

Quick Reference

Stormwater Sampler SS505

Stormwater Sampler with Rain Gauge & Water Sensor Control

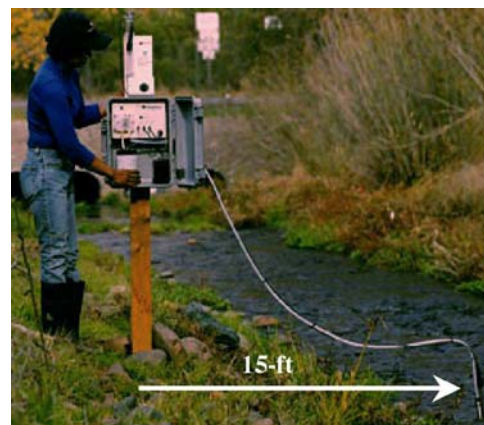
Collects discrete samples from waters at remote locations, triggered by level switch detecting high water and/or 24-hr rain gauge accumulation. Rain gauge auto-drains daily.

Basic Setup & Operation:

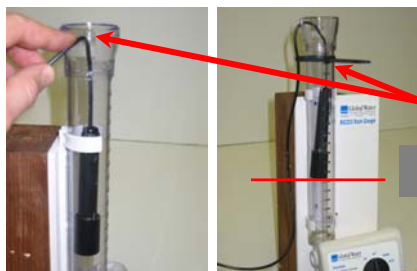
- Open the Sampler and remove the battery charger from the enclosure for safe storage while sampler is in field use. The spare sample bottle should be kept in the sampler for convenience.



store battery charger



- Install Sampler in its **vertical, upright orientation**, using a 4 x 4 post, convenient wall, or existing enclosure. The Sampler **MUST BE VERTICAL**. Locate within **fifteen feet of the water sampling site**.
- **Avoid drilling holes through enclosure**. Seal any holes made in the enclosure with silicone sealant to prevent water intrusion into the unit.
- Mount the Rain Gauge using the two pre-drilled holes in the gauge's backplate, ensuring that the **installation is away from trees and buildings**.
- At the desired time of daily auto-draining, turn the knob on the gauge to **SET for 10 sec**, then turn knob to **AUTO to commence automatic operation**. Turn to **DRAIN** to manually drain the rain gauge. Turn to **OFF** to stop the gauge from auto draining.



trigger level

- Insert rain sensor into rain gauge, placing tip at specified level of rainfall accumulation at which to trigger sample. Hook the sensor's cable into the groove at the top of the cylinder and secure the cable to the cylinder with the provided tie-wrap.
- Install the sample pickup hose and water sensor to a stake (eg: rebar) at the desired sampling location.



In Dry Channels, estimate the flow depth during a storm event and attach the pickup strainer at half that depth, securing excess hose and sensor cable away from the bottom of the channel.

In a Stream, submerge the pickup strainer and position at midwater depth using similar mounting material installed as above. For stream sampling, the water sensor is not used, as sampling is triggered only by the rain gauge sensor.



rebar



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Stormwater Sampler SS505 (cont'd)

- **Verify the power connections** at the battery and the control panel, and ensure that the sensor plugs are in place securely. **Turn on unit.**

For Dry Channel sampling, both the rain and the water sensors should be plugged into the control panel.

For **Stream sampling**, connect the rain sensor, but **use the bypass plug for the water sensor socket.**

NOTE: The Water and Rain Sensor sockets **MUST** have a working sensor or bypass plug in place for operation.



Use Bypass Plug when not using the Water Sensor (eg: Stream sampling)



- **Test the unit** with the sensors dry: Turn the switch ON, and use the "Sample Now" switch to test the pump. (This switch can also be used to take manual samples.)
Also, check that sampling is triggered by wetting the sensor(s).
Do not use distilled water, as the sensors need conductive (non de-ionized) water to properly perform.

- **Change Sample Bottle after Storm.** The sampler collects a one liter sample, approximately. A float switch in the sample bottle cap turns off the pump before the bottle overflows. Before stopping completely, a backflush routine acts to clear the pickup hose and strainer. After a storm, remove the sample bottle or transfer the sample to another vessel for analysis. Install a clean, empty bottle.



- **Check pump speed and battery voltage.**

Note the sound of a properly running pump. Run it manually (by pushing the "Sample Now" button) and listen to the sound – **if it grinds slowly, the battery may need charging.**

Verify the charge with a voltage meter to ensure the battery has not dropped to less than 10.5 volts. Recharge the battery by removing the leads connecting it to the sampler and connecting it to the supplied transformer (which plugs into a 110vAC wall socket). Connect Red to Red, Blue to Black.

Full recharge takes about 12 hours, and should be done monthly.



NOTE: The battery life will last longer if recharged before it drains below 10.5 volts.



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