



## Dr. Zap



# Wave Distortion Detection Technology Provides True 100% Continuous Monitoring

The dictionary defines constant as uniform and unchanging, and continuous as uninterrupted. Nonetheless, most Dual-Wire Resistance Monitors, advertised as continuous, utilize a pulsed test current and do not really provide continuous monitoring. Some of these "constant" monitors detect failures less than 10% of the time! Electrical current is pulsed for only 0.2 seconds followed by an interval of 2 seconds off (a period ten times as long).



Workstation Continuous Mini Monitor

Full Time Workstation Continuous Monitor



Damaging static charges can easily occur in the portion of the time in between the pulses. The dual-wire system does not reliably meet all industry specifications, as the cords do not meet the EOS/ESD Association guidelines for the 1 to 5 pound "breakaway force" requirement.

Workstation Continuous Monitoring is superior to periodic or pulsed testing, and can save a significant amount of money in testing costs and rejected product. Periodic testing detects failures after ESD sensitive products have been manufactured. The costs of dealing with the resulting catastrophic or latent defects can be considerable. Per ESD Handbook TR 20.20 paragraph 5.3.2.4.4 "Typical test programs recommend that wrist straps that are used daily should be tested daily. However, if the products that are being produced are of such value that knowledge of a continuous, reliable ground is needed, and then continuous monitoring should be considered or even required." Workstation Continuous Monitors eliminate the need for users to test wrist straps and log the results; by their function, these monitors satisfy the ISO 9000 test logging requirement.



Dual Operator Workstation Continuous Monitor with Satellites

To learn more, click [HERE](#)



## Hot Deals

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**OFFER GOOD UNTIL MAY 5TH!**

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Special Integrator Offer - act by April 24, 2003 and we will supply competitive brand product at our cost - no additional integration charge. When you have competitive brand items required by your customer, ESD Systems.com will act as the integrator, charging you only the cost we are charged. No integration fee.

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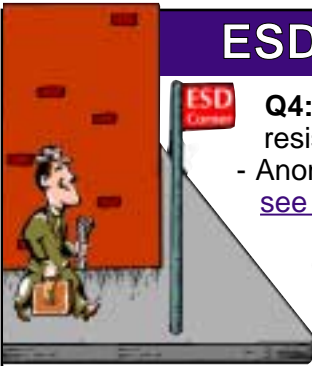
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Offers good on Garage Sale items until April 30th

## ESD Q & A CORNER



**Q4:** What is the purpose of a 1 Megohm resistor in semiconductor assembly layout?  
- Anonymous, Malaysia  
[see ANSWER 4](#)

**Q13:** We have weekly monitoring of [our] ESD work surface to ensure it is properly grounded via 1 Meg resistor. What is the common cause of

unstable resistance readings between ESD (hard ground) and conductive work surface ground (soft ground)? - Anonymous, Muntinlupa, Philippines  
[see ANSWER 13](#)

**Q289:** What should the earth impedance be for a personal earthen system to be used in an electronics component factory clean room. When tested it was found to be 23 ohms. Is this safe or should it be closer to 20 ohms? - Anonymous, Cardiff, United Kingdom  
[see ANSWER 289](#)

**Q336:** We ship GPS systems that are in metal aluminum housings. The units are placed in a preform for shipping. The preform is covered with a 3-mil thick material that covers Styrofoam. When torn from the foam, the cover material measures 5000 volts with a 3M ESD meter. Since the units have sharp corners, the probability of tearing is high. Do we have an ESD problem? - John Hill, Antioch, Tampa, FL  
[see ANSWER 336](#)

**Q409:** Wrist ground straps are the primary method of ESD protection in our facility. There are several associates who work in areas requiring ESD precautions, who consistently fail wrist strap testing. They have tried numerous wrist straps on all of our testers with the same result...failure. Are there methods of correcting this problem? -Dave, Hebron, OH  
[see ANSWER 409](#)

[Find more ESD Q&As here](#)

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## Certification Information

ESD SYSTEMS.com Training



## PRODUCT UPDATES

### New Product Wrist Strap Tester



ESD Systems.com's new 41195 Wrist Strap Tester is a battery operated, portable tester designed to test wrist straps and smocks. Test results include fail low, pass, and fail high so the user can identify the type of failure (if one has occurred).



Click [HERE](#) for complete information.

[Buy Now](#)

[Tech Info](#)

### New Product

### Dual Operator Workstation Continuous Monitor with Satellites



Introducing the 41222 / 41223 Dual Operator Workstation Continuous Monitor with Satellites. Feedback from customers has challenged us to make the ESD Systems.com 41137 Dual Operator Workstation Continuous Monitor even better. We've made a number of changes, including control unit with LED lights that can be positioned where best for supervision and satellite remote monitors with wrist strap ground that can be positioned where best for operators..

Click [HERE](#) for complete information.

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[Tech Info](#)

### Tech Briefs with Complete Installation and Maintenance Instructions are Available Online

Product document support includes a technical brief, drawing or bulletin. These are referenced within our [on-line catalog](#) as well as listed in our [web site](#).

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### New Product

#### MULTI-MOUNT CONTINUOUS MONITOR



The ESD Systems.com 41124/41125 Multi-Mount Continuous Monitor continuously monitors the integrity of one operator. The Multi-Mount Continuous Monitor has a variety of mounting options. It can be installed on equipment where the LEDs are easily visible. It can also be installed on the side of a machine, oven, or laminate. The Monitor will provide virtually instantaneous notification of static control equipment failures, eliminating the need of periodic testing and costly record keeping.

Click [HERE](#) for complete information.

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Register now on ESD Systems.com and receive a #36010 ESD Awareness Booklets for Employees. Use as part of training plan required by ANSI/ESD S20.20.

Click [HERE](#) to register.

This is a free monthly eNewsletter, which specializes on issues in electrostatic control in the semiconductor/electronics workplace and is best viewed while connected to the Internet.

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