MADGETECH
WE BUILD DATA LOGGERS

RFVolt2000A

Wireless Voltage Data Logger

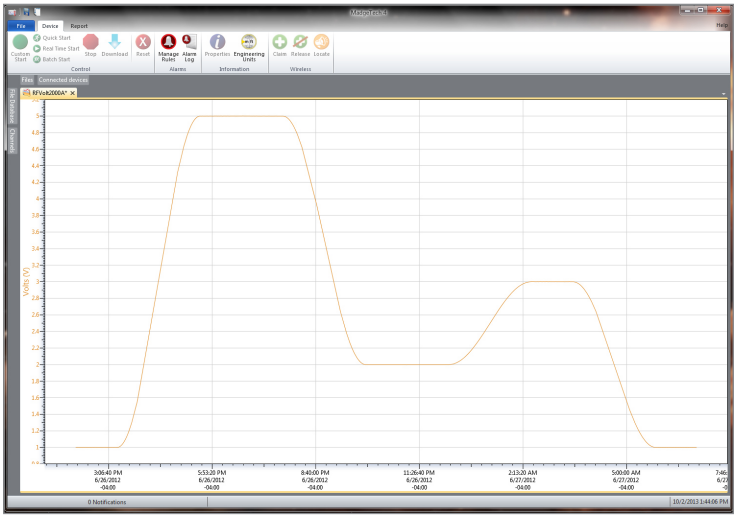
The RFVolt2000A is a wireless data logger designed to measure and record DC voltage signals. The data logger can connect directly to DC voltage sources which makes it ideal for battery usage studies, solar energy monitoring and other DC voltage monitoring applications. The RFVolt2000A can also be interfaced with a wide range of voltage output sensors, including pressure sensors and CO_2 sensors, as well as transmitters and other transducers. The RFVolt2000A is available in a 160 mV, 3.2V, 24V, or 32V measurement range.

The RFVolt2000A features an LCD screen which provides instant access to the current reading, minimum, maximum and average statistics. Through the software, the device can be programmed with engineering units, which convert the voltage signals into a different unit of measure such as PSI, % or PPM.

The RFVolt2000A-160mV model is a wireless, differential voltage data logger. The device is equipped with a three position terminal block to allow for a positive, negative and ground connection. This allows the measurement of the voltage difference between two signals tied to the same ground.

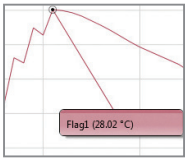
The RFVolt2000A can be used as a single, wireless data logging system, or it can be expanded to a large scale system, which can include hundreds of data loggers measuring a number of areas (additional MadgeTech wireless data loggers and transceivers may be required). The RFVolt2000A is compatible with the latest MadgeTech 4 Software.

MadgeTech 4 Software Features

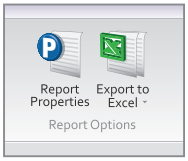


Graph View

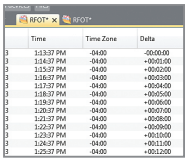
- Multiple graph overlay
- Statistics
- Digital calibration
- Zoom in/ zoom out
- Lethality equations (F0, PU)
- Mean Kinetic Temperature
- Full time zone support
- Data annotation
- Min./Max./Average lines
- Summary view



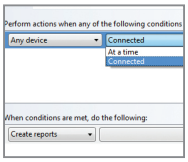
Cooling Flags



Export to Excel



Tabular Data View



Automation

Features

- Battery Life Indicator
- Digital Display
- Direct USB Interface
- AC Power connection via USB
- Configurable Alarms
- Ability to manually reset statistics
- 5 year battery life at 15 Minute Reading Rate
- 160mV Model Measures Differential Voltage

Benefits

- Digital Display Provides Instant Access to Current Readings and Statistics
- Minimal Long-Term Maintenance
- Readings displayed in users selected measurement unit
- Time and Money Saving with Battery Life Management
- Continuous monitoring
- E-mail, text message and audible alerts provides assurance and quality control

Applications

- Battery Usage Studies
- Solar Cell Monitoring
- Cathodic Protection Monitoring
- Applications that require an external sensor:
  - Pressure Monitoring
  - CO_2 Monitoring
- 160 mV Model Measures Radio or Electromagnetic Frequency Interference

SPECIFICATIONS

Specifications are subject to change without notice. Specific warranty remedy limitations apply. Call (603) 456-2011 or go to **madgetech.com** for details.

MEASUREMENT

Model	3.2 V	24 V	32 V	160 mV
Voltage Range	-3.2 VDC to +3.2 VDC	-8 VDC to +24 VDC	-88 VDC to +32 VDC	±160 mVDC
Voltage Resolution	0.1 mVDC	0.05 mVDC	1.0 mVDC	5.0 µV
Calibrated Accuracy	±0.05 % FSR at 25 °C			±0.01 %FSR
Input Impedance	125 kΩ			> 1 MΩ
Overload Protection	±50 V, indefinitely			3V
Analog Conversion Time	150 ms			
Frequency Rejection	50/60 Hz			
Response Time	150 mS at sensor			

WIRELESS

RF Frequency	2.45 GHz IEEE 802.15.4 ultra-low power wireless transceiver with fully bi-directional communication
Band	ISM band 2.405-2.475 GHz
Maximum Output Power	+0 dBm typical
Receiver Sensitivity (RFC1000)	-95 dBm typical
Transmission Distance (to data loggers)	RFC1000, RFC1000-CE & RFC1000-IP69K 2,000 ft max. outdoors - line of sight unobstructed 500 ft max. indoors - typical urban environment
Transmission Distance (to other RFC1000's)	RFC1000 4,000 ft max. outdoors - line of sight unobstructed 1,000 ft max. indoors - typical urban environment RFC1000-CE 2,500 ft max. outdoors - line of sight unobstructed 700 ft max. indoors - typical urban environment RFC1000-IP69K 4,000 ft max. outdoors - line of sight unobstructed 1,000 ft max. indoors - typical urban environment

BATTERY WARNING: BATTERY MAY LEAK, FLAME OR EXPLODE IF DISASSEMBLED, SHORTED, CHARGED, CONNECTED TOGETHER, MIXED WITH USED OR OTHER BATTERIES, EXPOSED TO FIRE OR HIGH TEMPERATURE. DISCARD USED BATTERY PROMPTLY. KEEP OUT OF REACH OF CHILDREN.

GENERAL

Reading Rate	1 reading every second up to 1 reading every 24 hours
Memory	32,2568 readings
LED Functionality	**Green LED** blinks every 5 seconds to indicate unit is logging **Blue LED** blinks every 15 seconds to indicate unit is in wireless mode **Red LED** blinks every 1 second to indicate alarm condition
Wrap Around	Yes
Start Modes	Immediate and delay start
Calibration	Digital calibration through software
Calibration Date	Automatically recorded within device
Battery Type	9 V lithium or alkaline battery included; user replaceable with any 9 V battery
Battery Life	Approximate 5 years typical for 15 minute reading rate
Data Format	Date and time stamped V, mV, µV, engineering units specified through software
Time Accuracy	± 1 minute/month
Computer Interface	USB to mini USB, 250,000 baud for standalone operation or RFC1000 required for wireless operation
Operating System Compatibility	Windows XP SP3 or later
Software Compatibility	Standard Software version 4.1.8.0 or later Secure Software version 4.1.7.0 or later
Operating Environment	-20 °C to +60 °C (-4 °F to +140 °F), 0 %RH to 95 %RH non-condensing
Dimensions	3.5 in x 3.17 in x 0.95 in (88.9 mm x 80.5 mm x 24.1 mm) - Data logger only
Material	ABS Plastic
Weight	4.4 oz (125 g)
Approvals	US (FCC), CA (IC), CE, South Korea (KCC), China (CMIIT), Japan (LCIE)
Alarm	User configurable high and low audible, on-screen, email and text (SMS) alarms. Alarm Delay: A cumulative alarm delay may be set in which the device will activate the alarm (via LED) only when the device has recorded a user specified time duration of data.
Audible Alarm Functionality	1 Beep per second for reading alarm above/below threshold

Ordering Information

RFVolt2000A-3.2V	PN 901460-00	Wireless Voltage 3.2 VDC data logger
RFVolt2000A-24V	PN 901450-00	Wireless Voltage 24 VDC data logger
RFVolt2000A-32V	PN 901465-00	Wireless Voltage 32 VDC data logger
RFVolt2000A-160mV	PN 901455-00	Wireless Voltage 160 mVDC data logger
RFC1000	PN 901383-00	Wireless RF receiver/repeater. USB to mini USB adapter & power supply included
RFC1000-CE	PN 901338-00	Wireless RF transceiver/repeater, CE approved for Europe. USB to mini USB adapter & power supply included
RFC1000-IP69K	PN 901389-00	Wireless RF transceiver/repeater, splash proof with an IP69K rating. USB to mini USB adapter included
RFC1000 Cloud Relay	PN 901900-00	MadgeTech Cloud Services Data Logging Hub
RFC1000-CE Cloud Relay	PN 901901-00	MadgeTech Cloud Services Data Logging Hub, CE approved for Europe
Power Adapter	PN 901839-00	Replacement USB universal power adapter
U9VL-J	PN 901804-00	Replacement battery for RFVolt2000A

For Quantity Discounts call (603) 456-2011 or email **sales@madgetech.com**