



# INSTRUCTION MANUAL

## A-IAPC-M

### Ionized Air Parts Cleaner



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# A-IAPC-M Ionized Air Parts Cleaner

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## I. INTRODUCTION



FIG. 1 VIEW OF THE SYSTEM

Thank you for purchasing **A-IAPC-M Ionized Air Parts Cleaner**.

BOKAR International retains the right to make changes to specifications contained herein at any time, without notice. Please contact your local authorized Distributor or Bokar International to obtain the latest specifications.

This manual will provide you with the information necessary to properly set up, operate and maintain the A-IAPC-M Ionized Air Parts Cleaner. Please read this manual carefully before using the system.

## II. SAFETY

The purpose of this "SAFETY" section is to inform the users of the heading guidelines used in this manual to indicate special Notes, Cautions, Warnings or Dangers. Also included are precautions, which must be observed when operating or servicing this product.

These "NOTES", "CAUTIONS", "WARNINGS" and "DANGERS" are inserted in this manual whenever deemed necessary. They appear in a blocked off form with outline and a shaded background to highlight the information as shown below.

<b>NOTE</b>
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### NOTE

Used to indicate a statement of company recommendation or policy. The message may relate directly or indirectly to the safety of personnel or protection of property. NOTE is not associated directly with a hazard or hazardous situation and is not used in place of "CAUTION", "WARNING" or "DANGER".

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### CAUTION

Used to indicate a hazardous situation, which may result in minor or moderate injury. May also be used to alert personnel to conditions, procedures and practices which, if not observed, could result in damage to or destruction of the product or other equipment.

### WARNING

Used to define additional information, that if not closely followed may result in serious damage to equipment and represent a potential for serious personnel injury.

### DANGER

Defines additional information, that if not closely followed may result in severe personnel injury or death. Danger is not used for property damage unless personal injury risk is present.

### PRECAUTIONS

The following are general safety precautions, which personnel must understand and follow when using or servicing this product. These precautions may or may not be included elsewhere in this manual.

### CAUTIONS

1. Utilize all standard electrical safety precautions when using this or any other electrical equipment.
2. Always use this system in a well-ventilated area.
3. Exercise proper precautions when using chemicals (e.g., solder paste). Refer to the Material Safety Data Sheet (MSDS) supplied with each chemical and adhere to all safety precautions recommended by the manufacturer.
4. The fumes emitted during soldering are irritants and therefore should be removed. A pumped vent is located at the rear of the unit and should be ducted accordingly.

### NOTES

To insure continued peak performance, use genuine ZeroCharge replacement parts.

#### WARNING

**This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.**

**Children should be supervised to ensure that they do not play with the appliance.**

## III. PACKAGING

The packaging of the A-IAPC-M Ionized Air Parts Cleaner has been carefully designed to ensure maximum protection during shipping. However, no packaging can guarantee 100% protection, and damage may occur through rough handling by the carrier. Please ensure that any claims for shipping damage are reported promptly to the carrier and to the Distributor from whom the product was purchased.

The content of the box is as follows:

1. A-IAPC-M Ionized Air Parts Cleaner Unit
2. XFS-4 Foot Switch
3. Power Cord
4. User's Manual
5. Guarantee card

## IV. UNPACKING

Prior to use of the system, please check if the system is complete. Should you notice that any items are missing, please notify us, giving the details of model number, voltage, date of purchase,

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where purchased and what is missing. Missing items must be reported within 7 days from the date of purchase.

### WARNING

When unpacking, please be careful and read the manual prior to turning the system "ON". Please check that the voltage of the System corresponds with the voltage of your available supply. Connection to incorrect voltage supply may cause damage to the System!

## V. GENERAL INFORMATION

### FRONT PANEL

#### 1. FOOT SWITCH

Turns the ionized air ON and OFF.

2. **TIMER Switch** – sets time interval after which the unit turns OFF ionized air after it is turned ON. Time interval can be set from 1. to 36 sec.

#### 3. POWER Switch

Turns the power to the system ON and OFF. Green illumination indicates that the system is ON.

#### 4. PRESSURE Regulator

Allows for adjustment of the air pressure supplied to the nozzles. Turn clockwise to increase air pressure or counterclockwise to reduce it.

#### 5. Air pressure gauge

Shows the pressure set by the regulator.

#### 6. LIGHT Switch

Turns on the light in the cabin

#### 7. PULSE MODE Switches

Switch 1: Turns ON and OFF the pulse mode.

Switch 2: Sets **LOW** and **HIGH** frequency of pulsing ionized air.

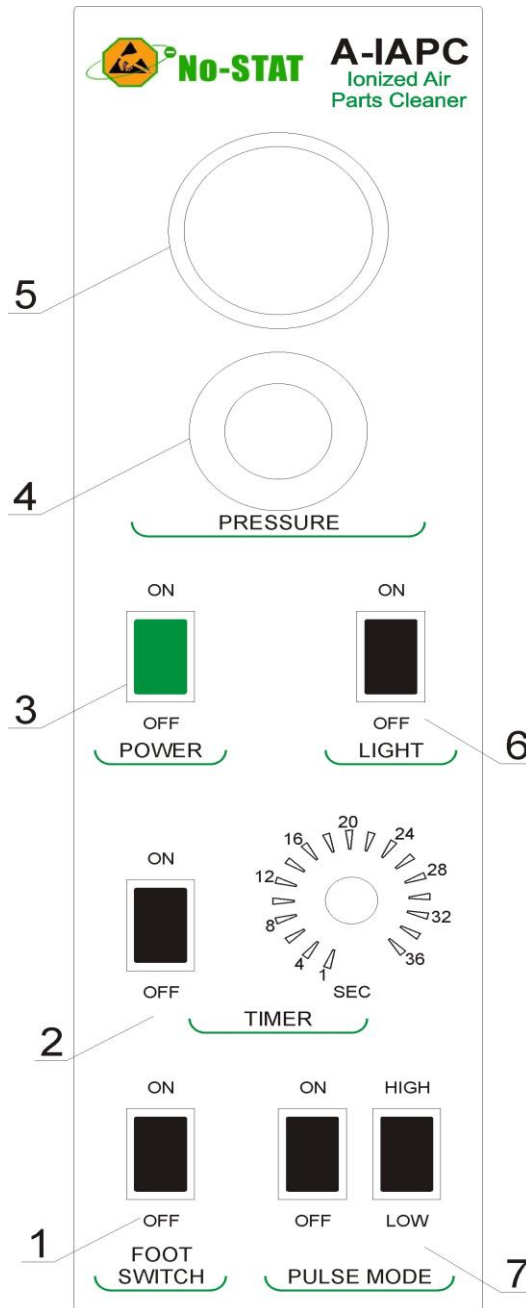


FIG. 2 VIEW OF THE CONTROL PANEL

## A-IAPC-M Ionized Air Parts Cleaner

### BACK PANEL

1. **AC IN** -- power receptacle with Fuse  
Provides AC power to the system through a power cord. Contains a 20 mm type fuse for overload protection (value depends on AC supply 4A for 115V and 2A for 230V supply)
2. **AIR IN** Input air connector  
Input air supply hose connector for hose size OD= 8mm.
3. **Foot switch** connector  
Foot switch enables for a hand free operation (Turning the unit on or off by pressing the footswitch).

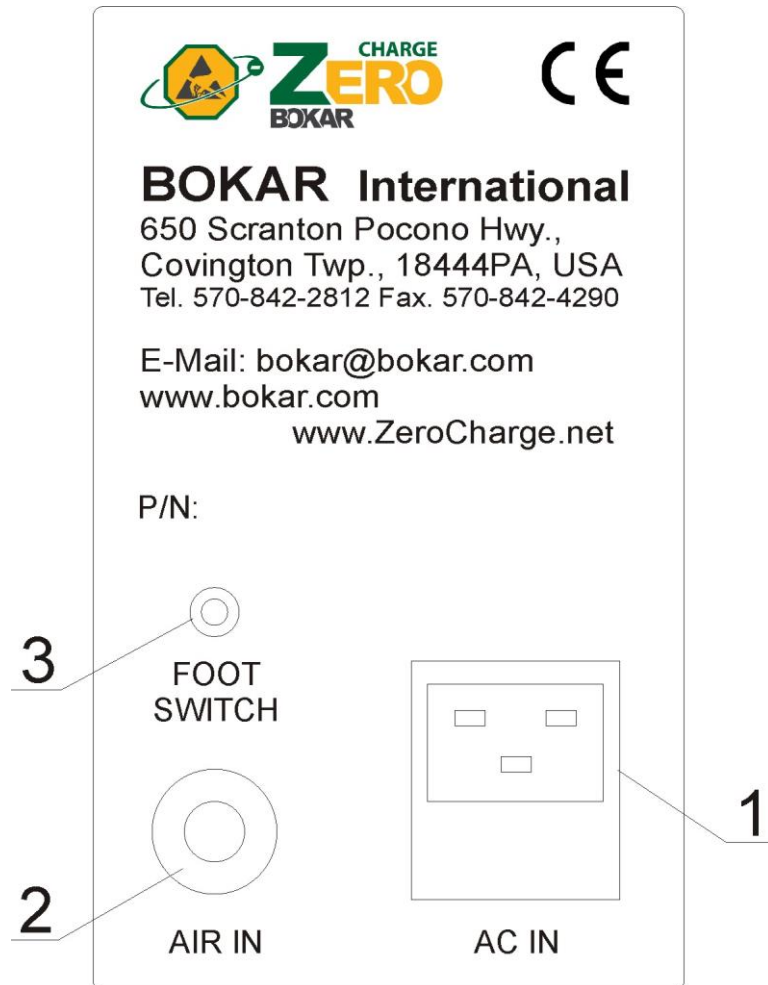


FIG. 3 VIEW OF THE BACK PANEL

## VI. SET-UP AND INSTALLATION

### ELECTRICAL REQUIREMENTS

The A-IAPC-M Ionized Air Parts Cleaner consumes 48 Watts of power. If your power outlet cannot provide suitable power, arrange for a qualified, licensed electrician to install one for you.

### SET-UP

1. Remove the A-IAPC-M Ionized Air Parts Cleaner from its shipping box. Store the shipping box in a convenient location. Reusing this box will prevent damage if you ship or store the system
2. The system should be located on a stable work surface.
3. Confirm that the power switch on the front panel is in the "OFF" position.
4. Connect XFS-4 foot switch to the connector on the back panel of the A-IAPC-M.
5. Connect compressed air to the 'AIR IN' connector. The connection is via standard quick connect accepting a tube of OD= 8mm.
6. Connect AC power to a suitable AC power outlet.

## VII. SYSTEM DESCRIPTION AND APPLICATION

The A-IAPC-M Parts Cleaning Chamber was designed to incorporate advanced, useful features to optimize cleaning of small and medium size parts.

- Two ionizing air nozzles blowing cleaning air downwards for efficient static removal and cleaning

## A-IAPC-M Ionized Air Parts Cleaner

- Two motion sensors to activate the ionized air when placing the cleaned object into the chamber
- A timer to set the desired time when pressurized and ionized air performs the cleaning
- A footswitch to activate cleaning air when the operator wants to by-pass the motion sensors
- A pulse action of the cleaning ionized air in which the air is striking the cleaned object with pre-set intervals
- Maximum air striking mode in which all air is re-directed to one ionized air nozzle giving additional possibility to clean exceptionally difficult details of the cleaned object. In this mode the nozzle on the right is de-activated

Ionizing air high-voltage module is integrated in a compact housing and powered by a safe power supply (24V). It can be used in high temperature and high humidity.

Illuminated green LEDs on the ionizing nozzles AI-N3 indicate normal operation. Illuminated red LEDs on the nozzles show that high voltage power source does not provide the required voltage and that the chamber must be serviced.

Positive and negative ions are automatically balanced and there is no need to correct the balance.

### System Operation

1. Connect AC power to a suitable AC power outlet.

CAUTION
To insure operator safety, the AC supply receptacle must be checked for proper grounding before initial system operation.

2. Turn the power switch to "ON" position.
3. Select the appropriate mode of operation of the switches on the front panel and start working.
  - For example: If you do not need the special features set all switches (except for the power switch) to OFF position. Place the object to be cleaned into the chamber and photoelectric sensors will start the flow of the ionized air.
  - If you want to use the chamber by-passing photoelectric switches you can use the foot switch to turn ON and OFF ionized air stream.
  - To use the chamber for a pre-set time interval use a built-in timer. The timer can be set from 1 to 36 seconds. The flow of the ionized air will stop when the pre-set time is finished.
  - To clean the object with cavities you can chose the PULSE MODE.  
In this mode you air will blow for 90 milliseconds every 90 milliseconds on HIGH setting and for 180 milliseconds every 180 milliseconds on LOW setting.

## VIII. TECHNICAL SPECIFICATIONS

Operating voltage and Power usage	AC 100V-240V ~50/60Hz Power consumption: 48 W
Ionizing Air Nozzle	Two pieces. ZeroCharge Brand Model AI-N3
Recommended input pressure	30 to100 psi 2~7 Kg/cm2. Maximum 120 psi (8 kg/cm2)
Air (Nitrogen) Input connection	Line diameter OD=0.315" (Ø 8mm)
Ion Balance	0V±10V
Ozone concentration	0.01ppm

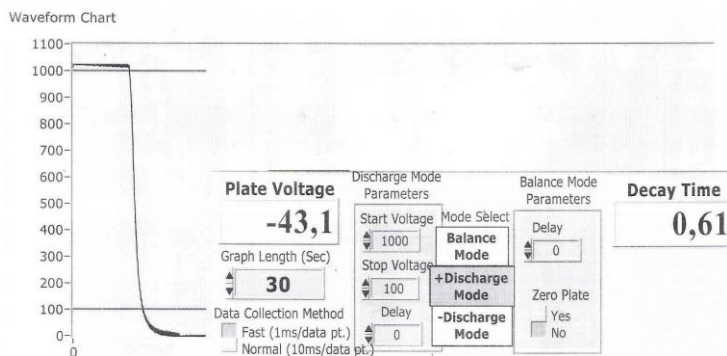
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Decay time of the charge on the cleaned object	Less than 1.3 sec (from 1000V do 100V at the distance of the object from the nozzle of 8”(150mm)
Timer	1 do 36 sec.
Pulse Mode ionized air delivery	Set in „HIGH” air blows for 90 milliseconds every 90 milliseconds Set in „LOW” air blows for 180 milliseconds every 180 milliseconds
Air extraction from the chamber	Brushless exhaust fan volume: 135 SCFM (230m3/h) via 2.9” (74mm) diameter port and an optional HEPA filter P/N XF-IAPC1
HEPA filter (optional)	P/N XF-IAPC1 Dimensions: <span style="float: right;">Filtration 99.9 %</span>
Operating conditions	Temperature: 0C~ 50°C    Relative Humidity: 20% ~ 85%
Outside dimensions (L x W x H)	19,7” x 12” x 15,6” (500mm x 305mm x 395mm)
Front opening dimensions (L x W x H)	13.8” x 9.8” x 7.5” (350mm x 249mm x 190mm)
Front opening dimensions when the front cover is opened: (L x W x H)	16.3” x 9.8” x 8.5” (414mm x 249mm x 215mm)
Gross and net weight:	28.7 lb and 22.1 lb (12,5kg and 10 kg)

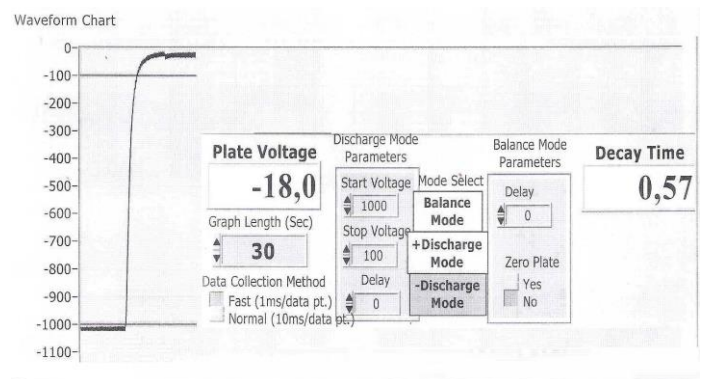
### Example charts showing discharge times of the static accumulated on the cleaned object:

Measurements taken in the following conditions:

- Ambient temperature: 25°C
- Humidity: 50% RH
- Distance between the cleaned object and the charged plate measuring discharge time Set at 6 “ (~150mm)
- Air pressure 43 psi ( ~3 kg/cm2)



**Decay time from +1000V to 100V**



**Decay time from - 1000V to -100V**



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