

American Ultraviolet
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OPERATION & MAINTENANCE MANUAL

MODEL: MRS14-4-P0Z



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1. Introduction

The MRS14-4-P0Z Unit is an easily moveable disinfection system designed to provide direct, prolonged UVC treatment. The unit will disinfect surfaces within its reach, until the predetermined amount of time has been reached.

The unit is controlled with a remote-control fob. The unit is equipped with a 360° motion sensor array, to prevent accidental exposure to individuals who enter the area during the disinfection cycle. The unit has (4), GML600AT, 14" UVC lamps.

The MRS14-4-P0Z unit's design is intended for UVC surface disinfection treatment of Ambulance interiors but can be utilized for any relatively small enclosed area. The unit is provided with rubber bumper feet for placing the unit on a floor or other flat surface. The MRS14-4-P0Z unit also has a top mounted heavy duty eyehook that will allow for the unit to be suspended from a roof or ceiling surface, if required.

1.1. Technical Information

MRS14-4-P0Z

Input Voltage.....	120 VAC, 60 Hz, 1 Amp
Internal Fuse Rating.....	1.5 Amp
Power Cable Length.....	8 feet
Weight.....	26 lbs.
Lamp Type.....	GML600AT
Lamp Quantity.....	(4)
Dimensions.....	10.0" wide x 10.0" long x 25.19" tall

READ BEFORE OPERATING THIS UNIT

2. Safety



This unit should only be operated or repaired by personnel who have read this manual, understand the unit's operation, and know what to do in the case of an emergency. All repairs are to be performed only by an authorized service technician.

2.1 Safety Warnings



ULTRAVIOLET (UV-C) EXPOSURE WARNING

Light in the short-wave UV-C band can cause erythema (reddening of the skin) and conjunctivitis (inflammation of the mucus membranes of the eye). People should avoid direct exposure to UV-C. UV-C exposure is relatively easy to limit because most products absorb UV-C. Standard windows and glass absorbs all UV-C. Dead skin absorbs most UV-C light energy so erythema is limited. UV-C does not penetrate the eye's lens. However, conjunctivitis can occur and though temporary, may be extremely painful. The manufacturer recommends that all direct exposure to UV-C be avoided. Safety glasses must be worn at all times the device is plugged in; in addition, it is highly recommended that a protective garment such as a lab coat is worn while operating the device. In case of accidental UV-C exposure, contact appropriate EMS.



HIGH VOLTAGE HAZARD

The unit uses high voltages, and proper electrical connections are required. Do not operate the unit if there is any visible damage to the module body, the motion sensor, the power cable, or any other part.



The MRS14-4-POZ unit can be considered a "spark" hazard. Do not operate the unit in an explosive environment.



HOT SURFACE

UV Lamps will become hot during use and will remain hot for a brief period after use. Lamps should not be touched for at least 2 minutes after use.

**Contact American Ultraviolet Technical Support at 800-288-9288
with any questions.**

2.2 Safety Features

Motion Sensors:

Four (4) motion sensors are mounted above the lamps, (1) on each side of the upper enclosure. These sensors prevent UV-C exposure to any persons who may enter the area or room during a decontamination cycle. This is done by turning the UV lights off and cancelling the cycle.

Wireless Controller:

Due to the controller being wireless the operator can exit the room first and then start the countdown to begin the decontamination cycle thus reducing the chance of UV-C exposure to the operator.

WARNING: The Motion Safety Sensor System, in NO WAY reduces or eliminates the responsibility of the operator to verify that the area to be treated is empty and that all access points to the area are secure.



3. Operation

The MRS14-4-POZ mobile disinfection device must only be used by trained and knowledgeable users. It is the responsibility of the end user and administration of the location where the MRS14-4-POZ is being used to provide proper training of the operation of the MRS14-4-POZ unit, for best results. Improper use or operation of the MRS14-4-POZ can lead to possible operator injury.

Using the heavy-duty aluminum handles, pick the unit up and place it in the desired location, either resting on a floor surface or suspended from the roof or ceiling surface. Plug the unit into a three-prong, properly grounded, 120 VAC, 15 Amp rated electrical outlet. This outlet must be protected with an appropriately rated and listed circuit breaker.

Make sure that the unit is positioned such that it is not obstructing the outlet and that the outlet is easily accessible should the device need to be disconnected. Obstructing the plug can lead to a dangerous operating environment.



With the power cord plugged in, press the Rocker Switch into the On position. This action will power the Exposure Timer located next to the Rocker Switch. Program the Timer to the desired exposure time. Ensure all personnel have exited the treatment area and all other sensitive material has been removed and close off any access points to the immediate area to be treated.

Once the area to be treated has been closed off and secured, using the remote fob, press the up arrow to start the UVC exposure cycle. This action will result in the UVC Lamps coming on and the Cycle Timer going through a pre-determined count-down time, as set by the user. Once the Timer has timed out, the UVC Lamps will turn off, completing the exposure cycle. At that time, the exposure cycle can be repeated if desired, by pressing the up arrow once again.

Depending on the overall arrangement of the area being exposed, the MRS14-4-POZ can be repositioned as required and recycled, to expose other surfaces that may have been shadowed from the line of sight of the UV rays, during the previous exposure cycle.




WARNING: Before entering the area being treated after the cycle is complete, proper PPE should be worn to prevent any accidental skin exposure to UV-C.

4. Moving The Unit

Unplug the unit from the electrical outlet. Lift the unit from its resting place by use of the top mounted heavy-duty aluminum handles and remove it from the area. The unit is now ready to move to the next area to receive treatment.

5. Lamp Installation

Note: Clean, cotton gloves must be worn when lamps are installed to prevent fingerprints on lamps.

1. Allow the unit and lamps to cool. The unit and lamps should be allowed to reach close to room temperature before handling.
2.  Turn off power to the system and unplug the power cord. Ensure there is no voltage being supplied to the unit in order to prevent any possibility of UV exposure or electrical shock.
3. If the unit has a lamp in place, carefully remove the lamp by firmly gripping the lamp at the lower end and disconnecting it from the power connector, by pulling straight up.
4. Carefully slide the lamp up through the grommet, and angle the lamp outwards. Slide the lamp out of the grommet and then out of the MRS14-4-POZ light fixture.
5. Properly dispose of the lamp in accordance with Local, State, and Federal Regulations.
6. To install a new lamp, remove the lamp from the original packaging. Clean, cotton gloves should be worn when handling the UV lamps. Wipe the lamp using the provided alcohol wipes or use 100% isopropyl alcohol and lint-free cloths.
7. Gently insert the lamp into the grommet fitting and angle the lamp back into the proper position, installing the lamps closest to the handles first, then the remaining (2) lamps.
8. Firmly seat all of the lamps into the power connectors.



6. Maintenance

MRS14-4-POZ requires very little maintenance:

1. Replace all lamps annually.
2. Clean any material or deposits on the lamps or unit casing.
3. Visually inspect the unit for damage prior to operation. DO NOT use if there is damage.
4. Please contact the manufacturer or a certified distributor to schedule a maintenance call to repair the machine.

7. Storage

Store the unit in a dry, temperature controlled environment.

8. Troubleshooting

1. The unit has lost power. Verify the unit is plugged in to a proper electrical outlet. Check the fuse located underneath the unit, next to the power cord.
2. Lamps will not come on. Check fuses.
3. One lamp doesn't come on. Replace lamp.
4. Please contact the manufacturer or a certified distributor to schedule a maintenance call to repair the machine.

9. Spare Parts

MRS45-12-POZ (120V)

Part #	Description
TXG350	Ballast, 120V
GML600AT	UV Lamp, 14", standard output
SEN-001	Sensor Board
SEN-002	Motion Sensor
PSD-110	Power Supply, 24VDC 60W
LHD105	4-Pin Lamp Socket
TMR-110	Cycle Timer
SWT-260	On-Off Rocker Switch
CRD008	Power Cord
FUSE038	Fuse
CTL-315	Remote Receiver Relay
FAN-120	Cooling Fan