

# PPA-400 PROCESS ANALYSIS KIT



The PPA-400 ESD Process Analysis Kit is for advanced professionals who need materials testing, facility evaluation and process analysis capabilities all in one kit.





### PROCESS ANALYSIS CAPABILITIES

The PPA-400 ESD Process Analysis Kit is for advanced professionals who need materials testing, facility evaluation and process analysis capabilities all in one kit. This integrated kit has everything in one case for full evaluation of a companies' ESD program and process. The PPA-400 includes all of the equipment in the PSK-310 Kit and adds the Prostat PGA-710 Autoanalysis System and the innovative CVM-780 Contact Voltmeter, miniature precision resistance fixtures and international adapters.

The PGA-710 is a unique electrostatic data analysis device for use with Prostat's PFK-100 Fieldmeter/Charge Plate Monitor Set. It records, plots, analyzes and automatically constructs reports of body voltage generation, electrostatic decay, voltage retention, ionizer performance and other static measuring functions. Its analytical features document and automatically calculate projected levels of typical Human Body (HBM) voltages. It helps determine the risk of equaling or exceeding damaging or hazardous HBM discharge voltages in static sensitive facilities.

The New CVM-780 Contact Voltmeter<sup>TM</sup> combines the ease of use of a digital voltmeter with the high input impedance and low input capacitance of a true electrostatic voltmeter in a small, portable, battery operated package.

Also included is the PRF-912B Miniature E12 Micro Probe Set accurately measures surface resistance of small areas up to 1.0x10<sup>12</sup> ohms. It consists of a PRF-912B Concentric Resistance Fixture, shielded cable equipped with BNC connectors, and a BNC to male banana instrument adapter.

The PPA-400 Process Analysis Kit is shipped in our new Program Manager Case which is a Hybrid, ultra light Polycarbonate and aluminum construction.

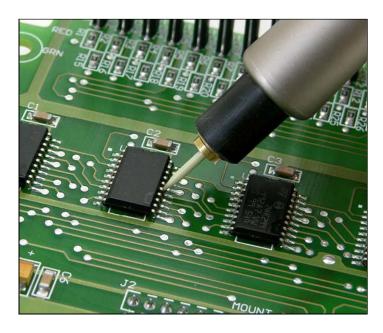
### CVM-780 CONTACT VOLTMETER

#### A VALUABLE ESD ANALYSIS TOOL

Being a true electrostatic voltmeter, not a field meter means that it reads real voltage, without confusing it with electrostatic field strength, which can be distinctly different.

The CVM-780 Contact Voltmeter<sup>™</sup> uses a unique active probe design which is fully guarded and shielded for minimal interference with the surrounding E field.

The Contact Voltmeter<sup>TM</sup> is powered by rechargeable Nickel Metal Hydride batteries and is a valuable ESD Analysis Tool.



Compatible with the PGA-710 Autoanalysis System

The CVM-780 is compatible with the PGA-710 Autoanalysis System to record measurements for probability analysis and report generation.





#### **ESD ANALYSIS APPLICATIONS**

Analyze process, devices and assemblies for causes of Charge Device and Machine Model losses. Measure voltages on:

- Device Lead Frame Contacts
- Circuit Board Traces
- Automatic Test Contacts
- Conductors in process critical path
- Machine parts
- Placement heads
- Handlers
- Production Aids
- Chairs
- Carts
- Personnel
- Trays
- Shelving
- Conductive Containers

#### IF YOU CAN TOUCH IT...

YOU CAN MEASURE IT!



#### Resistance Fixtures & Electrodes

Use five-pound electrodes for measuring resistance of floors, worksurfaces, floor mats, etc. Measure:

- Resistance Point to Point (Rtt)
- Resistance to Ground (Rtg)
- Evaluate:
  - o Floors
  - Worksurfaces
  - o Equipment
  - o Garments
  - o Production Aids

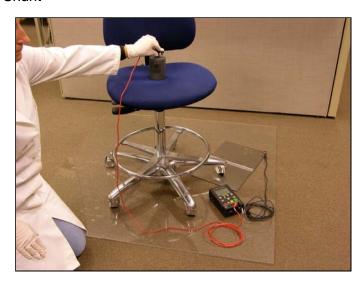


### PRS-801 RESISTANCE SYSTEM SET

#### WIDE RANGE. ACCURATE. PORTABLE.

The most important ESD Audit & Evaluation instrument is this wide range, constant voltage resistance meter. Use with many accessories & fixtures. Unique wide range portable, constant voltage ohmmeter with data logging, calculating and computer communication capabilities

- Resistance Range: 0.1  $\Omega$  to 2.0x10<sup>14</sup>  $\Omega$
- Test Voltages
  - o 0.001 to 10 Volts Auto Variable
  - o 10 & 100 Volts Constant  $\pm$  <5 mv
- Digital LCD Display & LED Indication
- 80 Data Point Memory
- Software for Data Download to PC
- Includes Lead Sets, Steel & Insulative Test beds, and Calibration Shunt









**Download Capability** 

#### **WIDE RANGE. ACCURATE. PORTABLE.**

#### PRF-911 CONCENTRIC RING SET

The PRF-911 Concentric Ring is a low-profile test fixture conceived specifically for use with the PROSTAT PRS-801 Resistance System and PRS-812 Resistance Meter. It will measure surface resistance per ESD S11.11, and volume resistance per ESD S11.12, and ANSI/ESD SP15.1.





Its compact size allows the fixture to be inserted into small flexible containers, such as an ESD protective bag, without having to cut the package.



#### **FEATURES**

Measures surface resistance per ANSI/ESD STM11.11

Measures volume resistance per ANSI/ESD STM11.12

Measures surface volume & resistivity per ASTM D-257

Incorporates a spring loaded, self-aligning center electrode feature

The included Dual Test Bed consists of an insulated test surface for ANSI/ESD STM11.11 surface measurements laminated to a steel test plate for volume measurements.



### PRF-912B MICROPROBE SET

The PRF-912B Miniature E12 Micro Probe Set accurately measures surface resistance of small areas up to 1.0x10<sup>12</sup> ohms. It consists of a PRF-912B Concentric Resistance Fixture, shielded cable equipped with BNC connectors, and a BNC to male banana instrument adapter.

# PRF-922A-B TWO-POINT ADAPTER

The PRF-922A-B Miniature Probe Two Point Adapter, allows Prostat customers to convert their PRF-912B, or PRF-914B Miniature Concentric Ring "Micro Probes" to a precision "two point probe".







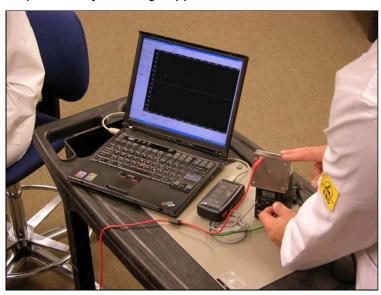
#### PGA-710 AUTOANALYSIS SYSTEM SET

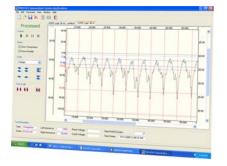
#### **ESD ANALYSIS AT ITS FINEST**

The PGA-710 Autoanalysis System<sup>®</sup> allows experienced ESD Auditors to analyze any Facility or Manufacturing Process in conjunction with their Prostat PFK-100 Field Meter Set and computer.

It records and analyzes measurements and automatically generates reports for Voltage Generation, Fields and Electrostatic Decay. Or the PGA-710 may simply function as an advanced recorder for general measurement and experimental applications. Use it to measure and analyze People, Floors, Footwear, Ionizers, Chairs, Carts, Equipment, Packaging Materials and other ESD control elements.

You may also record measurements remotely with the PGA-710 for later downloading and computer analysis using supplied software.





Measure, Record, Analyze & Report Electrostatic Voltage Generation and Decay Performance:

- Footwear and flooring combinations
- Carts & Chairs
- Packaging Materials & Systems
- Production Aids
- Worksurface Voltage Suppression
- Ionization Offset Voltage & Decay Performance
- Production Aids & Materials
- Record process equipment field voltages

#### **ESD ANALYSIS AT**

**ITS FINEST!** 



### PFK-100 FIELD METER SET

The PFK-100 set includes Prostat's unique PFM-711A dual range field meter, CPM-720 charged plate monitor assembly and PCS-730 ±1 kv charging source.

With this instrument set you can measure electrostatic fields, analyze ionizer performance and assess the voltage generation of materials, equipment and personnel.









### PDT-740B STATIC DECAY TIMER

The PDT-740B Static Decay Timer is designed to measure the time required for a 1,000 volt charge to dissipate to less than 100, 50 or 10 volts in tenths of a second.

This extremely useful accessory is used with the Prostat PFM-711A Field Meter and CPM-720A Charge Plate Monitor to evaluate Ionizer Decay Time in accordance with ESD Association Ionization Standard S3.1. The PDT-740B may be used to evaluate the static decay capabilities of materials, personnel, equipment and other products.







PMT-872A WRIST STRAP/ FOOTWEAR CHECKER

#### WRIST STRAP/FOOTWEAR CHECKER &

### **FOOTWEAR AUDITOR**

The PMT-872 is a unique, highly portable, battery operated multi-function PASS/FAIL performance verifier. It confirms the operational resistance range of wrist straps, heel straps and ESD controlled footwear.

The PMT-872 features a large test button, audible PASS BEEP with Green PASS light, Red LOW and HIGH Fail lights, and yellow battery low indicator.

The PFA-860 Footwear auditor is designed for resistance measurements of footwear while being worn by personnel.



PFA-860 FOOTWEAR AUDITOR

### **PWA-805 WRIST STRAP AUDITOR**

Add the capability of electrically testing your wrist straps according to ESD S1.1 Evaluation Testing Paragraph 5.1.

- Measure the Interior of the Wrist Strap Cuff
- Measure the Exterior of the Wrist Strap Cuff
- Measure the Resistance of the Ground Cord Alone
- Measure the Resistance of the Whole Wrist Strap Assembly





## PHT-771 DIGITAL PSYCHROMETER

- Simultaneous display of %RH, Temperature and Dew point or Wet Bulb or Probe Temperature
- Wet bulb measurements without slinging
- Calculates T1-T2 differential (Air Temperature-External Probe Temperature) using optional probe
- Unique sensor cap design twists to closed position for protection during storage
- Switchable °F/°C temperature units with 0.1° resolution
- Data Hold freezes current reading on display
- Max/Min readings

PGT-61-164 UNIVERSAL SURETEST®

**CIRCUIT ANALYZER** 

The PGT-61-164 SureTest® Universal Circuit Analyzer test circuits according to ANSI/ESD S6.1-*Grounding*. Verify the following wiring conditions:

- Neutral and equipment grounding conductor wires are present and not connected to each other
- Hot and neutral wires are not reversed
- Hot and equipment grounding conductors are not reversed
- Impedance of the equipment grounding conductor is not greater than 1 ohm

In addition, you can effectively test and troubleshoot a branch circuit.





## **GAP-005 GROUND ADAPTER PLUG**

Provides an ESD ground path to a previously tested receptacle.

#### Features:

- Equipped with three (3) indicating lights
- Banana plug input for Wrist Strap Connection
- UL Approved

### INTERNATIONAL OUTLET ADAPTERS

Outlet adapters for Europe, the UK and Asia are included in the PPA-400 Process Analysis Kit.

The PGT-602PE can be used as and Outlet Adapter for any country in Europe. The PGT-602PUK will work anywhere in the UK and Asia.

Additionally, the GAP-010 will work in the UK and Asia...







### PWS-610M FABRIC BAND WRIST STRAP



In conjunction with the best product designers in the ESD industry, Prostat has created new refinements in wrist strap technology. Prostat wrist straps are specially designed for durability, lightweight, portability and comfort.

These unique personnel and instrument grounding products are intended for use in demanding, high performance applications where reliability is the priority.

#### **INCLUDED**

PWS-620B Fabric cuff with Adjustable Buckle and 100mm snap cover

PWS-610PGC Personal Ground Cord Lightweight-Heavy Duty with installed 1 meg Ohm Resistor

Metal Alligator Clip



#### PWS-620 METAL BAND WRIST STRAP

The PWS-620 Wrist Strap features a metal wristband that incorporates a patented linking system. It enables you to adjust the strap to fit virtually any wrist size. This unique band comes manufactured in 130mm lengths and can be easily enlarged using one or more of the five 10mm nylon expansion links included.

The band is extremely comfortable, as each one is "custom fit" to the user. This band eliminates the need to stock bands of various sizes.



PWS-620C Metal Adjustable Band

PWS-610PGC Personal Ground Cord Lightweight-Heavy Duty with installed 1 meg Ohm Resistor

Metal Alligator Clip





# PED-655 ENGINEERS DESKTOP WORKSTATION

A complete, portable desktop ESD workstation can easily be set up anywhere the engineer is working. Don't be caught unprotected. Use this handy workstation any time you are working on a circuit board, evaluating components or testing prototypes.

Set it up at your desk, in the conference room or any temporary workspace. Each workstation is ESD performance tested.



#### PK-370 BLACK CARRYING CASE

The PK-370 is a Hard Shell with retractable handle and wheels. The case also contains foam inserts for protection of test equipment and accessories.

The case includes a PAB-023 Black Accessory Box.





"YOU CAN TAKE IT WITH YOU! "



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