

# 2018 EOS/ESD Association, Inc. Tutorials

April 24-25, 2018

EOS/ESD Association, Inc., 7900 Turin Rd. Bldg. 3, Rome, NY 13440, USA

Lunch and refreshments provided

## FC100: ESD Basics for the Program Manager

April 24, 2018 8:30 a.m. - 4:30 p.m.

Ron Gibson, Advanced Static Control Consulting



### Certification: PrM

This tutorial provides the foundation material for understanding electrostatics and ESD and their role in the manufacturing and handling of ESD sensitive devices. The fundamental properties of charge, electric fields, voltage, capacitance, and current are discussed with a view towards understanding key electrostatic phenomena and electrical processes. These include charge generation and decay, material properties, and induction. An overview of device failure mechanisms is presented, including how these models impact ESD control programs. Finally, the course provides an overview of ESD control procedures during handling and manufacturing and an overview of ANSI/ESD S20.20 program requirements. This full day course is required for those in-plant auditors and program managers who are working toward professional ESD certification. The presentation includes many in-class demonstrations, videos, and animated slides.

Some sample topics covered in this course are:

- Definitions and relationships among important electrical and mechanical properties
- Causes of charge generation and decay
- Field effects and voltages
- Role of capacitance in ESD ( $Q=CV$ )
- Overview of key measurements including common pitfalls of some measurements
- Review of ESD failure models
- Understanding and demonstrating electrostatic induction
- Utility and limitations of air ionization
- Basic goals of ESD controls
- Properties of effective ESD control products and materials
- Overview of ANSI/ESD S20.20 ESD program development requirements

Setting the Global Standards for Static Control!

EOS/ESD Association, Inc. 7900 Turin Rd., Bldg. 3, Rome, NY 13440-2069, USA  
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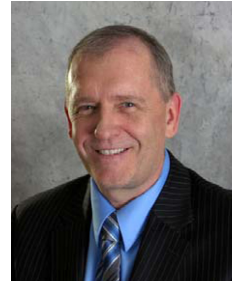
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## FC101: How To's of In-Plant ESD Auditing and Evaluation Measurements

April 25, 2018 8:30 a.m. - 4:30 p.m.

Ron Gibson, Advanced Static Control Consulting



### Certification: Prm

This program reviews the evaluation and periodic verification (audit) measurement procedures for the technical requirements specified in the ANSI/ESD S20.20 ESD program development standard. Detailed explanation of instruments, fixtures, and accessories function and usage are provided. Then, the details of "How to" measure are explained and demonstrated. Measurements include those listed in Table 1: Grounding/Equipotential Bonding Requirements; Table 2: Personnel Grounding Requirements; and Table 3: EPA/ESD Control Items. These recommended measurement procedures confirm the proper operation and use of ESD control products and materials selected as part of a facility's S20.20 ESD control program.

Some sample topics covered in this course are:

- ANSI/ESD S20.20 Technical Control Requirements
- Program Manager's Approach to Instrumentation and Applications
- Testing Ground Circuits and Assessing Connections
- Essential Resistance Measurement Procedures and Concerns
- Electrostatic Field and Voltage Measurements
- Personnel Grounding Considerations vs. ESD Control Points
- Product Installation Baseline Measurements
- Evaluation, Acceptance, and Audit Procedures for: Ground Systems, Floors, Work-surfaces, Equipment, Personnel Grounding, Garments, Materials, Production Aids, Packaging, and Ionization Devices
- Electrostatic Analysis Measurements including Worksurface Suppression, Footwear/Flooring, and Ionization Decay

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## About the Instructor:

Ron Gibson is the president of Advanced Static Control Consulting (ASCC), which was founded in 2010. ASCC provides consulting, ESD material and product qualification, and develops ESD training programs for clients. From 1994 to 2010 Ron was the corporate ESD program manager for Celestica International, Inc. and was responsible for the ESD control programs at all of Celestica's factories worldwide. From 1979 to 1994 Ron worked for IBM. Ron co-authored IBM's initial factory ESD standards. Ron has been a member of the ESD Association (ESDA) since 1988, and has served as an officer in the positions of president, senior vice president, vice president, secretary, and treasurer. He has also served as chairman of the ESDA Standards Committee (STDCOM) for over 10 years and as the first chairman of the ESDA certification business unit. Gibson is an iNARTE certified electrostatic discharge control engineer, an ESDA certified instructor for the program manager certification program, and is a certified chief ESD coordinator for the Reliability Center of Japan.



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First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

Company Name: \_\_\_\_\_

Street: \_\_\_\_\_ City: \_\_\_\_\_

State/Province: \_\_\_\_\_ Country \_\_\_\_\_ Zip/Postal Code: \_\_\_\_\_

Address is (please circle the one that applies) Home or Company

Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_

## Course Selection

- |                                                                                               |                           |
|-----------------------------------------------------------------------------------------------|---------------------------|
| <input type="checkbox"/> FC100: ESD Basics for the Program Manager                            | \$510 / non-Members \$610 |
| <input type="checkbox"/> FC101: How To's of In-Plant ESD Auditing and Evaluation Measurements | \$510 / non-Members \$610 |

Cancellation & refund requests will be honored only if received in writing no later than March 9, 2018, and are subject to a \$50 fee. Any other approved dispositions will also be assessed a \$50 fee.

## Payment Information

Register online at <http://www.cvent.com/d/0tqftm>

Other forms of payment Contact:

**EOS/ESD Association, Inc.**

info@esda.org

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