Charge Plate Monitor

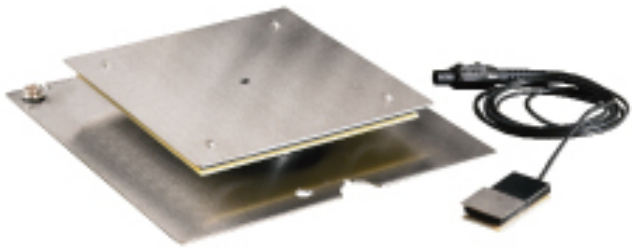
model **288B**

Features:

- **Innovative High Voltage electrometer provides tests to unprecedeted low voltage with unmatched stability**
- **Meets ESD Association Standard ANSI / ESD STM 3.1**
- **Fully configurable operating parameters**
- **Soft keys for highly intuitive programming**
- **Manual and automated testing of Decay and Balance**
- **Internal storage for up to 1500 tests, 500 locations and 4 test protocols**
- **Internal battery for portable operation (also line operated)**
- **Large, easy to read, high contrast LCD display**
- **Detachable 6” x 6” plate (Optional plate 1” X 1” plate available)**
- **RS232 interface**
- **Built in temperature and humidity sensors**
- **Auto-ranging to 0.1V resolution below 100V**
- **Compatible with optional 288B Graphing Software**

Plate Assembly:

6” x 6” plate assembly includes a detachable ground plane that is used for improved consistency in decay readings. Built in self-test resistor for function confidence check is also incorporated. (Optional 1.0” x 1.0” plate assembly is available.) Small diameter (3mm) low noise zcoaxial cable is used for interconnection to main unit.





The Model 288B’s easy-to-use, self-contained design simplfies ionizer audits:

Testing your ionizers is as simple as pushing a button.

The Model 288B is the first Charged Plate Monitor to incorporate a microprocessor and data storage, eliminating the need for a dedicated computer. All test parameters are programmable allowing tests to be optimized and not dictated by equipment limitations. Once programmed, the Model 288B will perform a series of tests automatically: +/- decays, balance, balance peaks, temperature, humidity, time/date are stored and may be reviewed via the display or downloaded to a PC. The PC software (included) permits the user to define and name ionizer locations, test setups and sequences, then upload these to the CPM. All of these features result in a flexible, easy to use instrument that facilitates audits while inimizing errors.

Operation:

The Model 288B performs manual or automatic decay and balance tests on critical ionization equipment and stores the results and averaged decay times for up to 500 workstations. Temperature and relative humidity are displayed real-time and recorded with the test data.

All pertinent test information is presented on a large format LCD display. Custom protocols and personal workstation definitions can be uploaded and results downloaded for analysis via a bi-directional RS-232 link.

In DECAY mode the plate is charged to a predetermined voltage from ±10 to ±1000. During test, the plate will discharge toward zero in the presence of ionization. The elapsed time of decay between the start voltage and a preset stop voltage, as low as zero volts, is displayed.

In BALANCE mode, isolated plate voltage, test duration and + / - peak voltages are displayed.

Self-tests include battery check, tests for functional errors and a built-in decay self confidence check.

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TREK Has Joined Advanced Energy

Charge Plate Monitor
model 288B

Specifications:
All specifications are referred to plate voltage unless otherwise specified.

Display	240 x 64 character/graphic
Voltage -	3½ digit display (Decay and Peak reading)
Accuracy	±0.1% of reading ±3 V
Resolution	1 volt
Balance -	0.1 volt for readings < 150 volts
Time -	4 digit display
Accuracy	0.1% of reading ±1 lsd
Resolution	0.1 second for readings < 1000 seconds 1 second for reading > 999 seconds
Electrometer	
Dynamic range	±1200 volts
Follower error	< 10 mV
Speed of Response	<10 msec for 1 kV to 0 volts (90%-10%)
Bandwidth	-3db @ 1Khz 20V_{p-p} -3db @ 10Hz 2000V_{p-p}
Noise	< 12 mV $_{rms}$
Monitor output	Divide by 200
Accuracy	0.1% of reading ±1 mV Refer to Output
Output Impedance	1K ohm
Start Voltages	1000 volts Standard
Range	±10 to ±1000 volts
Resolution	Settable to 1 volt
Accuracy	0.3% of setting ±2.5 volts
Stop Voltages	100 volts Standard
Range	0- ±995 volts
Resolution	Settable to 1 volt
Accuracy	0.3% of setting ±2.5 volts
Charge Voltage	
Range	10 to 100 volts above the start voltage
Resolution	Settable to 1 volt increments
Accuracy	0.3% of setting ±2.5 volts
Charge Plate	
Capacitance	20 pF ±2pf
Zero Drift	< 100 mV/sec (no incident ion flow)
Self Discharge	< 200 mV/sec
Peak Detector (Balance Test) Bandwidth	<10HZ
Temperature Sensor	
Range	0 - 50°C
Accuracy	±2°C typ
Humidity Sensor	
Range	10% - 80% RH @ 25°C
Accuracy	±5% typ
Operating	
Temperature	5°C to 35°C
Humidity	to 80%, non condensing
Battery life	Typ > 6 hrs
Charge Time	< 8 hrs to > 90% capacity
Power	
Voltage	90 - 250 VAC 50/60 Hz
Wattage	< 12 watts operating
Data Storage	1500 Readings
CPM	
Size	11" x 9" x 6" (280 x 229 x 152 mm)
Weight	12½lb. (5.7kg)

Optional Carrying Case Available

Calibration:

Monroe Electronics instruments are factory-calibrated prior to shipment. Recalibration should be performed annually, or more frequently if specified by contract or company policy. Your instrument should also be recalibrated any time it has been repaired or tampered with. We will be happy to perform the calibration for you or refer you to one of our Authorized Service Organizations.

Warranty:

Monroe Electronics, Inc., warrants that each instrument and sub-assembly manufactured by them shall be free from defects in material and workmanship for a period of two years after shipment from the factory. This warranty is applicable to the original purchaser only.

The Monroe Electrostatic & ESD product line is now owned by Advanced Energy and managed by TREK in Lockport, NY.

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