

# EM Eye<sup>®</sup>—electromagnetic field, ESD Event and RF signal meter

[www.credencetech.com](http://www.credencetech.com)

## The Power of a Bench-Top Meter in Your Pocket

Whether you are in charge of product development, EMC compliance or ESD prevention, or equipment installation and maintenance, or if you are involved in research, your work depends on the test equipment you have available. The ability to take various measurements, to collect and store data, to present the data in the most convenient way, and to process it on a computer, along with the portability of your instruments, determines what you can or cannot achieve.

To make your job a little easier, Credence Technologies has developed EM Eye<sup>®</sup>—the smallest and most versatile instrument for measuring EM fields, RF signals and ESD events.

Weighing just 7.5 oz., EM Eye can literally fit in a palm of your hand or in your shirt pocket. This broadband EM field meter offers exceptional sensitivity and, due to its unique design, is equipped with three different detectors—average, peak, and quasi-peak. In addition, EM Eye features the ability to measure amplitude modulation and transmitter EIRP. EM Eye's miniature detachable antenna can be replaced with an RF adapter for RF signal measurements. EM Eye is the ultimate instrument to detect, locate, count, measure and log ESD Events.



As small  
as it gets™

## Applications

Electromagnetic Fields:  
Electromagnetic Compliance  
Antenna Installation and Maintenance  
Telecommunications  
(CW, TDMA/GSM/DECT)  
RF Safety  
Diagnostics of Power Equipment  
Interference Analysis  
Site Survey  
ESD Events:  
ESD Audit and Survey  
ESD Environment Diagnostics and  
Interference Analysis  
Reduction of Yield Losses caused by ESD  
Data Logging for ESD Reports and  
Statistical Analysis  
RF Signals:  
Product Design  
R & D  
Service, Repair and Maintenance  
of RF Equipment

## Features

Electromagnetic Fields:  
Measures electromagnetic field strength over  
a wide dynamic range  
Measures both continuous and pulsed fields  
Measures field strength and power density  
Measures EIRP of a transmitter (CTM045)  
Locates sources of EMI  
ESD Events:  
Detects ESD Events and locates their sources  
Measures the magnitude of individual ESD  
Events  
Counts ESD Events  
Logs ESD Events with their magnitude and  
time/date stamp (CTM045) for generating  
ESD environment diagrams and records  
Lets you listen to ESD Event “crackles” via  
internal speaker or optional headphones.  
RF Signals:  
Broad frequency range (up to 2GHz)  
Wide dynamic range  
AVG/Peak/Quasi-Peak detectors  
Frequency counter

**EM Eye<sup>®</sup>**  
Model CTM041

**EM Eye<sup>®</sup>-DL**  
Model CTM045



**Credence  
Technologies, Inc.**



## EM Eye as an RF Voltmeter

Connect RF cable (see EM Eye Accessories) instead of antenna, and EM Eye becomes a miniature RF voltmeter featuring three detector types, overload indication, hold/max hold, reference-based measurements, AM%, data logging (CTM045) and more.

## EM Eye Accessories

Model **CTA211**



For use of EM Eye as an RF signal meter.

Kit includes:

- SMA/SMA adapter
- 3' (1.8m) RF cable
- 40dB attenuator for extended dynamic range

## Specification

General	
<b>Size</b>	
Body Only	4.72" x 2.39" x 1" (120 x 60.5 x 26mm)
With Antenna	6.23" x 2.39" x 1" (158 x 60.5 x 26mm)
<b>Weight</b> (incl. battery and antenna)	7.5 oz. (120g)
<b>Battery</b>	
	9V Alkaline, 8 hrs. operation typ.
<b>Audio</b>	
Speaker	AM Demodulated Signal
Headphone Jack	Internal with On/Off 3.5mm, optional headphones
<b>Computer Interface</b>	
RS232	With supplied cable
Data upload	EM Eye-DL model CTM045
Data Exchange Software	For MS Windows™ '95, '98, NT (model CTM045)
<b>Display</b>	
Type	LCD, multifunctional
Bar Graph	Lin/Log, Zoom
Display Backlight	LED w/auto off
<b>Detectors</b>	
	Average; Peak; Quasi-Peak
<b>Functions</b>	
REF	Reference Scales Absolute Units; %; dB
	Reference Level Auto-Zero, Adjustable
HOLD	Hold, Hold Max
<b>Overload Indicator</b>	
	On LCD display
Data Logging—model CTM045	
Number of Records, max.	1999 records
Real-Time Clock	Built-in
Recording Modes	Manual Event-based (set by Reference) Interval-based Averaging over a period Combination of any of the above
Data Retrieval	Local, Remote (with supplied MS Windows™-based software)
ESD Event Measurements	
ESD Event Reference	Auto 10% above ambient Adjustable
Measurement Modes	Individual Event Magnitude Event Counter Data Logging
Field Strength Measurements	
<i>All parameters are with the standard antenna</i>	
<b>Antenna</b> Detachable	
<i>Individual antenna data stored in internal memory of EM Eye</i>	
<b>Standard Antenna</b> Miniature Active Broadband	
Frequency Range	2MHz–2GHz
Size	0.75" x 1.7" 19mm x 43mm
<b>Laser Pointer</b> Class 3a	
(Active with directional antenna only)	
<b>Measurement Modes</b>	
Field Strength	V/m, mV/m, dBµV/m
Sensitivity (min.)	10mV/m 80dBmV/m 27nW/cm <sup>2</sup> 60dB typ. mW/cm <sup>2</sup> , µW/cm <sup>2</sup>
Dynamic Range	
Power Density	
Frequency Counter	
Frequency Range	10MHz–2GHz
Sensitivity	0.5V/m typ.
Amplitude Modulation	%
<b>Antenna Transmitting Power—model CTM045</b>	
Transmitter EIRP	mW, W
RF Signal Measurements	
<b>General</b>	
Input Connector	SMA Male (see Accessory Kit)
Input Impedance	50 Ohms
Frequency Range	1MHz–2GHz
Sensitivity (min.)	-60dBm/47dBmV/0.2mV
Max. Input Signal	
Direct Input	+5dBm
With Optional External Attenuator	+33dBm
<b>Measurement Modes</b>	
Signal Strength	mV, dBmV, dBm
Frequency Counter	
Frequency Range	10MHz–2GHz
Sensitivity	-40dBm typ.
Amplitude Modulation	%

### Model CTM041 includes:

- EM Eye
- User's Guide
- Plastic Storage Case
- Data Cable
- Battery

### Model CTM045 includes:

- EM Eye-DL
- User's Guide
- Plastic Storage Case
- Data Retrieval Software for Windows™
- Data Cable
- Battery

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**Credence Technologies, Inc.**

P.O. Box 5146  
 Santa Cruz, CA 95063, U.S.A.  
 Tel. 831-459-7488  
 FAX 831-427-3513  
 e-mail: [info@credencetech.com](mailto:info@credencetech.com)  
 web site: [www.credencetech.com](http://www.credencetech.com)