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Revision Record

MANUAL, PRODUCT INFORMATION BULLETIN | Part #399545, Rev. L

Revision	Description	Date
A	Initial Release	March, 2008
B	Added to <i>General Safety Considerations</i>	December, 2008
C	Section 3.0, change to ISO 9001 compliant; remove France from <i>Worldwide Site Directory</i> ; update to current style guide standards	October, 2009
D	Section 5.0, update to <i>ETS-Lindgren Worldwide Site Directory</i>	May, 2010
E	Added <i>Calibration Services Plus!</i> ; updated <i>Worldwide Site Directory</i> ; added <i>Equipotentiality</i> symbol	April, 2011
F	Updated <i>ETS-Lindgren Worldwide Site Directory</i>	January, 2012

Revision	Description	Date
G	Removed physical addresses from the <i>ETS-Lindgren Worldwide Site Directory</i> ; updated to current style guide standards	September, 2012
H	Updated template/icons	March, 2015
I	Skip "l" per style guide.	July, 2015
J	Remove specific webpage references in Calibration section. Removed obsolete addresses from the <i>ETS-Lindgren Worldwide Site Directory</i> .	February, 2016
K	Fixed copyright date	April, 2016
L	Updated addresses in the <i>ETS-Lindgren Worldwide Site Directory</i> .	January, 2017
M	Updated addresses in ETS-Lindgren Worldwide Site Directory; added more hazard label information	November, 2017

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Notes, Cautions, and Warnings



Note: Denotes helpful information intended to provide tips for better use of the product.



Caution: Denotes a hazard. Failure to follow instructions could result in minor personal injury and/or property damage. Included text gives proper procedures.



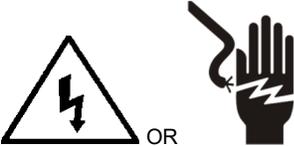
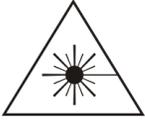
Warning: Denotes a hazard. Failure to follow instructions could result in **SEVERE** personal injury and/or property damage. Included text gives proper procedures.

1.0 Safety and Regulatory Information

Safety Symbol Definitions

This product and related documentation must be reviewed for familiarization with safety markings and instructions prior to operation.

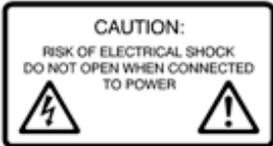
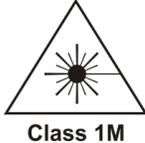
Safety Symbol	Definition
<p>CAUTION</p> <p>OR</p> 	<p>CAUTION: Denotes a hazard. Failure to follow instructions could result in minor personal injury and/or property damage. Included text gives proper procedures.</p>
<p>WARNING</p> <p>OR</p> 	<p>WARNING: Denotes a hazard. Failure to follow instructions could result in SEVERE personal injury and/or property damage. Included text gives proper procedures.</p>
 <p>OR</p> 	<p>Refer to Manual: When product is marked with this symbol, see the instruction manual for additional information. If the instruction manual has been misplaced, download it from ets-lindgren.com, or contact ETS-Lindgren Customer Service.</p>

Safety Symbol	Definition
 <p>OR</p>	<p>High Voltage: Indicates presence of hazardous voltage. Unsafe practice could result in severe personal injury or death.</p>
	<p>Protective Earth Ground (Safety Ground): Indicates protective earth terminal. You should provide uninterruptible safety earth ground from the main power source to the product input wiring terminals, power cord, or supplied power cord set.</p>
 <p>Class 1M</p>	<p>Laser Warning: Denotes a laser (class 1M) is part of the operating system of the device.</p>
	<p>ONLY QUALIFIED PERSONNEL should operate or service this equipment.</p>

General Safety Considerations

Safety Symbol	Definition
 <p>OR</p> 	<p>CONTACT ETS-LINDGREN PRIOR TO SERVICING. Servicing (or modifying) the unit by yourself may void your warranty. If you attempt to service the unit by yourself, disconnect all electrical power before starting. There are voltages at many points in the instrument that could, if contacted, cause personal injury. Only trained service personnel should perform adjustments and/or service procedures upon this instrument. Capacitors inside this instrument may still be CHARGED even when instrument is disconnected from its power source.</p>
	<p>BEFORE POWER IS APPLIED TO THIS INSTRUMENT, GROUND IT PROPERLY through the protective conductor of the AC power cable to a power source provided with protective earth contact. Any interruption of the protective (grounding) conductor, inside or outside the instrument, or disconnection of the protective earth terminal could result in personal injury.</p>

Safety Symbol	Definition
	<p>EQUIPOTENTIALITY: Identifies the terminals, when connected together, to bring various parts of a system to the same potential, not necessarily being the earth (ground) potential, e.g. for local bonding.</p>
	<p>WARNING: This is a Safety Class I product (provided with a protective earthing ground incorporated in the power cord). The mains plug shall only be inserted in a socket outlet provided with a protective earth contact. Any interruption of the protective conductor, inside or outside the instrument, is likely to make the instrument dangerous. Intentional interruption is prohibited. DO NOT defeat the earth grounding protection by using an extension cable, power cable, or autotransformer without a protective ground conductor.</p>
	<p>WARNING: No operator serviceable parts exist inside. Refer servicing to qualified personnel. To prevent electrical shock, do not remove covers.</p>

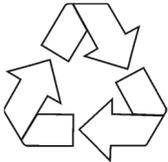
Safety Symbol	Definition
	<p>CAUTION: Uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any parts inside this unit.</p>
	<p>CAUTION: This instrument is shipped with a three-wire power cable, in accordance with international safety standards. When connected to an appropriate power line outlet, this cable grounds the instrument cabinet.</p>
	<p>WARNING: The battery charger incorporates parts, such as a switch and relay that potentially could produce sparks or arcs.</p> <p>WARNING: For indoor use only, do not expose to rain.</p>
	<p>LASER HAZARD. Laser power up to 150 mW at 830 nm may be accessible at the fiber connector of the laser. However, the laser beam itself is not hazardous as the interlock ensures that the exposure time will be less than 30 ms.</p>

Safety Symbol	Definition
	
	<p>STAY CLEAR of moving components during operation of equipment.</p>
	<p>MOVING BOOM: Keep clear during tower operation. A falling boom can cause serious injury.</p>
	<p>SURFACE MAY BE HOT: Risk of injury. Allow surface to cool before handling.</p> <p>RISK OF FIRE: Keep combustible and other materials that can burn away from surface.</p>
	<p>KEEP HANDS CLEAR: Moving parts can crush and cut.</p>

Safety Symbol	Definition
 <p>OR</p> 	<p>CAUTION: Before performing any maintenance, disconnect the fiber optic cables from the unit and turn off power.</p> <p>When disconnecting fiber optic cables, apply the included dust caps to the ends to maintain their integrity.</p> <p>Before connecting fiber optic cables, clean the connector tips and in-line connectors.</p> <p>Before attaching in-line connectors, clean them with moisture-free compressed air.</p> <p>Failure to perform these tasks may result in damage to the fiber optic connectors or cables.</p>

Other Symbols

Symbol	Definition
	<p>Waste Electrical and Electronic Equipment (WEEE) Directive: (European Union) At end of useful life, this product should be deposited at an appropriate waste disposal facility for recycling and disposal. Do not dispose of with household waste.</p>

Symbol	Definition
 The image shows the universal recycling symbol, which consists of three chasing arrows forming a triangle.	<p>Recyclable Products: This product includes rechargeable batteries. At end of useful life, please recycle the used batteries, or dispose of them safely and properly. Many cities collect used batteries for recycling or disposal. You may contact your local waste disposal agency for information on battery recycling and disposal.</p>

2.0 Receiving Your Order

Unpacking and Acceptance

1. Upon delivery of your order, inspect the shipping container(s) for evidence of damage. Record any damage on the delivery receipt before signing it. In case of concealed damage or loss, retain the packing materials for inspection by the carrier.
2. Remove the product from its shipping container(s). Save the container(s) and any protective packing materials for future use.
3. Check all materials against the packing list to verify that the equipment you received matches what was ordered. If you find any discrepancies. Note them and call ETS-Lindgren Customer Service for further instructions.

Make sure you are satisfied with the contents and condition of your order prior to placing the product into service.

Service Procedures

To return a system or system component for service:

1. Contact ETS-Lindgren Customer Service to obtain a Service Request Order (SRO).
2. Briefly describe the problem in writing. Give details regarding the observed symptom(s) or error codes, and whether the problem is constant or intermittent in nature. Please include the date(s), the service representative you spoke with, and the nature of the conversation. Include the serial number of the item being returned.

3. Package the system or component carefully. If possible, use the original packing materials or carrying case to return a system or system component to ETS-Lindgren at the following address:

ETS-Lindgren

Attn: Service Department

1301 Arrow Point Drive

Cedar Park, TX, USA 78613

Phone: +1.512.531.6400

Customer Service: +1.512.531.6498

ets-lindgren.com

3.0 Calibration Services

Annual Calibration

For reliable and repeatable long-term performance, annual recalibration of your measuring device by an ETS-Lindgren experienced technician is recommended. See *Service Procedures* on page 15 for the steps to return your measuring device for calibration.

The ETS-Lindgren calibration team will calibrate most any type or brand of measuring device. For more information about our calibration services, visit our website at ets-lindgren.com or call +512.531.6498.

ETS-Lindgren Calibration Lab

- Expert calibration for any brand of EMC antenna
- The industry's first A2LA accredited calibration site
- Cutting edge test equipment
- Proprietary software for superior calibration accuracy
- NIST traceable equipment and ISO 9001 compliant processes
- Average turnaround time: 10 days
- Options for product repair, rush delivery, and electronic data delivery
- Exceptional customer service with prompt, attentive response

Calibration Services Plus!

Calibration Services Plus!™ is a customized, optional program to help you expertly maintain your test and measurement assets. It is designed to address the challenges of managing the calibration and repair of test and measurement components, including scheduling and planning to ensure peak performance. Additional information is available at ets-lindgren.com.

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4.0 Warranty

Scope and Duration of Warranties

Seller warrants to Buyer that the Products to be delivered hereunder will be (1) free from defects in material, manufacturing workmanship, and title, and (2) conform to the Seller's applicable product descriptions and specifications, if any, contained in or attached to Seller's quotation. If no product descriptions or specifications are contained in or attached to the quotation, Seller's applicable product descriptions and specifications in effect on the date of shipment shall apply. The criteria for all testing shall be Seller's applicable product specifications utilizing factory-specified calibration and test procedures and instruments.

All product warranties, except the warranty of title, and all remedies for warranty failures are limited to one year unless otherwise specified in the product manual and/or Seller's quotation.

Any product or part furnished to Buyer during the warranty period to correct a warranty failure shall be warranted to the extent of the unexpired term of the warranty applicable to the repaired or replaced product.

The warranty period shall commence on the date the product is delivered to Buyer; however, if Seller assembles the product, or provides technical direction of such assembly, the warranty period for such product shall commence on the date the assembly of the product is complete. Notwithstanding the foregoing, in the event that the assembly is delayed for a total of thirty (30) days or more from the date of delivery for any reason or reasons for which Seller is not responsible, the warranty period for such product may, at Seller's options, commence on the thirtieth (30th) day from the date such product is delivered to Buyer. Buyer shall promptly inspect all products upon delivery. No claims for shortages will be allowed unless shortages are reported to Seller in writing within ten (10) days after delivery. No other claims against Seller will be allowed unless asserted in writing within thirty (30) days after delivery (or assembly if the products are to be assembled by Seller) or, in the case of alleged breach of warranty, within the applicable warranty period.

Warranty Exclusions

Except as set forth in any applicable patent indemnity, the foregoing warranties are exclusive and in lieu of all other warranties, whether written, oral, express, implied, or statutory. EXCEPT AS EXPRESSLY STATED ABOVE, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, BY STATUTE OR OTHERWISE, WHETHER OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR USE OR OTHERWISE ON THE PRODUCTS, OR ON ANY PARTS OR LABOR FURNISHED DURING THE SALE, DELIVERY OR SERVICING OF THE PRODUCTS. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.

Warranty coverage does not include any defect or performance deficiency (including failure to conform to product descriptions or specifications) which results, in whole or in part, from (1) negligent storage or handling of the product by Buyer, its employees, agents, or contractors, (2) failure of Buyer to prepare the site or provide an operating environmental condition in compliance with any applicable instructions or recommendations of Seller, (3) absence of any product, component, or accessory recommended by Seller but omitted at Buyer's direction, (4) any design, specification, or instruction furnished by Buyer, its employees, agents or contractors, (5) any alteration of the product by persons other than Seller, (6) combining Seller's product with any product furnished by others, (7) combining incompatible products of Seller, (8) interference with the radio frequency fields due to conditions or causes outside the product as furnished by Seller, (9) improper or extraordinary use of the product, or failure to comply with any applicable instructions or recommendations of Seller including maintenance, calibration and cleaning procedures and intervals, or (10) acts of God, acts of civil or military authority, fires, floods, strikes or other labor disturbances, war, riot, or any other causes beyond the reasonable control of Seller.

This warranty does not include (1) batteries, (2) cables, (3) gasket, (4) fingerstock, or any item that is designed to be consumable. Seller does not warranty products of others which are not included in Seller's published price lists.

Buyer's Remedies

If Seller determines that any product fails to meet any warranty during the applicable warranty period, Seller shall correct any such failure by either, at its option, repairing, adjusting, or replacing without charge to Buyer any defective or nonconforming product, or part or parts of the product. Seller shall have the option to furnish either new or exchange replacement parts or assemblies.

Warranty service shall be performed at the Seller's factory, or the Buyer's site at the sole discretion of the Seller. Within the warranty period, the Buyer shall be responsible for all transportation to the Seller's factory, and the Seller shall be responsible for transportation of goods to the Buyer's site.

Within the contiguous 48 United States, warranty service performed during the applicable warranty period will be performed without charge to Buyer during Seller's normal business hours. After the warranty period, service will be performed at Seller's prevailing service rates. Subject to the availability of personnel, after-hours service is available upon request at an additional charge.

Outside the contiguous 48 United States, travel and per diem expenses, when required, shall be the responsibility of the Buyer, or End User, whichever is applicable regardless of the warranty period.

The remedies set forth herein are conditioned upon Buyer promptly notifying Seller within the applicable warranty period of any defect or non-conformance and making the product available for correction.

The preceding paragraphs set forth Buyer's exclusive remedies and Seller's sole liability for claims based on failure of the products to meet any warranty, whether the claim is in contract, warranty, tort (including negligence and strict liability) or otherwise, and however instituted, and, upon the expiration of the applicable warranty period, all such liability shall terminate. IN NO EVENT SHALL SELLER BE LIABLE TO BUYER FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND ARISING OUT OF, OR AS A RESULT OF, THE SALE, DELIVERY, NON-DELIVERY, SERVICING, ASSEMBLING, USE OR LOSS OF USE OF THE PRODUCTS OR ANY PART THEREOF, OR FOR ANY CHARGES OR EXPENSES OF ANY NATURE INCURRED WITHOUT SELLER'S WRITTEN CONSENT DESPITE ANY NEGLIGENCE ON BEHALF OF THE SELLER. IN NO EVENT SHALL SELLER'S LIABILITIES UNDER ANY CLAIM MADE BY BUYER EXCEED THE PURCHASE PRICE OF THE PRODUCT IN RESPECT OF WHICH DAMAGES ARE CLAIMED. This agreement shall be construed in accordance with laws of the State of Texas. In the event that any provision hereof shall violate any applicable statute, ordinance, or rule of law, such provision shall be ineffective to the extent of such violation without invalidating any other provision hereof.

Any controversy or claim arising out of or relating to the sale, delivery, non-delivery, servicing, assembling, use or loss of use of the products or any part thereof or for any charges or expenses in connection therewith shall be settled in Austin, Texas by arbitration in accordance with the Rules of the American Arbitration Association, and judgment upon the award rendered by the Arbitrator may be entered in either the Federal District Court for the Western District of Texas or the State District Court in Austin, Texas, all of the parties hereto consenting to personal jurisdiction of the venue of such court and hereby waive the right to demand a jury trial under any of these actions.

5.0 ETS-Lindgren Worldwide Site Directory



Note: Please see ets-lindgren.com for a list of ETS-Lindgren offices, including phone and email contact information.

<p><u>USA Corporate Headquarters– Texas</u> Phone: +1.512.531.6400 Email: Support@ets-lindgren.com</p>	<p><u>USA–Illinois</u> Phone: +1.630.307.7200 Email: Support@ets-lindgren.com</p>
<p><u>USA–Oklahoma</u> Phone: +1.580.434.7490 Email: Support@ets-lindgren.com</p>	<p><u>USA–Wisconsin</u> Phone: +1.715.356.2022 Email: Support@ets-lindgren.com</p>
<p><u>China–Beijing</u> Phone: +86.10.8273.0877 Email: China@ets-lindgren.com</p>	<p><u>China–Shanghai</u> Phone: +86.21.5204.5795 Email: Support@ets-lindgren.com</p>
<p><u>China–Shenzhen</u> Phone: +86.755.2675.8955 Email: Support@ets-lindgren.com</p>	<p><u>Finland</u> Phone: + 358.2.8383.300 Email: Support@ets-lindgren.com</p>
<p><u>India</u> Phone: +91.80.4341.8600 Email: Support@ets-lindgren.com</p>	<p><u>Japan</u> Phone: +81.3.3813.7100 Email: Support@ets-lindgren.com</p>
<p><u>Singapore</u> Phone: +65 6391 0026 Email: Support@ets-lindgren.com</p>	<p><u>Taiwan</u> Phone: +886.2.2702.3389 Email: Support@ets-lindgren.com</p>
<p><u>Dubai</u> Phone: +971.55.610.4055 Email: Support@ets-lindgren.com</p>	

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