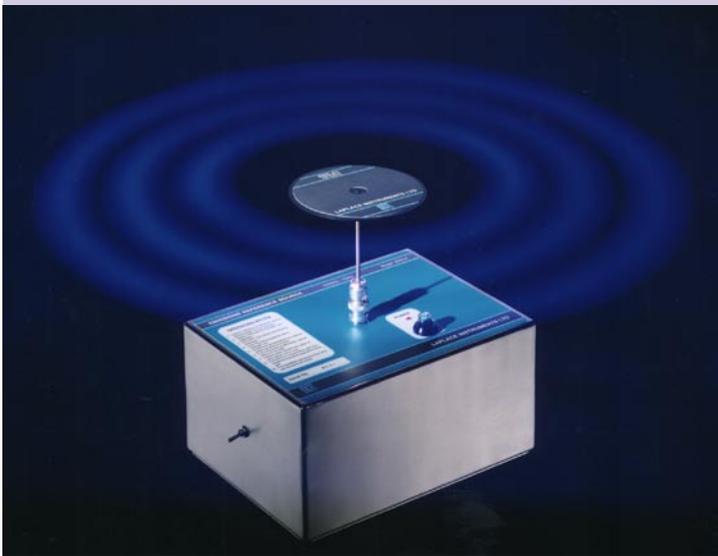


## Take the guesswork out of radiated emissions measurements up to 3GHz

Small, self contained emitters which generate a known, measured field strength at a standard measurement distance. These sources ensure measurement integrity and reduce measurement uncertainty.

- ▼ **Obtain true end-to-end calibration including site conditions, antenna and receiver.**
- ▼ **Frequency range from 30MHz to 3 GHz**
- ▼ **Ultra-stable emission level with traceable calibration**



The range comprises two models, the ERS and the EMC10.3G. Each radiate a known RF field strength and are supplied with calibration data measured at 3 metres. Their output is in the form of a closely spaced harmonic series which provides a continuous, narrowband signal covering the whole range. Measurements of these signals are unaffected by receiver RBW or detector type, reducing the possibility of error and ensuring a highly stable result. A key application for these sources is the measurement of test site characteristics so that non-compliant sites can be corrected.

**Reduce Measurement Errors** By correlation between the results on your site and the calibration data supplied with these sources, errors due to site distortions and instrumentation error are quantified and can be compensated.

**Site flexibility** If your site is somewhat 'less than ideal' then these sources compensate for the unwanted reflections, lack of ground plane and any other influences that may reduce result integrity.

**Self Contained** These units are shipped complete with antenna, battery, charger and calibration data. Their small size makes them ideal for spot checks and enclosure screening trials.



# Emissions Reference Sources

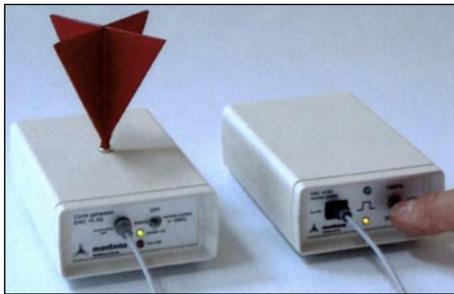
## General

The ERS and EMC10.3G sources have been developed originally for the evaluation of screened room resonances and other test site inconsistencies. They are now universally used for site integrity checks and for the calibration of all kinds of test sites from informal to compliant measurements OATS. Both units are supplied with individual calibration data measured under the following conditions:

Antenna- source distance: 3 metres  
 Polarisation: Vertical and Horizontal \*  
 Source Height: 0.8 metres  
 Antenna height: Scanned from 1 to 4 metres  
 \* ERS only

## Options

ERS-2: A low output version of the ERS with a field strength (at 3m) between 30 and 50dBuV/m (The equivalent figures for the standard version are 50-70dBuV/m. This lower output makes the -2 ideal for use in test cells and chambers and other enclosed spaces, avoiding the tendency to overload the instrumentation.



EMC10.3G/RC: A remote control unit which connects to the 10.3G source by optic fibre and enables on/off and harmonic spacing selection without entering the test area or chamber.

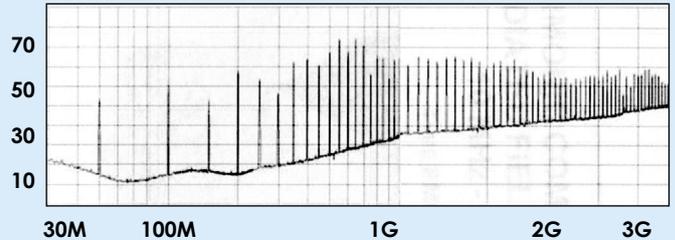
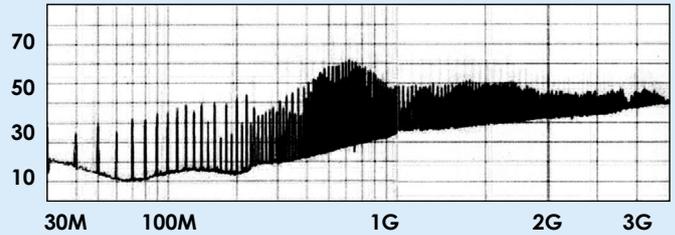
## Common specifications

RF output: From detachable antenna  
 RF signal: Continuous, steady state, narrow band, harmonic series.  
 Harmonic spacing  
     ERS: 2MHz  
     EMC10.3G: 10MHz and 50 MHz (switchable)  
 Frequency range:  
     ERS: 30MHz - 1GHz  
     EMC10.3G 10MHz - 3.5GHz  
 Power: Internal battery

Model	ERS	EMC10.3
Frequency range (MHz)	30 - 1000	10 - 3500
Harmonic spacing	2MHz	10MHz & 50MHz (switchable)
Frequency stability (ppm)	80	100
Radiant field polarisation	Vertical & horizontal	Vertical
RF level at 3m (dBuV/m) { Std ERS - 2	50 - 70 30 - 50	40 - 80
Battery type	Custom rechargeable	6LR61 9v PP3
Battery life before charging	4 hours	8 hours
Size with antenna (mm)	120 x 64 x 188	144 x 72 x 135
Weight	1.5kg	0.2kg
Control	On/Off only	On/Off Harmonic switch, local and remote

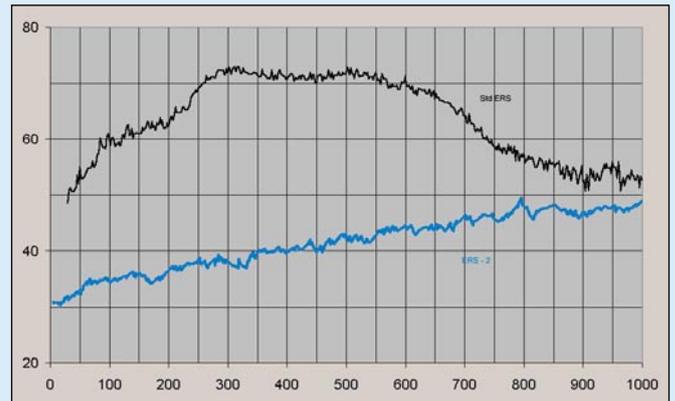
## EMC10.3G

Typical calibration plots for 10MHz and 50MHz harmonic spacing shown with log frequency axis



## ERS

Typical calibration plot showing harmonic peak values against a linear frequency axis. Both standard and low output versions are given.



Long term monitoring of annual calibration results over the past 6 years have shown that these sources have exceptional long term stability, with changes less than the measurement uncertainty of the calibration process

Available from:

R. A. Mayes Company, Inc.  
 10064 Deerfield Rd  
 Franktown, CO 80116  
 Tel: 1-800-742-9447  
 Website: www.ramayes.com

## LAPLACE INSTRUMENTS LIMITED

3B, Middlebrook Way, Holt Road,  
 Cromer, Norfolk NR27 9JR. UK

Tel: +44 (0)1263 51 51 60  
 Fax: +44 (0)1263 51 25 32  
 E-mail: tech@laplace.co.uk  
 Website: www.laplace.co.uk

