

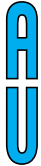
# GUARDIAN™

**ASSIST**

ULTRAVIOLET MONITOR EXTENSION



Owner's Manual

 SINCE 1963  
**ATLANTIC ULTRAVIOLET**  
CORPORATION®

*Manufacturers / Engineers / Sales / Service*  
Germicidal Ultraviolet - Equipment & Lamps

375 Marcus Boulevard • Hauppauge, NY 11788  
631.273.0500 • Fax: 631.273.0771  
Email: Sales@AtlanticUV.com  
Ultraviolet.com • BuyUltraviolet.com

Extensive Product Information Available at:

**Ultraviolet.com**  
**BuyUltraviolet.com**



## Installation, Operation & Maintenance

Read and Follow  
All Safety Instructions.  
Save these Instructions.

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These instructions generally describe the installation and operation of the **GUARDIAN™ ASSIST** Ultraviolet Monitor Extension. Questions that are not specifically answered 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.


 **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 blocking eye-wear.

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




 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 trash

# 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 reflected germicidal ultraviolet rays. Germicidal ultraviolet rays are harmful to the eyes and skin.

2. Intended for indoor use only.
3. Do not alter design or construction.
4. Do not use this unit for anything other than its intended purpose, as described in this manual.
5. Do not remove any labels or devices.
6.  The **GUARDIAN™ ASSIST** should be protected from harsh environments, high humidity, and temperature extremes.
7.  **WARNING** The **GUARDIAN™ ASSIST Ultraviolet Monitor Extension housing is not waterproof. Serious damage can occur if internal electronics come in contact with water.**
8.  **CAUTION** Germicidal ultraviolet rays may break down plastic, rubber or other non-metallic materials, with inadequate resistance to ultraviolet. Shield all plastic, rubber or other non-metallic parts such as: plastic drain pans, wire insulation, flex ducts, humidifiers, filters, etc. which may be exposed to direct or reflected germicidal ultraviolet rays.
9. Do not operate the **GUARDIAN™ ASSIST Ultraviolet Monitor Extension** if the power cord and/or plug are damaged, or if any other damage to the monitor is visible or suspected.
10.  **WARNING** Do not operate without proper electrical ground.
11. Utility power supplied, to the **GUARDIAN™ ASSIST** MUST match power requirements listed on the monitor label.
12.  **WARNING** Always disconnect power to the **GUARDIAN™ ASSIST Ultraviolet Monitor Extension, and unplug before performing any service or maintenance**
13. Read and follow all notices and warnings on the unit.
14. **SAVE THESE INSTRUCTIONS.**

# CAUTION

It is the user's responsibility to determine and validate the suitability of this equipment for use in the user's system or process. No warranty or representation is made by the manufacturer with respect to suitability or performance of this equipment or to the results that may be expected from its use. The user should periodically inspect, clean as necessary and confirm the presence and good legibility of the product safety labels. Contact the factory for replacement labels in the event that any of the labels are missing or illegible.

# PRODUCT APPLICATION

Figure 1 – GUARDIAN™ ASSIST Monitor Face

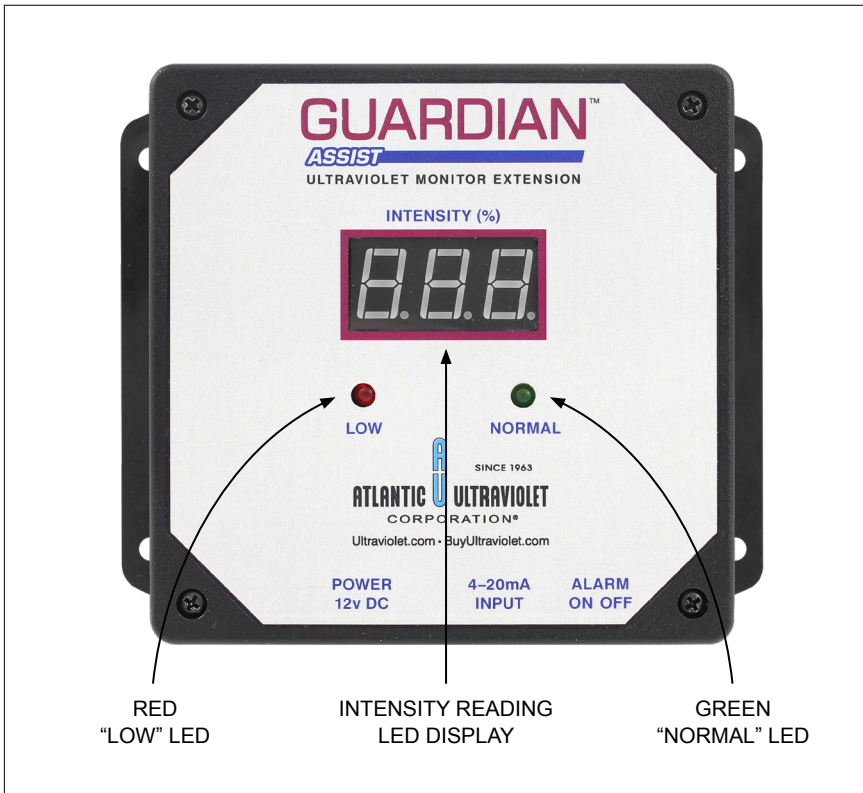
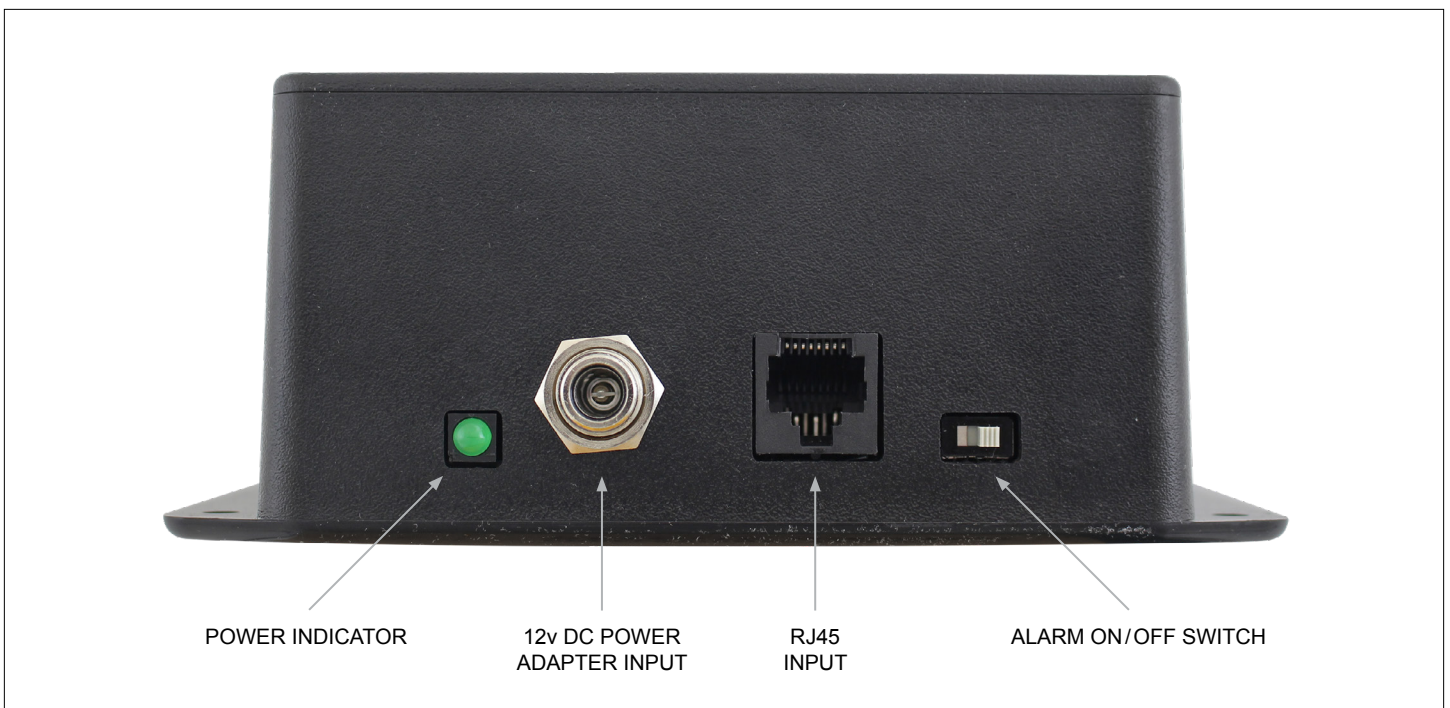


Figure 2 – 12v DC Power Adapter



Figure 3 – Bottom View of GUARDIAN™ ASSIST



# PRODUCT APPLICATION CONT.

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## **CONSTRUCTION**

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- The **GUARDIAN™ ASSIST** Ultraviolet Monitor Extension is fabricated from UL Approved ABS Fire Retardant Plastic.

## **PRINCIPLE OF OPERATION**

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The **GUARDIAN™ ASSIST** is designed to remotely indicate the intensity level displayed on the Digital **GUARDIAN™** Ultraviolet Monitor.

- The **GUARDIAN™ ASSIST** converts a 4–20 mA signal from the Digital **GUARDIAN™** Ultraviolet Monitor to an intensity level displayed on the monitor face. A 4 mA signal would read 0 and a 20 mA signal would read 120.
- The **GUARDIAN™ ASSIST** intensity reading will be the same as the Digital **GUARDIAN™** Ultraviolet Monitor +/- 2%.

When the **GUARDIAN™ ASSIST** Ultraviolet Monitor detects a germicidal ultraviolet energy level which is acceptable:

- The **GUARDIAN™ ASSIST** will light a green LED on the front of the instrument panel with the heading “**NORMAL.**”
- The display should read between 30 and 120.

When the Digital **GUARDIAN™** Ultraviolet Monitor detects a germicidal ultraviolet energy level which is unacceptable:

- The **GUARDIAN™ ASSIST** will light a red LED on the front panel with the heading “**LOW.**”
- The display should have a reading below 30.

## **Internal Audio Alarm**

When the Digital **GUARDIAN™** Ultraviolet Monitor detects a germicidal energy level which is unacceptable, an audio alarm will sound on the **GUARDIAN™ ASSIST**. The alarm can be disabled by an **ON/OFF** switch on the side of the unit.

## **LIMITATION OF USE**

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The **GUARDIAN™ ASSIST** Ultraviolet Monitor Extension is intended to be used with the Digital **GUARDIAN™** Ultraviolet Monitor. Using this monitor on any other product is not recommended or recognized by Atlantic Ultraviolet Corporation®.

## **UNPACKING**

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- Remove the **GUARDIAN™ ASSIST** Ultraviolet Monitor Extension and power adapter from its shipping carton.
- Atlantic Ultraviolet Corporation® takes all possible precautions when packing this unit to prevent damage. Carefully inspect the unit as well as the sensor probe and other contents of the carton for damage. Report all damage immediately. Do not assemble or operate if there is any damage.
- 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 in working order.

# INSTALLATION

## LOCATION

- The **GUARDIAN™ ASSIST** Ultraviolet Monitor Extension is intended for indoor use only. It should be protected from environments, high humidity, extreme temperatures, and dripping water.
- Electrical power is supplied to the **GUARDIAN™ ASSIST** by a 12v DC Power Adapter (See Figure 2).

## CONVENTIONAL INSTALLATION



IN ORDER TO PERFORM THIS TASK, BE SURE TO WEAR THE FOLLOWING SAFETY EQUIPMENT: SAFETY GLASSES OR A FACE SHIELD, AS WELL AS GLOVES

**⚠ WARNING** Always disconnect power to all devices before performing any service or maintenance.

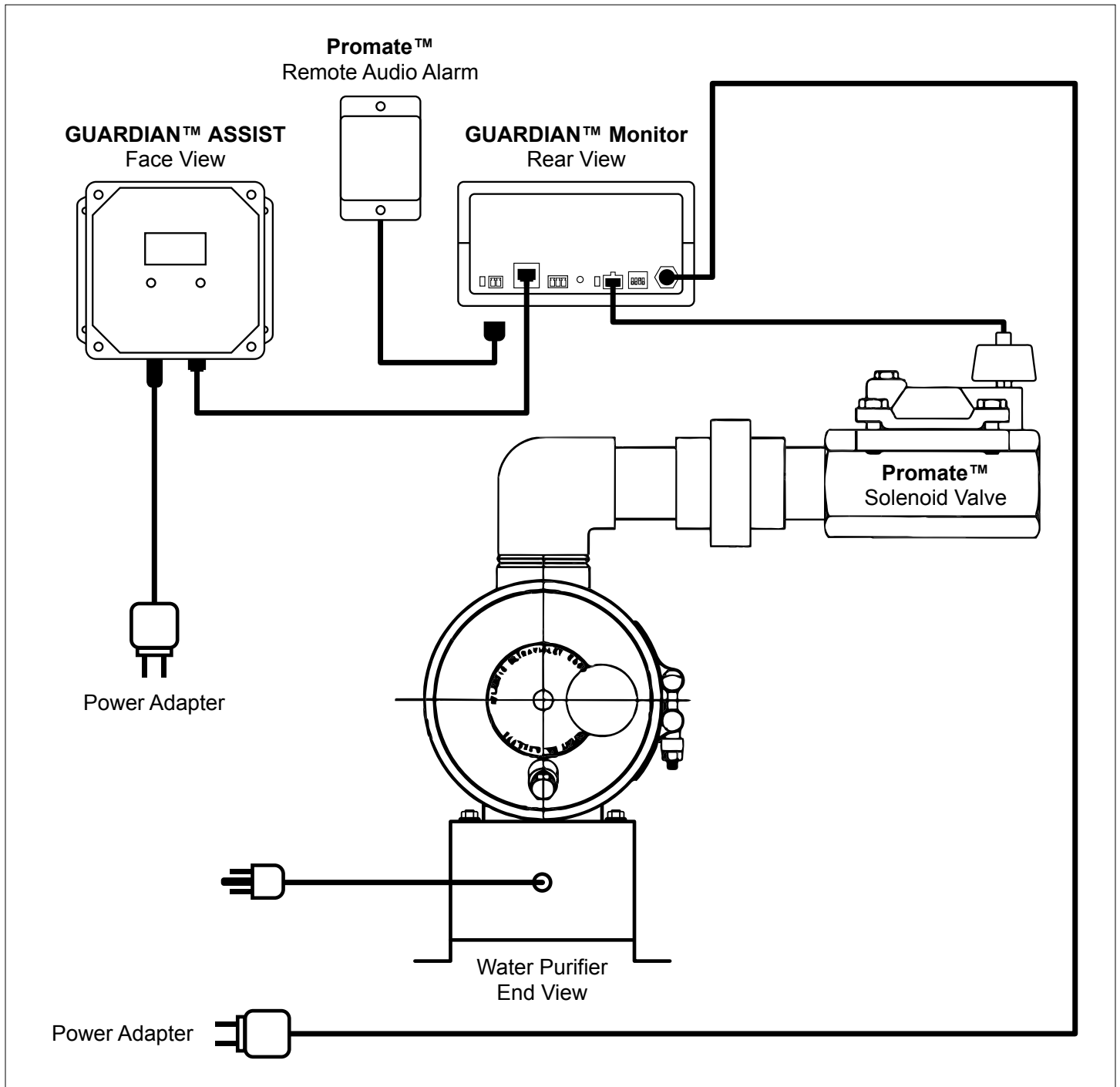
1. Connect the **GUARDIAN™** Ultraviolet Monitor and **GUARDIAN™ ASSIST** to an electrical supply, using the supplied cables.
2. Plug one end of the RJ45 cable into the output jack on the Digital **GUARDIAN™** Ultraviolet Monitor.
3. Plug the other end of the RJ45 cable into the 4–20 mA input jack on the **GUARDIAN™ ASSIST**.

Figure 4 – Connecting **GUARDIAN™ ASSIST** to the Digital **GUARDIAN™** Ultraviolet Monitor



# INSTALLATION

Figure 5 – Example of a Standard Installation Using the **GUARDIAN™ ASSIST**



# TROUBLESHOOTING

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## “LOW” INTENSITY READINGS

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If, during the normal operation of the purifier, the intensity readings falls below the “Trip Set” level, take the following steps:

1. Verify that the “LOW” LED on the Digital **GUARDIAN™** Monitor is illuminated, and that its display has the same reading as the **GUARDIAN™ ASSIST** (If **GUARDIAN™** Monitor and **GUARDIAN™ ASSIST** do not have the same reading, verify that the RJ45 cable is connected between them).
2. Verify the water purifier’s lamp is on by looking at the purifier’s sight port.
3. Clean the **CRYSTAL CLEAR™** quartz sleeve; see the Owner’s Manual supplied with the water purifier for the proper cleaning method, and note whether the intensity reading improves.
4. If, after cleaning the **CRYSTAL CLEAR™** quartz sleeve, there is no significant improvement in the intensity readings, it may be necessary to clean the quartz rod in the sensor probe. See procedure below to clean the sensor probe quartz rod.

## PROCEDURE TO CLEAN QUARTZ ROD

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The sensor probe contains a quartz rod which allows the UV rays from the lamp to pass into the Digital **GUARDIAN™** sensor. After a period of time, deposits can form on the end of the quartz rod. These deposits can limit the amount of UV rays that pass into the Digital **GUARDIAN™** sensor. Follow this section to clean the quartz rod in the sensor probe.



**IN ORDER TO PERFORM THIS TASK, BE SURE TO WEAR THE FOLLOWING SAFETY EQUIPMENT: SAFETY GLASSES OR A FACE SHIELD, AS WELL AS GLOVES**

As a precaution, consult your Owner’s Manual supplied with the water purifier to properly disconnect all power to your purifier and stop all water flow into and out of the unit before proceeding to the next step

**⚠ WARNING** Disconnect power to water purifier.

**⚠ WARNING** Germicidal ultraviolet rays are harmful to eyes and skin. **DO NOT** look directly at the germicidal lamp.

1. Disconnect power to Digital **GUARDIAN™** Monitor. Remove from chamber by loosening two set screws on the plastic collar and lifting it free from probe body. (See “**Installation**” section of Digital **GUARDIAN™** Manual for more information.)
2. Shut off water supply to water purifier via inlet and outlet shut off valves. Remove drain fitting and drain chamber.
3. Once the chamber is drained, remove sealing tape from the threads of the drain plug and re-wrap with 1/2” wide Teflon® tape. Reinstall and tighten the drain plug.
4. Unscrew the sensor probe by hand and remove from the chamber. (See “**Installation**” section of Digital **GUARDIAN™** Manual for more information.). **NOTE:** The quartz rod protrudes past the tip of the probe. Be careful not to damage.
5. Once the sensor probe has been removed from the purifier, inspect the tip of the probe where the quartz rod protrudes from the end cap. Make sure the quartz rod has not been damaged. Clean the end of the quartz rod with alcohol or a mild detergent, and rinse with clean water. (Stubborn stains can be removed with a diluted hydrochloric acid mix). Make sure the end face is completely clear and free of all deposits.

**⚠ WARNING** \***NOTE: Follow all manufacturer’s instructions and precautions when handling chemicals.**

6. Once quartz rod has been cleaned, reinstall into water purifier.
7. Place Digital Guardian onto sensor probe and tighten two set screws on the plastic collar.
8. Turn on water supply to water purifier via inlet and outlet shut off valves.



# TECHNICAL SPECIFICATIONS

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Table 2 – Technical Specifications

	<b>GUARDIAN™ ASSIST Specifications</b>
Voltage:	Power Adapter 100–240v AC input, 12v DC 460 mA output
Frequency:	50/60 Hz.
Case Dimensions:	5.77" W x 4.72" L x 2.37" H
Case Materials:	UL Rated ABS Plastic
Weight:	.8 lbs (approximate)
Current:	12v DC +/- 10%, 125 mA with alarm
Wattage:	1.5W with alarm

# REPLACEMENT PARTS

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Table 3 – Replacement Parts

<b>Part Number</b>	<b>Description</b>
30-0176	RJ45 Modular Cable, 25ft long, (8-Conductor) with Male RJ45 Connectors Each End
30-0177	RJ45 Modular Cable, 50ft long, (8-Conductor) with Male RJ45 Connectors Each End
30-0175	RJ45 Modular Cable, 100ft long, (8-Conductor) with Male RJ45 Connectors Each End
35-3190	<b>GUARDIAN™ ASSIST</b> 12v Power Adapter

# ***MAINTENANCE NOTES*** ---

# ***MAINTENANCE NOTES***

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# USER ASSISTANCE

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Atlantic Ultraviolet Corporation® makes every effort to ensure that the **GUARDIAN™ ASSIST** Ultraviolet Monitor Extension is a product of superior quality and workmanship. This manual describes the installation, operation, and maintenance of the **GUARDIAN™ ASSIST**.

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  
Email: [Sales@AtlanticUV.com](mailto:Sales@AtlanticUV.com)  
Website: [Ultraviolet.com](http://Ultraviolet.com)  
[BuyUltraviolet.com](http://BuyUltraviolet.com)

## PATENT NOTICE

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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.

# WARRANTY & PRODUCT REGISTRATION

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We warrant this product to the original owner to be free from defects in material and workmanship when installed in accordance with Atlantic Ultraviolet Corporation® specifications for a period of time as follows:

**UV Water Purifier Chambers** – Type 316 stainless steel chambers will have a Twelve (12) year Limited Warranty on the stainless steel chamber, from the date of original purchase while the Type 304 stainless steel chambers will have a Six (6) year Limited Warranty on the stainless steel chamber.

**UV Air Disinfection Housing** – Three (3) year Limited Warranty on the metal housing, from the date of original purchase.

**Ballasts** – Three (3) year Limited Warranty, from the date of original purchase.

**UV Lamps, Monitoring Devices, Optional Accessories, and Other Parts** – One (1) year Limited Warranty from the date of original purchase.

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 person; or improperly installed. Warranty will be null and void if any of the product's original labels are removed. This Limited warranty excludes the cost of labor.

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.

Be sure to register your product and validate purchase within 30 days — registration is simple and will take less than 2 minutes to do.

**NOTE – failure to register your purchase may jeopardize warranty.**

Go to [Ultraviolet.com](http://Ultraviolet.com) and scroll down to the bottom of the page, under “Trust” click the “Warranty Registration Form”, complete and click “Submit”. Or click on “Warranty Registration PDF” to download the warranty registration card as a PDF, complete and mail to us at 375 Marcus Boulevard, Hauppauge, NY 11788, or simply fax to 631-273-0771. If you prefer to register by phone, please call 631-273-0500 and our customer service staff will be glad to assist you.

For your convenience, record the following information below. The model and serial number can be found on a label located on the **GUARDIAN™ ASSIST** Ultraviolet Monitor Extension. Keep this manual, along with proof of purchase, handy when contacting our offices.

Purchased From:	Date:
Model:	Serial No.: