

Operating Guide

C-90B

Electronic Air Cleaner

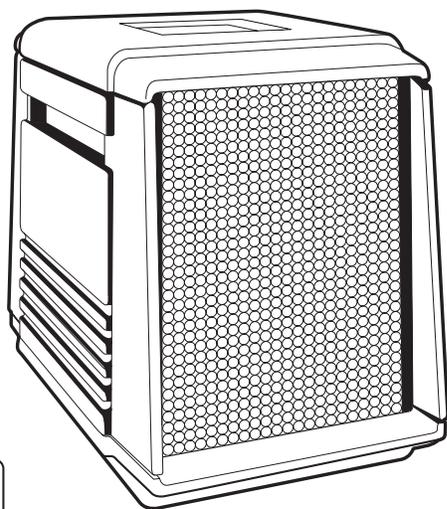


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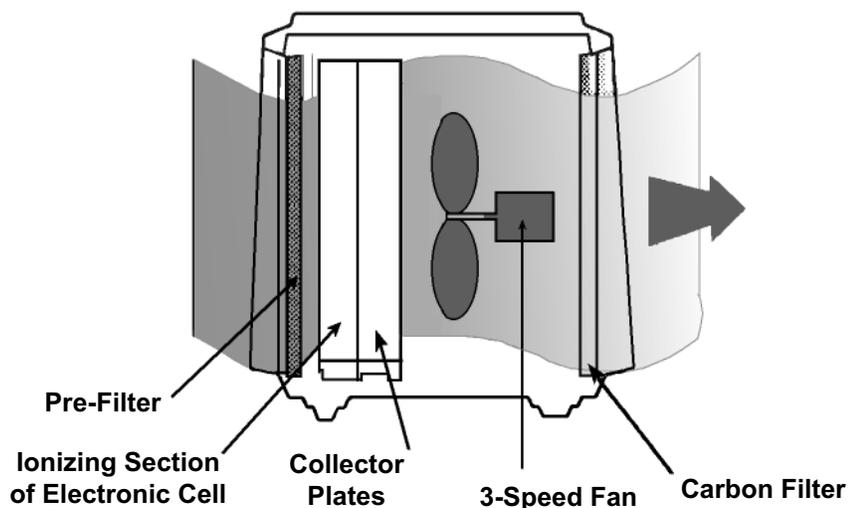
The Friedrich C-90B Electronic Air Cleaner

The Friedrich Electronic Air Cleaner is a self-contained console model consisting of a high voltage DC power supply, electronic cell, 3 speed fan, pre-filter and activated carbon post-filter in a rugged plastic cabinet.

It is designed to remove dust, tobacco smoke, pollen, bacteria and other airborne contaminants from the air. In just minutes, you will notice improvements in your indoor air quality as your Friedrich air cleaner begins the job of removing the billions of irritating microscopic particles from your home or office. The activated carbon post-filter also helps eliminate many objectionable indoor odors.

CAUTION: Before operating the unit

- Carry unit by handle indentations on side panels or carry from base, as the top removes for filter maintenance and will not support the unit.
- Remove the plastic cover from the activated carbon filter, and place the filter with label facing out.
- Make sure the electronic cell is properly placed in the cabinet - airflow arrow on the end plate should be pointing toward the fan.
- Make sure that the top cover is securely in place.
- This unit is equipped with a three-prong (grounded) plug for your protection against shock hazards and should be plugged directly into a properly grounded three-prong receptacle. **DO NOT, UNDER ANY CIRCUMSTANCES, CUT OR REMOVE THE GROUNDING PRONG FROM THIS PLUG.**
- Electronic air cleaners should NOT be placed in any area where potentially dangerous gasses or vapors exist, nor should they be used in wet environments.



Operating Your Friedrich Electronic Air Cleaner

CONTROLS

All controls for the Friedrich electronic air cleaner are located on the top of the unit and are accessible through an opening in the top cover. The controls are: OFF, HI, MED and LOW. An indicator lamp lights when the cleaner is on and operating normally.

Generally, HIGH fan speed is used in extreme conditions for rapid cleaning; such as during or after a party where there were many smokers; or for larger areas to circulate the clean air in all areas of the room. MEDIUM and LOW settings are usually adequate to maintain a clean air environment.

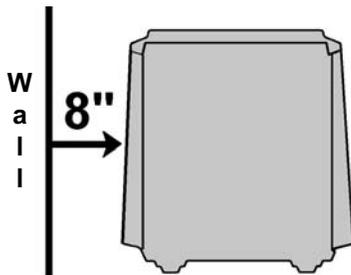
At initial start-up, the indicator lamp may flicker on and off and is not cause for alarm. Should the lamp completely fail to come on, review the "BEFORE OPERATING" and "TROUBLESHOOTING" sections.

During initial use, "snapping" sounds may be heard. This is normal, and the unit may continue to make these noises during the first few days of operation. After this initial break in period, only an occasional "snap" will be heard, indicating the unit is cleaning your air. NOTE: As the air cleaner's electronic cell becomes dirty, it will "snap" more frequently. When this occurs, you should wash the cell.

The best location for the air cleaner is a place closest to the source of tobacco smoke, dust or other indoor contaminants.

Position the unit so that the airflow around the intake and discharge grilles is not blocked. For best results, do not place the intake grille (rear) closer than eight (8) inches from a wall. Provide a clear, unobstructed path for the discharge air. The farther the discharge air travels, the greater the effectiveness of the air cleaner. For greater comfort, position the air cleaner so that the discharge air does not cause uncomfortable drafts.

To use a room air cleaner most effectively in rooms that share an open doorway or archway, position the unit near the common opening and direct the airflow into the adjacent room to promote good air circulation.



ECONOMICAL CLEAN AIR

The Friedrich electronic air cleaner costs no more to operate than a standard household light bulb. The benefits from clean air far outweigh the low operating costs of continuous cleaning. Remember, the more you operate your electronic air cleaner, the cleaner your air will be.

Cleaning

IMPORTANT PRECAUTIONS

The collector plates of the electronic cell and the pre-filter can become extremely dirty. With an excessive amount of contamination buildup on the collector plates and the pre-filter, the electronic air cleaner's efficiency decreases. Also, as dirt builds up on the ionizing wires, the charging process becomes less efficient.

To prevent this loss of efficiency, the electronic cell and pre-filter must be cleaned regularly. How often will depend on actual usage. Cleaning will be more frequent if the air cleaner is operated continuously or under severe conditions.

Turn off and unplug air cleaner before opening top cover to remove electronic cell and pre-filter for cleaning. Always be careful when handling the electronic cell. Sharp edges and wires are capable of inflicting wounds. Care should also be taken when cleaning because of extremely hot water and potentially harmful effects of detergents on your skin.

Cleaning (Continued)

CLEANING THE PRE-FILTER

Remove the pre-filter and shake out or brush off the accumulated dust and lint. If this is not adequate, a vacuum may be used or the pre-filter can be cleaned with an all-purpose cleaning agent to remove tobacco smoke and cooking grease stains. A thorough rinsing is required after each cleaning. After cleaning, allow to dry and reinsert.

CLEANING THE CARBON FILTER

Occasionally, the carbon filter will need cleaning. Use a stream of air or a vacuum to remove the dirt. THE CHEMICAL AND ODOR ABSORPTION CAPABILITIES CAN NOT BE RESTORED. When the carbon filter can no longer remove odors from the air, it must be replaced. (See Carbon Filter Reorder Form packed with this unit or contact your nearest Friedrich dealer.) Under normal operating conditions the carbon filter should be replaced every 3-6 months. THE CARBON FILTER MUST BE IN PLACE FOR THE AIR CLEANER TO OPERATE.

CLEANING THE ELECTRONIC CELL

The simplest method of cleaning the electronic cell is to use an automatic dishwasher. The dishwasher provides the correct cycle of wash, rinse and dry. Water temperatures normally found in dishwashers will not harm the cell.

1. After turning off the air cleaner, remove the cell and gently place on the dishwasher rack with airflow arrows pointing up. In some dishwashers, it may be necessary to remove the top rack. **BE EXTREMELY CAREFUL WHEN PLACING ON DISHWASHER RACK TO NOT DAMAGE IONIZER WIRES OR BEND COLLECTOR PLATES.**
2. Use any available household dishwasher detergent recommended for use in your appliance and follow manufacturer's instructions.
3. Not all dishwashers may be capable of holding the electronic cell. Be sure to compare the internal size of the dishwasher to the dimensions of the electronic cell (16" high x 12 1/2" wide x 4 1/2" deep.) All parts of the dishwasher must be able to move freely.
4. Take care to avoid damaging the cell when removing it from the dishwasher. **GENTLY LIFT THE CELL STRAIGHT UP TO PREVENT DAMAGE TO IONIZER WIRES AND COLLECTOR PLATES.**
5. The cell may be hot when removing it from the dishwasher. Allow to cool or wear protective gloves. Make sure that all water is drained off when removing the cell from the dishwasher.
6. If dirt stains or detergent residue remain after washing, it may be necessary to rewash the cell or switch detergent.
7. The electronic cell must be COMPLETELY dry before replacing it in the air cleaner for use.

Cleaning (Continued)

ALTERNATE CELL CLEANING METHOD

If an automatic dishwasher is not available or not of sufficient size to accommodate the cell, a large container capable of holding the electronic cell can be used.

1. Mix an automatic dishwasher detergent with hot water in a ratio of 4 oz. of detergent to one gallon of water. Water temperature should be between 150° F and 170° F. Be careful to avoid prolonging skin contact with solution and DO NOT splash solution in the eyes.
2. Soak the cell in the solution for about 15 minutes. The solution should be agitated in some way every 2 to 3 minutes by sloshing or stirring the solution.
3. Remove the cell from the cleaning solution and place in a clean container of hot water (150° F to 170° F) for rinsing and let set for 10 minutes.
4. Remove the cell from the rinse water and allow to drain and dry before using.
5. If there is any detergent residue remaining, rinse again, since it may affect the efficiency of the air cleaner.

NOTE: The ionizer wires may become so dirty that an occasional cleaning is recommended. With a damp cotton ball, wipe the ionizer wires by placing the wire between finger and thumb.

Discoloration of the Cell

Occasionally, after the cleaning process, the cell may seem stained. If the stain is black or very dark, it is probably detergent residue and should be rinsed off at once. If yellowing appears, it is probably stain from tobacco or other smoke. The yellowing does not affect air cleaner efficiency. Use an ammonia-based detergent to clean tobacco tar and other smoke residue from the collector plates.

Replacing the Cell in Cabinet

After the cell has been washed, check for broken ionizer wires and bent collector plates. If broken wires are observed, return unit to Authorized Warranty Station for wire replacement. If bent collector plates are observed, carefully straighten with a screwdriver or other flat object. **BE CERTAIN THAT NO TWO COLLECTOR PLATES ARE TOUCHING AS THIS WILL CAUSE AN ARC AND PREVENT THE AIR CLEANER FROM OPERATING PROPERLY.** The operation light will not light and the electronic cell will not function.

Remember that the electronic air cleaner has a cell key which prevents the cell from being positioned incorrectly. If the cell seems stuck when being inserted or the access cover will not fit securely, check to be sure that the cell is being positioned properly. If excessive force is used, the cell or air cleaner unit could be damaged. Airflow arrows point toward fan motor.

If the cell is placed into the air cleaner while still damp, the indicator light may not come on until the cell is dry, which would normally take about two hours. If the cell is energized and annoying snapping sounds occur, the cell should be removed from the air cleaner and allowed to thoroughly dry.

Activated Carbon Post-filter

The activated carbon filter must be replaced when it is no longer effective in eliminating odors. The life of the carbon filter will depend on the concentration of odors and fumes in the air passing through the air cleaner. Under normal operating conditions, the carbon filter should last from three to six months. The carbon filter must be in place for the air cleaner to operate.

Consumer Troubleshooting Guide

If you experience problems with the operation of your air cleaner, please:

- Make sure electronic cell is clean, dry, and properly installed.
- Make sure pre-filter and carbon filter are both properly installed.
- Make sure the top cover is properly snapped in place.
- Check fan motor and indicator lamp on all speed settings starting with low.

If your air cleaner still has any of the following problems, proceed step by step as shown below until no further action needs to be taken.

PROBLEM 1 - Fan Off, Lamp Off

- Make sure the supply cord is plugged into a standard household receptacle.
- Make sure there is voltage to the receptacle by using any other electric device.
- Make sure the carbon filter is in place.
- Make sure the top access cover is properly in place in order to actuate the interlock switch. The interlock switch is provided for consumer safety and should never be bypassed.
- No further corrective actions should be taken by the consumer. Return unit to Regional Authorized Warranty Station for repair (see page 10.)

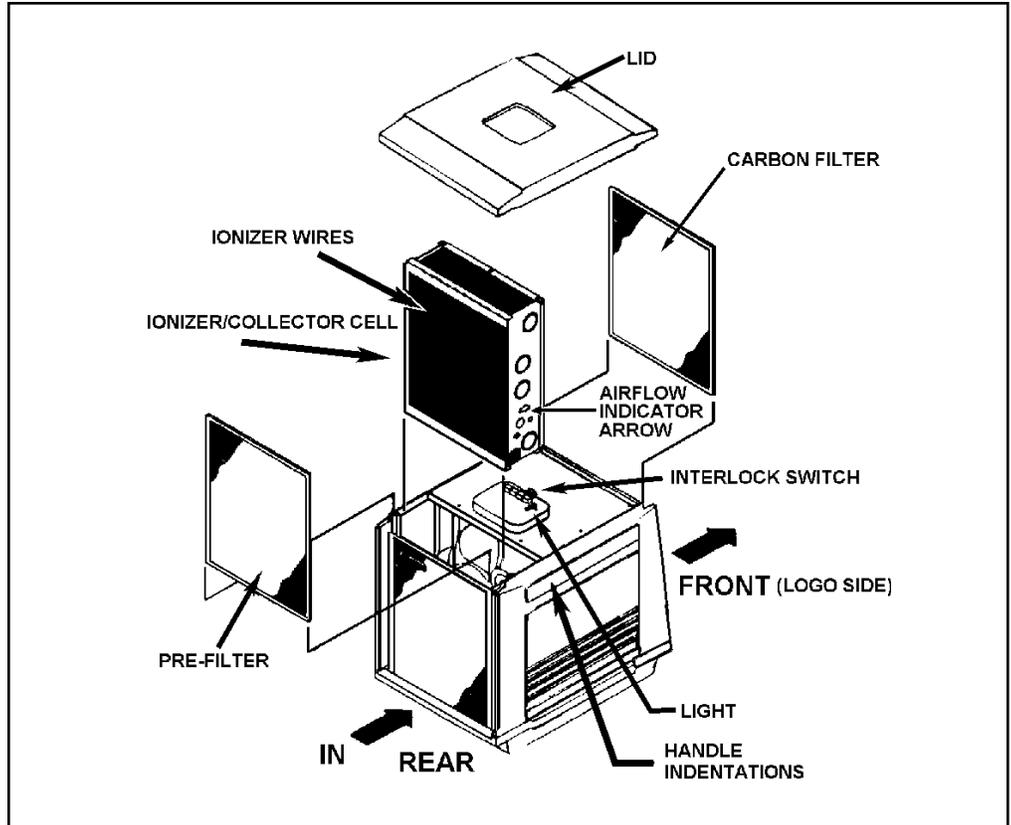
PROBLEM 2 - Fan On, Lamp Off

- Allow the electronic cell to dry completely before reinstalling it into the unit.
- Unplug the unit and check electronic cell to see if any of the collector plates are touching. Gently straighten and evenly space the plates.
- Check electronic cell to see if any of the ionizer wires are broken. See page 8 for location. If broken wires are observed, no further corrective actions should be taken by the consumer. Return unit to Regional C-90B Authorized Warranty Station for repair.

PROBLEM 3 - Fan Off, Lamp On

- This condition represents an unserviceable failure of the air cleaner. Return to Regional Authorized Warranty Station for repair.

Major Components



C-90B Specifications

OPERATING TEMPERATURES

This air cleaner is intended for use indoors, at temperatures normally found in occupied spaces.

ELECTRICAL RATINGS

120 Volt, 60 Hertz.

INDICATOR LIGHT

Located on the access cover next to the 3-speed switch. It indicates that the air cleaner is operating properly.

INTERLOCK SWITCH

Interrupts the supply power to the unit when the access cover is opened.

WEIGHT

33 lbs. (15 Kg) shipping weight - 28 lbs. (13 Kg) net weight.

DIMENSIONS			
	Height	Width	Depth
Cabinet	19"	15"	21 1/2"

NOMINAL CURRENT AND POWER CONSUMPTION			
120Volt, 60 Hertz			
Fan Speed	CFM	Amps	Watts
High	390	.80	90
Medium	280	.56	64
Low	220	.41	47

If You Need Service

In the unlikely event that your Friedrich Electronic Air Cleaner should require service, you should contact your dealer for location of the nearest service center, or see listings below for the nearest Regional C-90B Authorized Warranty Repair Station.

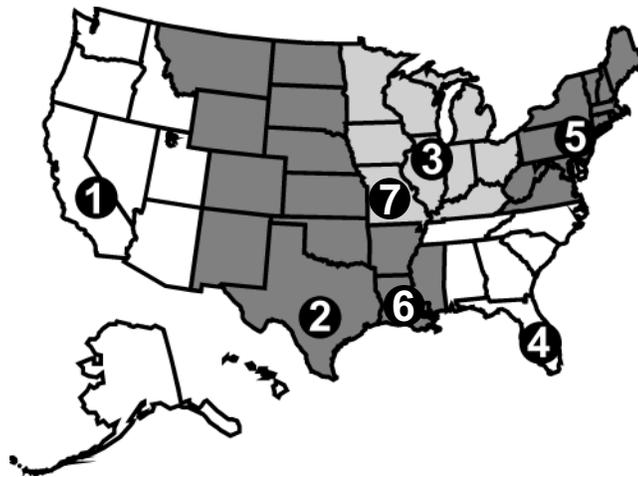
If your Friedrich Electronic Air Cleaner should need to be shipped for service, please contact your nearest Regional Authorized Warranty Repair Station at phone number listed on page 9, or contact the Friedrich Customer Assurance Department at

(210) 357-4400 for specific shipping information.

Package your unit or part in the original packing material if possible. If not, use a sturdy carton and surround the unit or part with an ample amount of material to cushion it during shipping. Be sure to tape the carton securely. All shipping charges must be **prepaid** by the shipper. Please include a brief description of the malfunction (please be specific). Be sure that you have included your proof of purchase (date of sale) and the correct address for the return shipment.

If you have any questions about your warranty coverage or how to obtain warranty service, please contact the Friedrich Customer Assurance Department at (210) 357-4400 ext. 662.

Regional C-90B Authorized Warranty Repair Stations



1 Cagle's Appliance
114 S. Campus Ave.
Ontario, California 91761
TEL: (909) 986-9789

2 Alamo Service Co.
1450 North Flores
San Antonio, Texas 78212
TEL: 210/227-7571
(800) 328-2450

3 B & G Service Co.
3950 North Elston
Chicago, Illinois 60618
TEL: (773) 588-2290

4 Reeve Air Conditioning, Inc.
2501 South Park Road
Hallandale, Florida 33009
TEL: (954) 962-0252
(800) 962-3383

5 United AC & Appliance
101 M. Ellis Street
Staten Island, NY 10307
TEL: (718) 605-7780

6 Thermal Products
271 Plauche Street
Harahan, Louisiana 70123
TEL: (506) 818-1008

7 Carroll Serv. Inc.
4000 Shenandoah
St. Louis, Missouri 63110
(314) 371-3033



Friedrich Air Conditioning Company

P.O. Box 1540
San Antonio, TX 78295
210.357.4400
www.friedrich.com

ELECTRONIC AIR CLEANER LIMITED WARRANTY

Friedrich Air Conditioning Company warrants its electronic air cleaner to be free from defects in workmanship or materials, under normal use and service, for a period of One Year from the date of purchase by the original owner. If at any time during the warranty period, the product is found to be defective or malfunctions, Friedrich Air Conditioning Company will repair or replace the defective part (at its option) and provide the shop labor to repair this electronic air cleaner.

This warranty shall not apply if it is shown by FRIEDRICH that the defect or malfunction was caused by neglect or abuse during operation by consumer.

The cost of shipping the unit to Friedrich Air Conditioning Company or a service agency shall be covered by the purchaser. The repaired or replaced part or unit will be shipped by Friedrich Air Conditioning Company to the purchaser, freight prepaid. The warranty on any repaired or replacement part shall be for a duration of time no longer than the remaining or unexpired term of the original warranty.

This warranty does not cover any other charges incurred by the purchaser.

The sole responsibility of FRIEDRICH shall be to repair the product within the terms stated above. FRIEDRICH SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY, EXPRESS OR IMPLIED, APPLICABLE TO THIS PRODUCT. Some states do not allow the exclusion or limitation of consequential damages, so this limitation may not apply to you.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, AND THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY EXCLUDED BEYOND THE ONE YEAR DURATION OF THIS WARRANTY. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which can vary from state to state.

(10-04)