



# Operating Manual

**Model 212v2  
Benchtop Ioniser**



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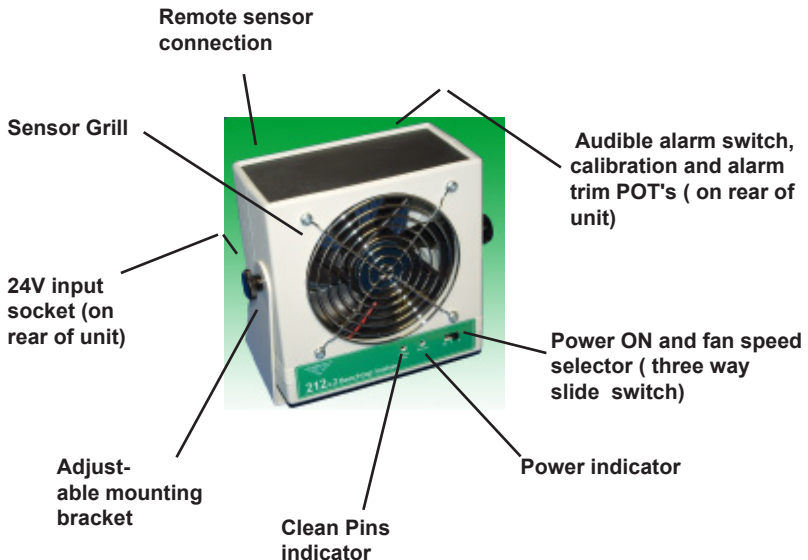
# Introduction

The Model 212v2 Benchtop Ioniser is a compact unit which complements the Meech Series 200 product range.

The Model 212v2 provides excellent work station coverage and a high level of ESD protection. It has been specifically designed to meet the demanding performance requirements in applications such as:

- Semiconductor manufacture
- Electronics assembly & testing
- Test and re-work
- Optics, contact lenses & fibre optics
- Medical device manufacture & packaging
- Wave soldering

The key features of the Model 212 Benchtop ioniser are shown below:



## Unpacking And Inspection

The Model 212v2 Benchtop Ioniser has been carefully packed at the factory in a container designed to protect it from accidental damage. Nevertheless, we recommend careful examination of the carton and contents for any damage. If damage is evident, do not destroy the carton or packing material and immediately notify the carrier of a possible damage claim. Shipping claims must be made by the consignee to the delivering carrier.

## 24V DC Power Supply

The Model 212v2 Benchtop Ioniser is supplied with a 24V DC filtered and grounded switchmode power supply, which has been certified as being fully compatible with Meech Series 200 products.

An alternative 24V DC supply can be used, if available, **provided it is filtered and grounded.**

## Installation and Use

The Model 212v2 Ioniser is designed for benchtop mounting. An adjustable mounting bracket allows the unit to be rotated and clamped so that the ion airstream can be directed over the required work bench area.

The 24V power supply lead is connected to the Ioniser via a DC power input socket on its rear panel.

During normal operation of the Ioniser, care should be taken not to upset the ion balance by touching the front grill or allowing any object to come into contact with it.

**WARNING** - High voltages are present in the unit.

**Under no circumstances should the unit be opened without first turning off the power and isolating the unit by disconnection of the power cord. Operators must not try to insert fingers or any other object through the grill apertures.**

# Operation

The Model 212v2 is supplied calibrated and ready to use.

**Connect the Model 212v2 to a 24V DC grounded supply ( Meech Model A200 SM15 switchmode) by inserting the jack plug of the switchmode into the input socket on the rear of the unit.**

Switch ON the Model 212v2 using the slide switch found on the front of the unit.

## Slide switch Position “0”

When the slide switch is in the position, marked “0”, the unit is OFF.

## Slide switch Position “1” - Low fan speed.

When position “1” is selected the 212v2 switches ON. The red fault indicator will flash and the green OK indicator will illuminate. If enabled the audible alarm will briefly also sound. The fault indicator will extinguish and the audible alarm will cease after 10 seconds. The green OK indicator will remain ON.

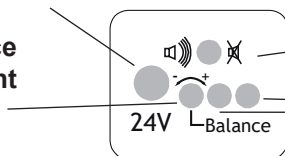
## Slide switch Position “2” - High fan speed.

When position “2” is selected the 212v2 switches ON. The red fault indicator will flash and the green OK indicator will illuminate. If enabled the audible alarm will briefly also sound. The fault indicator will extinguish and the audible alarm will cease after 10 seconds. The green OK indicator will remain ON.

**Audible Alarm** The unit is supplied with the audible alarm deactivated, this can be enabled by sliding the switch on the rear of the unit to the opposite position.

**24V dc input socket**

**Ion balance  
Adjustment  
POT**



## Alarm Operation

In the event that the unit cannot maintain a balanced ion output the red alarm indicator and the audible alarm will sound ( if enabled).

The alarm will be activated typically because the emitter pins on the unit require cleaning or the unit requires re-calibration.

In the event that the unit continues to alarm after the pins have been cleaned (see later) the 212v2 should be returned to Meech Static Eliminators for re-calibration. A Returns Authorisation Number should be requested from Meech before return of the unit.

## Ion Balance Adjustment.

The ion output of the blower can be adjusted for zero volts by rotation of the Ion balance Adjustment Potentiometer (POT)- see opposite. Rotating the POT clockwise increase the number of positive ions and anticlockwise increases the number of negative ions.

## Positive (+ve) and Negative (-ve) Alarm level Set

The alarm set points are factory calibrated for operation when an ion imbalance of +/- 50V is detected. Typically caused by dirty pins or objects contacting the front grill.

The alarm set points can be made more or less sensitive by rotating the +ve / -ve alarm set POTs (see opposite).

Rotating the +ve alarm set POT clockwise increases it's sensitivity

Rotating the -ve alarm set POT clockwise increases its sensitivity.



# Emitter Pin Cleaning

**Before attempting to clean the emitter pins the unit should first be switched off and disconnected from the electrical supply.**

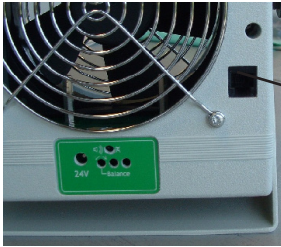
The 212v2 contains four high voltage emitter pins, which are accessible by removing the rear grill of the unit. Using a cotton bud dampened with isopropanol, clean each of the emitter pins. If the pins are very dirty they should be replaced. The emitter pins are located in sockets and can be removed / replaced using a pair of tweezers.

Replacement emitter pins are available from Meech -Order code A200-EMITPIN-10/1.0

## Technical specification

|                          |  |
|--------------------------|--|
| Input voltage            | : 24V DC - grounded  |
| Power consumption        | : 11W  |
| Maximum temperature      | : 60 Degrees C   |
| Housing                  | : Plastic  |
| Dimensions               | : 160mm x 160mm x 95mm ( H x W x D)<br>( without stand)                        |
| Noise                    | : 46dba @ 1m   |
| Emitter pins             | : Four off - machined titanium   |
| Decay time               | : < 4 seconds @ 305mm (1000 to 100V)<br>maximum fan speed setting.             |
| Output ion balance       | : +/- 10V  |
| Weight                   | : 0.65 kg  |
| Air flow                 | : 15 to 20 lt / sec (33 to 43 CFM)   |
| Alarm activation         | : The alarm activates when the 212v2<br>cannot maintain a balanced ion output. |
| Calibration              | : Factory calibrated at 305 mm   |
| Remote Sensor Connection | : RJ 11 socket.  |

Pin 1 - 24V  
Pin 2 - ground/earth  
Pin 3 - ground/earth  
Pin 4 - Signal



RJ11 Socket

## Operating the Model 212 with a Remote Sensor

The Model 212v2 can be operated with a remote sensor. The blower features an RJ 11 for this purpose. Connection details are specified above.

## Repairs And Warranty

The 212v2 benchtop ioniser is warranted by Meech Static Eliminators Ltd to the original purchaser against defects in material and workmanship for one year after purchase. Should any malfunction occur, please return the ioniser directly to Meech Static Eliminators or your local agent. All products returned to the factory MUST be accompanied by a return authorisation number and must be shipped prepaid. For prompt service, ship the unit to the factory with the return authorisation number shown clearly on the label. Be sure it is well packed in a sturdy carton with shock absorbing material.

Include a note stating the nature of the problem as specifically as possible, and also include instructions for returning the ioniser to you. We will pay one-way return surface shipping costs on any repairs covered under the warranty.

Field repairs should not be undertaken during the warranty period. Repair attempts by unqualified personnel will invalidate the warranty.

# CE Approval

An EC declaration of conformity for this product exists in respect of the Low Voltage Directive :72/23/EEC ("LVD") & Electromagnetic Compatibility Directive : 89/336/EEC ("EMCD")



# Health and Safety

Emission of Ozone: Considerably below international standard of 0.1ppm.



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