, mounting hardware, spare parts or instructions.

For your convenience, record the following information below. The model and serial number can be found on a label located on the **Sanidyne®** Portable Area Sanitizer. Keep this manual, along with proof of purchase, handy when contacting our offices.

Purchased From:	Date:
Model:	Serial No.:

WARRANTY

We warrant that this product will be free from defects in material and workmanship for a period of one year from the date of shipment thereof or the product's total rated life, whichever first occurs. Within the warranty period we shall repair or replace such products, which are returned to us with shipping charges prepaid, and which are determined by us to be defective. This warranty will not apply to any product, which has been subjected to misuse, negligence, or accident; or misapplied; or modified; or repaired by unauthorized persons; or improperly installed.

The Buyer shall inspect the product promptly after receipt and shall notify us at our main office in writing of claims, including claims of breach of warranty, within thirty (30) days after the Buyer discovers or should have discovered the facts upon which the claim is based. Failure of the Buyer to give written notice of a claim within the time period shall be deemed to be a waiver of such claim.

The provisions of the above warranty are our sole obligation and exclude all other remedies or warranties, expressed or implied, including warranties of merchantability and fitness for a particular purpose, whether or not purposes or specifications are described herein. We further disclaim any responsibility whatsoever to the customer, or to any person, for injury to person, damage to, or loss of property or value caused by any product which has been subjected to misuse, negligence, accident; or modified or repaired by unauthorized persons; or improperly installed.

Under no circumstances shall the Company be liable for any incidental, consequential or special damages, losses or expenses arising from the contract for this product, or in connection with the use of, or inability to use, our product for any purpose whatsoever.

PATENT NOTICE

No attempt has been made to determine the patent status of applications illustrated or described in this publication. Inclusion in this publication of any design or method of use, which may be patented, is not to be construed as promoting or sanctioning unauthorized use.