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# **LA-1400S CEILING MOUNT AIR CLEANER INSTALLATION INSTRUCTIONS**

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**IT IS IMPORTANT TO READ THE FOLLOWING INSTRUCTIONS CAREFULLY – DAMAGE TO THE PRODUCT OR TO INSTALLER AND PROPERTY COULD RESULT IF INSTRUCTIONS ARE NOT FOLLOWED.**

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## **IMPORTANT**

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 surface of air cleaner free from dirt and smudges.
4. All electrical wiring must comply with applicable codes and local ordinances. DO NOT connect power supply until air cleaner has been installed and/or checked.

## **HOW TO DETERMINE THE NUMBER OF ELECTRONIC AIR CLEANERS REQUIRED**

1. Calculate the volume of the room. Volume (cubic feet) = Length x Width x Height
2. Determine the circulation of the air needed, based upon 8 air changes per hour for average conditions, to reduce the smoke and pollution. Use 16 air changes per hour for high concentrations of smoke and contaminants, or when one has a desire to reduce smoke and pollution even further.
3. The LA-1400S produces 800 cfm at low speed and 1100 cfm at high speed. To establish the correct number of units to use, you should calculate the cubic feet of air in the area to be cleaned, and then use a figure of 8 air changes/hour in that area for average cleaning, and 16 air changes per hour for very polluted or smoke filled conditions. You should remember that the slower the air passes over the surface of the air cleaner, the more efficiently the unit will operate. Therefore, when calculating the number of units needed, take into account air flow and cleaning capacity.

## **EXAMPLE #1**

ROOM DIMENSIONS:           50' X 100' X 10' CEILING  
TYPE OF AREA:               RESTAURANT OR LOUNGE  
AIR CHANGES DESIRED:   16/HOUR

### **STEP 1 – Volume**

$$50' \times 100' \times 10' = 50,000 \text{ CU FT}$$

### **STEP 2 – Volume to be cleaned**

$$50,000 \text{ CU FT} \times 16 \text{ air changes per hour} = 800,000 \text{ CU FT per Hour}$$

### **STEP 3 – Volume/Minute to be cleaned**

$$800,000 \text{ CU FT per Hour} / 60 \text{ Minutes per Hour} = 13,333 \text{ CU FT Min (CFM)}$$

### **STEP 4 – Number of units needed**

$$13,333 \text{ CFM} / 1,100 \text{ (CFM of unit)} = 12.09 \text{ or } 12 \text{ units}$$

## **EXAMPLE #2**

ROOM DIMENSIONS: 50' X 30' 10' CEILING  
TYPE OF AREA: OPEN OFFICE AREA WITH MULTIPLE PERSONNEL  
AIR CHANGES DESIRED: SOME SMOKERS & 20 DESKS – USE 8 CHANGES/HOUR

### **STEP 1 – Volume**

$$50' \times 30' \times 10' = 15,000 \text{ CU FT}$$

### **STEP 2 – Volume to be cleaned**

$$15,000 \text{ CU FT} \times 8 \text{ air changes per hour} = 120,000 \text{ CU FT per Hour}$$

### **STEP 3 – Volume/Minute to be cleaned**

$$120,000 \text{ CU. FT per Hour} / 60 \text{ Minutes per Hour} = 2,000 \text{ CU FT Min (CFM)}$$

### **STEP 4 – Number of units needed**

$$2,000 \text{ CFM} / 1,100 \text{ (CFM of unit)} = 1.8 \text{ or } 2 \text{ units}$$

## **PROPER LOCATION OF THE MODEL LA-1400S AIR CLEANER**

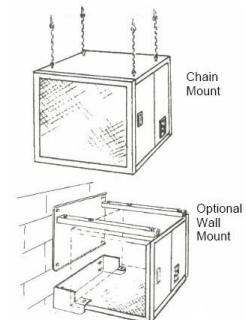
Locate electronic air cleaners consistent with existing air circulation in the room so that the heating and air conditioning systems are complemented by the air cleaners. Air cleaners must be mounted to strong structural parts of the ceiling with adequate head clearance, and should be a minimum of 10 feet from air intake or exit ductwork.

## **MOUNTING YOUR LA-1400S ELECTRONIC AIR CLEANER**

The LA-1400S comes with a 6' cord, but it is the responsibility of the purchaser to provide an adequate outlet which meets local codes. An approved extension cord may be used if it meets local and national codes.

The LA-1400S is designed with 4 mounting holes on the top and bottom of the unit. Eye bolts are provided with the units so that they may be hung by chains from supporting beams on the ceiling. If you choose the optional wall mount for the LA-1400S, see the instruction sheet included with the Model 10009 wall mount. The mount using the included eye bolts, follow the instructions below. The unit may be hung so the air flow is from the left to the right, or from the right to the left depending on the needs of the customer.

1. Choose an area which compliments the rest of the air flow in the room before you mount the air cleaner.
2. Make sure you have correct lengths of chain, and that it is capable of sustaining the weight of the unit. Standard hardware item, link chain with working load of at least 100 lbs. Also make sure you have mounting lag screws or equivalent fasteners to attach the chain to the ceiling beams or studs. In some instances, it may be necessary to construct a mounting frame to properly suspend the unit.
3. Locate the ceiling studs or beams and attach the correctly sized chain. Chain length should be such that it will not allow the LA-1400S to have a floor to bottom height which would pose a hazard to room occupants. A minimum height of eight feet from floor to bottom of unit is recommended when chain hung.
4. After securing the chain to the ceiling studs or beams, us 4 “S” hooks on the chain to mount the air cleaner cabinet to the chain. (It is a good idea to take out the electronic cell and other parts to make the cabinet lighter when mounting and then to replace the internal parts into the unit.) **The**



**first thing to remember is to remove the shipping screw which holds the cells of all units while in transit from the factory.** This screw is located at the base of the cell and locks the cell to the cabinet. Remove it with a Phillips head screwdriver.

5. After making sure all the parts are securely replaced into the unit, you may now test the operation of the unit by plugging it into the nearest outlet and turning the air cleaner on.

### **OPERATING INSTRUCTIONS**

1. Turn the unit on by selecting one of the following modes of operation located on the control box:
  - a) Low – Air is circulated and the cell is activated
  - b) High – Air is circulated and the cell is activated
2. Indicator light will appear when any of the “on” modes are selected indicating there is electrical power to the unit.

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## ***LA-1400S CEILING MOUNT AIR CLEANER MAINTENANCE***

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### **WASHING THE ELECTRONIC CELLS AND PREFILTER**

**NOTE: FAILURE TO CLEAN CELLS WILL VOID WARRANTY**

The electronic cell must be inspected frequently and the collected dirt removed regularly to prevent excess accumulation which may result in risk of flashover and fire damage. Inspect electronic cells and filters every week for the first month or two to determine your required cleaning schedule. Use the following as a guide for your establishment;

Cocktail Lounge – Every week (if run daily)  
Conference Room – Once every month  
Restaurant – Every week (if run daily)

### **REMOVAL OF ELECTRONIC CELL(S) PREFILTER SCREEN AND CARBON AFTERFILTER**

1. Turn the Electronic Air Cleaner off.
2. Disconnect the power supply cord.
3. Open the door containing the cells and remove the prefilter screen and the carbon afterfilter.
4. Slide the carbon filter and the prefilter screen from the cells.

***NOTE: The first time you remove the cell from the unit you must first remove the small packing screw which is used to anchor the cell during shipment.***

### **CLEANING THE PREFILTER SCREENS**

Use a damp rag to wipe off the inside and outside of the cabinet which acts as the first prefilter. Remove the black prefilter screen from the cell assembly and wipe off with a damp cloth. It is your second prefilter.

**CLEAN CARBON AFTERFILTERS** by vacuuming or brushing. DO NOT WASH. Replace carbon afterfilters as needed, using the following as a guide;

Cocktail Lounge – 1-2 months

Restaurant – 1-3 months  
Beauty Salon – 1-3 months  
Conference Room & Office – 6-12 months

**REMOVE DIRT OF ELECTRONIC CELL** by one of the following methods;

1. Run through full cycle on dishwasher using a detergent marked “safe for aluminum”. Allow to dry thoroughly.
2. Soaking Method:
  - a) Use a washing container large enough to hold the cells, such as a laundry tub or trash container.
  - b) Fill container with hot water.
  - c) Dissolve 1 to 1-1/2 cups dishwasher detergent or use a detergent marked “safe for aluminum”.
  - d) Soak cell for 20 minutes, agitate and remove.
  - e) Rinse cell with a fine spray of water.
  - f) Soak cell in clean hot water for 15 minutes.
  - g) Allow cell to dry thoroughly
3. High Pressure Steam Cleaner / Car Sprayer Method
  - a) Saturate cells.
  - b) Spray on liquid detergent or cleaning solution marked “safe for aluminum”.
  - c) Wash.
  - d) Rinse with hot water.
  - e) Allow cell to air dry thoroughly.

Inspect cells. If any dirt remains, repeat cleaning procedure. If it is necessary to repeat the cleaning procedure, it is advisable to increase the washing frequency. Check cells for bent plates and broken ionizing wires. Reinsert cells and carbon filters. **DO NOT INSERT CELLS** if not completely dry. Approximately every 6 months, place a drop of oil in the two oil holes on the fan motor. Use non-detergent electric motor oil only. (SAE 20)

**REPAIR AND MAINTENANCE**

Before attempting any repairs on your Electronic Air Cleaner, check the following items first.

1. Check fuse.
2. Check for electrical power to unit.
3. Check that the electronic cell, prefilter screen and carbon filter are “CLEAN”, dry and properly installed in the Air Cleaner.

Repair work should only be performed by a trained, experienced serviceman. Check with your dealer for the repair station in your area.

## **TROUBLE SHOOTING ELECTRONIC AIR CLEANERS**

**CAUTION:** During repair procedures dangerous line voltage circuits are exposed; use care to avoid the hazard of electrical shock or possible damage to the unit. The following examples are used to aid the serviceman in trouble shooting any malfunction in the Electronic Air Cleaner quickly and properly.

### **INDICATOR LIGHT DOES NOT WORK**

1. Check fuse.
2. Plug power supply into the proper receptacle.
3. Measure line voltage at power source (120V depending on unit).
4. Replace light.

### **COLLECTOR CELL MALFUNCTION**

1. Remove electronic cell and inspect for bent collector plates. Make sure cell is thoroughly clean and dry.
2. Return electronic cell to air cleaner cabinet. Do not install prefilter screen at this time.
3. Turn air cleaner on and use a long, insulated screw driver to generate an arc between the collector cell plates; or, use the high voltage DC probe, measure 4,800 at the collector plates.

### **FAN MOTOR DOES NOT RUN**

1. Check power source and fuse.
2. Measure line voltage at two speed switch.
3. Measure line voltage at fan motor.
4. Replace fan motor.

For any questions, please contact our customer service department at **1-800-237-9199**.

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## **LA-1400S AIR CLEANER SPECIFICATIONS**

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The LA-1400S electronic air cleaner can be used in bars, casinos, restaurants, meeting halls, bowling alleys, clubs or anywhere you desire clean, fresh air. The LA-1400S's triple action filtering system works like a pollution magnet, trapping up to 97% of particles as small as one-millionth of an inch for a healthier business or industrial environment. The prefilter removes dust, hair, lint and larger dust particles; the electrostatic filter removes particles as small as 0.01 microns in size, such as tobacco smoke, fumes, dusts, mold spores, and vapors; and the activated charcoal after-filter helps to eliminate even the most stubborn odors, as in cooking, welding and similar odors. **1 unit recommended for every 800 square feet.**



- Capacity - 2-Speed (high - 1,300 CFM, low - 800 CFM)
- Dimensions - 21.5" W x 19.5" H x 17" L
- Shipping Weight - 65 lbs.
- Electrical - 5 amps, 120V, AC/60Hz - 720 watts
- Electronic Cell Collection Area - 13,284 square inches
- Sound Level - 53 - 65 dB(A)
- Particle Removal - As small as 0.01 microns
- 7 year limited warranty
- All electrical components and fan motor are UL Listed and CSA Certified.

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