CERV2 Outside VOC Sensor Installation Guide

The outside VOC sensor option allows the CERV2 to measure VOC levels in the fresh air entering the CERV2 from outside. An Outside VOC Prevention function can be enabled by the user to allow the CERV2 to disable ventilation during times when the outside VOC level is higher than inside. This is especially useful in locations where wildfires or other outside pollutants are a concern.

Sensor Features

- Calibration-free
- Low Power
- Wide VOCs detection range
- High sensitivity

Sensor Specifications

Technology	Metal Oxide Element Gas Sensing
Monitoring Range	400-2000ppm human equivalent CO2
Warm-up Time	15 Minutes
VOCs Detected	Alcohols, Aldehydes, Aliphatic Hydrocarbons, Amines, Aromatic Hydrocarbons, CO, CH4, LPG, Ketones, Organic Acids
Operating Power	125mW

Outside VOC Sensor Module Installation

1) Turn off power to the CERV2 using the main power switch on the bottom right front of the unit
2) Remove the filter access cover by unscrewing the thumb screws. The panel should simply lift off
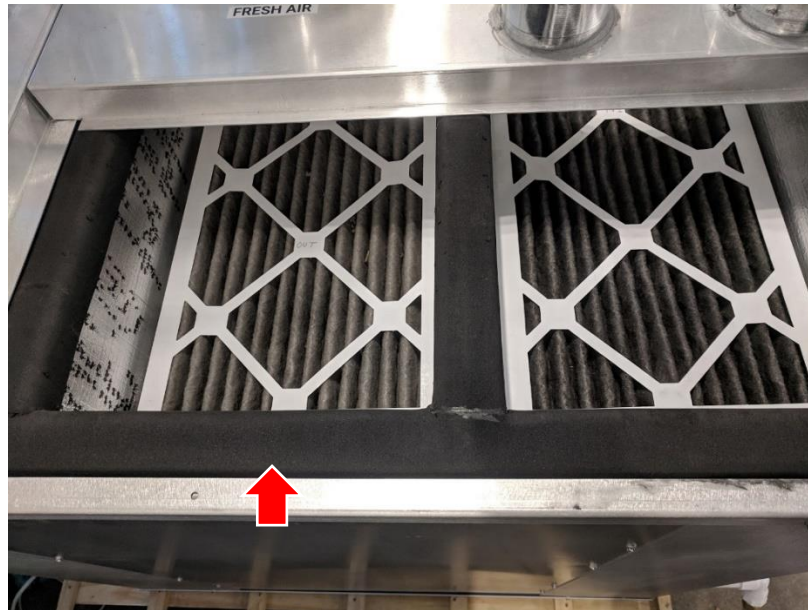
3) Remove the Fresh Air filter by lifting up and pulling out.
4) You will see a small rectangular circuit board with two empty sockets. Insert the VOC sensor into the right socket, as shown below. Ensure that the pins are properly inserted into the socket, and the module is in the correct orientation.
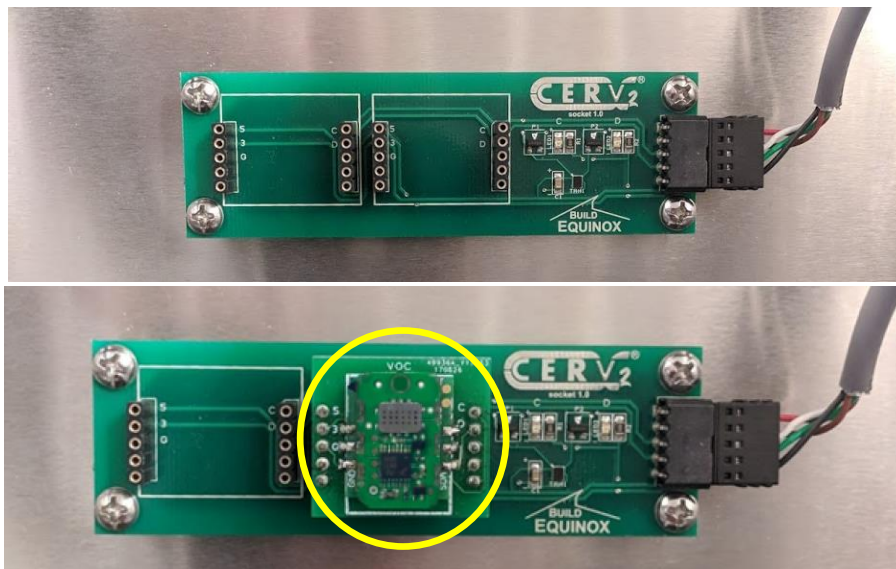
5) Reinsert the fresh air filter and filter cover, then turn back on power to the CERV.

Enabling Outside VOC Control

Follow the diagram below to access the Outside VOC Sensor Control for the CERV2
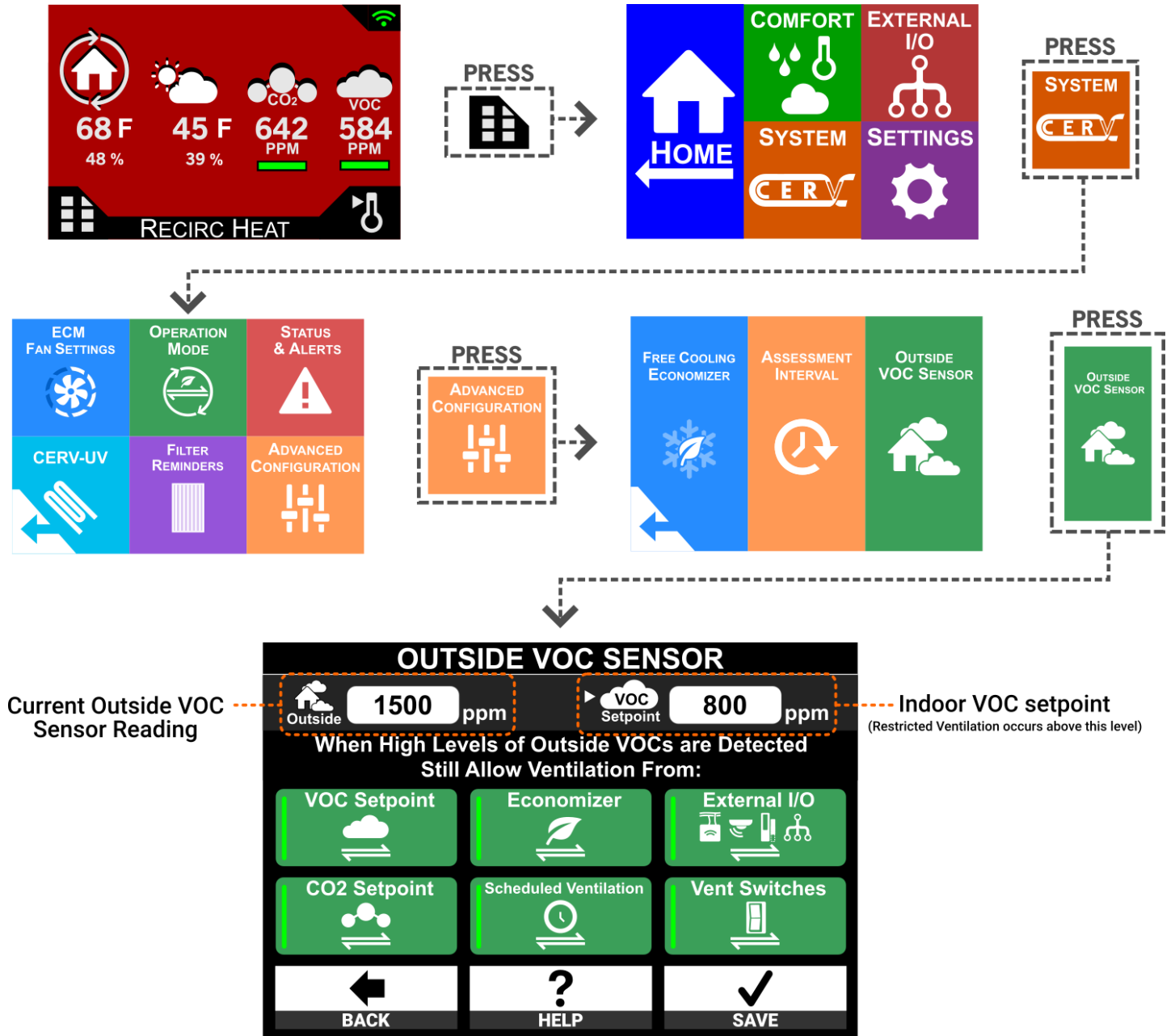
When outside VOCs rise above the CERV's VOC setpoint, the CERV can run with restricted ventilation based on options selected in the screen above. When this occurs, the home screen of the CERV will display the following icon:

Note: After powering on the CERV, the VOC sensor takes approximately 15 minutes to warm-up. During this period, the sensor will read 400ppm.

Descriptions for each of the options can be found on the following page.

Outside VOC Control Options

When outside VOCs rise above the CERV's VOC setpoint:

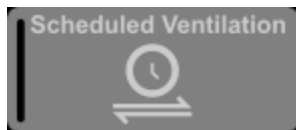|	
VOC Setpoint	CERV ventilates to keep indoor VOCs below setpoint. Remote VOC sensors can trigger Ventilation.
VOC Setpoint	No ventilation due to high indoor VOC levels. Remote VOC sensors do not trigger Ventilation.
CO2 Setpoint	CERV ventilates to keep indoor CO2 below setpoint. Remote CO2 sensors can trigger Ventilation.
CO2 Setpoint	No ventilation due to high indoor CO2 levels. Remote CO2 sensors do not trigger Ventilation.
Economizer	If outdoor temperature and relative humidity are beneficial, the CERV may ventilate to help heat or cool.
Economizer	The CERV will not ventilate to help boost heating or cooling.
Scheduled Ventilation	Setting a ventilation schedule (ex. vent 10 min every hour) allows the CERV to vent periodically.
Scheduled Ventilation	Even with a ventilation schedule configured, the CERV will not ventilate.
External I/O	Status Monitors (ACT, motion detectors, etc), auxiliary inputs, and remote RH sensors may trigger ventilation.
External I/O	Status Monitors (ACT, motion detectors, etc), auxiliary inputs, and remote RH sensors will not trigger ventilation.
Vent Switches	Wireless Ventilation Switches may be used to trigger the CERV to ventilate.
Vent Switches	Wireless Ventilation Switches will not trigger ventilation when pressed.