# Wilcox Distribution, LLC is pleased to offer this user's manual for IVP'S BIODEFENSE INDOOR AIR PROTECTION V1 SYSTEM





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# Thank you for choosing the World's Only Biodefense Indoor Air Protection System™

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## We are here to help:



**Online** ivpair.com



## **Support Center**

Call: 1-713-953-8480 or 1-800-713-4872 between Mon-Fri 8am to 8pm CST; Sat 9am to 6pm CST

Email: info@ivpair.com

### What's in the box

IVP Air Disinfection System Unit



#### Lockable Caster Wheels



Bottom stabilizers for shipping



## Getting Started Important Safety Instructions

- Use the unit **ONLY** for its intended use.
- To protect against a risk of electric shock, do not immerse any part of the system in water or in any other liquids.
- To reduce the risk of an electric shock or damage to the device, switch it off and unplug the device before cleaning or performing **ANY** maintenance to the device.
- To reduce the risk of burns from hot surfaces, switch the device off and allow it to cool before performing any maintenance to the device.
- This device is **NOT** a toy, and children should always be supervised if near the device.
- This device is **NOT** to be used by children or persons with reduced physical, sensory, or mental capabilities.
- **NEVER** look directly at a burning Ultra-Violet (UV) light, as this may permanently damage your eyes.
- The UV components are sealed in the device to ensure there is no risk of harm and UV light exposure. Before opening the service access door, ensure the device is powered off to prevent accidental exposure to UV light.
- Effectiveness of this device may degrade if filters are not cleaned or replaced as specified.
- When moving the device, care must be taken to ensure it does not tip over or roll out of control.
- The device may lose effective function if used outside of the operating conditions specified.
- To avoid damage to the device, **ONLY** use cleaning chemicals and procedures as specified.
- Do not attempt to repair or replace any part of this device unless it is specifically recommended in this manual. All other services should be referred to a qualified technician.
- No form of water or liquid should enter the device. Should this occur, **IMMEDIATELY** switch off the device and unplug it. Contact your distributor.
- To protect against a risk of electric shock, do not immerse **ANY** part of the system in water or in any other liquids.

- Do not place any heavy objects on the power cord as this may cause a fire and/or an electric shock.
- Make sure the power cord is plugged firmly into the outlet. If the power is not plugged in correctly, this may cause a fire or an electric shock.
- Plug the device into a dedicated 110V AC power outlet only. Do not overload the power outlets with several cords simultaneously. Do not power the unit through power bars or extension cords.
- Do not touch the plug with wet hands, as this may cause serious injuries.
- Do not alter or modify the plug or cord of this device, as it could cause a fire or an electric shock.
- Use the proper power cable and outlet.
- Lightning or static electricity could affect the circuit and may cause a fire or damage the unit. To avoid this, plug the device into a dedicated, grounded outlet.
- Do not block the air inlet of the device, as this will reduce the airflow, resulting in poor performance and may cause damage to the device.
- Do not sit, stand, or place heavy objects on the device, as this may result in injury and/or damage to the device.

## Getting Started Key Components—Controls



Mode buttons, with button LED lights



LED strips (top rim and shoe lighting)

### Getting Started Operating States

The device operates in one of five operating states. The user may set the operating state of the device and select the fan mode by pressing one of the mode buttons.

**System States:** Start, Sleep, Circulating, Heating, and Service State

Fan Modes: OFF, QUIET, NORMAL, BOOST

**1. Start State:** When power to the device is switched on, the system starts and goes in SLEEP State.

**2. Sleep State:** In this state, the UV light and heaters are switched off, fans are powered, but the speed is set to zero therefore, there is no apparent activity. The LED strips and the button LEDs are off.

Pushing any button will bring the system to CIR-CULATING state.

**3. Circulating State:** In this state, the fans and the UV light are active. The heaters are off, and the LED strips are on. Only one button LED is on, indicating the active fan operating mode. The fans can be operated in the following modes:

**Quiet** Fans run at low speed, indefinitely. **Normal** Fans run at medium speed, indefinitely. **Boost** This is a transient mode: The Fans will run for five minutes at high speed, after which the mode switches back automatically to the previous mode setting. If there was no previous setting, the fans will go back to Normal mode.

The user may select the fan operating mode by pressing and holding the respective button for about one second.

If a fan operating mode is already active, pressing the active mode button (i.e. the button that is lit) for about one second will bring the system back to SLEEP state.

#### 4. Heating State:

In this state the UV light is turned off, the fan's speed is zero, LED strips are on, and the system performs internal Filter Heating.

The system can enter this state only from CIRCU-LATING state. Entering and exiting this state is automatic. The interval time when HEATING state is triggered is nominal 30 minutes, adjustable by service.

## Getting Started Operating States Continued

During HEATING state, the button LEDs are activated in a circular pattern, with a period that lasts approximately one second.

After finishing the heating process, the system goes back to CIRCULATING state, and resumes operating with the fan mode already established. The user can not interrupt the HEATING process.

**5. Service State:** The system automatically goes into this state if an anomaly that requires service intervention is detected.

In this state, the UV light is switched off, heaters are switched off, fans are powered, but the speed is set to zero therefore, there is no apparent activity.

The LED strips are off, and the button LEDs are blinking together, once per second.

The operating states for the device are shown in the following table:

State	Activity	UV	Fan	Heater	Button LEDs	LED Strips
START	System Power-on	OFF	Off	Off	Off	Off
Sleep	System idling	Off	Off	Off	Off—TBC	Off
Circulating	Air moving and UV	ON	Selected Mode (Qui- et/Normal/ Boost)	Off	Mode LED On (Quiet/ Normal/ Boost)	On
Heating	Heating	Off	Off	Off		On
Service	Waiting for help	Off	Off	Off		Off

## Getting Started Particulate Counter

The particulate counter displays a number representing the number of particulates existing in the air flowing through the air outlet of the device.

If the value rises to a hight level, it indicates that the device is not operating effectively, and service is required.

## Getting Started Transport and Positioning

#### **Setting Up**

The device may be moved by pushing it with the handles on the sides.

Before moving the device, ensure that the wheels are unlocked.

#### Setting Up

After positioning the device for operation, lock the wheels to ensure it does not roll or move unintentionally.

#### Preparing the space

The device may be positioned against a wall.

**Warning:** Ensure that the air inlet of the device is not blocked, as this will reduce the airflow and result in poor performance and may cause damage to the device.

### Maintenance Cleaning

Materials to be used:

- Microfiber cloth
- Cleaning solution (10% bleach with clean water)

We need a process:

- 1. Turn unit off
- 2. Unplug unit from electrical source
- 3. Using a damp microfiber cloth...

**Warning:** Failure to follow the steps listed can result in permanent damage to the unit and can potentally be harmful to the operator.

**Warning:** The device should **ONLY** be cleaned when it is switched off and disconnected from the power grid.

**Warning:** Ensure that no form of water or liquid enters the device. Should this occur, **IMMEDIATE-LY** switch off the device and unplug it. Contact your distributor.

### Maintenance Service

The device has an access door at the back to facilitate service. A tool or key is required to open the door.

Service users may set the following settings:

- The amount of time for the fans to run in Boost state. This is set nominally to 5 minutes.
- The interval time when HEATING state is triggered. This is set nominally to 30 minutes

Service users shall be able to read the output of alpha numeric codes for trouble shooting.

### Maintenance Operating and Transport Environment

- Operating temperature: +5°C to +40°C, 15% to 90% RH at atmospheric pressure 700 hPa to 1060 hPa
- Storage / Transport Temperature: -40°C  $\pm$  2°C, Ambient RH / +60°C  $\pm$  2°C, 5% R