VIQUA

Owner's Manual

Models:
270272-R

MEMBER

Water Quality
ASSOCIATION

520157-R_RevE

Congratulations on the purchase of your ultraviolet (UV) water disinfection system!

This system uses the most advanced UV technology on the market and is designed to provide you with years of trouble free operation with minimal maintenance required to protect your drinking water from microbiological contaminants.

To ensure ongoing disinfection of your water, UV lamps need to be replaced annually with VIQUA factory-supplied replacements. VIQUA lamps are the result of extensive development resulting in a highly efficient disinfection platform with extremely stable UV output over the entire 9000 hour lifetime. Its success has led to a proliferation of non-genuine copies in the market.

The UV lamp is the heart of the disinfection system, and there should be no compromise when it's time for a replacement.

Why should you insist on genuine factory supplied VIQUA replacement lamps?

- Use of widely available, non-genuine, replacement lamps has been shown to damage the control module of VIQUA UV disinfection equipment.

- An increasing number of calls to VIQUA Technical Support are connected with non-genuine lamps being used (unknowingly) as replacements.

- Damage arising from the use of non-genuine lamps poses a safety risk and is not covered by equipment warranty.

- Unless the UV equipment is equipped with a UV sensor (monitor), it is not possible to verify the UV (invisible) output of replacement lamps.

- Similar appearance to the original lamp and the presence of (visible) blue light does not mean equivalent disinfection performance.

- VIQUA replacement lamps undergo rigorous performance testing and strict quality control processes to ensure that the safety and performance certifications of the original equipment are not compromised.

So, you can see that it's simply not worth the risk! Insist on genuine VIQUA replacement lamps.

Section 1   Safety Information

Please read this entire manual before operating this equipment. Pay attention to all danger, warning, and caution statements in this manual. Failure to do so could result in serious personal injury or damage to the equipment.

Make sure that the protection provided by this equipment is not impaired. Do not use or install this equipment in any manner other than that specified in the installation manual.

1.1 Potential Hazards:

Read all labels and tags attached to the instrument. Personal injury or damage to the instrument could occur if not observed.

	Waste electrical and electronic equipment (WEEE). This symbol indicates that you should not discard wasted electrical or electronic equipment (WEEE) in the trash. For proper disposal, contact your local recycling/reuse or hazardous waste center.		This symbol indicates gloves must be worn.
	This is the safety alert symbol. Obey all safety messages that follow this symbol to avoid potential injury. When on the equipment, refer to the Operational and Maintenance manual for additional safety information.		This symbol indicates safety boots must be worn.
	This symbol indicates a risk of electrical shock and/or electrocution exists.		This symbol indicates the operator must read all available documentation to perform required procedures.
	This symbol indicates that the contents of the transport package are fragile and the package should be handled with care.		This symbol indicates that the system should only be connected to a properly grounded, grounding-type controller receptacle that is protected by a Ground Fault Circuit Interrupter (GFCI).
	This symbol indicates a safety glasses with side protection is required for protection against UV exposure.		

Warning: This product may contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

1.2 Safety Precautions:

	⚠ **DANGER**
	Failure to follow these instructions will result in serious injury or death.
	• **Electric Shock:** To avoid possible electric shock, special care should be taken since water is present near the electrical equipment. Unless a situation is encountered that is explicitly addressed by the provided maintenance and troubleshooting sections, do not attempt repairs yourself, refer to an authorized service facility.
	• **GROUNDING:** This product must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electrical shock. This system is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances. Improper connection of the equipment-grounding conductor can result in a risk of electrocution. Check with a qualified electrician or service personnel if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with this system – if it does not fit in the outlet, have a proper outlet installed by a qualified electrician. Do not use any type of adapter with this system.
	• **GROUND FAULT CIRCUIT INTERRUPTER PROTECTION**: To comply with the National Electrical Code (NFPA 70) and to provide additional protection from the risk of electric shock, this system should only be connected to a properly grounded, grounding-type controller receptacle that is protected by a Ground Fault Circuit Interrupter (GFCI). Inspect operation of GFCI as per manufacturers suggested maintenance schedule.

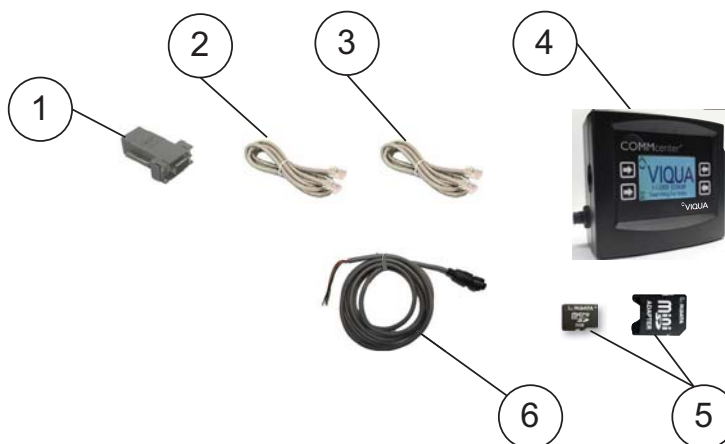|	*NOTICE*
	Read and understand the Owner's Manual before operating and performing any maintenance on this equipment.

Section 2   General Information

Figure 1 System Components

Item	Description	Part Number
1	RJ11 to RS232 Adapter	602982
2	RJ11 to RJ11 Straight through Cable	260176-R
3	RJ45 (Ethernet) cable	602942
4	COMMcenter ((includes parts #602942, 602982, 230440-R and 260176-R))	270272-R
5	2GB Micro-SD with Mini-SD adapter	230440-R
6	Cable Assembly. Commcenter Dry Contact	260201-R

Additional Accessories Purchased Separately:

To connect multiple units:

- RJ45 cable(s). Available from VIQUA and retailers. One is provided with each COMMcenter.

To connect to a computer:

- RJ11 cable. Available from VIQUA and various retailers. One is provided with each COMMcenter.

- Dry Contact cable. Available from VIQUA and various dealers. One is provided with each COMMcenter.

Section 3   Installation

3.1 Single Unit

Procedure:

1. Install water treatment unit(s) if required.

   Note: A "unit" is a complete system.

2. Power up the unit(s).

3. Mount the COMMcenter on wall, if so desired (it may also rest on a flat surface). If using RJ45 (Ethernet) cable, COMMcenter may be installed at any distance from unit(s).

   Note: Mounting holes are 2.5" (6.8 cm) apart.

4. If connecting to a single unit, connect the unit's controller (refer to Figure 2) to the COMMcenter using the cable provided with the COMMcenter.

5. To connect to multiple units, refer to Figure 3 then return to step 5.

6. Refer to Section 4 for basic operations of the COMMcenter.

7. Set the time and date on the COMMcenter. Refer to How do I set the time? and How do I set the date?.

8. If data-logging is desired, insert mini-SD card or connect to computer using MAXtrack software (available at www.viqua.com). For details, refer to Section 5.

Figure 2 Controller

3.2 Multiple Units

•   Up to 9 units may be linked to the COMMcenter.

•   Make the required connections in the sequence as shown in Figure 3.

•   The port closest to the front of each controller is for the line out and the port closest to the back is for the line in.

•   Only one Ethernet connection cable is provided with the COMMcenter.

•   The units are identified by an "address". Until they have been connected, all units are addressed as "0".

•   The COMMcenter assigns each unit an address when first connected.

•   Each unit then retains the address it is assigned, even when unplugged or connected to another COMMcenter.

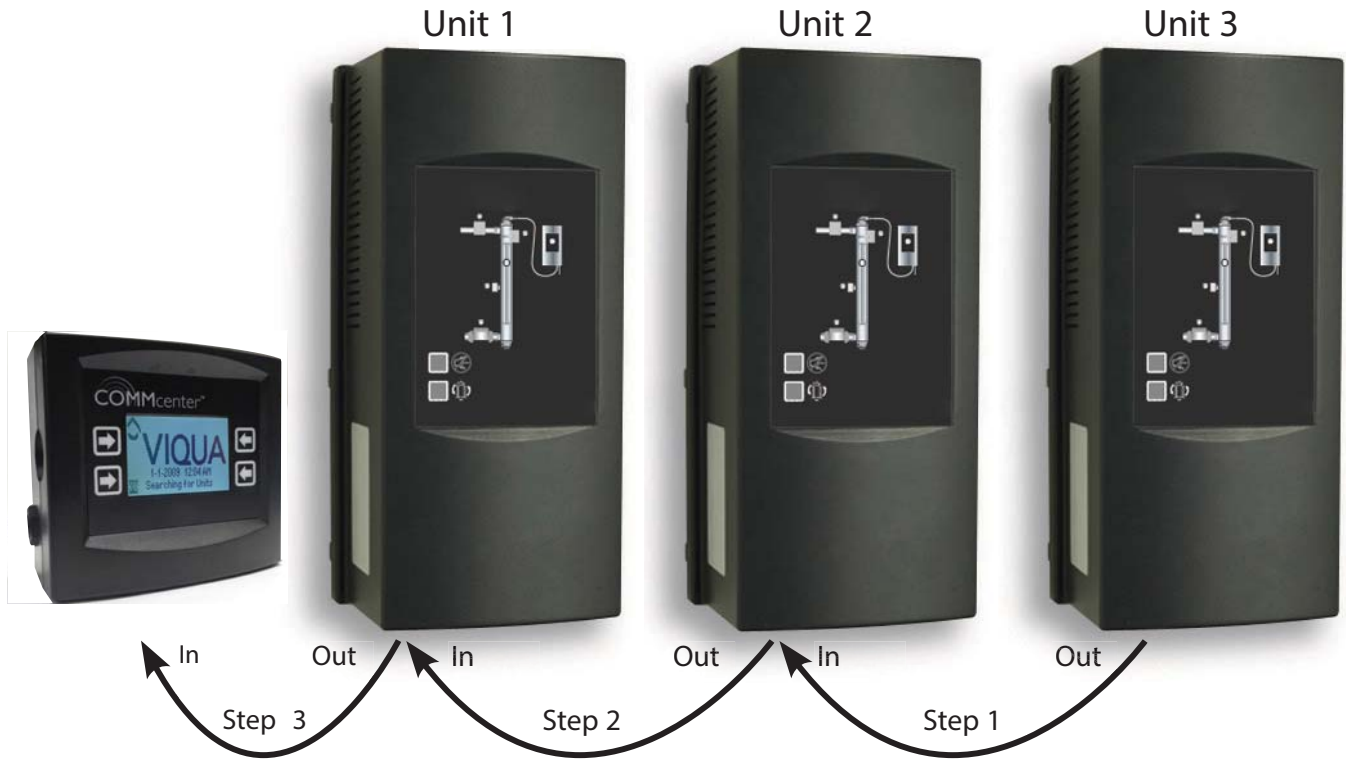•   Refer to How do I connect multiple units? for more information.

Figure 3 Multiple Unit Installation

Section 4   Operation

Navigation

There are four buttons on the COMMcenter. Their function corresponds to what is displayed on the screen next to each button, as illustrated below.

Figure 4 COMMcenter

1	Use this button to select "Settings".	3	Use this button to move up through options.
2	This button does not have an assigned function on this screen.	4	Use this button to move down through options.

Standard and Advanced Menu Settings

There are two menu settings: Standard and Advanced. For the features of each, refer to the Menu Structure on the next page. When the COMMcenter is connected to more than one unit, it defaults to Advanced Menus mode. Otherwise, this mode may be selected - refer to How do I change the menu mode?.

Welcome Page and Home Page

The Welcome page appears during start-up. Left unattended, the COMMcenter will alternate between the Welcome page and the Home page. The latter displays the most critical information about the performance of the unit(s). To view the menu options from the Welcome page or the Home page, press any button.
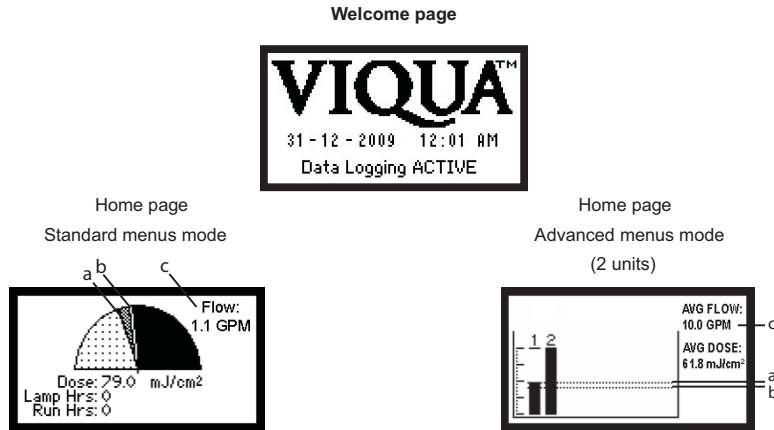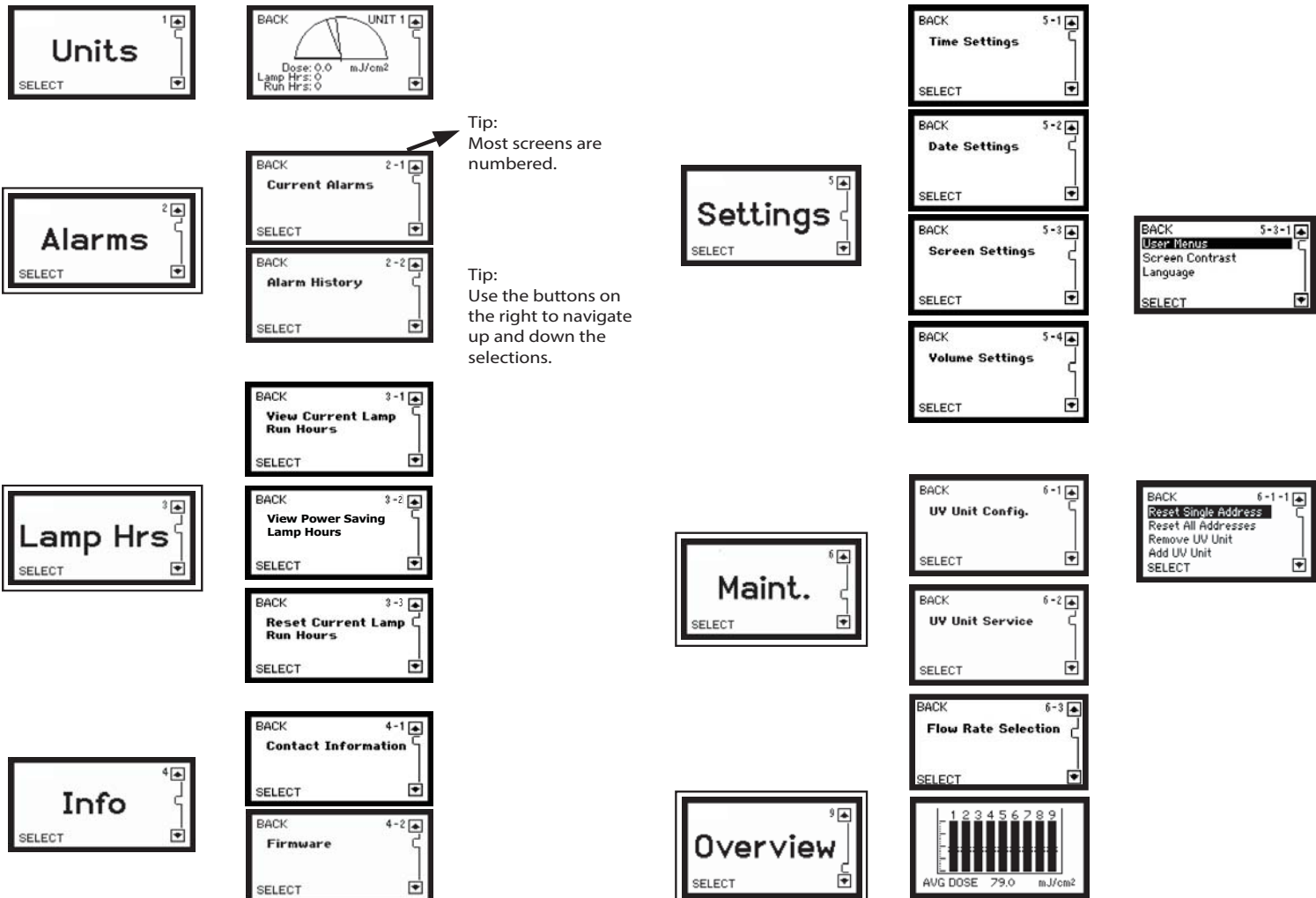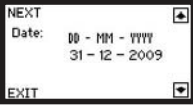
Welcome page

Home page

Standard menus mode

Home page

Advanced menus mode

(2 units)

Figure 5 COMMcenter

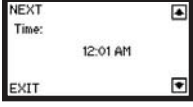| a) Dose 45, nearing alarm set point	c) GPM Flow rate (if so equipped with flow meter)
b) Dose 40, alarm set point. Unit will shut solenoid valve (if so equipped) below this level.	

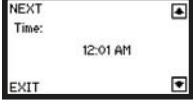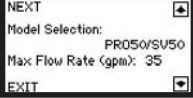Screens with a double outline are only visible when in Advanced Menus mode.

Tip:
Most screens are numbered.

Tip:
Use the buttons on the right to navigate up and down the selections.

Initial Setup - First-time On Sequence

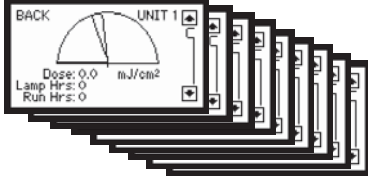*Use buttons on right to set language*

Use buttons on right to set date

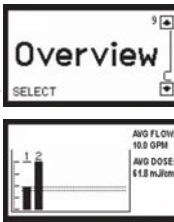*Use buttons on right to set time*

Use buttons on right to set model

Use buttons on right to set max flow rate

What dose is being delivered?
How long has my lamp been running?
How long has my system been running?

One screen for each unit, up to a maximum of 9. Navigate between units using buttons on the right. If only one unit is present, this is the Home page.

Note: The Home page for multiple systems is also useful as it displays the dose being delivered by each unit. It may be viewed by selecting the following:
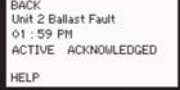
What alarms are currently present?

Alarms must first be acknowledged by pressing any button on the COMMcenter or by pressing the Mute button on the power supply. This does not remove the alarm condition.

Note: The "Alarms" screens may only be viewed when in Advanced Menus mode.

Use buttons on right to scroll through alarm

You can review helpful advice by simply pressing the bottom left button.

What alarms have occurred?

The COMMcenter stores the last 40 alarms that have occurred in memory. For greater data-logging capability, including the ability to data-log dose, use our free MAXtrack software or insert a mini-SD card.
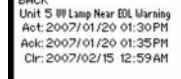
Note: The "Alarms" screens may only be viewed when in Advanced Menus mode.

Use buttons on right to scroll through alarm
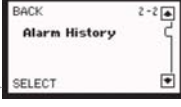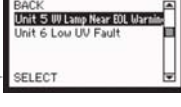
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How many more days should my lamp last?

Note: The "Lamp Hours" screens may only be viewed when in Advanced Menus mode.
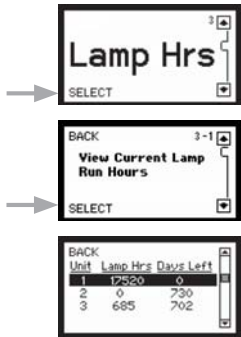
How do I check my power savings hours?

What firmware revision do I have?

Use buttons on right to choose COMMcenter or ballast interface (controller).

How can I reset the lamp run hours after installing a new lamp?

The lamp run hours can also be reset at the power supply. Refer to system Owner's Manual for details.

Note: the "Lamp Hours" screens may only be viewed when in Advanced Menus mode.
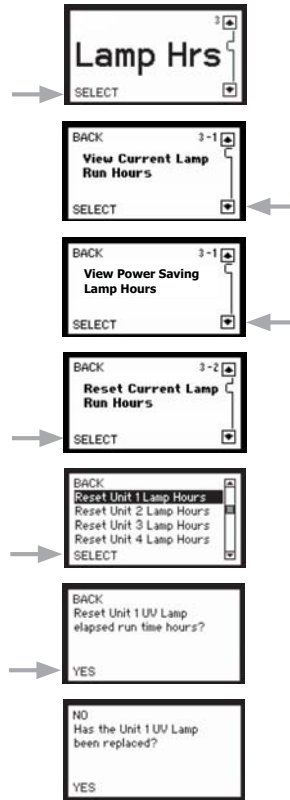
Use buttons on right to scroll through the unit.
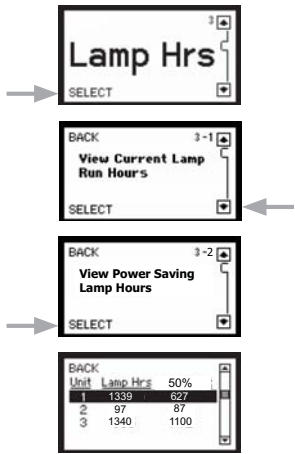
Who do I contact for help?
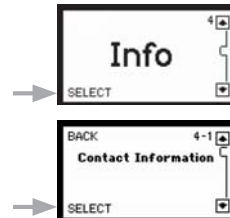
Operation

How do I set the time?

The COMMcenter is equipped with a battery that will allow it to track the time for the life of the product.

Use buttons on right to set hour

Use buttons on right to set minutes

Use buttons on right to set AM/PM
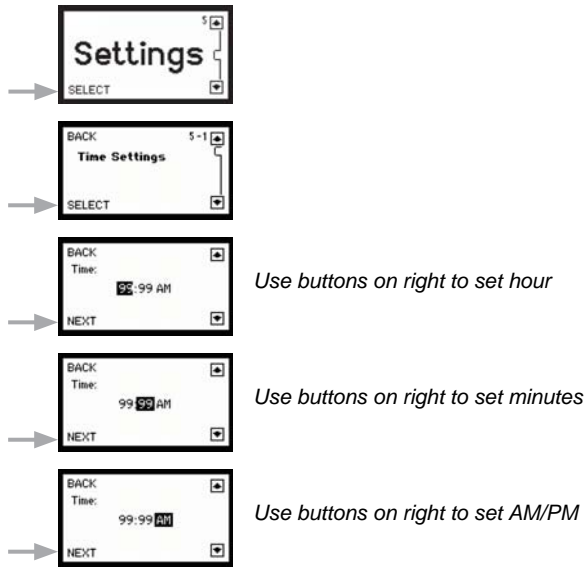
How do I set the date?

The COMMcenter is equipped with a battery that will allow it to track the date for the life of the product.

Use buttons on right to set day

Use buttons on right to set month

Use buttons on right to set year
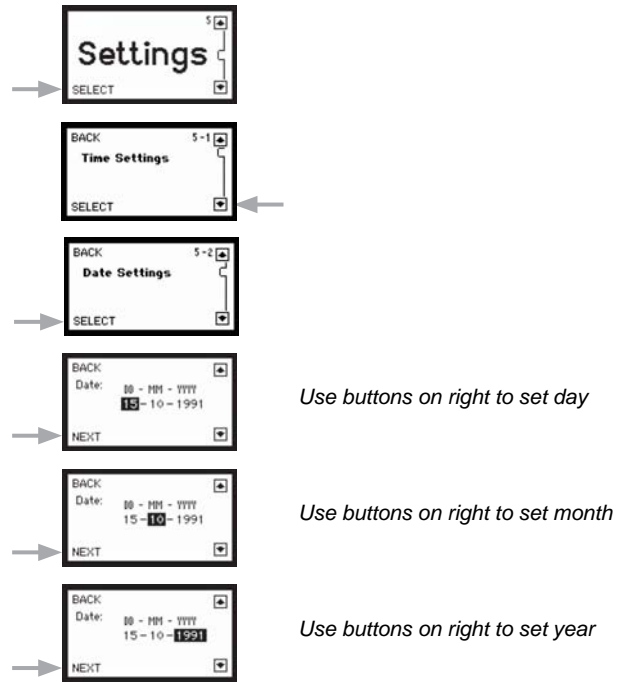
How do I change the menu mode?
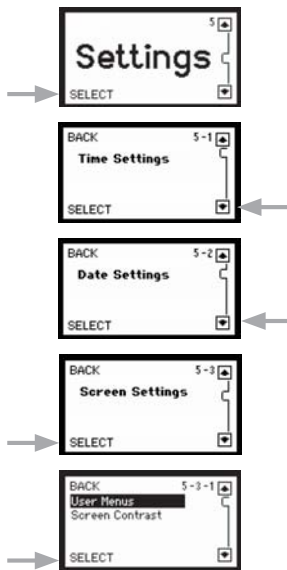
How do I adjust the screen contrast?

Use buttons on right to set screen contrast

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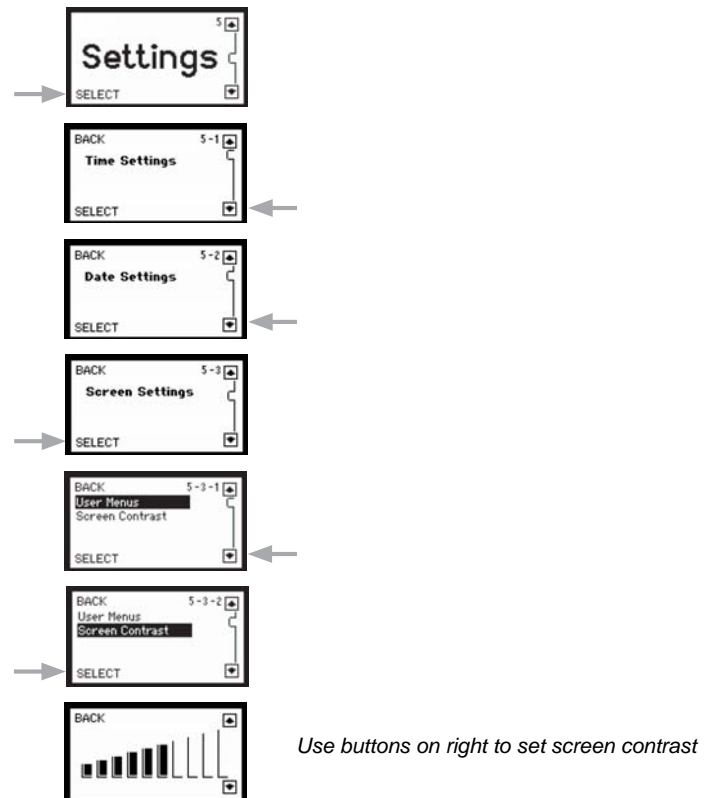
How do I change the language?

Use buttons on right to set language
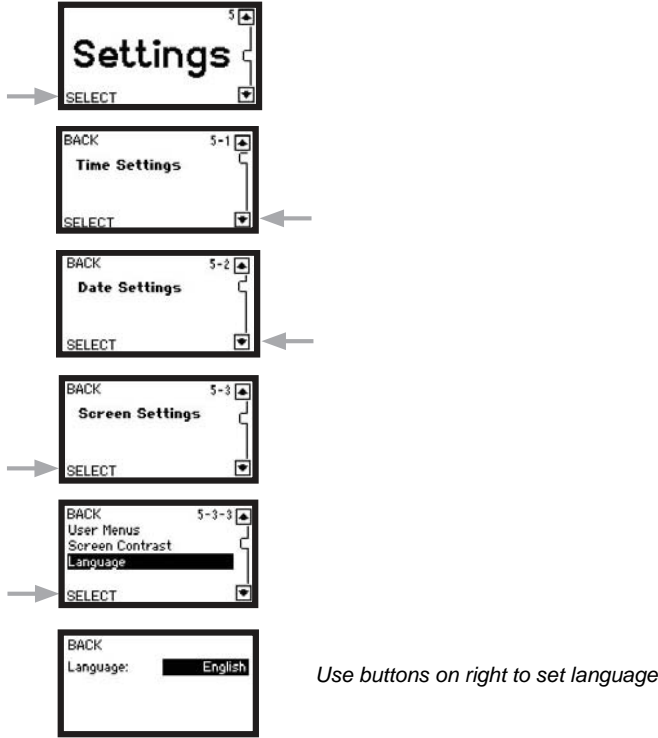
How do I adjust the volume of the audible alarm?

Use buttons on right to set volume
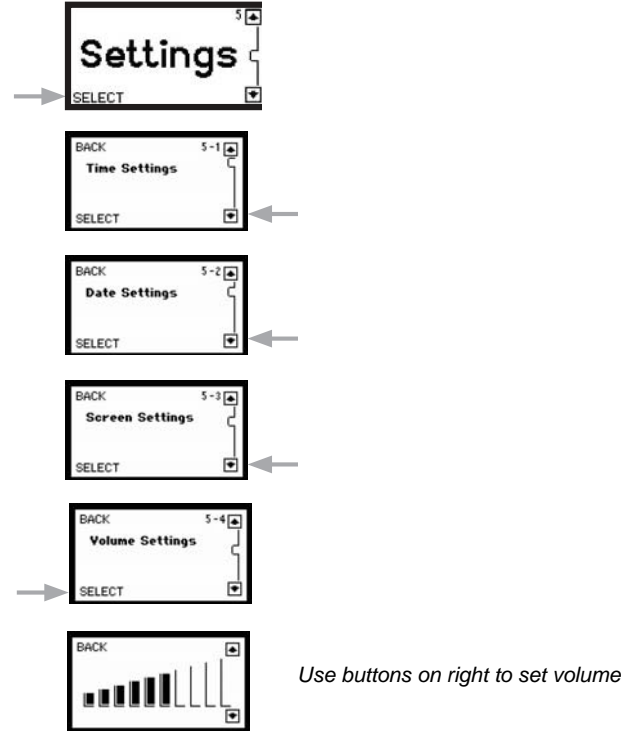
How do I permanently remove a unit?

This procedure resets the address for one unit to "zero", and the COMMcenter will no longer track this unit. Use this when permanently removing a unit. This way, if it is used again in another location, it will not have an assigned address.

Note: *The "Maintenance" screens may only be viewed when in Advanced Menus mode.*

Use buttons on right to scroll through the unit
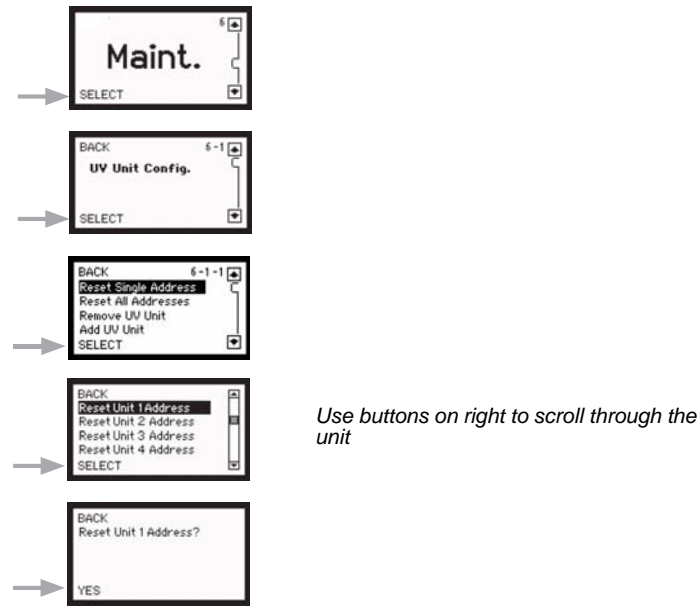
How do I reset all addresses?

This procedure resets the addresses of all units to "zero". Use this only after consulting with VIQUA Technical Services at 11-800-265-7246.

Note: *The "Maintenance" screens may only be viewed when in Advanced Menus mode.*
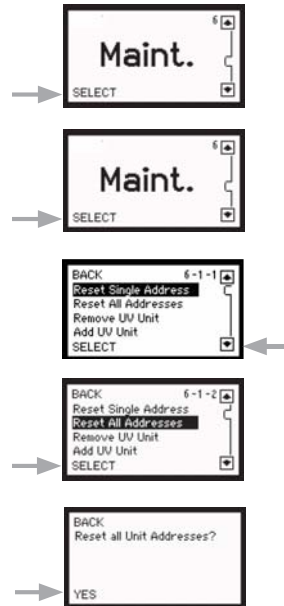
How do I remove a unit?

When this procedure is followed, the unit that is removed is no longer tracked by the COMMcenter. Use this procedure when removing a unit from service, such as when turning off a unit that is only used as a back-up. This avoids lost-communications alarms.

Note: The "Maintenance" screens may only be viewed when in Advanced Menus mode.
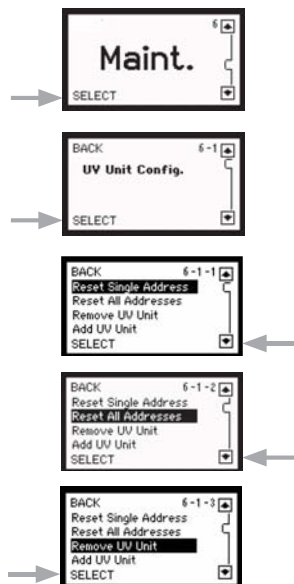
How do I re-install a unit?

Use this procedure when a unit that was previously removed from service (ex: back-up system) needs to be returned to service. You must know the address of the system being returned to service.

Note: The "Maintenance" screens may only be viewed when in Advanced Menus mode.
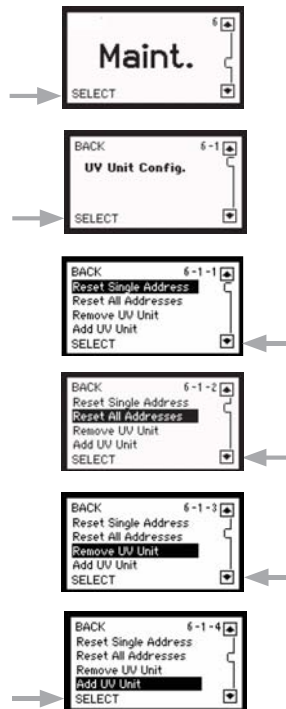
How do I connect multiple units?

Use this procedure when connecting multiple units to the COMMcenter (additional Ethernet cable(s) required, refer to Section 2). It is advised to connect and add one additional unit at a time, so that their addresses will match up with their location. Refer to the diagram on page 5 for directions on linking additional units to the COMMcenter. After selecting "Add UV Unit", follow the prompts to add units to increase the number of existing units.
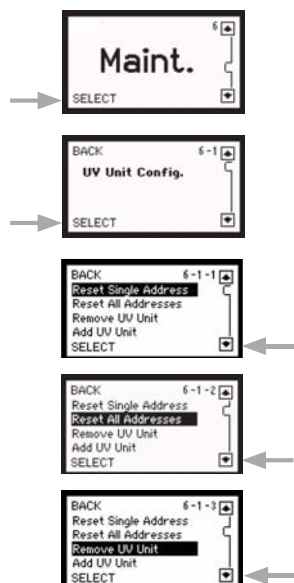

What if I am replacing the COMMcenter?

First, it is important to reset the address on the primary unit using the original COMMcenter. This can be done by following the procedure to permanently remove a unit (page 14). The new COMMcenter should then automatically detect the primary unit. If additional units were connected to the original COMMcenter, they can be added using the procedure for connecting multiple units. In this case however, choose "No" when asked if units are being added to increase the number of additional units, and select "Yes" when asked if units have already been assigned a designated address. If the unit was not removed from service properly, it may be necessary to reset the unit before it can connect to the new COMMcenter (Refer to How do I reset the ballast unit?).

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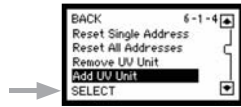
How do I reset the COMMcenter?

To reset a COMMcenter, hold down any two buttons diagonally opposite each other while connecting it to a unit. This will return the COMMcenter to its factory default settings.

How do I reset the ballast unit?

To reset the ballast unit, hold down both buttons on the front of the unit while connecting the power cord. This will reset the address and lamp life counter within the unit.

WARNING: Resetting the ballast unit will erase all information regarding lamp life and reset the lamp life counter. If you wish to reset the lamp hours, do so through the COMMcenter.

How do I turn off a unit for servicing?

This procedure provides a two hour window during which the COMMcenter no longer tracks the specified unit. Use this procedure when a unit must undergo service so as to avoid alarms.

How do I turn a unit on after servicing?

This procedure triggers the COMMcenter to resume tracking the unit specified. Note that if this procedure is not followed the COMMcenter will try to resume tracking of the given unit automatically, two hours after it was first turned off for servicing.
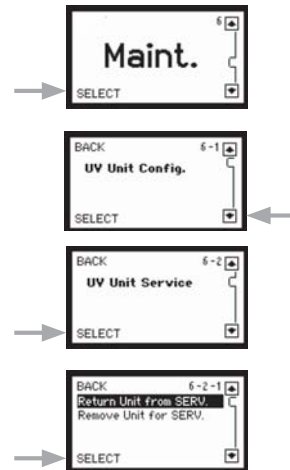
How do I change the flow rate?

Use buttons on right to set model

How do I change the Dose Alarm Level?
* For Pro10, 20 and 30 models only
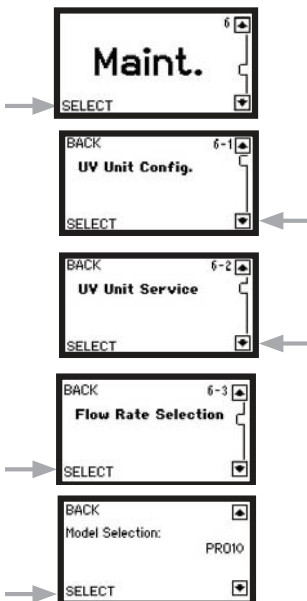
Use buttons on right to set model
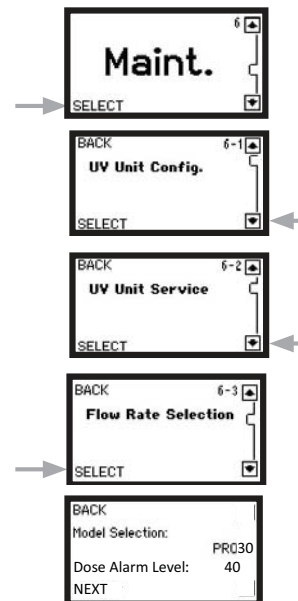
NEXT
Model Selection:
          UVMAX G/G+
Max Flow Rate (gpm): 50
BACK

Use buttons on right to set max flow rate

BACK
Model Selection:
          PR030
Dose Alarm Level: 80
NEXT
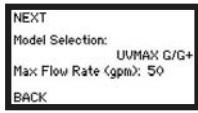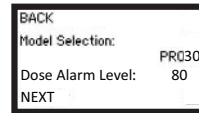
Use buttons on right to set dose alarm level 40, 80 or 120mJ/cm²

Section 5   Data-Logging

5.1   Using a Mini-SD Card

The COMMcenter has the ability to store data on the performance of your system(s) to a mini-SD card, refer to Figure 6. Mini-SD cards are available at various retailers.

Information is recorded every minute and a 512MB card should store 18 years worth of information.

To use this data-logging feature, simply insert a mini-SD card into the slot on the left side of the COMMcenter.
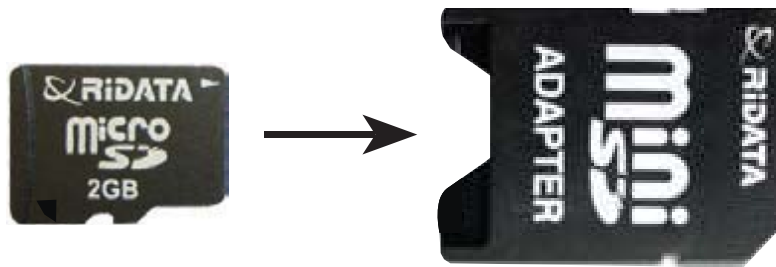
Figure 6 Mini-SD card

5.1.1   Extract Mini-SD Card

Procedure:

9. Push the card into the COMMcenter.

10. This will cause the card to spring out slightly for removal.

Figure 7 Extracting Mini-SD card

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5.1.2 Download Information Stored on Mini-SD Card

Procedure:

1. Insert the card into a card reader that is attached to a computer.

Note: Card readers are available from various retailers.

2. Use the computer's file management application to view the contents of the card.

3. A folder with name "dd_mm_yy" format contains the data-log files, with CSV extension.

4. These files may be opened in Micros oft Excel or VIQUA's free MAXtrack software (refer to Section 5.2) for easy viewing of the data.

5. You may wish to save the file to the computer's hard drive.

6. To re-use the mini-SD Card, re-insert the card into the COMMcenter.

5.1.3 When Data-logging from Multiple Units

When using a standard Ethernet (RJ45) cable to connect the COMMcenter to the first controller, it is important to note that power is provided to the COMMcenter through this cable. Therefore, if power to this unit is interrupted the COMMcenter loses power and data-logging is temporarily stopped. This may not be desirable in situations where multiple units are installed. To avoid this situation, it is recommended that you reconnect and reconfigure the COMMcenter using another unit.

5.2 Using MAXtrack Software

Your COMMcenter has the ability to store information directly to a PC equipped with MAXtrack software, which is available for free. MAXtrack software allows you to easily search and view system performance, and presents real-time information as well. To learn more about the great features of this software or to download, visit www.viqua.com.

Figure 8 MAXtrack Software

Note: Screen caption of real-time performance monitoring using MAXtrack software.

5.2.1 Minimum Requirements

- Pentium II 233MHz

- 128 MB RAM (256MB for Windows XP)

- 3GB free hard drive space

- One free Serial Port (RS232, 9-pin female)
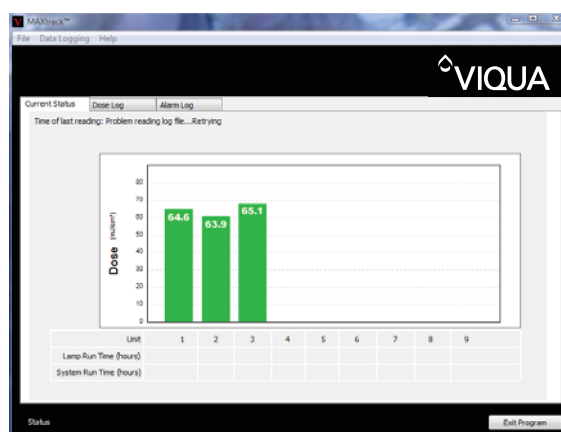
- Windows 2000 or better

5.2.2 Installation

Procedure:

1. Connect the provided RJ11 cable to the COMMcenter.

2. Connect the other end of the cable to the adapter provided with the COMMcenter.

3. Connect the adapter to your computer. If no suitable port is available, a USB adapter may be purchased from a retailer.

4. Go to www.viqua.com and download your free MAXtrack software.

5. Open the software application now installed on your computer, either from the shortcut on your desktop or by choosing "Start" then "All Programs" then "MAXtrack".

5.2.3 Operation

The MAXtrack program is an interface for viewing the data received from the COMMcenter. The program receives and stores information even when the program is closed. For assistance with this program, please contact our technical support staff at 1-800-265-7246 (North America) or 519-763-1032 (International).

Section 6 COMMcenter Programming

6.1 SD Card Firmware Updating

COMMcenter firmware updates can be easily done via the SD Card. Power off the COMMcenter and remove SD card. Load the new firmware version onto the SD card via a computer device. Reinsert the SD card back into the COMMcenter. While holding down the top right button power up the COMMcenter until the screen displays Updating Firmware. Release the button and wait until the COMMcenter reboots.

Section 7 Dry Contact

7.1 Description

The COMMcenter has a Dry Contact output connector that can be used to signal a remote device such as a remote alarm of auto dialer when a major alarm occurs with the UV system.

7.2 Alarm Descriptions

The Dry Contact output will inform you of the following major Alarms

- Lamp Fault
- Ballast Fault
- UV Sensor Fault
- Low UV Fault

7.3 Connections

Connection to the Dry Contact output connector is done via the supplied Dry Contact Cable assembly PN 260201-R. Wiring connections are as follows:

- Normally Open (N.O.) - RED Wire
- Normally Closed (N.C.) - GREEN Wire
- Common (COM) - BLACK Wire

7.3.1 Connection Logic Chart

The following is the logic chart for the Dry Contact relay.

Wire	Output Terminal	UV System Running Normally (No Major Alarms)	UV System is in one of the Major Alarms or there is no power to the UV system
RED	N.O. (Normally Open Contact)	The Electrical path between these contacts are closed	The Electrical path between these contacts are open
BLACK	COM. (Common)		
	COM. (Common)	The Electrical path between these contacts are open	The Electrical path between these contacts are closed
GREEN	N.C. (Normally Closed Contact)		

Section 8 Manufacturer's Warranty

Our Commitment

VIQUA is committed to ensuring your experience with our products and organization exceeds your expectations. We have manufactured your UV disinfection system to the highest quality standards and value you as our customer. Should you need any support, or have questions about your system, please contact our Technical Support team at 1.800.265.7246 or technicalsupport@viqua.com and we will be happy to assist you. We sincerely hope you enjoy the benefits of clean, safe drinking water after the installation of your VIQUA disinfection system.

How to Make a Warranty Claim

Note: *To maximise the disinfection performance and reliability of your VIQUA product, the system must be properly sized, installed and maintained. Guidance on the necessary water quality parameters and maintenance requirements can be found in your Owner's Manual.*

In the event that repair or replacement of parts covered by this warranty are required, the process will be handled by your dealer. If you are unsure whether an equipment problem or failure is covered by warranty, contact our Technical Support team at 1.800.265.7246 or e-mail technicalsupport@viqua.com. Our fully trained technicians will help you troubleshoot the problem and identify a solution. Please have available the model number (system type), the date of purchase, the name of the dealer from whom you purchased your VIQUA product ("the source dealer"), as well as a description of the problem you are experiencing To establish proof of purchase when making a warranty claim, you will either need your original invoice, or have previously completed and returned your product registration card via mail or online.

Specific Warranty Coverage

Warranty coverage is specific to the VIQUA range of products. Warranty coverage is subject to the conditions and limitations outlined under "General Conditions and Limitations".

Ten-Year Limited Warranty for VIQUA UV Chamber

VIQUA warrants the UV chamber on the VIQUA product to be free from defects in material and workmanship for a period of ten (10) years from the date of purchase. During this time, VIQUA will repair or replace, at its option, any defective VIQUA UV chamber. Please return the defective part to your dealer who will process your claim.

Three-Year Limited Warranty for Electrical and Hardware Components

VIQUA warrants the electrical (power supply) and hardware components to be free from defects in material and workmanship for a period of three (3) years from the date of purchase. During this time, VIQUA will repair or replace, at its option, any defective parts covered by the warranty. Please return the defective part to your dealer who will process your claim.

One-Year Limited Warranty for Lamps, Sleeves, and UV Sensors

VIQUA warrants lamps, sleeves, and UV sensors to be free from defects in material and workmanship for a period of one (1) year from the date of purchase. During this time, VIQUA will repair or replace, at its option, any defective parts covered by the warranty. Your dealer will process your claim and advise whether the defective item needs to be returned for failure analysis.

Note: *Use only genuine VIQUA replacement lamps and sleeves in your system. Failure to do so may seriously compromise disinfection performance and affect warranty coverage.*

General Conditions and Limitations

None of the above warranties cover damage caused by improper use or maintenance, accidents, acts of God or minor scratches or imperfections that do not materially impair the operation of the product. The warranties also do not cover products that are not installed as outlined in the applicable Owner's Manual.

Parts repaired or replaced under these warranties will be covered under warranty up to the end of the warranty period applicable to the original part.

The above warranties do not include the cost of shipping and handling of returned items

The limited warranties described above are the only warranties applicable to the VIQUA range of products. These limited warranties outline the exclusive remedy for all claims based on a failure of or defect in any of these products, whether the claim is based on contract, tort (including negligence), strict liability or otherwise. These warranties are in lieu of all other warranties whether written, oral, implied or statutory. Without limitation, no warranty of merchantability or of fitness for a particular purpose shall apply to any of these products.

VIQUA does not assume any liability for personal injury or property damage caused by the use or misuse of any of the above products. VIQUA shall not in any event be liable for special, incidental, indirect or consequential damages. VIQUA's liability shall, in all instances, be limited to repair or replacement of the defective product or part and this liability will terminate upon expiration of the applicable warranty period.

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