### MICROWAVE OVEN LEAKAGE METERS

## MICROWAVE CALIBRATION SYSTEMS AREA MONITORS AND SYSTEMS

#### HI-1501 Survey Meter

Acceptable to the US Government CDRH/FDA/DHHS requirements for compliance testing of microwave ovens. The device provides accuracy, resolution, and portability for widespread use by manufacturers, service technicians, regulatory agencies, and public health officials. The unit is virtually immune to failure caused by excessive fields. Three ranges offer measurements from 0.1 to 100 mW/cm² at 2450 MHz. Battery powered.



#### HI-1801 Survey Meter

Provides an easy and inexpensive means for public health agencies and service technicians to check microwave leakage. A single 1 – 10 mW/cm² range gives easy to understand readings in a durable, compact, battery powered unit.



### 🛂 HI-1600 Survey Meter

Accurately measures microwave leakage at both 915 MHz and 2450 MHz. Three survey ranges are incorporated into a switching sequence that includes positions for battery and probe checks. Battery powered.



### 🛂 HI-1710A Microwave Measurement System

The HI-1710A combines the proven and reliable diode sensing technology of the Holaday Microwave Oven Survey Meters with the digital processing techniques developed for automated oven scanning. Selectable full-scale ranges of 1,2,5,10 mW/cm². Calibrated at 2450 MHz.

#### Features:

- AC Line Powered
- Analog BarGraph Display
- Digital Alarm Set (with electrical contact output)
- RS-232 Serial Interface for Computer Control
- Serial Printer Output
- Analog Recorder Output
- Separable Probe/PreAmpllifier for ease of calibration or repair
- Simple to Operate
- Optional Remote Zeroing



The RS-232 serial interface allows easy adapting of the unit to electronic data acquisition in laboratory studies and semi-automatic production test systems. Digital Peak-Hold and Push Button Zeroing aid in improving testing productivity and reducing errors.

### HI-2790B Calibration Comparison System

The HI-2790B calibration systems comply with the US Government CDRH/FDA/DHHS requirements and microwave oven manufacturers' requirements for evaluating calibration consistency of leakage survey meters. The HI-2790B is acceptable to CDRH for daily and 30-day checks of compliance meters. All Holaday Microwave Survey Meters can be checked in these systems.



### HI-2602 Interlock Monitor

The HI-2602 Interlock Monitor provides continuous surveillance of 2450 MHz microwave fields for protection of personnel and equipment. The device detects and indicates fields from 0.2 - 2 mW/cm² through a remotely mounted probe using Holaday's patented microwave field sensor. Useable in any critical area, the panel-mounted HI-2602 interlocks with any alarm or microwave source. AC powered, adjustable alarm level.



#### HI-1500-3B Interlock Monitor

The HI-1500-3B provides automatic continuous surveillance of 2450 MHz microwave fields for protection of personnel and equipment. The Monitor interlocks with any 2450 MHz microwave source remotely disabling or alarming when the adjustable trip-point is exceeded. Adjustable from  $1\,$ –  $10\,$  mW/cm². AC powered.



#### HI-2651 Microwave Oven Test Module

A revolutionary system designed to minimize time and labor-intensive testing while improving consistency and data collection. As the center of an automated oven test system, the HI-2651 Oven Test Module offers considerable total cost savings over manual testing methods. The HI-2651 test Module interfaces with existing automated oven production systems for lowest total cost with improved productivity.



#### **PRODUCTS LINES**

#### **Broadband RF**

Holaday manufactures full range of survey instruments for monitoring human exposure to radiofrequency electromagnetic fields. Electric and magnetic field probes connect to a broad selection of readout and display devices and monitor field exposures from 10 kHz to greater than 40 GHz. Special purpose instruments measure induced body currents and offer personal monitoring of workplace environments.

Providing assistance to health and safety professionals for more than 35 years, Holaday is in the forefront of EMF safety. In addition to a comprehensive line of instruments, accessories and services for EMF radiation hazard markets, we offer a world-class calibration facility and an application engineering staff that can provide for your specialized needs.

#### Low Frequency

We offer a wide assortment of survey and monitoring instruments specifically designed to measure the complex electric and magnetic fields. Sources include high voltage power lines, computer monitors, televisions, home appliances, and other electrical power equipment. VLF instruments monitor electric and magnetic fields up to 400 kHz for a wide range of industrial applications which use electromagnetic energy. Options include single axis or isotropic readings, data logging, digital or analog data displays, fiber optic control for remote monitoring, analysis software, etc.

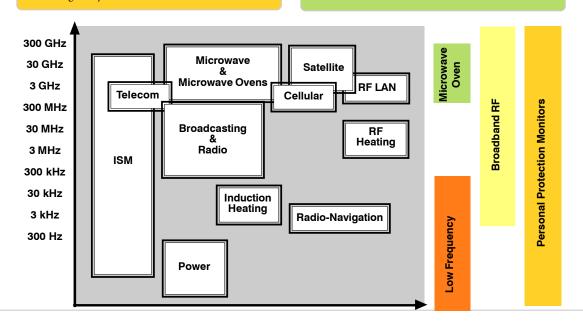
**Personal Protective Equipment (PPE)** 

Holaday helps health and safety professionals monitor the workplace for high EMF levels with a variety of innovative products. Portable personal monitors can be worn in a pocket or belt, area monitors provide continuous surveillance over any critical area requiring protection of personnel or equipment, and RF protective lothing provides the best means to minimize radiofrequency RF exposure. RF signage is available to provide proper notice of possible hazards for broadcast, elecommunications, and industrial process areas.

#### Microwave Oven

Our microwave oven survey instruments encompass products from handheld leakage meters to production ine automatic testing and stand-alone calibration systems. Our equipment provides the accuracy required by oven manufacturers, service technicians, regulatory agencies, and public health officials.

Holaday provides a full service calibration and repair facility for all its products, offering customers the assurance that their instruments will always be available when needed for accurate and reliable measurements.



#### Our Services

#### **Basic Training**

Holaday provides training in all aspects of electromagnetic field measurement and safely. Training is tailored to the unique needs of the customer. Topics cover relevant physical principles, human body interactions with electromagnetic fields, explanations of various safety standards, and examples on how to determine compliance to these standards. The EM spectrum from DC to over 40 GHz is examined complete with instrument demonstrations to help reinforce the classroom work with practical field examples.

#### **Field and Technical Support**

Holaday provides support For those currently making measurements who need application help for their particular situation. We can help if you need assistance correlating instrumentation measurements and compliance assurance. This level of service can often be provided over the phone through support from Holaday's application engineering staff or using our web site. On the web site you will find reference materials and application notes ready to download to your PC.

Phone support is provided to our customers at no charge and covers the complete Holaday product range, including how our products can be used to monitor compliance.

#### **Full Service Compliance Testing**

Holaday offers a full service testing program to guide you in determining compliance.

This service incorporates Site Surveying, Measurement and Data Collection and Analysis, and Complete Test Reports detailing ambient EMF levels. Reports identify potentially hazardous or non-compliant areas, and offer recommenda-tions, if necessary, to aid you in getting your site back into compliance. Assistance on needed equipment (RF Safety Signage, Personal Protective Equipment for workers, etc.) is available.

#### **About ETS-Lindgren**

ETS-Lindgren is the proven world leader for components and systems that measure, shield and control electromagnetic energy. We provide solutions for EMI/RFI/EMF test and measurement applications as well as medical, industrial and governmental RF shielding requirements. Our product line ranges from simple bench-top diagnostic tools to fully integrated turnkey facilities.

Recently, ETS-Lindgren acquired Holaday Industries and their product line of quality EMF measurement probes and probe calibration services. Holaday probes are now manufactured by ETS-Lindgren and Holaday's probe calibration services have been added to our own broadening service capabilities.

As part of ESCO Technologies Corporation, ETS-Lindgren has the financial strength to meet our commitments, both today and tomorrow. A leading supplier of engineered products for growing industrial and commercial markets, ESCO is a New York Stock Exchange listed company (symbol ESE) with headquarters in St. Louis, Missouri.

#### US

1301 Arrow Point Drive Cedar Park, Texas 78613 +1.512.531.6400 Phone +1.512.531.6500 Fax info@ets-lindgren.com

#### UK

Boulton Road Pine Green Industrial Area Stevenage Herts, SG1 4TH United Kingdom +44.(0)1438.730700 Phone info@ets-lindgren.co.uk

# Singapore\* 87 Beach Road

#06-02 Chye Sing Building Singapore 189695 +65.6536.7078 Phone +65.6536.7093 Fax Lrfesin@singnet.com.sg

1917-1918 Xue Zhixuan Building No. 16 Xue Qing Road Haidian District Beijing P.R.C 100083 +8610.8275.5086 Phone +8610.8275.5503 Fax infochina@ets-lindgren.net

#### **Finland**

Mekaanikontie 1 FIN-27510, Eura Finland +358.2.8383.300 Phone +358.2.8651.233 Fax info@ets-lindgren.eu.com

#### France\*

Centre D'Affaires Paris Nord Batiment Ampere 93153 Le Blanc Mesnil France +33.1.48.65.34.03 Phone +33.1.48.65.43.69 Fax LRP.france@wanadoo.fr

**Japan** 4-2-6, Kohinata, Bunkyo-ku Tokyo, 112-0006 Japan +81.3.3813.7100 Phone +81.3.3813.8068 Fax info@ets-lindgren.com.jp

#### Brazil\*

Centre D'Affaires Paris Nord Batiment Ampere 93153 Le Blanc Mesnil France +33.1.48.65.34.03 Phone +33.1.48.65.43.69 Fax



www.ets-lindgren.com

Information presented is subject to change as product enhancements are made.

Contact the ETS-Lindgren Sales Department for current specifications.

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# EMF SAFETY MEASUREMENT SYSTEMS **MICROWAVE OVEN**



