

SC-500

ELECTRONIC AIR CLEANER



MODEL NO. 05C11E-41002

OPERATION AND INSTALLATION MANUAL

WHAT IT DOES

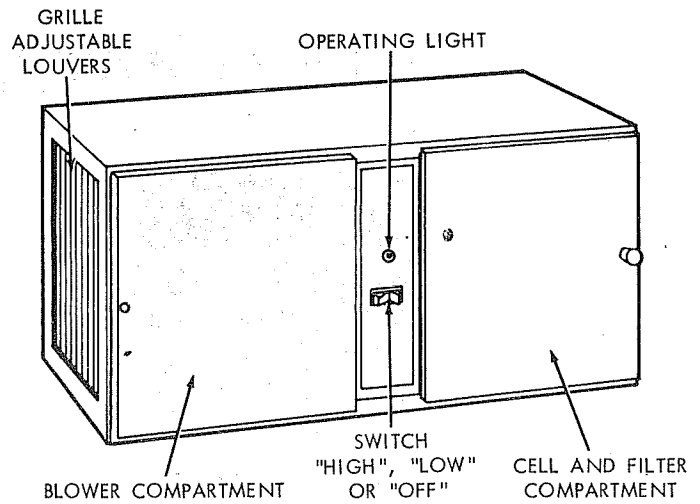
Your new Self-Contained electronic air cleaner is one of the latest appliances in this modern age of electronics.

The air cleaner is designed to remove a high percentage of dirt, dust, cooking and tobacco smoke, pollen, bacteria and other airborne contaminants from a room when operating.

Most of these particles cannot be seen except with a microscope, unless they are as highly concentrated as tobacco smoke. These contaminants cause stains and discoloration on your walls and draperies when they collect in your place of business.

The staining and soiling particles are far too small to be removed by a flat furnace filter. Particles as small as one twenty-five thousandth of an inch ($1/25,000''$) are efficiently removed from the circulating air by an electronic air cleaner.

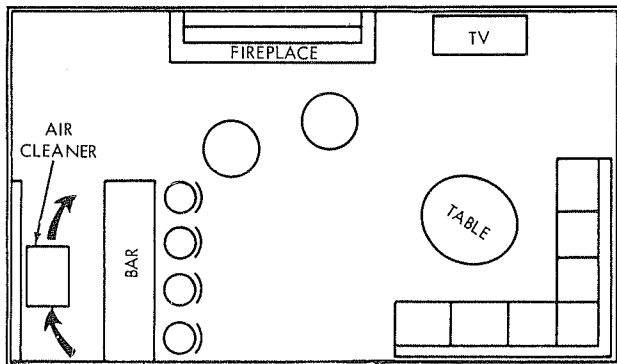
Your Self-Contained, electronic air cleaner will keep the air clean in a room measuring 18' x 20' with a 8' ceiling, at the high blower speed. A room measuring 15' x 18' with a 8' ceiling will be cleaned at the low blower speed. Both room sizes are based on 10 air changes per hour. Larger rooms can be cleaned by installing multiple units.



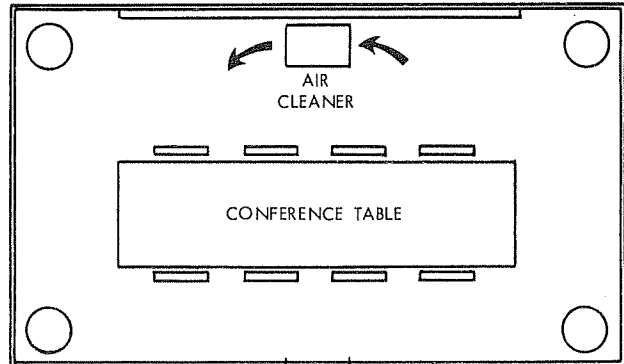
WHAT IT WILL NOT DO

Your new electronic air cleaner will not remove lint or other large particles that fall out of the air before being drawn into the air cleaner. These particles may show up on a flat surface such as a desk or table top, but they are not the type of particles that cause soiling and staining, with resulting cleaning and redecorating bills.

INSTALLATION



COCKTAIL LOUNGE — UNIT SUSPENDED UPSIDE DOWN TO DEFLECT AIR AWAY FROM CUSTOMERS AT BAR.



TYPICAL CONFERENCE ROOM — THE UNIT SHOULD NOT BE LOCATED WHERE AIR MOVEMENT WOULD BE RESTRICTED. PROPER AIR CIRCULATION SHOULD BE MAINTAINED TO INSURE A GOOD CLEANING PERFORMANCE.

LOCATION

The best location for a self-contained unit is in a position where airflow is not impeded, closest to the concentration of tobacco smoke and dirt producing activities. Care should be executed so that the unit does not discharge air directly upon seating areas.

MOUNTING

The unit is manufactured for right-to-left airflow. However, this can be reversed by installing the unit in an upside-down position. Eight internal mounting nuts (four top, four bottom) are included so that threaded rods can be used to hang the unit from the ceiling. Optional shelf mounting brackets are available with a slight additional charge.

OPERATIONAL DATA

Your self-contained Electronic Air Cleaner can be plugged into a standard wall receptacle with the 9' power cord that is attached to the unit. **WARNING:** To reduce the risk of electric shock, this equipment has a grounding type plug that has a third (grounding) pin. This plug will only fit into a grounding type power outlet. If the plug does not fit into the outlet, contact qualified personnel to install the proper outlet. Do not alter the plug in any way.

TWO SPEEDS HIGH480 CFM
LOW360 CFM

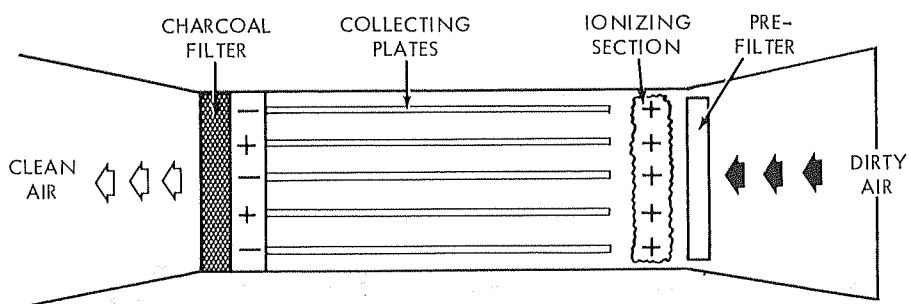
POWER REQUIREMENTS....120 Volts 60 Cycle

WATTAGE CONSUMED.....250 Watts

DIMENSIONS.....19 in. Wide, 26.5 in. Long and
12.5 in. High

WEIGHT.....51 lbs.

HOW IT WORKS



The dirty air is drawn through the side grill until it reaches the air cleaner collecting cell inside. First, lint particles are trapped by the pre-filter. Then the dirty air passes through the ionizing section of the cell where all the particles receive a strong electrical charge. The charged particles are carried by the air to the collecting plates of the cell, where they are pulled to the plates

by a strong electric force. The effect is similar to that of iron filings being pulled by a magnet. The air then passes through an activated charcoal filter which removes offensive odors. The clean air is then circulated through the diffuser on the opposite end of the air cleaner and then into the living area.

MAINTENANCE

CLEANING THE CELL (Weight 7 lbs.)

Approximately once a month the air cleaner's collecting cell should be removed and washed.

Push the "high"/"low" switch to off. Wait 15 seconds for the collecting cell to automatically discharge. Open the cell access door by pulling on the knob.

The cell is held in position during operation by a spring latch attached to the bottom of the cabinet. Remove the pre-filter.

Depress the spring latch and slide the cell out of the shelf. Immerse the cell and pre-filter in a warm solution of low-sudsing detergent. Rinse with water and allow to drip for two hours.*

Replace the cell in the cabinet shelf, making sure contact is made with the cell contact as indicated on the end of the collecting cell. Also, reinsert the pre-filter. Close the cell access door.

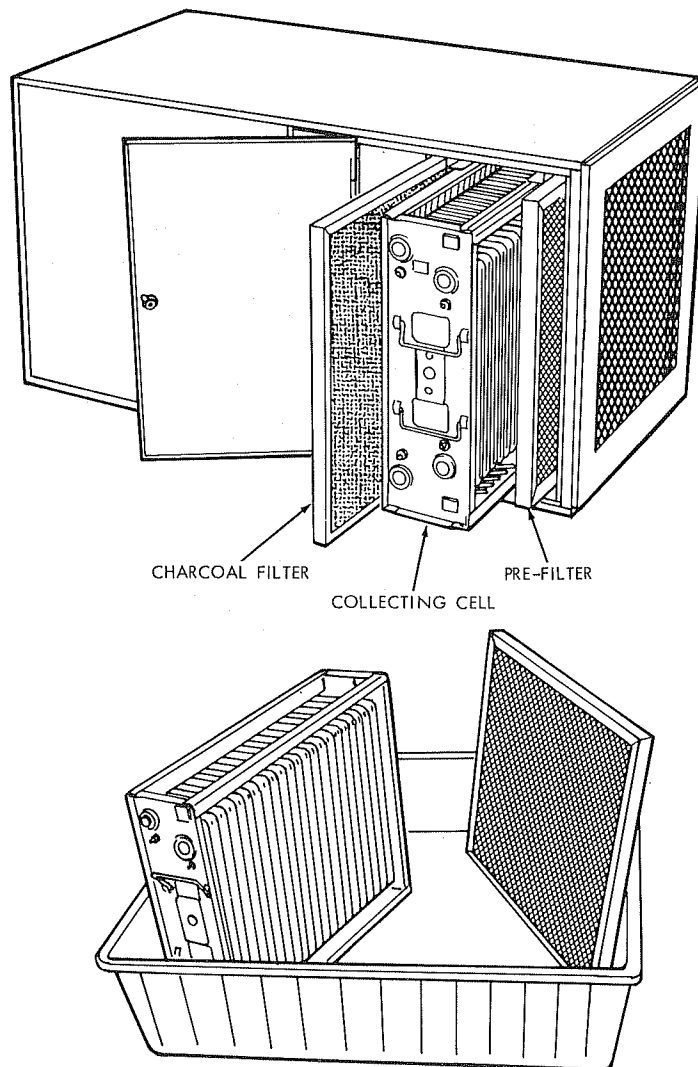
ARCING

When the power is turned on after washing the cell, arcing (loud cracking noise) may occur for a short time. Arcing will not damage the cell and will stop in a short while.

Regular washing of the collecting cell and pre-filter will insure maximum efficiency from the electronic air cleaner. The washing schedule may vary in frequency, depending on the dirt load encountered at installation site.

CHARCOAL FILTER

The charcoal filter will lose its odor removal efficiency in approximately six months. It cannot be washed like the cell and pre-filter. Replace this charcoal filter with a new charcoal filter when this occurs.



* Gently wipe the ionizing wires to remove the white chalky deposits.

PARTS LIST

for

MODEL 05C11E-41002

ELECTRONIC AIR CLEANER

(SC-500)

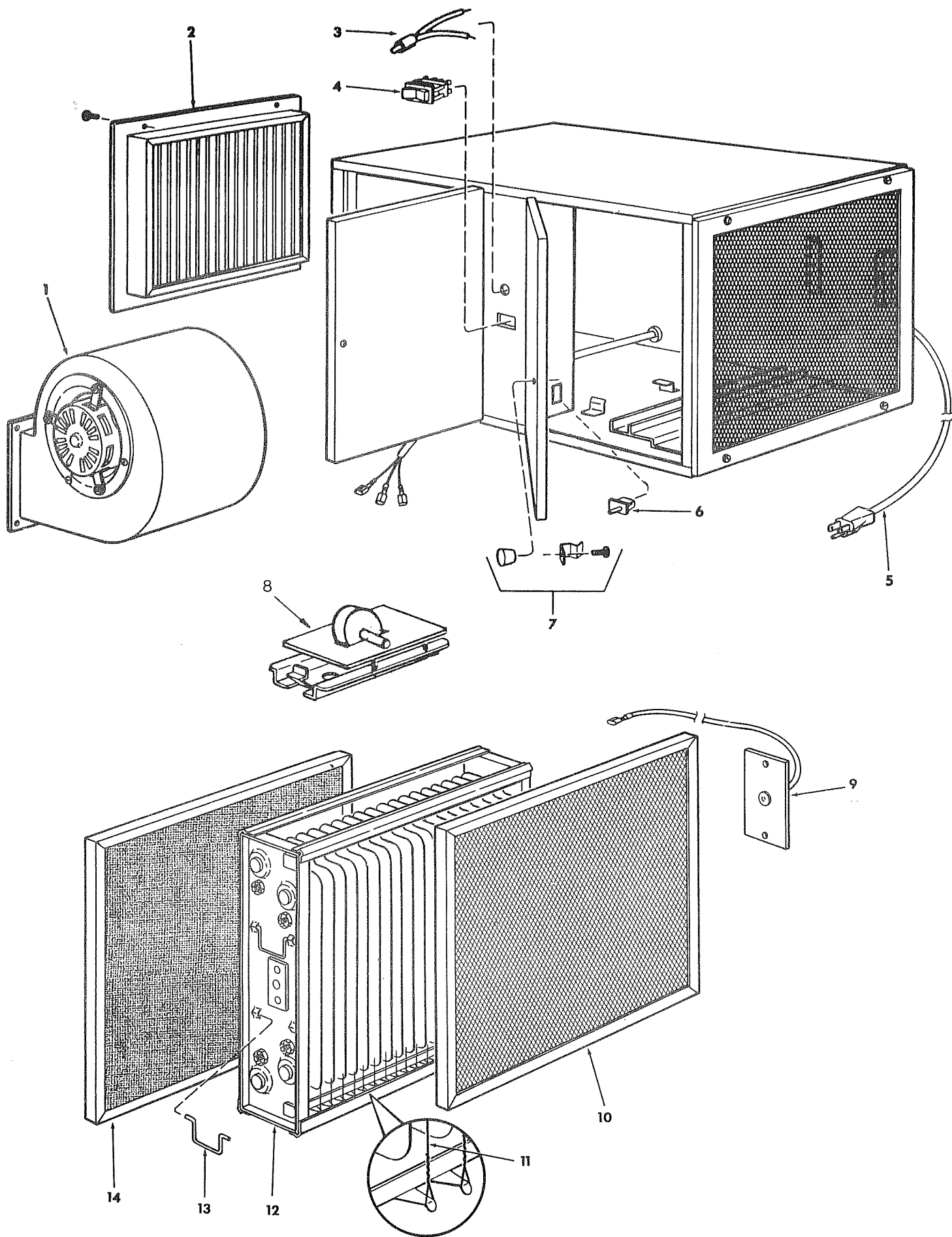
WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING

1. The PART NUMBER
2. The PART DESCRIPTION
3. The MODEL NUMBER
4. The NAME OF ITEM — Electronic Air Cleaner

Always Order by "Part Number". . . Never by "Item No."

KEY NO.	PART NO.	DESCRIPTION
1	F848-0281	Direct Drive Blower
2	F831-0085	Grille Assembly
3	F844-0136	Light
4	F876-0183	Operating Switch
5	F848-0305	Power Cord Assembly
6	F876-0188	Safety Switch
7	F839-0011	Knob and Latch
8	F858-1000	Power Supply
9	F819-0144	Cell Contact Board
10	F825-0327	Pre-Filter
11	F843-0777	Ionizing Wire
12	F811-0313	Collecting Cell
13	F832-0039	Cell Handle
14	F825-0404	Charcoal filter
+	F806-0480	Wall Mounting Brackets (Optional)
+	846-0265	Owner's Manual

+ Not Illustrated



TECHNICAL REPAIR GUIDE

This guide contains service checks to assist service personnel in locating and correcting any malfunction that might occur to render the air cleaner ineffective or inoperative. The air cleaner has been designed with replaceable components, such as the high-voltage power supply which allows the serviceman to simply replace a defective component rather than attempt repairs of such components in the field.

The first chart "Basic Service Guide" will probably cover many owner complaints. If after checking the items listed, the air cleaner still fails to operate properly, continue with the second chart "Complete Checkout Procedure" until the trouble has been located.
(See wiring diagram)

WARNING: RISK OF ELECTRIC SHOCK

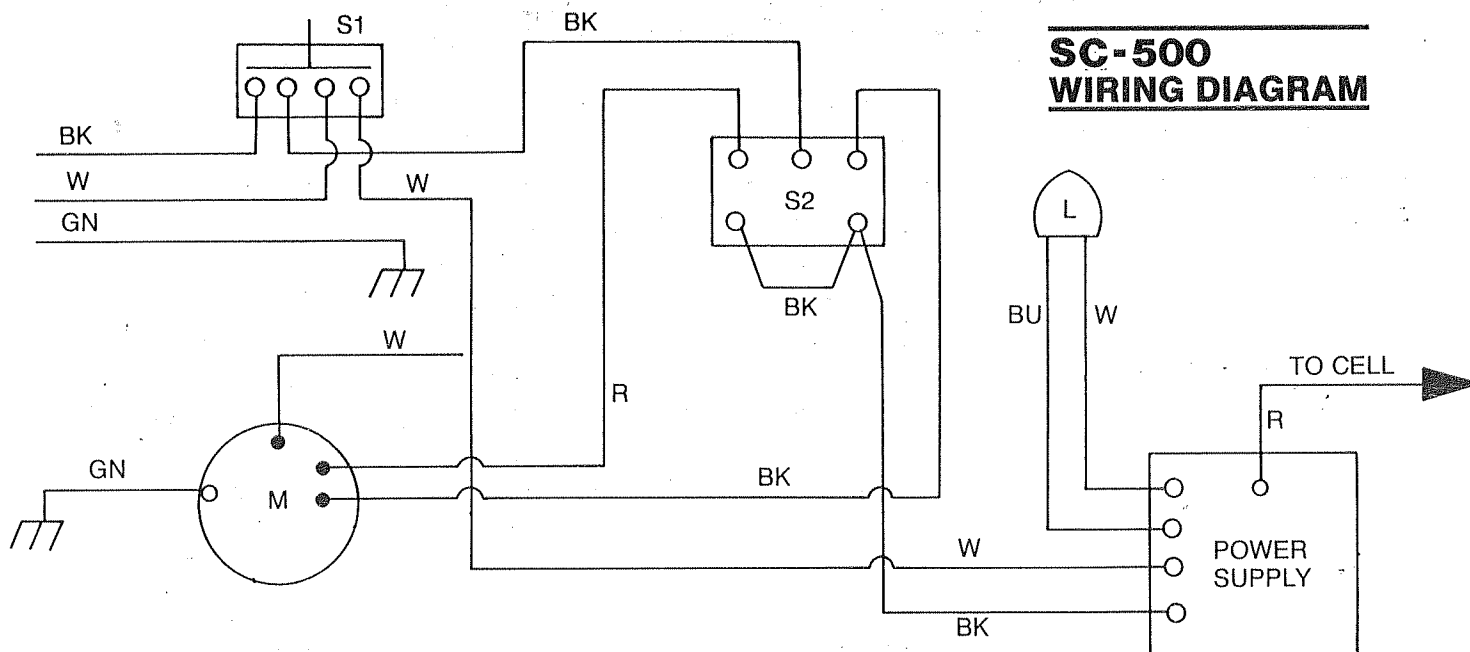
These servicing instructions are for use by qualified personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

NORMAL OPERATION

- ON/OFF switch in high or low position.
- Green light "ON", blower motor running.
- Voltage on air cleaner cell, either ionizer or plates 6200 to 6600 VDC.
- Voltage at cell contact located in rear of cabinet, no cell attached (open circuit) 6400 to 6800 VDC.

BASIC SERVICE GUIDE

SERVICE INDICATION	SERVICE CHECKS
<ul style="list-style-type: none"> Indicator light "ON" Blower Operating (High or Low) 	<ul style="list-style-type: none"> Unit operating correctly Voltage at collecting cell 6500 ± 300 VDC
<ul style="list-style-type: none"> Indicator light "OFF" Blower not operating 	<p>Power is not being supplied to air cleaner.</p> <p>A. Check voltage at 120 VAC receptacle. If none, check fuse or circuit breaker at input line.</p> <p>B. Check ON/OFF switch which must be in either "High" or "Low" position.</p>
<ul style="list-style-type: none"> Indicator light "ON" (blinking) Blower operating (high or low) 	<p>A. Remove cell and wash thoroughly.</p> <p>B. Check cell for any foreign object that might be lodged between plates of cell.</p> <p>C. Check cell for broken ionizing wires, cracked insulator, or bent plates.</p> <p>D. When replacing cell in cabinet ensure that the directional arrow on cell corresponds with direction of air flowing in cleaner. Cell contact must point toward cell contact board located in rear of cabinet.</p>
<ul style="list-style-type: none"> Indicator light "OFF" Blower operating (high or low) 	<p>A. Remove cell from cabinet.</p> <p>B. If indicator light comes "ON" and voltage reading at cell contact is 6100 VDC or above, problem is in cell. Check as above.</p> <p>C. If indicator light remains "OFF" and voltage reading at cell contact is less than 6100 VDC problem is in the D. C. Power Supply (see Checkout Chart).</p>
<ul style="list-style-type: none"> Cell "arcing" excessively <p>NOTE: An occasional "arc" is considered normal</p>	<p>A. Check voltage to air cleaner. Voltage should not exceed 120 VAC.</p> <p>B. Remove cell and pre-filter, wash thoroughly.</p> <p>IMPORTANT: All ionizing wires must be completely clean with no buildup on wires. Cell plate adjacent to ionizing wire must be completely clean of all contaminate deposits.</p>



NOTE:

1. Cell voltage 6500 VDC
Cell current 1.0 MA.
2. Power supply and cell
ground through chassis.

LEGEND:

- S1 - Safety Switch
- S2 - Hi-Lo-Off Switch
- L - LED Operating Light
- M - Motor - 2 Speed
- C - Motor Capacitor
- BK - Black
- W - White
- R - Red
- BU - Blue
- BR - Brown
- GN - Green

COMPLETE CHECKOUT PROCEDURE

If the malfunction has not been eliminated in the "Basic Service Guide" proceed to the "Checkout Chart" to locate the problem. When the defective component is discovered and replaced, the air cleaner will resume normal operation.

All voltage measurements indicated can be made with a high voltage D. C. probe and a general purpose volt-ohm meter. For example: Simpson 260 or equivalent.

1. Remove the collecting cell and charcoal filter from air cleaner cabinet.
2. Apply 120 VAC to the air cleaner, depress safety switch and measure voltage at terminal marked "LINE" on the D. C. Power Supply. Voltage should be the same as that applied.
3. If 120 VAC does not appear at "LINE" terminals, the problem is in the primary voltage circuit. Check "Hi/Low/Off" switch, safety switch and all wiring points.
4. If 120 VAC did appear at "LINE" terminal then check the voltage output to the terminals marked "LIGHT" (Blue and white) on the D. C. Power Supply. DO NOT DISCONNECT THE LIGHT WIRES FROM THE TERMINALS. Voltage should be 2 volts, D. C. $\pm .5$.
 - A. If voltage to light is 1.5 VDC or above, replace the operating light.
 - B. If voltage to light is below 1.5 VDC, check the voltage at the collector cell contact located in the back of the cabinet.
 - C. If the voltage at the cell contact is 6100 VDC or above, the power supply is functioning properly.
 - D. If the voltage at the cell contact is below 6100 VDC, replace the D. C. Power Supply.

D. C. POWER SUPPLY SPECIFICATIONS

The power supply is a Solid State, High Frequency A.C. to D.C. power source and is not designed for individual component part replacement. Emerson recommends the replacement of the entire "snap-in" power supply in the event of a failure.

Input voltage	120 VAC, 60 HZ
Output to light	2 VDC $\pm .5$
H.V. Output (no load)	6400 - 6800 VDC
H.V. Output (loaded)	6200 - 6600 VDC



WARRANTY TO CONSUMER - PURCHASER

EMERSON
Electronic Air Cleaners
LIMITED WARRANTY



This type White/Rodgers electronic air cleaner is warranted to the consumer against defects in materials and workmanship for 12 months from date of installation. The electronic air cleaner must be installed by a competent heating and/or air-conditioning contractor in accordance with White/Rodgers installation instructions, operated within the unit's listed capacity, and not moved from the original installation site. NO OTHER WARRANTY, WRITTEN OR ORAL, APPLIES. No employee, agent, dealer, or other person is authorized to give any warranty on behalf of White/Rodgers.

If service is required it must be performed by a competent heating and/or air-conditioning contractor (preferably the installing contractor). White/Rodgers liability is limited to replacement of defective parts and does not include the cost of labor, other expenses in servicing the unit, or incidental or consequential damages. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATIONS ON THE LENGTH OF WARRANTY ON INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.

If the installing dealer or contractor fails to render performance under the terms of this Limited Warranty within a reasonable time, then contact in writing:

WHITE-RODGERS

Division of Emerson Electric Co., 9797 Reavis Road, St. Louis, MO 63123, (314) 577-1300

The consumer may be asked to return the air cleaner or part (s) claimed to be defective to White-Rodgers, 303 North Industrial Park Rd., Harrison, Arkansas 72601 or nearest distributor point, at the expense of the consumer. The consumer will be expected to supply information on serial number, date of installation, name of installing dealer, and model number of the unit involved.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM PROVINCE TO PROVINCE.



WHITE-RODGERS

Controlling America's Indoor Comfort

White-Rodgers Division, Emerson Electric Co.
9797 Reavis Road, St. Louis, MO 63123-5398