

## Certificate of Calibration

**Manufacturer:** Radian Research, Inc.  
**Instrument Model:** RD-33-333 Dytronic Portable Standard  
**Serial Number:** 300732  
**Firmware Revision:** 07.10.30  
**Error Specification:** .01% worst case



**Quality Management System  
ISO 9001 Certified**

**Customer Name:** Enercom, S.A.  
**Address:** Balboa, Calle Akee #1511-B APDO321  
 Balboqa-Ancon, Panama

**P.O. Number:** Warranty

**Environmental Conditions**  
 Temperature: 23°C +/- 2°C  
 Humidity: between 35% and 60%

**CE Number:**  
**RMA / Certificate Number:** 25538  
**Calibration Date:** 6-Nov-12

Based on the recommended calibration interval, the next calibration is due on: 6-Nov-13

**Radian Research's As-Found Test Results showed this Instrument to be:**

New    In Tolerance    Out of Tolerance    Inoperative    Limited Calibration  
 For Out of Tolerance conditions, As-Found Data Reports are furnished.

Radian Research Inc. certifies the instrument listed above meets or exceeds all published specifications and was calibrated in compliance with ANSI/NCCL Z540-1 using applicable Radian Research procedures which meet the requirements of ISO 9001:2008. This instrument was calibrated by a Radian Research RS-703A Syntron Automated Calibration System which is traceable to the National Institute of Standards and Technology (NIST). The RS-703A Calibration System is traceable within the limitations of NIST's services, by accuracies derived from accepted values of natural physical constants, or by accuracies derived from accepted ratio type calibration techniques. The RS-703A Calibration System is cross checked and calibrated on a schedule which is adjusted to maintain required accuracies and traceability.

**Software used for Calibration:** RS-703A Control Program Rel.04.30.03 Test Release Apr 6  
**RS-703A serial number:** 703125, 703140, 703192

**Applicable Traceability & Report Numbers for References used by Radian's Metrology Lab:**

Watt-hour, VA-hour, VAR-hour, Q-hour, Amp-hour, Volt-hour, Volt-Squared hour, AC Volt

Master Reference Bank consisting of (3) RD-22-RTS  
 Serial Numbers: 200717, 200718, 200719, Calibration Due Date: 4-Aug-13  
 Traceable to (3) RD-22-RTS SN's 202098, 202099, 202100 calibrated by NIST

Time Base (Frequency)

Arbiter Systems Model 1083B Satellite-Controlled Frequency Standard s/n B1057. GPS controlled system with an uncertainty of 0.000002ppm. No calibration required.

DC Volts

Fluke Model 732B DC Volt Standard s/n 7703004 with an uncertainty of ± .1ppm.  
 Fluke Certificate Number 10D5460; Calibration Due Date: 9-June-2013.

Resistance

Guildline Standard Resistor Model 9330/10K s/n 62623, 62624 with an Expanded Uncertainty of ± .321  
 Test Certificate C13947, C13948. Calibration Due Dates: 27-May-2013 and 26-May-2013 respectively

Other

Hewlett Packard 8 Digit Multi-Meter Model 3458A s/n 2823A02816. Agilent Technologies  
 Test Certificate Number 55915: Calibration Due Date 2-Mar-2013.

**Metrology Laboratory Technician Signature**

LAB  
88

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