

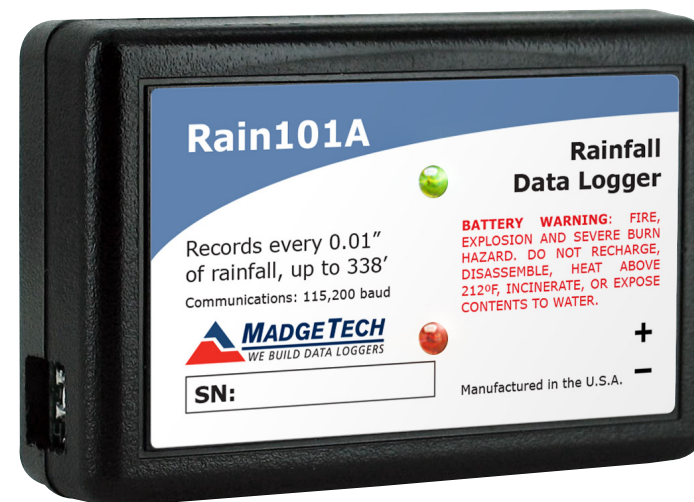
Description	Rain101A
Accuracy	±4% over range of 1" to 6" per hour
Orifice	8" dia. (204mm dia.)
Reed Switch Contact Rating	3W, 28VAC
Rainfall Per Bucket Tip	0.01" (0.254mm)
Operating Environment	-20°C to +80°C (-4°F to +176°F), 0%RH to 95%RH non-condensing
Construction Materials	Funnel: anodized aluminum; Base, body, bracket, tipping bucket: PVC
Mounting	(3) 1/4" (6mm) dia. holes on 9.5" (241mm) dia. circle
Tripod/Mast Kit	Contact factory for availability
Rain Gauge Dimensions	12.0" x 8.4" dia. (305mm x 214mm dia.)
Enclosure Dimensions	3.5" x 2.9" x 1.1" (87mm x 73mm x 27mm)
Shipping Weight	10lbs (4.5kg)
Data Memory	406,323 readings; software configurable memory wrap
Baud Rate	115,200
Typical Battery Life	10 years typical
Weight	Rain Gauge: 10 lbs (4.5kg) Enclosure and data logger: 9 oz. (254g)
Materials	ABS Plastic
Approvals	CE

Battery Warning

WARNING: FIRE, EXPLOSION, AND SEVERE BURN HAZARD. DO NOT SHORT CIRCUIT, CHARGE, FORCE OVER DISCHARGE, DISASSEMBLE, CRUSH, PENETRATE OR INCINERATE. BATTERY MAY LEAK OR EXPLODE IF HEATED ABOVE 100°C (212°F).

Specifications subject to change.

See MadgeTech's terms and conditions at www.madgetech.com



Rain101A
Rainfall Data Logging System

Product Notes

Selecting a Location

It is necessary to shield the gage from the wind to obtain an accurate measurement of precipitation. The following should be taken into consideration with placing the Rain101A:

- Trees, bushes, and shrubbery provide natural shields from the wind. If natural protection is unavailable, a wind shield should be constructed.
- The gage must be clear of obstruction or surfaces that could splash water into the orifice.
- The gage should be located in the center of a circle clear of obstructions.
- In locations where heavy snowfall occurs, the gage should be mounted on a tower high above the average snow level. *Note: This unit does not measure snowfall, this is a precaution to avoid burial.*
- A stable, level mounting platform is required to attach the rain gage.

Installation of the Rain101A

- Remove the funnel from the top of the gage and remove all packing material from it.
- Verify that the bucket moves freely on its pivot.
- The gage must be level to operate properly. Use a carpenter's level to check that the gage is level in all directions. Washers can be used under the feet as shims.
- Attach it to the mounting platform with ¼" bolts (3 locations on a 9-1/2" bolt hole circle).
- Run the 50' (ft.) of provided cable to the location where the data logger will be mounted, securing it roughly every 2 feet. There are 4 mounting holes (0.2 in. diameter spaced 2.5 in. square) on the water-resistant enclosure.

Interpreting the Data

For information on how to interpret the downloaded data, please refer to the document "Rain101A Rainfall Data Logger Quick Setup Guide" on the MadgeTech website.

Installation Guide

Installing the Interface cable

- IFC200
- Insert the device into a USB port. The drivers will install automatically.

Installing the software

Insert the Software USB Stick in an open USB port. If the autorun does not appear, locate the drive on the computer and double click on Autorun.exe. Follow the instructions provided in the Wizard.

Device Operation

Connecting and Starting the data logger

- Once the software is installed and running, plug the interface cable into the data logger.
- The device will appear in the Connected Devices list, highlight the desired data logger.
- For most applications, select "**Custom Start**" from the menu bar and choose the desired start method, reading rate and other parameters appropriate for the data logging application and click "**Start**". ("**Quick Start**" applies the most recent custom start options, "**Batch Start**" is used for managing multiple loggers at once, "**Real Time Start**" stores the

dataset as it records while connected to the logger.)

- The status of the device will change to "**Running**", "**Waiting to Start**" or "**Waiting to Manual Start**", depending upon your start method.
- Disconnect the data logger from the interface cable and place it in the environment to measure.

Note: The device will stop recording data when the end of memory is reached or the device is stopped. At this point the device cannot be restarted until it has been re-armed by the computer.

Downloading Data From a Data logger

- Connect the logger to the interface cable.
- Highlight the data logger in the Connected Devices list. Click "**Stop**" on the menu bar.
- Once the data logger is stopped, with the logger highlighted, click "**Download**". You will be prompted to name your report.
- Downloading will offload and save all the recorded data to the PC.

Device Maintenance

Battery Replacement

Materials: [Small Phillips Head Screwdriver](#), [3/32" HEX Driver \(Allen Key\)](#), [Replacement Battery \(LTC-7PN\)](#)

- Remove the Data Logger from the Waterbox101A using the Allen Key.
- Puncture the center of the back label with the screw driver and unscrew the enclosure.
- Remove the battery by pulling it perpendicular to the circuit board.
- Insert the new battery into the terminals and verify it is secure.
- Screw the enclosure back together securely.

Note: Be sure not to over tighten the screws or strip the threads.

Recalibration

The Rain101A system includes an Event101A data logger and a tipping bucket rain gauge. The data logger is programmed with engineering units to display in units of rainfall. The Event101A has a digital input signal and cannot be calibrated. A Certificate of Conformance can be provided.

To send the devices back, visit www.madgetech.com, select Services then RMA Process.