

lakeair[®]

Clean Air ~ Everywhere

Operating and Service Manual

CM2-RC2 120 Volt

WIFI Included



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ABOUT Your CM2-RC2

The CM2-RC2 air purifier was designed to provide long service. The unit was designed to be easily repairable. The product warranty is 7 years but you can expect 15 or more years of useful product life. The CM2-RC2 is a heavy duty all air purifier. There are no circuit boards. We use simple switches that if necessary are easy to replace.

Unpacking

Your CM2-RC2 air purifier is shipped on a 27" x 27 " pallet. If you ever need to ship your air purifier back to the factory it MUST be shipped strapped to a pallet. The CM2-RC2 was designed to be easily repaired so it is unlikely to need to ship your unit back. Care should be taken while unpacking the MAX Guard. The unit weighs about 80 pounds and the box should be placed in the upright position. It may be necessary to slice the corners of the box if you are unable to lift the unit out.

INSTALLATION INSTRUCTIONS

IT IS IMPORTANT TO READ THE FOLLOWING INSTRUCTIONS CAREFULLY. DAMAGE TO THE PRODUCT OR TO INSTALLER AND PROPERTY COULD RE-SULT IF INSTRUCTIONS ARE NOT FOLLOWED. Important Safety Precautions

1. Do not connect the power source until after the unit is mounted. Shock and/or damage could result.
2. Be sure to shut the unit off prior to any service work.
3. Wear gloves to protect hands during installation as well as to keep the surface of air cleaner free from dirt and smudges.

Equipment Needed for Installation

1. Regular and Phillips Screwdrivers
2. Wire cutters
3. Pliers
4. Twelve gauge galvanized wire for hanging the wires from the true ceiling to the top of the unit (if threaded rod is to be used, it will replace the wire.).
5. Enough twelve or fourteen gauge electrical wire and conduit to reach the nearest switched circuit. (see Electrical Instructions)
6. Junction box fittings as required.

Items Supplied as Loose Parts

1. Four (4) black 1/4 x 20 eyebolts

Preparation for Mounting

The CM2-RC2 is designed to fit into a T-bar drop ceiling. Remove as many of the ceiling tiles as is necessary to safely and securely mount the air cleaner. The area between the true ceiling and the drop ceiling must be at least 13". There must be no duct work, pipes, or other obstructions to the area where the unit is to fit. Make sure that the spot chosen will be oriented for good air circulation.

Mounting

Attach four (4) 12 gauge galvanized steel support wires to the true ceiling. Twist each wire at least four times to provide for safe support for the air cleaner. Make sure the free end of the wire extends far enough to adequately reach the eye bolts and be attached to them.

Turn the air cleaner onto the grille portion so that the four holes are visible on the top portion of the unit. Attach the four eye bolts to the top by screwing them into the appropriate holes.

Lift the air cleaner into place and rest on the T-Bar opening without putting weight upon the T-Bar grid work. The weight should be borne by the support wires with the T-Bar acting as holding receptacle for the unit facing. You should check the level of the unit to insure proper operation.

Ceiling Hung Mounting

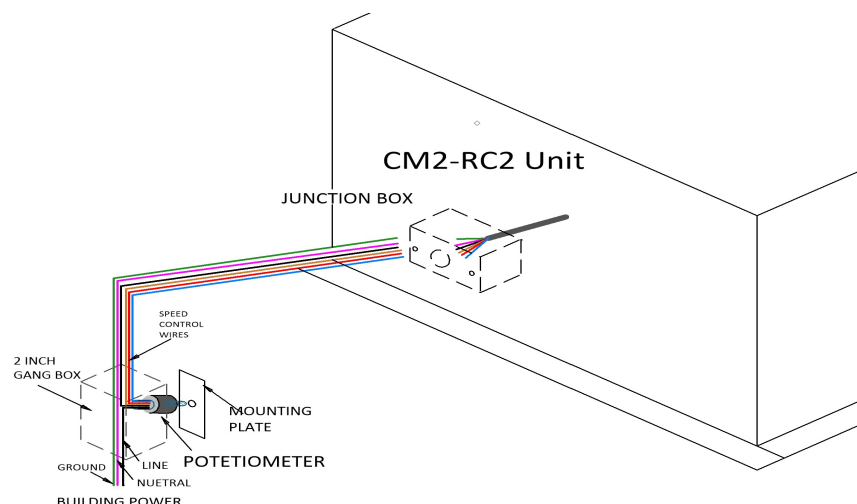
The CM2-RC2 can also be hung from the ceiling in most cases chains are used to suspend the unit from the ceiling rafters or supports. Just as done with T-Bar mounting use the 4 eye bolts to mount the unit. Remember to mount the unit close to the source of indoor air pollution. Insure the unit can work well with other air movement in the room.

Wiring

The CM-RC2 is controlled by a variable speed control potentiometer. (Note the CM2-RC2 must be wired with the potentiometer for the unit to operate properly If the potentiometer is by-passed the unit warranty is voided) The on board part of this wiring is held in a junction box on the side of the unit. this wire can be accessed by unscrewing to cover plate. There is a knock out for wire connection on the access plate.

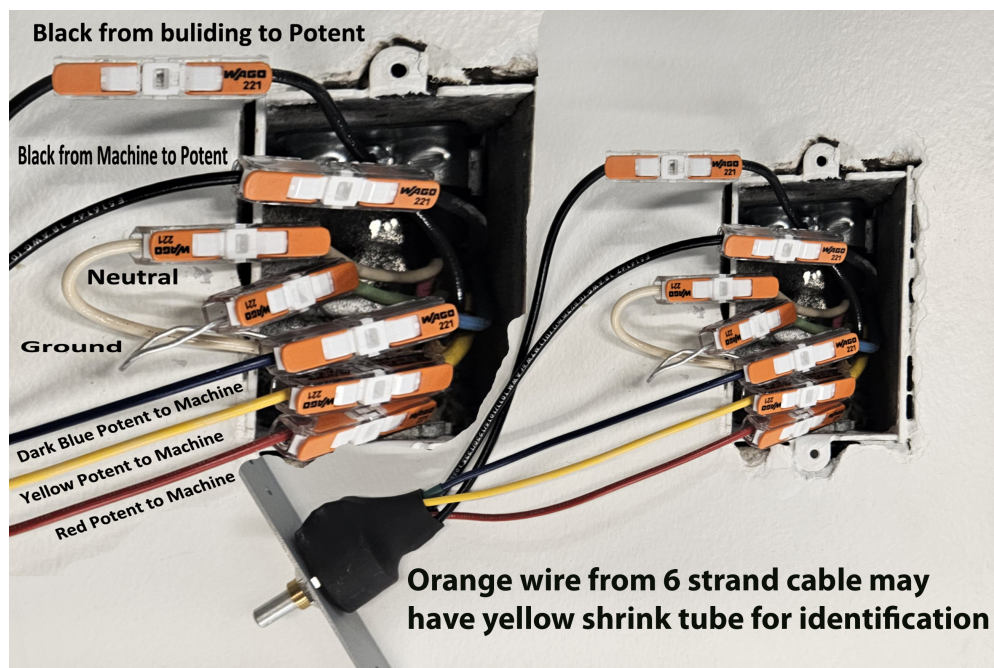
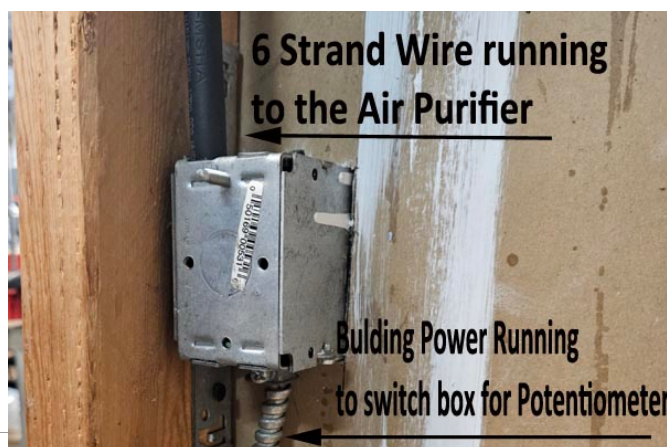
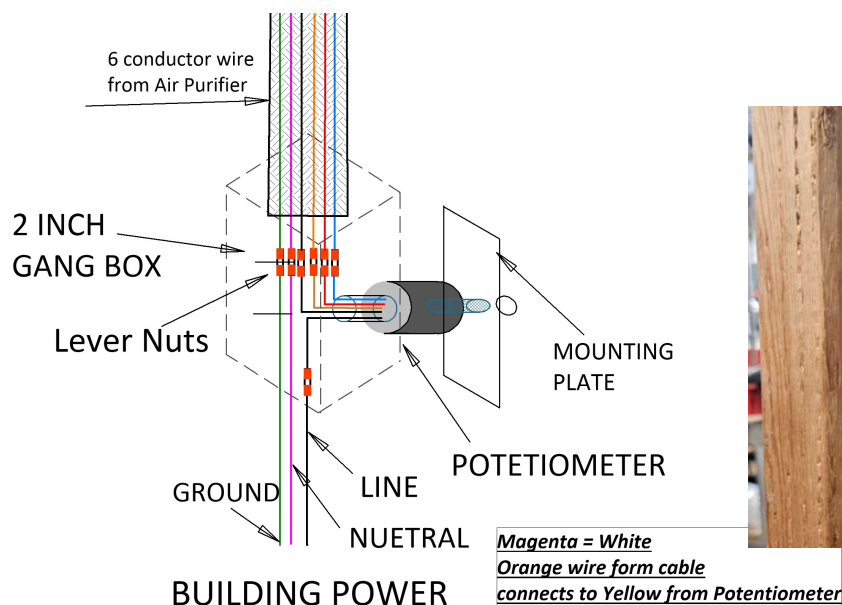
The wire coming from the unit (unless ordered with on-board speed control) has 6 conductors. You can purchase more wire from LakeAir if needed. This wire should be of sufficient gauge for run lengths under 40 feet.

6 conductor wire can now be run from the junction box to a standard gang box where the unit control is going to be located (see image) below.



Wiring at Wall

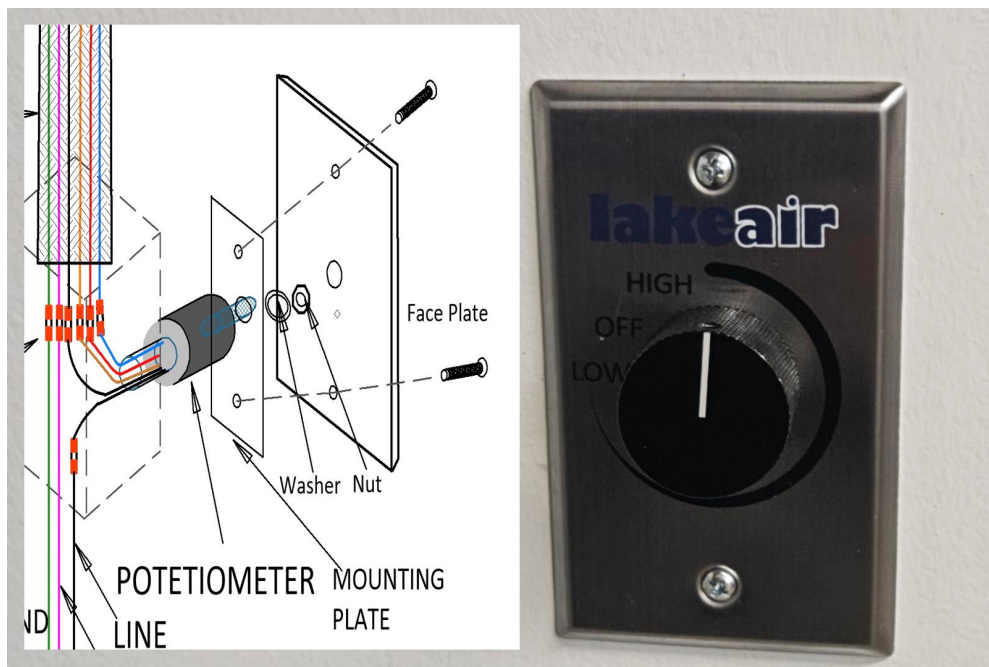
The power from the building should be run to a switch box. The LINE Runs through the potentiometer. The NEUTRAL and GROUND runs directly to the unit. The speed Control wires run from the rotary potentiometer to the air purifying unit. See Images Below for clarification.



You do not have to use the LakeAir Wiring Kit, Low voltage speed control is often hooked up using thermostat wire. Be sure to use a heavy enough gauge wire for the air purifier (maximum 4.4 amps per unit)

Face Plate

The potentiometer should be attached to the mounting plate. There is an alignment hole in the mounting plate. Secure the potentiometer to the mounting plate using the lock washer and nut. The Face plate can then be attached with the screws included, through both the face plate to the switch box



Wiring with on board Potentiometer

If you ordered your unit with the potentiometer mounted in the unit you need only hook up the building power to the unit. The wires coming from the unit will be power wires and they need to be connected to line, neutral and ground from the buildings power.

ON BOARD TOGGLE / ON BOARD DIGITAL WIFI

Units ordered with on Board Digital WIFI control and 8 foot power cord do not need any additional wiring. However, the WIFI functionality should be paired with a cell phone prior to use. This process is covered in the WIFI section on Page 11

(Note: The rocker switch on the control panel must be in the on position for this unit to operate.)



ON BOARD ROTARY SPEED CONTROL

Wiring with on board Potentiometer

If you ordered your unit with the rotary potentiometer mounted in the unit you need only hook up the building power to the unit. The wires coming from the unit will have 3 wires and they need to be connected to line, neutral and ground.

Operation

To engage the CM2-RC2 turn the knob of the rotary potentiometer clockwise. The potentiometer will click and that tells you the unit is on. The unit blowers take from 5 - 20 seconds to start turning. As you turn the dial clockwise the blowers will slow.

The CM2-RC2 is slightly over powered. There is no need to run this product on high. keep the speed at 3/4 speed to achieve the highest level of air cleaning. In many cases the powerful blowers move more than enough air at lower speeds.

ON BOARD TOGGLE WITH WALL SWITCH DIGITAL WIFI

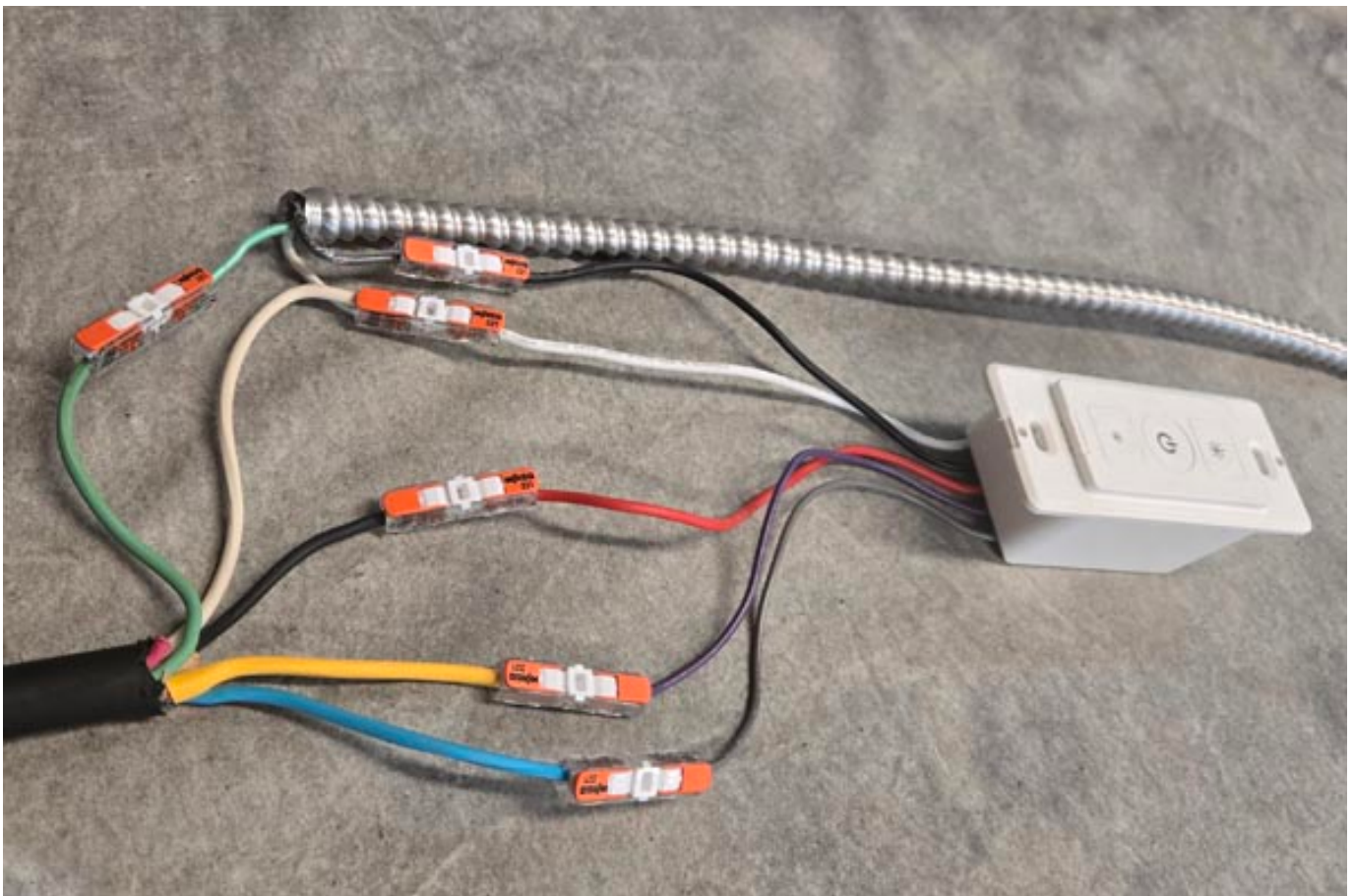
This section refers to option On Board Toggle with a Digital / WIFI functionality at a wall switch

The LA-RC2 is controlled by a variable speed control potentiometer.

(Note the LA2-RC2 must be wired with a rotary or digital potentiometer for the unit to operate properly. If the potentiometer is by-passed the unit warranty is voided)

The connection to the unit speed control is held in a junction box on the side of the unit. This wire can be accessed by unscrewing to cover plate. There is a knock out for wire connection on the access plate.

The wires coming from the unit (unless ordered in a different configuration) has 5 conductors. All 5 wires from unit must be connected. The LINE (main power) must run through the Digital WIFI. The NEUTRAL wire should be piggybacked in the wall switch box. The GROUND must be connected directly to the unit. The 2 speed control wires (blue and yellow) from from the unit must be connected to digital WIFI switch . These wires are purple and gray from the manufacturer, we cover them with blue and yellow shrink tube for ease of identification. The Blue and or Gray wire pairs the blue wire from the air purifier. The Yellow and or Purple pairs with the yellow from the air purifier. See image below for clarification.



ON BOARD TOGGLE WITH WALL SWITCH DIGITAL WIFI

Continued

After the air purifier is wired in, you're ready to pair the device. To set up your LakeAir air cleaning product, download the Smart Life app on your cell phone. Find the app in the Google Play Store for Android devices or the App Store for Apple devices. Alternatively, scan the QR code below to download the app.



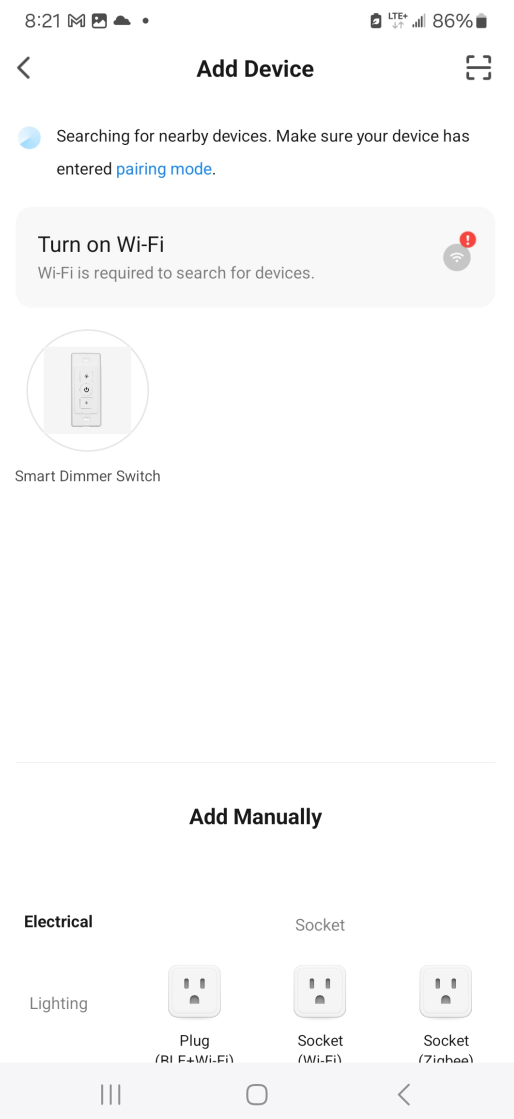
WIFI Identification and Use

When you add your LakeAir product via WIFI the controller shows up as a smart dimmer switch. (see image to right) The "Add Device" screen tells you to turn on WIFI, however pairing is preferably done by Bluetooth

The internal wiring and components have been altered to allow use of this generic device. You can rename your device to anything you like. It is also possible to group units together and create a home and rooms. To share the device with others you will need to create a home and add members.

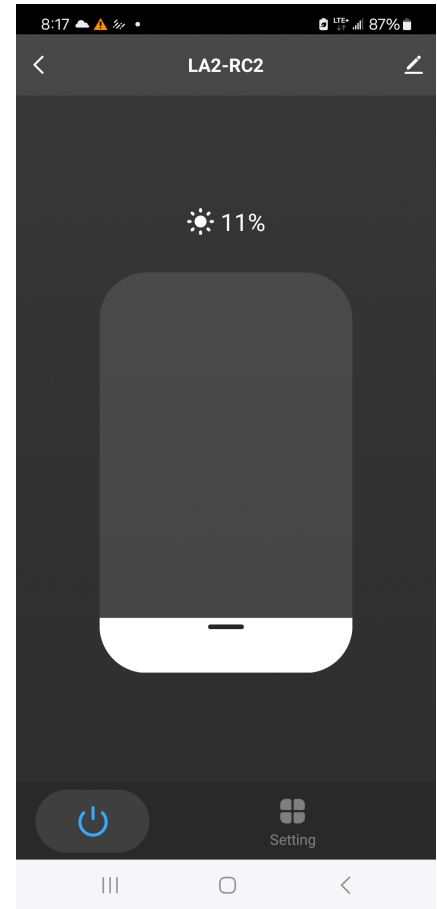
The in app documentation does a decent job of helping you set up various settings to get good use out of your LakeAir air purifying products.

The dimmer switch installation manual is sent along with your unit. for further clarification.



Controlling Your Air Purifier

To the right you see an image of the actual control screen. From here you can change the speed of your air purifying unit. Models with older style blowers may not function at the very lowest of settings. If you set you speed at 10% or above the blowers will be active. The icon in the bottom left turns your LakeAir Product on or off.

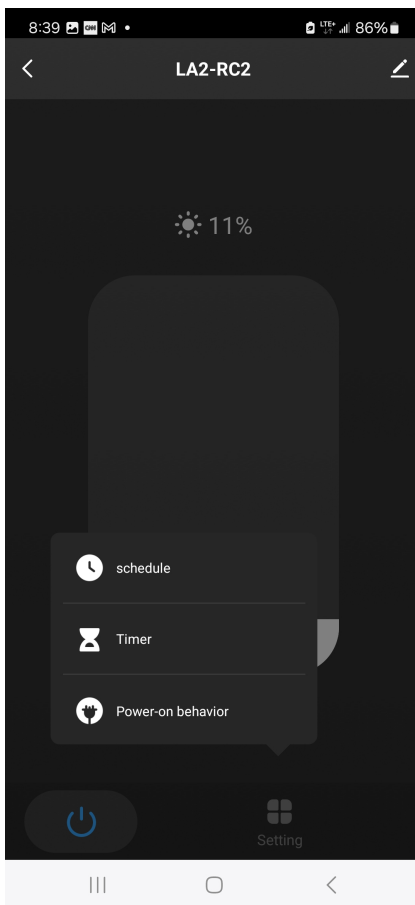


Tapping the settings button at the bottom of the screen allows you more control options. Schedule allows you set various schedules for operation.

The timer function allows you to set a simple timer for your device

The "Power on Behavior" allows you to set various settings to control how your device acts when you turn your LakeAir product on

There are other device behaviors that can be set through other screens within the Smart Life app,



Getting to Know your CM2-RC2

The CM2-RC2 is sold with a number of different filter package options. Not all of the following information will apply to your product. The filter options available are:

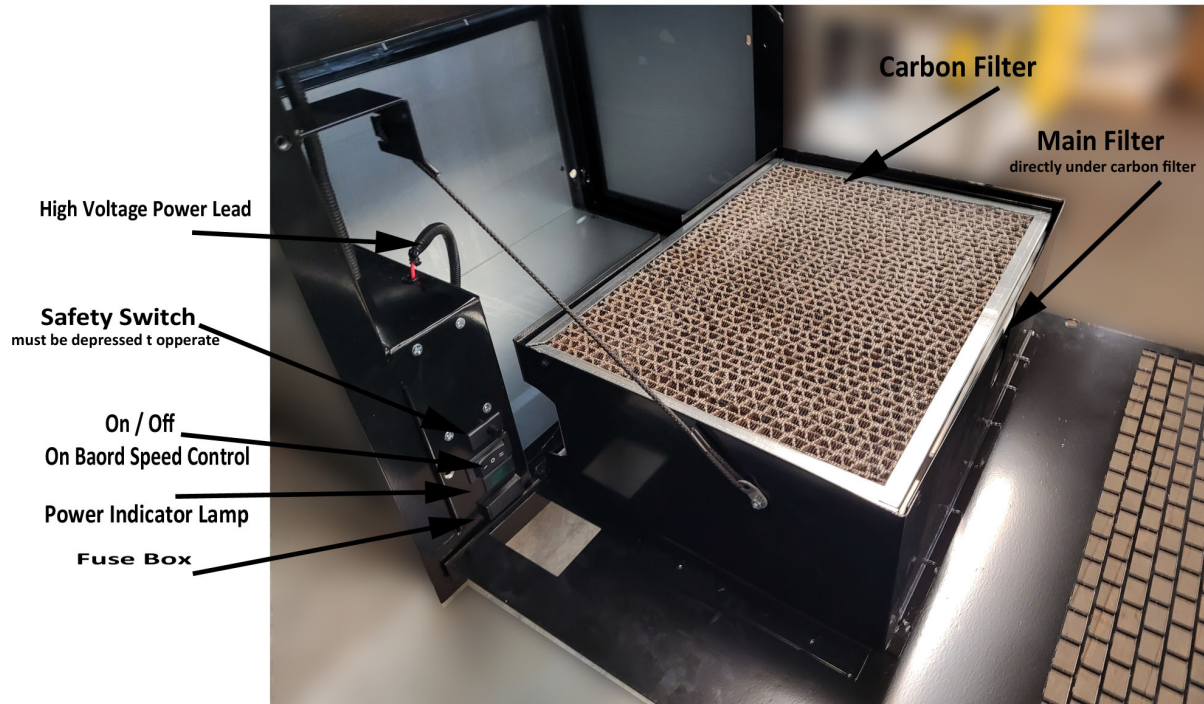
1. Standard HEPA
2. MERV 15
3. Electrostatic
4. HEPA / UVGI

All CM2-RC2 filter packages include a pre filter and carbon filter. In the UVGI model the UV bulbs are located behind the carbon filter incorporated into the UVC chamber. It is important to regularly inspect, clean and replace filters as needed. Failure to do so may lead to poor unit performance and voiding of the product warranty. The Blowers in this unit depend on air flow to keep the cool. Insufficient air flow may cause the motor bearings to over heat and fail. The Blowers are rated for 60,000 hours of normal use. Proper maintenance can greatly extend the blower life.

Maintenance

Your LakeAir Air Cleaner is a high quality, precision piece of equipment designed for many years of satisfactory performance. Adhere to a regular maintenance schedule and no problems should occur. This unit should be checked periodically for “dust load” and cleaned if found to have a large accumulation of dust and lint. Under regular conditions The HEPA filter should last 1 year and be replaced annually. The carbon filter should be changed every 3-6 months. When odors are no longer being removed, it is time to replace the carbon filter. The electrostatic filter cell should be washed every 3-6 months. The prefilter should be cleaned every 3 months. When used in a smoky environment the CM2-RC2 filters should be serviced more often. The UVGI bulbs (UVGI units only) should be changed every 12 months.

CM2-RC2 Major Parts



Fuse Box	497546	Carbon Filter	499024
Power Indicator	100139	Safety Switch	497567
Rocker Switch	497612		

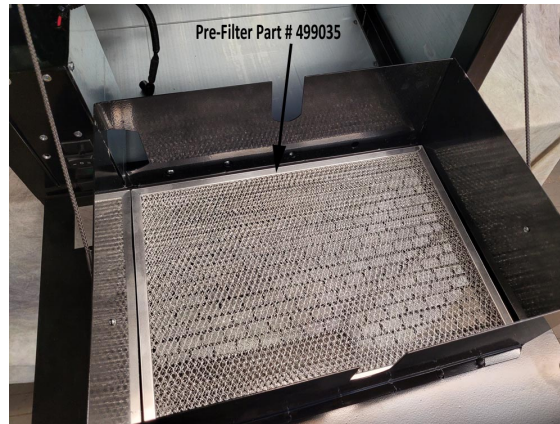
TOP View Of Motor Cabinet



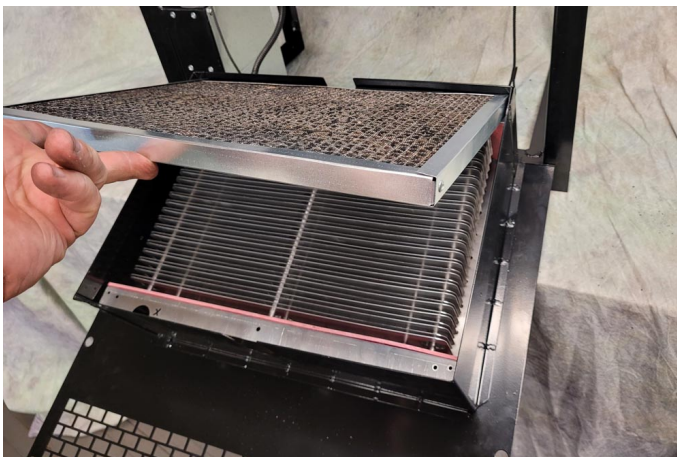
Blower	300781
Motor Mount	200478
Universal Plug	497546

Filter Removal and Installation

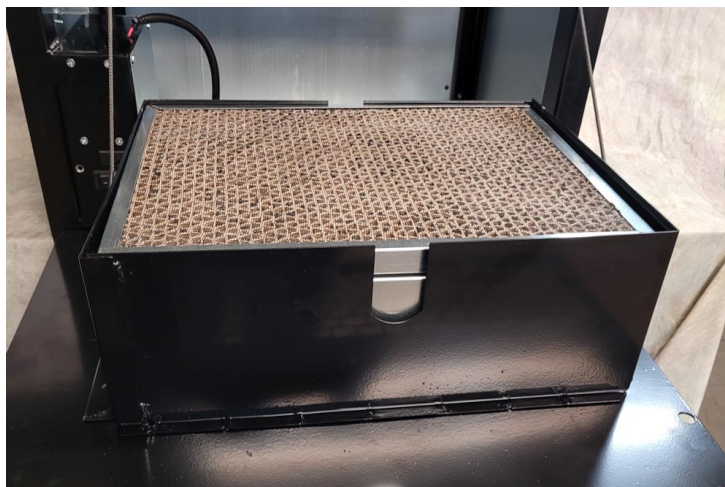
The pre filter is the first of 3 filters used in the CM2-RC2. The pre-filter removes large particles from the air stream. It also extends the life of the main filter. The pre-filter's rating is MERV 2 and its Part# is 499035. The pre-filter is the bottom filter placed into into the door of the CM2-RC2



The Main filter is located above the pre-filter and above the carbon filter This filter can be an electrostatic filter cell,,HEPA filter or MERV 15 High capacity media filter.



The carbon filter sits on top of all other filters and will be the first filter visible when you open the drop down filter panel.



Electrostatic Cell Removing and Re-installing

CAUTION

Always Ground the Cell before handling!

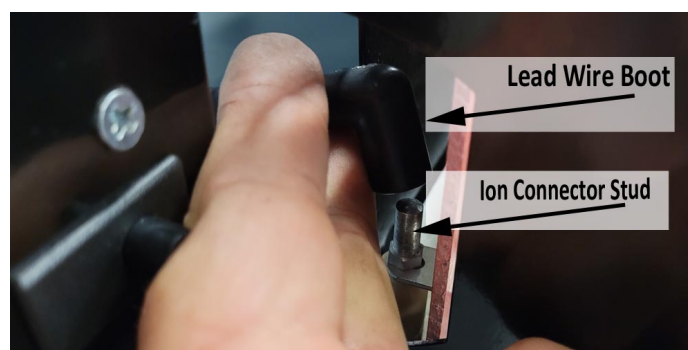
When you open the door to the Unit all power is cut off. It is possible however that some residual electricity is still residing in the Filter Cell. So, the **FIRST** thing to do is ground the voltage side of the cell. To do this take a Philips screw driver with an insulated handle and drag the screw driver across the plates. This will dissipate any residual charge.



Remove the ground screw.
The ground screw secures the filter cell and provides the ground needed to allow the filter cell to function properly

Before removing the electrostatic cell you will need to unplug it from the high voltage lead wire. The lead wire is attached to the cell and is accessed through the opening in the top left of the cell box. The lead wire has an insulated boot which is lifted off the ion stud. See Image Below

To re-install: reverse these steps, be sure that the power line is with the cell frame and avoid crimping the power.



Filter cleaning and replacement recommendations.

Filter and Bulbs listing

Filter / Kit	Part#	Replace / Clean
Standard HEPA filter	# 499084	Annually
UVGI HEPA Filter	N/A	Annually
MERV 15 Media Filter	# 499041	Annually
Pre Filter	# 499035	Annually
Standard Carbon	# 499024	3 months
Filter Cannablend	# 499158	3 months
Filter Electrostatic	# 102011	3 months
Filter Cell		

Note:

HEPA and Media filters should be replaced more often in smoking areas

Carbon filters should be replaced when odors re-appear

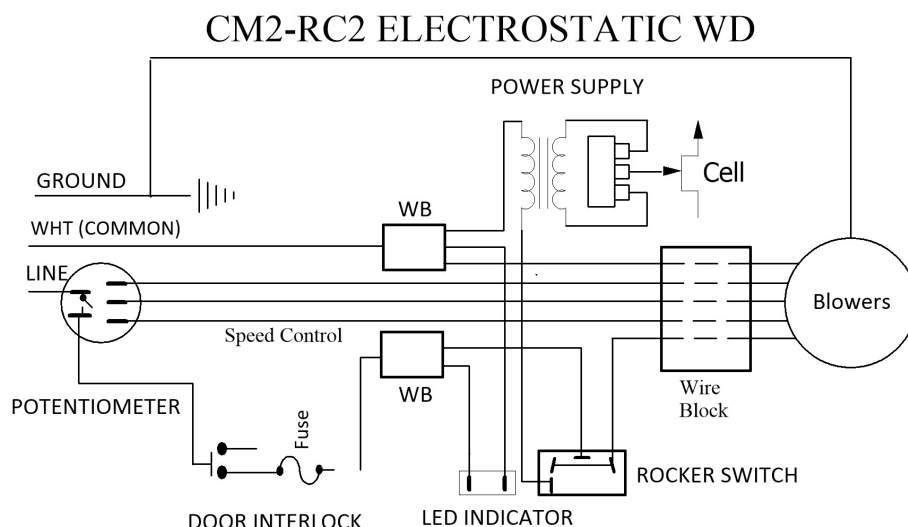
Electrostatic filter cell should be inspected to see when dirty

Filters can be ordered from the LakeAir website at www.lakeair.com. You can also order by calling the customer service number 800-558-9436. Text support is available at 862-319-1119

Specifications

Capacity.....	200-850 cfm
Standard HEPA Filter.	4.5 inch mini pleat
UVGI HEPA Filter.....	2.4 inch mini pleat
HEPA Efficiency.....	99.97% to 0.3 micron
Electrostatic Precipitator	4.5 inch / 5kv
Cell Collection Area.....	3000 sq. inches
Electrostatic Efficiency.....	97% to 0.1 micron
MERV 15 Media	High Capacity 4 inch Mini Pleat
MERV 15 Efficiency	95% to .3 micron
UVGI.....	+1000 μJcm^2 UVC dose
Lamp Life	9000 hours / 1 Year
Blower Life Expectancy.....	60,000 hours
Carbon Filter.....	1 chamber / 300 gram
inches Unit size.....	24 x 24 x 13
Shipping size.....	26 x 26 x 32
Unit weight.....	80 lbs.
Shipping weight.....	92 lbs.
Power usage.....	200 - 400 watts
Sound level.....	38- 65dB(A)
Power.....	120v, AC/60Hz/ 3.5 amps
Variable speed control.....	Low to Turbo
Cabinet finishes.....	Black & White
Warranty.....	7 Year Limited

Wiring Diagram



LakeAir ELECTRONIC AIR CLEANERS 7 YEAR LIMITED WARRANTY

The LakeAir CM2-RC2 Air Purifier is warranted by RK Ventures Inc. to the original purchaser to be free from defects in material and workmanship under normal use and service for a period of seven years from the date of purchase. The blowers of the LakeAir MAX Guard is warranted for (1) year from the date of purchase to the original purchaser. A extended blower warranty is available for purchase and extends the warranty to 7 years. LakeAir's liability is to be limited to repairing or replacing such products during the warranty period at its option, providing the product is sent prepaid to RK Ventures, Inc. or an Authorized Service Center and is deemed to be defective in part or portion to the satisfaction of RK Ventures, Inc. If RK Ventures and the original purchaser agree. the replacement part may be sent to the purchaser for their own replacement.

This warranty is in lieu of any other warranty expressed or implied and of all other obligations or liabilities in connection with the sale of the described LakeAir Electronic Air Cleaner. In no case will any claim for consequential damages or labor expenses be allowed. This warranty does not apply to a LakeAir Electronic or any part thereof which has not been operated in accordance with the operating instructions herein contained; where components or other accessories not compatible with the LakeAir Electronic Air Cleaner have been used or attached to it; which has been subject to accident, unauthorized alteration, abuse, damage by flood, fire or acts of nature.

User's Responsibility:

1. To operate and maintain according to instructions.
2. Regularly replace filters and cleaning of the unit including electrostatic filters. Failure to replace filters or clean the unit will void the warranty.
3. Use product controls in accordance with owner manual and maintain them or warranty will be voided.
4. Provide adequate electrical service, within voltage ratings that are indicated on the unit rating plate. Provide electrical protection devices to protect unit from voltage surges. Failure to provide proper electrical service or safety devices will result in warranty being void.

Damage not covered by Warranty:

5. Damage occurring during transportation or resulting from improper handling is not covered by the warranty.
6. Damage due to accident, alteration or tampering is not covered by the warranty
7. Misapplication of the product or use for purposes other than cleaning ambient air will void all warranties.

Customer Service

It is very important that our customers receive good support for any issues related to our products. If you have questions or need support it can be found in many ways.

Email:

Email support can be obtained by sending an email to sales@lakeair.com. We try to answer all email support matters within 12 hours. If emails are sent during regular business hours 8:00 AM - 6:00 PM CST replies should be much sooner.

Phone:

Customer Service phone support can be reached at 800-558-9436. Phone support is normally available Monday - Saturday 8:00 AM - 6:00 PM CST.

Website Chat:

website chat support can be reached found on our website at the bottom right of any page. Chat support is normally available Monday - Saturday 8:00 AM - 6:00 PM CST and Sundays 12:00 noon to 6:00 PM CST.

Customer Text Support:

Customer Text Support can be reached at 862-319-1118. Textsupport is normally available Monday - Saturday 8:00 AM - 6:00 PM CST and Sundays 12:00 noon to 6:00 PM CST.