HOBO Rain Gauge

RG3 Data Logging Rain Gauge

0.2 mm RG3-M
0.01 in RG3
15.2 cm diameter
x 25.7 cm high (6 x 10 in)
1.2 kg (2.5 lbs)

The HOBO RG3 data logging rain gauge is a self-contained rainfall logger that includes an integrated data logger with a high-quality tipping-bucket rain gauge. The RG3's logger has a built-in temperature sensor and is on a cable so it can be used in an optional radiation shield for logging air temperature.

Key Advantages (RG3 and RG3-M models):

- Aluminum housing and 15.4 cm (6.06 in.) collector ring
- Field-proven design
- Logger can be moved into an optional radiation shield for logging air temperature
- Three mounting feet to use on flat, level surfaces (three screws included)
- Side bracket for mast mounting (hose clamps included)
- Self-emptying for continuous rainfall logging

Rainfall

Range:	Up to 320 cm (RG3-M), up to 160 in (RG3)
Resolution:	0.2 mm (RG3-M), 0.01 in (RG3)
Time stamp Resolution:	1 second
Calibration Accuracy:	±1.0% (up to 20 mm/hr [RG3-M], 1 in/hr [RG3])
Maximum rainfall rate:	12.7 cm (5 in.) per hour

Temperature

Range:	-20° to 70°C (-4° to 158°F)
Accuracy:	±0.47° @ 25°C (±0.85° @ 77°F); a solar radiation shield is required for temperature measurements
Resolution:	0.10° @ 25°C (0.18° @ 77°F)
Sample rate:	1 second to 18 hours, user-selectable

Memory

16,000 to 23,000 tips when recording rainfall only
25,000 to 30,000 total measurements when recording rainfall and temperature

Mounting the Rain Gauge

The HOBO Rain Gauge has provisions for mounting two ways: surface mounting (Figure 1) and pole mounting (Figure 2). Surface mounting is recommended where possible. Note: Figure 2 has logger deployed outside of rain gauge housing, mounted inside an optional solar radiation shield.

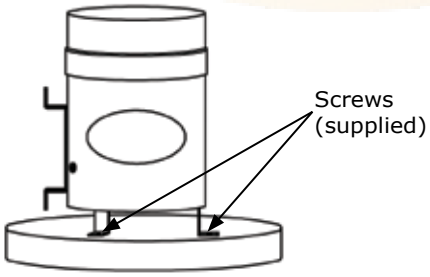

Figure 1: Surface mounting

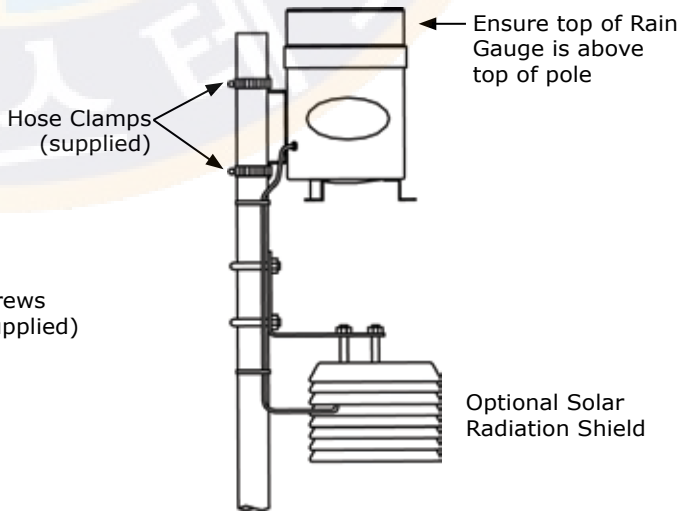

Figure 2: Mast mounting

Patented technology (U.S. Patent 6,826,664)

General Mounting Considerations

- The HOBO Rain Gauge housing MUST be mounted in a LEVEL position.
- A clear and unobstructed mounting location is necessary to obtain accurate rainfall readings. Tall objects can interfere with accurate rain measurements. It is recommended that you place the rain gauge away from the obstruction by a distance greater than three times the height of the obstruction If that is not possible, raise the rain gauge as high as possible to avoid shedding.
- Avoid splashing and puddles. Be sure the gauge is high enough above any surface that rain will not splash into the top of the collector.
- Vibration can significantly degrade accuracy of the tipping bucket mechanism. In windy locations make sure that the bucket will be vibration-free.
- For maximum sensitivity in low-moisture environments you can remove the collector screen. This eliminates water retention on the screen which could evaporate before being measured. The tradeoff is that without the screen, debris can get into the funnel and clog the orifice.

Complete system requires logger, software and base station.

Ordering Information

Data Logger
HOBO Rain Gauge

Software
HOBOware Pro Software (Windows/Mac)
Pendant® Base Station (required)

Communications and Accessories
HOBO U-Shuttle (requires Base Station)*
HOBO Waterproof Shuttle with Couplers**
Solar Radiation Shield

Tripod/Mast Accessories

1.5 Meter Mast
2m Tripod with Mast
1/4 in Stake Kit
Guy Wire Kit
1/2 in Stake Kit

* *Requires HOBOware Pro software. See page 52 for details.*
HOBOware includes USB interface cable
** *U-DTW-1 Data Shuttle can be used in place of base station (BASE-U-1)(See pages 70-71 for details).*

HOBO Pendant® Event

HOBO Pendant Event

7.1 x 3.3 x 2.3 cm
(2.8 x 1.3 x 0.9 in)
Cable 1.8 m (6 ft)
50 g (1.7 oz)

The HOBO Pendant Event data logger is ideal for rainfall logging and connects to most standard tipping-bucket rain gauges to determine rainfall rates, times, and duration.

Key Advantages:

- Records tips or momentary contact closures and temperature
- Event-based data storage provides detailed data and efficient memory usage
- Stores over 16,000 tips (160 inches of rainfall with a 0.01 inch rain gauge)
- Includes scaling to inches, millimeters, or other units

Memory:	Events only: 16K to 23K events Events and temperature: 25K to 30K data points
Battery life:	1 year (typical) — user-replaceable
	Weatherproof housing tested to NEMA 6 and IP67 CE

Rain Gauge Tips

External Event type:	Relay contact closure or rain gauge "tips"
Connection:	2 m (6 ft) cable with 2-wire input
Resolution:	1.0 second
Maximum input frequency:	1 Hz

Temperature

Range:	-20° to 70°C (-4° to 158°F)
Accuracy:	±0.54°C from 0° to 50°C (±0.97°F from 32° to 122°F); a solar radiation shield is required for temperature measurements
Resolution:	0.10° @ 25°C (0.8° @ 77°F)
Response time:	15 minutes (to 90% in airflow of 1 m/s)
Sample rate:	1 second to 18 hours, user-selectable

Complete system requires logger, software and base station.

Ordering Information

Data Logger	
HOBO Pendant Event	UA-003-64
Software	
HOBOware Pro Software (Windows/Mac)	BHW-PRO-CD
Pendant Base Station	BASE-U-1
HOBOware includes USB interface cable	
Optional Communications and Accessories	
HOBO U-Shuttle (requires Base Station)*	U-DT-1
HOBO Waterproof Shuttle with Couplers*†	U-DTW-1
Solar Radiation Shield	M-RSA

** Requires HOBOware Pro software, see page 52 for details.*
† U-DTW-1 Data Shuttle can be used in place of base station (BASE-U-1)(See pages 70-71 for details).