

Installation / Operation / Maintenance

Staticmaster Hand-Held Electrostatic Field Meter Model 521AE



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Please Observe The Following

NOTICE

Please review the information in this manual prior to operating the Electrostatic Fieldmeter in a work environment.

NOTICE

Please keep this document in a convenient place to refer to as a guide.

*WARNING

Do not use this product in a flammable atmosphere.

*WARNING

Do not submerge in water. If liquid enters product, disconnect the battery and allow to thoroughly dry before using again.



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1. Features and Description

1-1. Features

- Measures polarity and intensity of static charge on parts and assembly lines.
- Check ion balance performance of ionizers.
- Calibrated for the voltage range of 0 to ± 20 kV.

1-2. Description



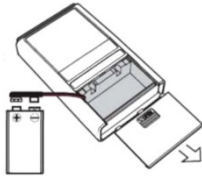
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2. Operation

2-1. Battery Installation:

- Open battery compartment door on the back of the Fieldmeter.
- Connect battery to the wire terminal.
- Replace and close battery compartment door.

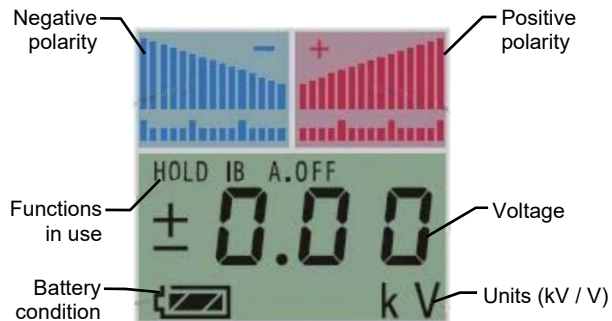


2-2. Power button

Press "POWER" button once. The unit will be in static charge measurement mode or standard mode.

2-3. LCD Display.

- The upper left section displays a bar graph in blue to indicate negative polarity voltage.
- The upper right section displays a bar graph in red to indicate positive polarity voltage.
- The lower section displays reader friendly numerical values, voltage unit, functions in use, and battery condition.



Note:

- If the voltage reading is blinking ± 22.0 kV with a continuous warning sound, the maximum voltage reading limit has been exceeded.
- If the voltage reading is Err, the maximum voltage reading limit has been continuously exceeded and the sensor could be damaged.

2-4. Battery Condition Display.

- The battery condition icon has 4 display stages. Replace the battery when display shows the battery to be empty.
- The life of a 9V battery, is approximately 30 hours.



2-5. Fieldmeter sound notifications.

- 1 beep – turned on and standard mode
- 3 beeps – turned on without auto power off function.
- 5 beeps – auto power off notification.
- 1 long beep – over range notification.

2-6. Ground the Electrostatic Fieldmeter.

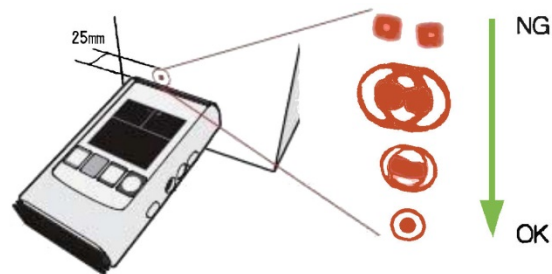
- Plug ground wire into the ground wire jack in the side of the fieldmeter.
- Connect to an earth ground using the alligator clip.



Note: for an accurate measurement, make sure the fieldmeter is connected to ground.

2-7. Proper Distance from target.

The distance between the fieldmeter and the target needs to be 1 inch (25.4mm). This is done by using the LED's. When the two red lights converge as one concentric circle the fieldmeter is at the proper distance.

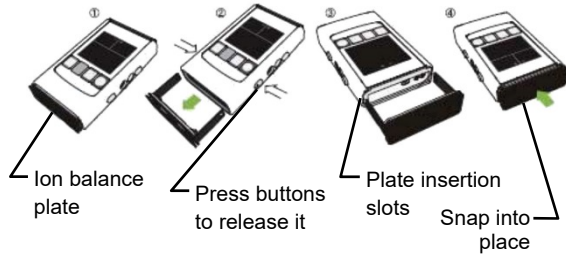


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2-8. Ion Balance Mode

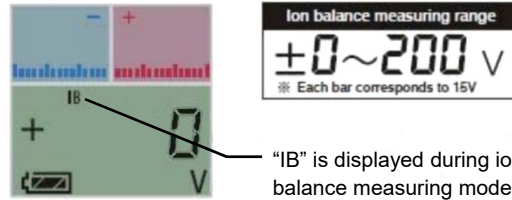
- Install the Ion Balance Plate.



- For accurate measurement, make sure the fieldmeter is connected to ground.
- Turn on the fieldmeter and press the Ion Balance button.



- Position fieldmeter in front of ionizer to be checked.



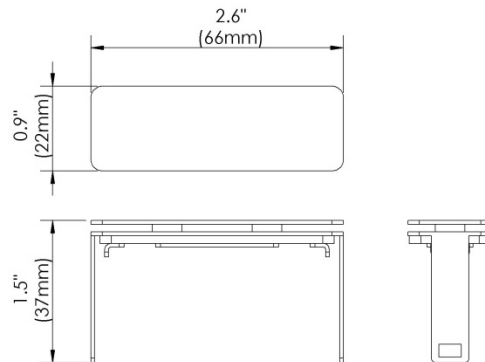
- The ion balance plate can be stored on the bottom end of the fieldmeter when not in use.

3. Technical Specifications:

Measuring Range:	Static voltage measuring range	0.0 ~ ±1.49 kV (low range) ±1.0 ~ ±20.0 kV (high range)
	Ion balance voltage measuring range	0.0 ~ ±200 V
Measuring distance	25 mm ±0.5 (1 in. ±0.02) (between the charged object and Fieldmeter)	
Accuracy	±10%	
Ambient conditions	10°C ~ 40°C (50°F ~ 104°F), 80% R.H. or lower	
Display	Large LCD display (Digital or bar graph)	
Power	9 V battery: 1 piece (Life: approx. 30 hours) (battery not included)	
Weight with battery	Approx. 140g (4.9 oz.) without ion balance plate (Ion balance plate: approx. 30g (1.1 oz.))	
Case material	Conductive resin (ABS)	
Accessories	Charge plate for ion balance measurement: 1 piece Ground cord: 1 piece (with alligator clip) Soft case: 1 piece	
Application	For checking the performance of ionizers, locating and measuring electrostatic charge.	

4. Dimensions

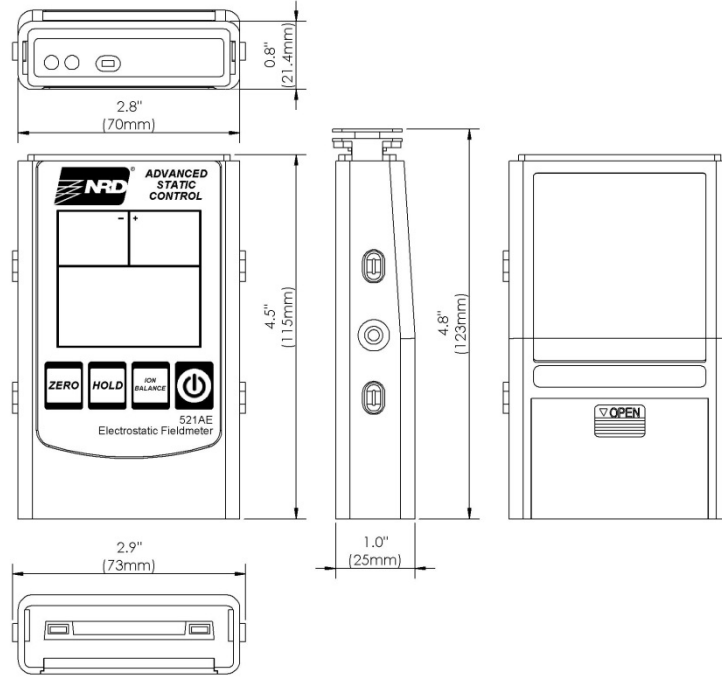
4-1. Charge Plate



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4-2. Fieldmeter



5. Warranty

Limited Warranty

NRD expressly warrants that for a period of one (1) year from the time of purchase, the device will be free of defects in material (parts) and workmanship (labor). Within the warranty period, the device will be tested, repaired, or replaced at discretion of NRD, free of charge. Any device under warranty should be shipped prepaid to the NRD factory. Call Customer Service at (716) 773-7634 for a Return Authorization number and shipping instructions. Include a copy of your original packing slip, invoice, or other proof of purchase date.

If the device is out of warranty, NRD LLC will quote repair charges necessary to bring your device up to factory standards.

Warranty Exclusions

The forgoing express warranty is made in lieu of all other product warranties, expressed and implied, including merchantability and fitness for a particular purpose that is specifically disclaimed. The express warranty will not apply to defects or damage due to accidents, neglect, misuse, alterations, operator error, or failure to properly maintain, clean or repair products.

Limit of Liability

The user shall determine the suitability of the product for their intended use, and the user assumes all risk and liability whatsoever in connection therein.



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