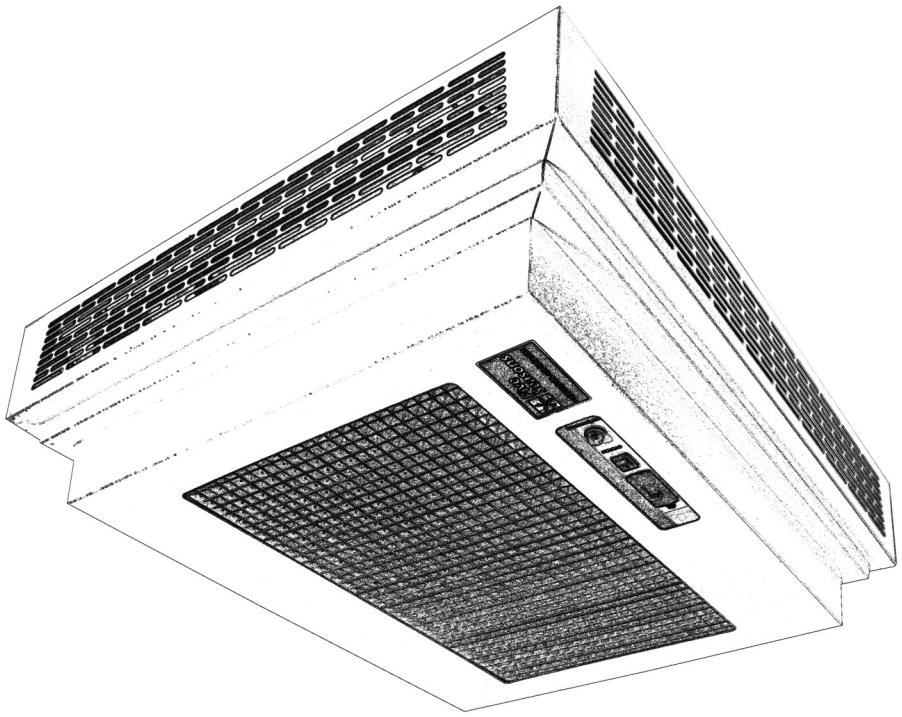
OPERATION & MAINTENANCE MANUAL

MODEL EPFX SSCB7W-R, EPFX SSCB7W-RE, EPFX SSCB7G-R, EPFX SSCB7G-RE SEMI-FLUSH CEILING MOUNTED ELECTRONIC AIR CLEANER

IMPORTANT: PLEASE READ MANUAL BEFORE OPERATING UNIT



FOR TECHNICAL SUPPORT AND REPLACEMENT FILTERS CALL: 1-866-998-9909
sales@enviropurefx.com

IMPORTANT: Please read entire instructions before installing the Electronic Air Cleaner.

CONTENTS

SAFETY CONSIDERATIONS

Read and follow instructions carefully. Follow all local electrical codes during installation. All wiring must conform to local and national electrical codes. Improper wiring or installation may damage Air Cleaner.

Understand the signal words WARNING and CAUTION which are present in the Installation, Operation & Service Instructions.

WARNING and CAUTION signifies a hazard which could result in property damage, personal injury or death.

Installation and servicing of Electronic Air Cleaners can be hazardous. Only trained and qualified service personnel should install, repair, or service Electronic Air Cleaners.

Untrained personnel can perform the basic maintenance functions of cleaning and replacing filters.

When working on air cleaning equipment, observe precautions in the manual, labels attached to the unit, and other safety precautions that may apply. Follow all safety codes. Wear safety glasses and work gloves.

WHAT THE ELECTRONIC AIR CLEANER DOES

WARNING

Before beginning any installation or modification, be certain that the main line electrical disconnect switch is in **OFF** position. Electric shock could result. Tag disconnect switch with suitable warning labels.

Your High Efficiency Electronic Air Cleaner has been designed to remove tobacco smoke particles, cooking smoke and grease, atmospheric dust, coal dust, insecticide dust, mites, pollen, mold spores, fungi, bacteria, viruses and more down to 0.01 micron (0.01 micron = 1/2,540,000 of an inch).

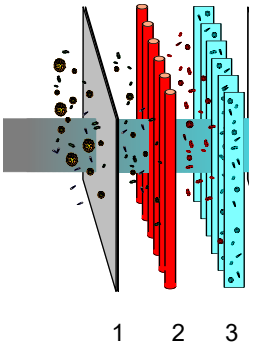
BENEFITS

- Helps clear up a smokey environment quickly, so customers can dine more comfortably.
- Helps employees reduce suffering from irritated eyes, nasal congestion and respiratory problems that lead to absenteeism.
- Helps prevent damaging black and greasy particles from staining ceilings, walls and furnishings, reducing the amount of housekeeping and redecorating costs.
- Helps to lower energy bills by recycling air rather than exhausting expensive heated or cooled air.

HOW IT WORKS

The Electronic Air Cleaner operates on the principle of "Electrostatic Precipitation." Millions of airborne pollutants are drawn through the intake grill on the bottom of the Air Cleaner and first pass through a prefilter which removes all large visible particles, such as lint. Next, smaller particles move to a 2-stage electrostatic collecting cell where they are given a powerful positive charge by the ionizing wires. Charged particles then move into the collecting area where they are attracted to a series of grounded plates. Pollutants are held in this section like a magnet until washed away during cleaning. Clean air is then dispersed from the side grills in four directions allowing superior air flow circulation.

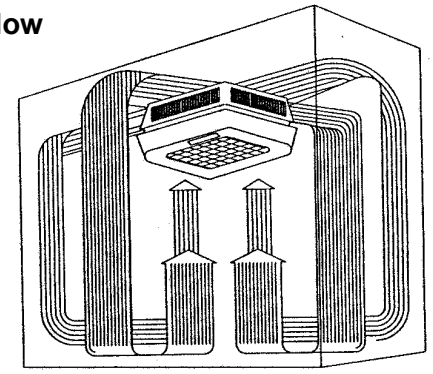
Electrostatic Precipitation



3 - Stage Electronic Air Cleaning Process:
1 - Prefilter Screen
2 - Charging Section
3 - Grounded Plates

Coanda Air Flow

The Air Cleaner creates a circular air flow pattern which never allows air to short -cycle or rest at the ceiling.



MAJOR COMPONENTS

The Electronic Air Cleaner is approximately 24 x 28 x 15 in (61 x 71 x 38 cm) with 6 in (15.2 cm) of the unit above the ceiling. The cover and exhaust grill which remain below the ceiling are hinged to allow access to the cell and power board. The unit is rated at 700 CFM (1190 m^3/hr) on the highest speed setting.

CABINET

The cabinet is constructed of 20 gauge steel. The external parts have a tough powder-coated, scratch-resistant finish. Access to the collecting cell, power box and prefilter is made by releasing the latches of the cover and allowing it to swing down.

The cover is interlocked to cut power to the unit when opened.

PREFILTER

The washable prefilter measuring 12.5 x 20 in (31.75 x 50.8 cm) is constructed of multi-layers of aluminum mesh for maximum filtration of large particles.

COLLECTING CELL

The dual voltage collecting cell is constructed of heavy gauge aluminum to resist rust and damage. The first stage, the ionizing section, is charged at approximately 7500 VDC. The collecting plates are alternately grounded and charged at 5000 VDC. The arrow on the cells indicates the direction of air flow which must point up towards the fan motor.

MOTOR AND FAN BLADE

The motor is 1/33 HP, 1050 RPM, 3-speed, controlled by a 3-position slide switch. The motor is thermally protected. The fan blade is 14 in (35.5 cm) with a 20° pitch.

ELECTRICAL COMPARTMENT

The removable power box contains the speed control, system switch, high voltage power board, and performance indicator light.

The interlock switch is located in the cabinet body near the wiring compartment.

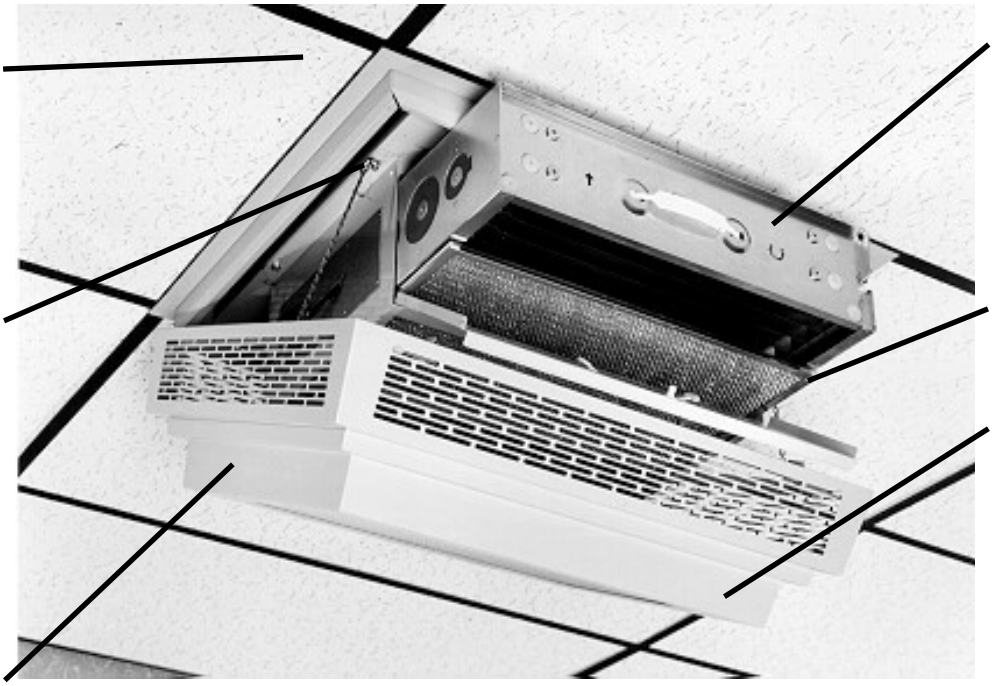
INSTALLATION

1. Read instructions carefully. Failure to do so may result in product damage or injury.
2. Make sure the sizing is correct for your application.
3. Installation should be done by a knowledgeable technician.
4. After installation, check out operation as provided in these instructions.

MOUNTING

1. Remove the unit from the box and lay the unit on its back, grill side up.
2. Release the grill by pushing the levers, located in the exhaust grill, toward each other and lift up.
4. Remove the 'S' hook from each chain, tilt cover up until the cover releases from the back hinges.installation easier. The fan blade may also be removed. Refer to "Removing The Power Box" instructions on the last page of this manual.
5. Holes are provided in the cabinet to accommodate 5/16 in (8 mm) threaded rod. Threaded rod can be attached to the angle iron which is laid across the joists, by drilling holes through these supports. Pass threaded rod up through the supports and secure with two nuts and washers. This will allow adjustment of the unit so that the flange is flush with the underside of the ceiling.

   Leave enough room around the Air Cleaner for removal of collecting cell and prefilter.
6. Replace cell section, wiring and chain.



OPERATION & MAINTENANCE

WIRING

WARNING

Electrical shock can cause injury or death. Be certain main line disconnect switch is off before wiring.

All wiring must comply with applicable codes and standards. See unit rating label for correct voltage and amperage.

1. Two knockouts are provided, one on top and one on the side of the unit adjacent to the wiring compartment. For convenience, a wall switch may be installed near the Air Cleaner, in series with the power source, to turn the unit on and off.
2. Remove the cover of the wiring compartment to locate the input leads and ground stud. The Air Cleaner must be grounded for proper operation and safety.
3. Once the unit is mounted and wired, the cover can be replaced on the hinges and the chain replaced on the "S" hooks. Close the cover by sliding the levers toward the center and pushing the cover up into place. Release levers to lock the cover into place.

OPERATION CHECK

1. With the cover closed and locked in place, turn the system switch on.
2. Adjust the fan speed with the slide switch. Insure the unit functions on all speed settings.
3. The Performance Indicator Light should be lit, which indicates the power board is functioning properly.

When the Air Cleaner is new, it may arc or periodically make "snapping sounds." A slight odor of ozone may be noticeable. The arcing and odor are due to rough edges and burrs on the cells. These symptoms will disappear during the first few weeks of normal operation. The ozone levels are well below government standards for indoor air concentration.

MAINTENANCE SCHEDULE

CAUTION

Make sure Air Cleaner switch is **OFF** before performing any maintenance or removing any components.

The collecting cell and prefilter must be cleaned on a regular basis for the unit to function at its peak efficiency. The frequency of cleaning will vary from one environment to another. The following is an average wash cycle:

- Stores, Offices, Computer & Conference Rooms = **4 Weeks**
- Cafeterias, Restaurants, Lounges = **3-4 Weeks**
- Bars, Pubs, Bingo Halls = **1-3 Weeks**

CLEANING AND SERVICE

1. Turn off the system switch and wait 15 seconds for high voltage to dissipate.
2. Open the cover and cell access door and remove collecting cell and prefilter. **Cell plates are sharp. Handle with care.**
3. Place cell in tub and spray completely with **DAX Detergent**, allowing detergent to run down both sides of plates and ionizing wires. Let sit for 5 minutes.
4. Rinse cell well with hot water (120ºF / 49ºC maximum).
5. If dirt or nicotine remains on plates, let cell soak in hot, soapy water for 30 minutes. **Never use any instrument to clean the cell, as this may damage the ionizing wires or misalign cell plates.**
6. Spray prefilter with **DAX Detergent** and rinse well.
7. To dry cell, tilt on 45º angle against wall with arrow pointing sideways. Allow to dry completely for at least 8 - 10 hours.
8. When the cell and prefilter are dry, place them back into the unit. The arrow on the cell points up. The red fibreboard on the cell should line up with the contacts in the cabinet. Close door and cover. If the cell arcs when the switch is turned on or if the performance indicator light does not come on, then the cells are still wet. Allow more time for drying.

The use of **DAX Detergent** (or non-chlorine, non-corrosive, non-abrasive liquid detergent) is recommended for cleaning as it is a heavy duty solution used expressly for removal of accumulated pollutants on cell plates. If used as directed, **DAX** will not harm aluminum or steel. Any problem arising out of the use of another cleaning agent will void the warranty.

DAX Detergent is available in 1 gallon (4.54 L) and 4.8 gallons (22 L) containers as well as 45 gallon drums (204 L).

CAUTION

Damage to Cells may occur if improperly handled or washed. Do not wash Cells in a dishwasher. Never use any object to clean between the cell plates, as this may cause damage to plates or ionizing wires. Never place cell in oven to dry. The edges of the cell may be sharp - handle with care.

SERVICE MAINTENANCE

1. Determine if the Air Cleaner is performing properly by seeing that:
   - System Switch is **ON**.
   - Performance Indicator Light is **ON**.
2. A simple test to check hi-voltage would be to blow dust or cigarette ash into the intake grill. An audible arc or snapping sound should be heard, ensuring good hi-voltage.
3. If in doubt, and if the cell is not collecting any carbon or nicotine tars, then see "Troubleshooting Guide" or consult your installation dealer.

WARNING

Electronic Air Cleaners use high voltage (low amperage). Only trained personnel should perform service. Use caution. Electric shock can cause injury or death.

SERVICE

ADJUSTING HIGH VOLTAGE OUTPUT

In case of excessive arcing on a clean, dry cell, there is an adjustable resistor mounted on the power board.

1. Turn off the system switch before opening the unit.
2. Remove the cover by slipping the 'S' hook from the chain and letting the cover gently down.
3. Lift the cover up off the rear hinge.
4. Remove the power box cover.
5. With a small slot screwdriver, adjust "R-2" slightly to reduce voltage to the cell. Do not reduce the voltage too much or the efficiency of the Air Cleaner will be reduced.

REMOVING THE POWER BOX

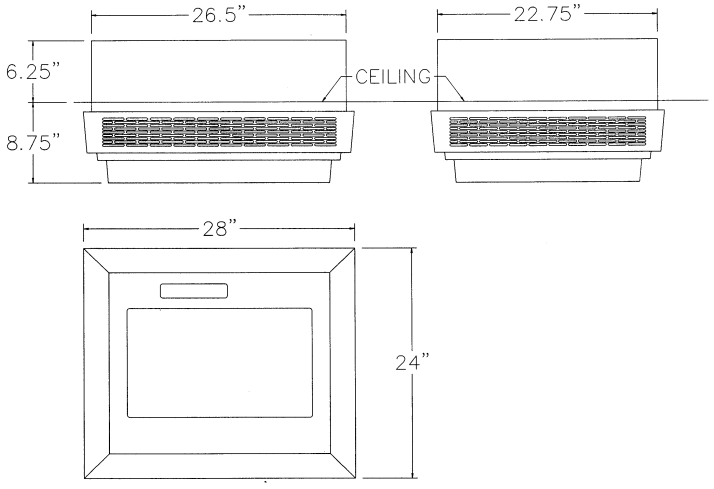
1. Shut off main breaker or switch.
2. Remove the cover as described previously.
3. Open power box cover.
4. Disconnect the following wires:
   - Terminal Block - Red, blue, black and white leads from motor
     - Supply line leads
   - Power Board - Orange leads on HV1 and HV2

Remove the two nuts holding the power box to the cell section.

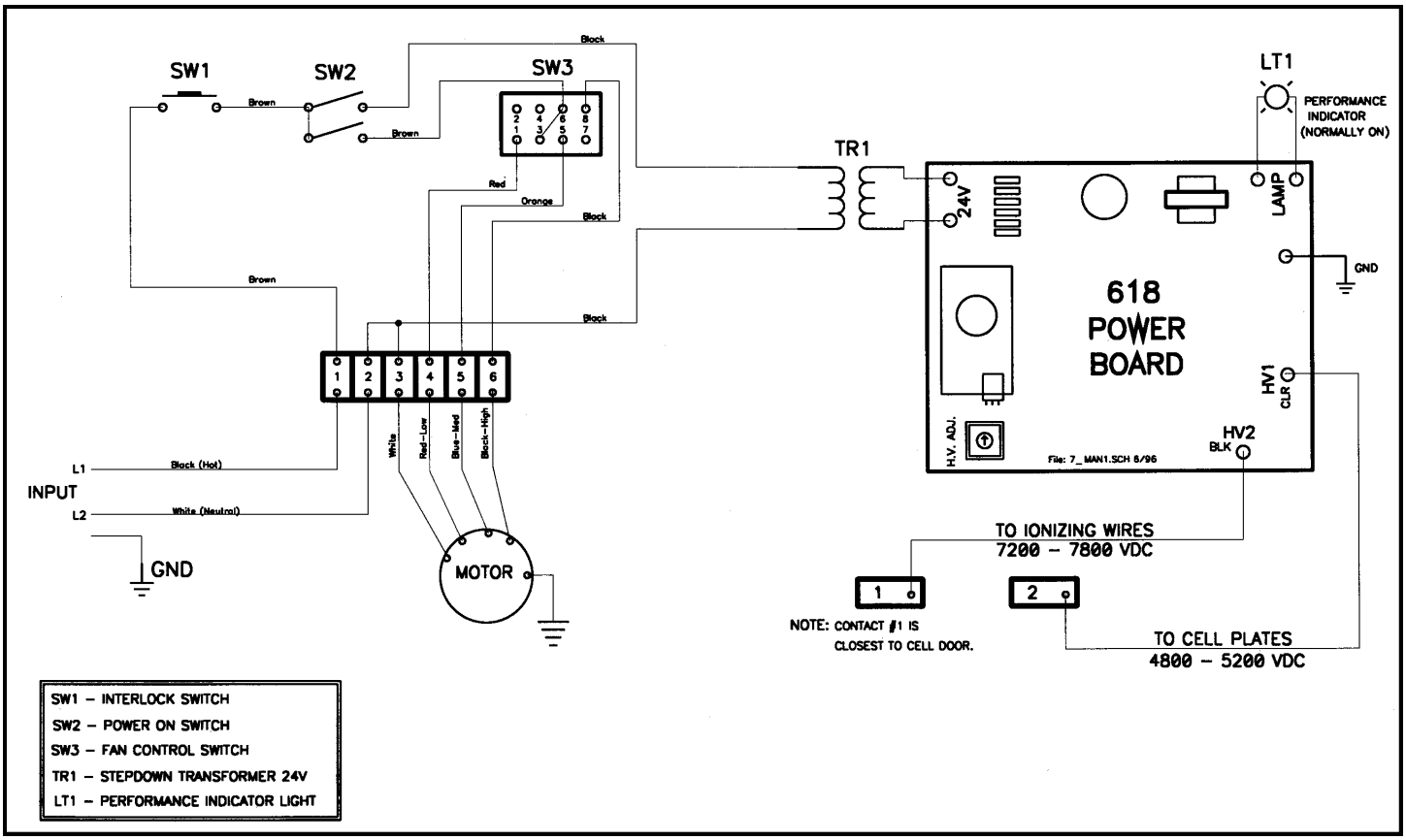
TROUBLESHOOTING GUIDE

PROBLEM	CHECK
Unit Does Not Operate	1. Main breaker is **ON** or voltage is supplied to unit.
	2. Main supply fuse or breaker is not tripped.
	3. Unit cover is completely closed and locked into place.
	4. System switch is **ON**.
Performance Indicator Light **OFF**	1. System switch is **ON**.
	2. Remove cell, close access door and turn unit **ON**. If Performance Indicator is still off, problem is in the power box. If light comes on with no cell, then there is a short circuit in the cell. Look for bent plates, broken ionizing wires or burnt insulators. Ensure cell is completely dry after washing.
Performance Indicator Light **ON**, Fan Not Working	1. Fan control switch is in proper position.
	2. Motor leads are connected to terminal block.
Cell Arcing Excessively	1. Cell is completely dry after washing.
	2. Cell plates are not bent or spaced too close.
	3. Cell insulators are not cracked, broken or burnt.
	4. Cell is dirty and needs cleaning.
	5. Broken ionizing wires.

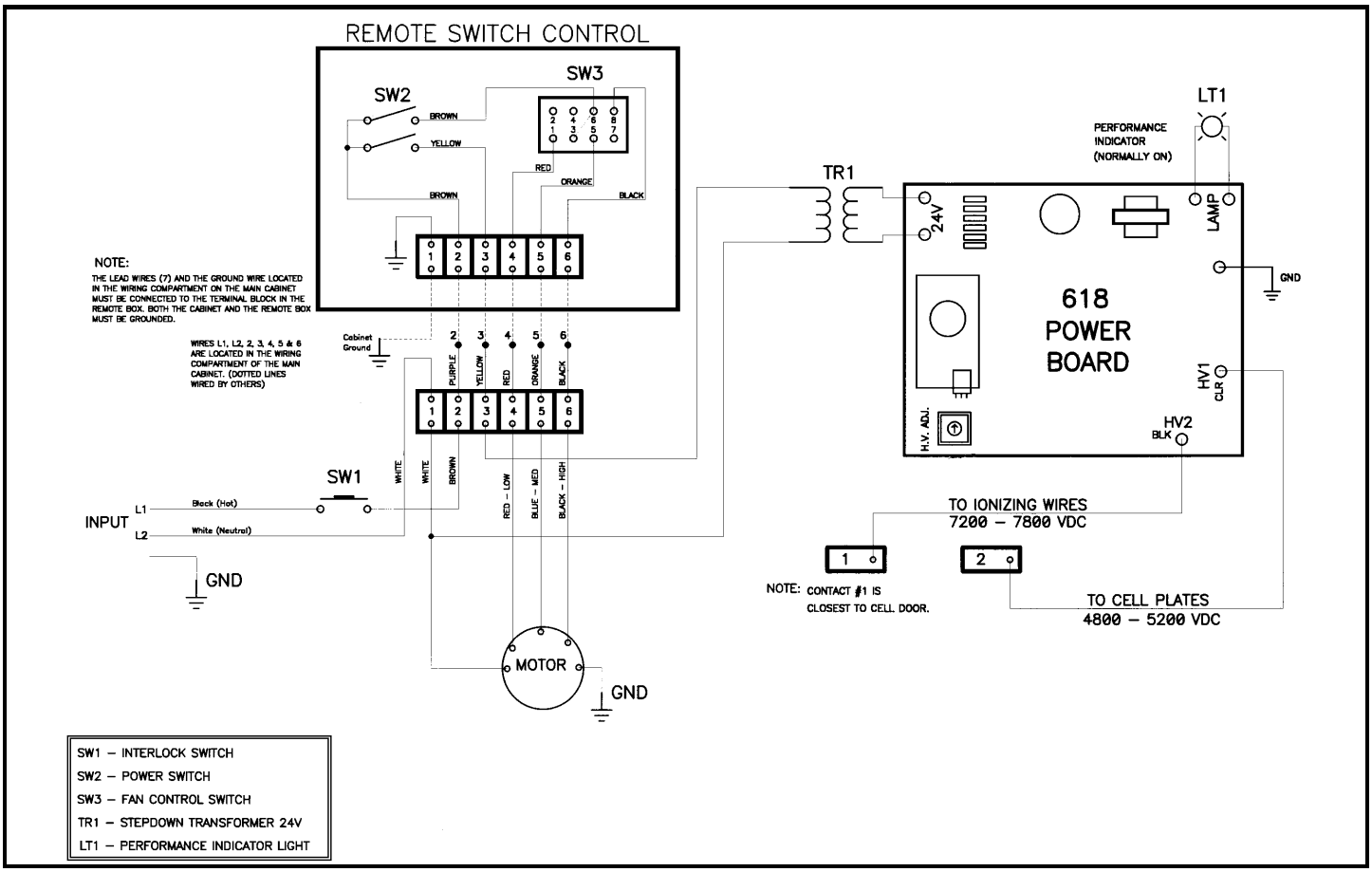
Dimensions	Length	24 in	61.0 cm
	Width	28 in	71.0 cm
	Height	15 in	38.1 cm
Weight		70.0 lbs	32.0 kg
Input Voltage		120 V 60 Hz	
		220 V 60 Hz	
		220-240 V 50 Hz	
Power Consumption (maximum)		150 Watts	
Air Flow	Hi	712 CFM	1210 m^3/hr
	Medium	575 CFM	977 m^3/hr
	Low	440 CFM	748 m^3/hr
Motor		1/33 HP	



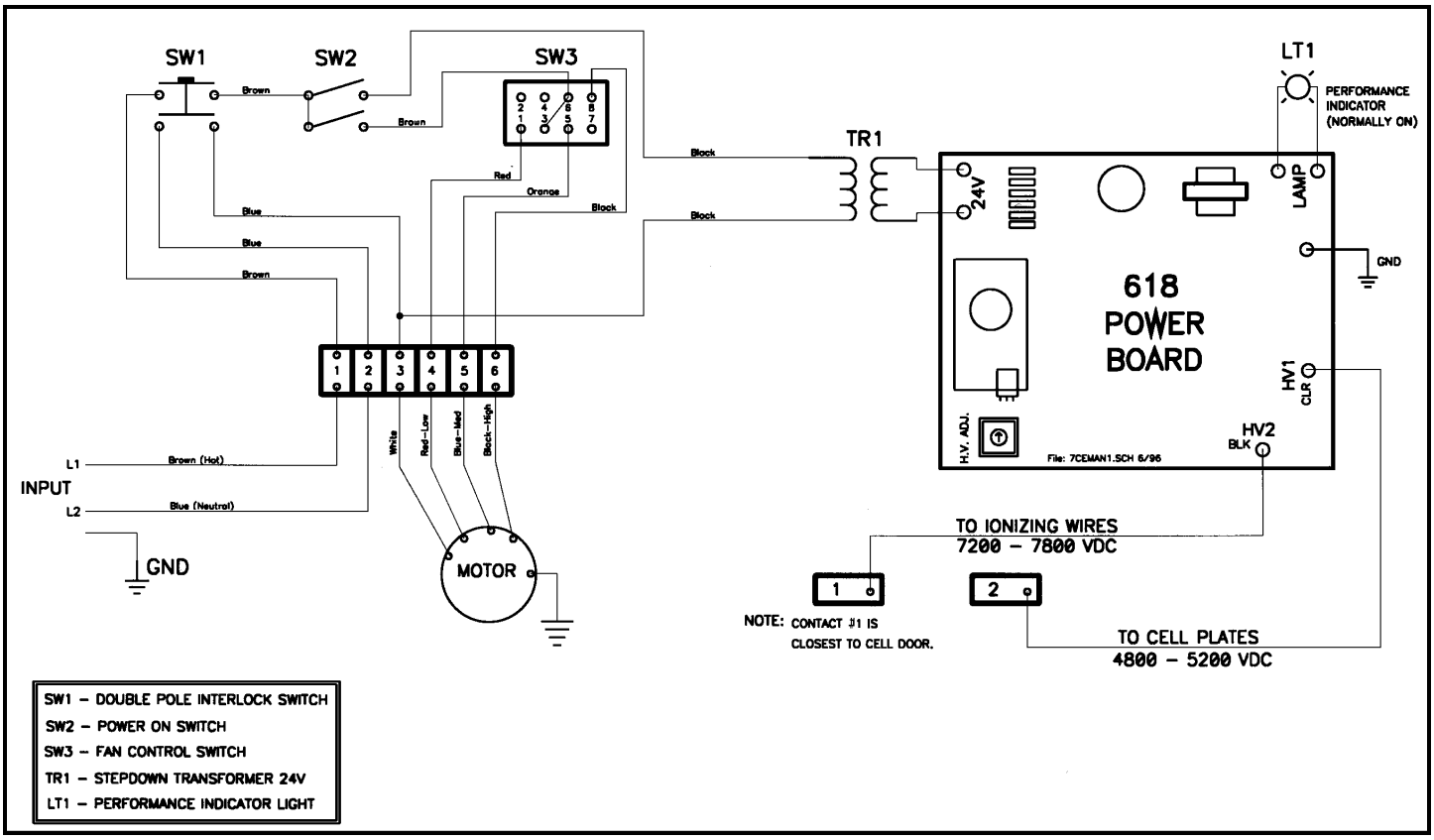
Electrical Schematic A (120 Volt)



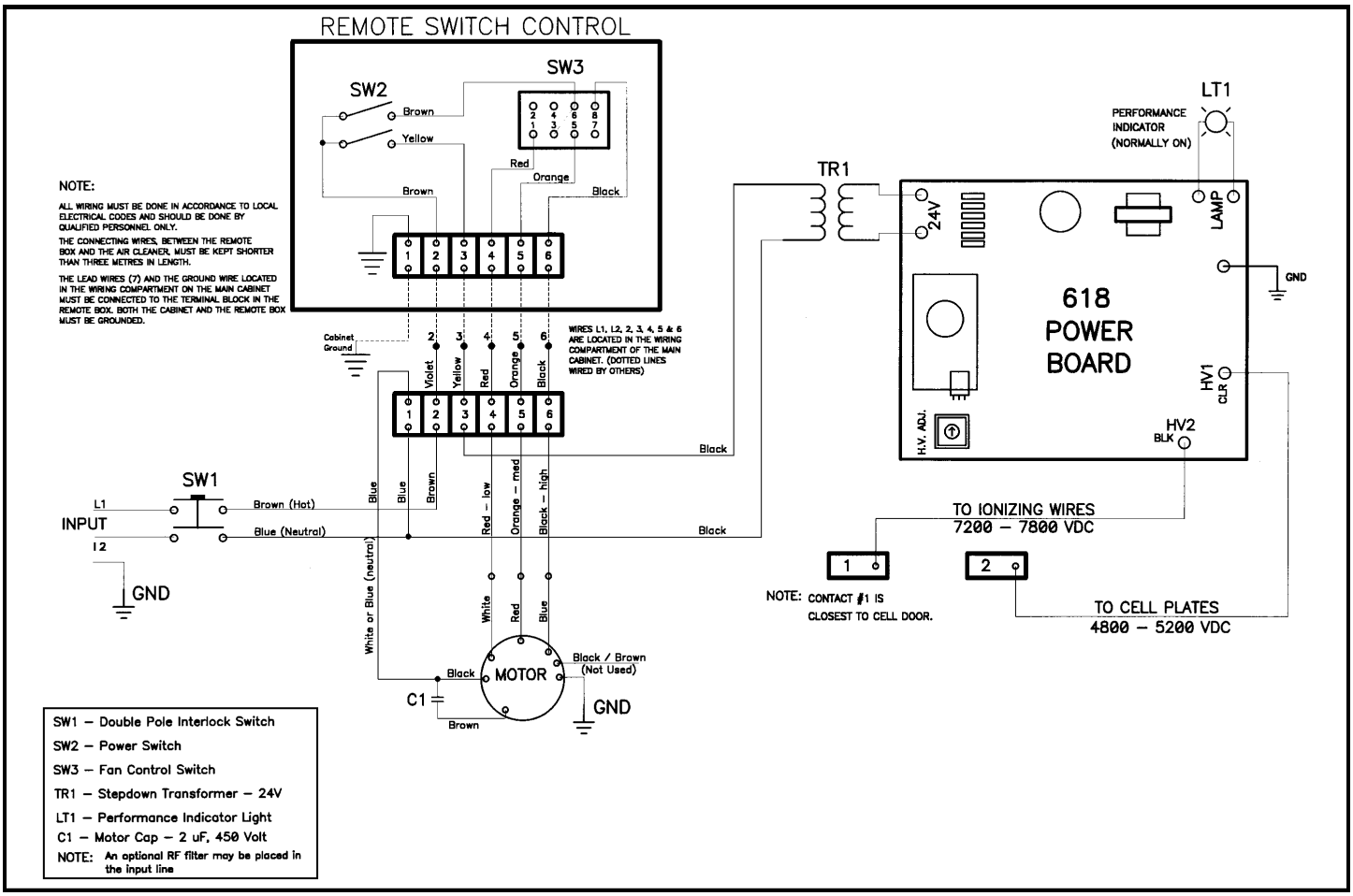
Electrical Schematic B with Wireless Remote (120 Volt)



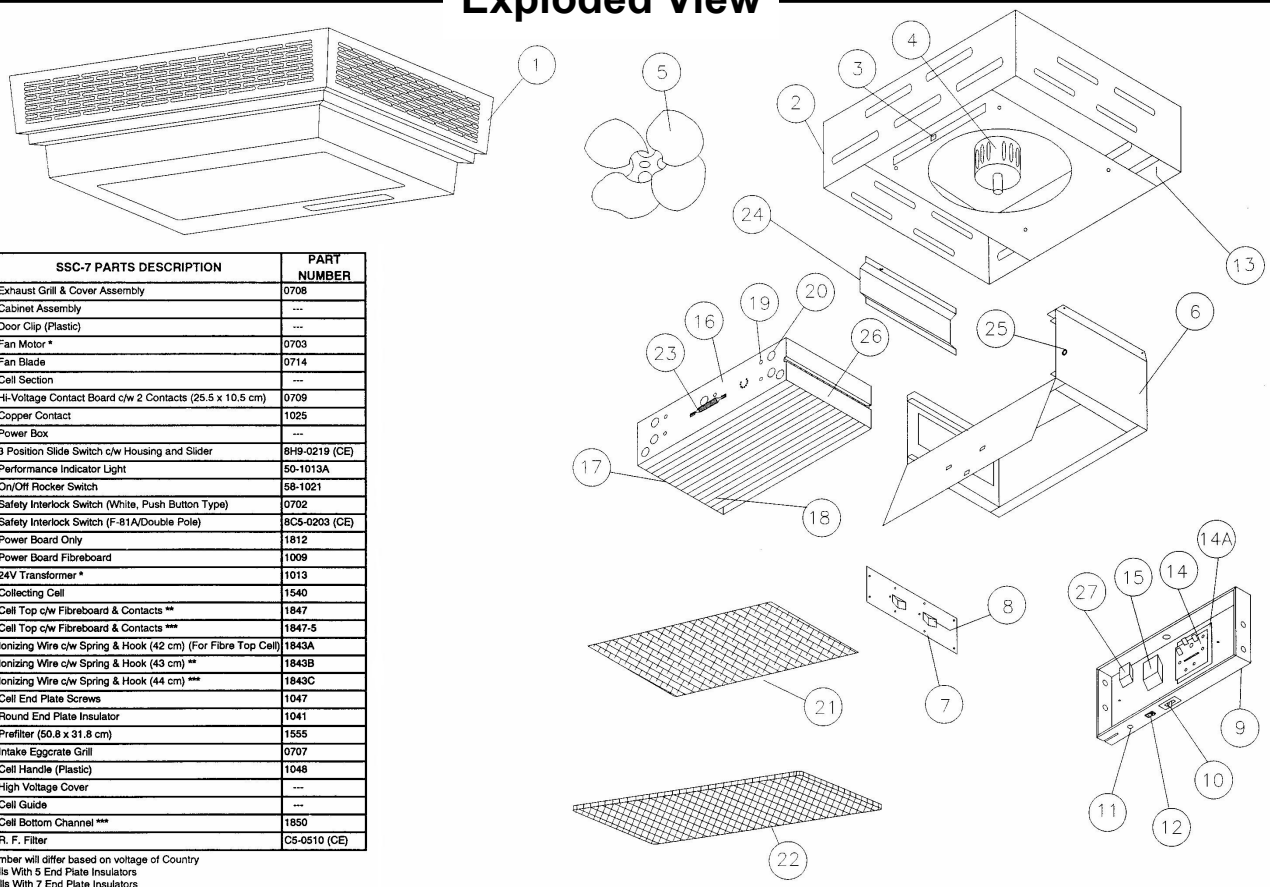
Electrical Schematic A (220-240 Volt)



Electrical Schematic B with Wireless Remote (220-240 Volt)



Exploded View



ITEM	SSC-7 PARTS DESCRIPTION	PART NUMBER
1	Exhaust Grill & Cover Assembly	0708
2	Cabinet Assembly	---
3	Door Clip (Plastic)	---
4	Fan Motor *	0703
5	Fan Blade	0714
6	Cell Section	---
7	Hi-Voltage Contact Board c/w 2 Contacts (25.5 x 10.5 cm)	0709
8	Copper Contact	1025
9	Power Box	---
10	3 Position Slide Switch c/w Housing and Slider	8H9-0219 (CE)
11	Performance Indicator Light	50-1013A
12	On/Off Rocker Switch	58-1021
13	Safety Interlock Switch (White, Push Button Type)	0702
	Safety Interlock Switch (F-81A/Double Pole)	8C5-0203 (CE)
14	Power Board Only	1812
14A	Power Board Fibreboard	1009
15	24V Transformer *	1013
16	Collecting Cell	1540
17	Cell Top c/w Fibreboard & Contacts **	1847
	Cell Top c/w Fibreboard & Contacts ****	1847-5
18	Ionizing Wire c/w Spring & Hook (42 cm) (For Fibre Top Cell)	1843A
	Ionizing Wire c/w Spring & Hook (43 cm) **	1843B
	Ionizing Wire c/w Spring & Hook (44 cm) ***	1843C
19	Cell End Plate Screws	1047
20	Round End Plate Insulator	1041
21	Prefilter (50.8 x 31.8 cm)	1555
22	Intake Eggcrate Grill	0707
23	Cell Handle (Plastic)	1048
24	High Voltage Cover	---
25	Cell Guide	---
26	Cell Bottom Channel ***	1850
27	R. F. Filter	C5-0510 (CE)

* Part Number will differ based on voltage of Country
** For Cells With 5 End Plate Insulators
*** For Cells With 7 End Plate Insulators

LIMITED ONE YEAR WARRANTY

This EnviroPureFX product is warranted to the original owner to be free from electrical and mechanical defects in material and workmanship, under normal use and maintenance, within its listed capacity, for a period of one (1) year from the date of original purchase; except however, for the prefilters or ionizing wires, which may have to be replaced from time to time. This EnviroPureFX product must not have been moved from the site of original installation. A new or remanufactured part to replace the defective part will be provided without charge for the part itself, through EnviroPureFX, provided the defective part is returned to EnviroPureFX **prepaid**, together with the **serial number, date of installation, and proof of purchase**. Defective parts must be packaged well and depending on the part, may require images emailed to EnviroPureFX prior to shipping, to confirm condition of parts. If goods arrive damaged due to improper packaging, warranty will be void. The replacement part assumes the unused portion of the warranty. Failing this, EnviroPureFX will guarantee the unit for a period of twelve (12) months from the date of manufacture, according to the manufacturer's records.

THIS WARRANTY DOES NOT INCLUDE ANY ADDITIONAL LABOR ALLOWANCE OR OTHER COSTS incurred for diagnosis, repairing, removing, installing, shipping, servicing, or handling of either defective parts or replacement parts. Such costs may be covered by a separate warranty provided by the dealer.

LIMITATIONS OF WARRANTY - All implied warranties (including implied warranties of merchantability) are hereby limited in duration to the period for which the limited warranty is given. The expressed warranties made in this warranty are exclusive and may not be altered, enlarged, or changed by any distributor, dealer or other person whatsoever.

ENVIROPUREFX will not be responsible for:

1. Normal maintenance as outlined in the Operation & Maintenance Manual including cleaning of electronic collecting cells and/or replacement of prefilters.
2. Damage or repairs required as a consequence of faulty installation or application by others.
3. Damage or repairs needed as a consequence of any misapplication, negligent handling, improper servicing, unauthorized alteration, or improper operations.
4. Failure to start due to voltage conditions, blown fuses, open circuit breakers or other damages due to the inadequacy or interruption of electrical service.
5. Damage as a result of floods, winds, fires, lightning, accidents, corrosive atmosphere, or other conditions beyond the control of EnviroPureFX.
6. Parts not supplied or designated by EnviroPureFX.
7. EnviroPureFX products installed outside the continental Canada, U.S.A., Alaska, and Hawaii.
8. Any personal injury, special indirect or consequential property or commercial damage of any nature whatsoever.

Model No. **Serial No.**

Date of Purchase **Dealer Name**

Owner's Company Name & Address

RETAIN THIS CERTIFICATE WITH YOUR VALUABLE DOCUMENTS

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