

Certificate of Calibration

Manufacturer: **Radian Research, Inc.**
Instrument Model: **RD-33-333 Dytronic Portable Standard**
Serial Number: 300732
Firmware Revision: 07.10.35
Error Specification: .01% worst case



**Quality Management System
ISO 9001 Certified**

Customer Name: Enercom, S.A.
Address: Balboa, Calle Akee#1511-B Apdo 321
Balboa-Ancon Panama

P.O.Number: Wire Transfer
CE Number:
RMA / Certificate Number: 28508
Calibration Date: 22-Sep-14

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

Based on the recommended calibration interval, the next calibration is due on: 22-Sep-15

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/NCSL 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.

Procedure used for Calibration: 9912987
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: 31-Jan-2015
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 $\pm .1$ ppm.
Fluke Certificate Number 12D5460; Calibration Due Date: 26-Oct-2015.

Resistance

Guilidine Standard Resistor Model 9330/10K s/n 62623, 62624 with an Expanded Uncertainty of $\pm .320$ ppm.
Test Certificate GCS15215, GCS15216. Calibration Due Dates: 25-Oct-2015.

Other

Hewlett Packard 8 Digit Multi-Meter Model 3458A s/n 2823A02816. Agilent Technologies
Test Certificate Number 60277: Calibration Due Date 21-Oct-2014.

Metrology Laboratory Technician Signature

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