River weir measurement

Many rivers and open channels have been historically monitored using a flume or weir structure that has been "rated" using empirical data. Typically this rating is based on the depth of the water running over/through the structure.

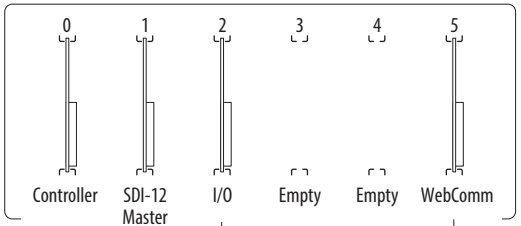
In recent times, the use of flumes and weirs has been negated somewhat by the advent of cheaper area/velocity methods. However, thousands of rated structures are still used worldwide in diverse applications such as large broad-crested weirs or smaller Parshall flumes. The HydroMace XCi includes built-in weir/flume equations and a look-up table that enables the user to interface downward looking ultrasonic or submerged depth sensors, and convert the depth readings to flow rate readings. The HydroMace includes equations for all major flume/weir types including:

- Parshall flumes
- V-notch weirs (30°, 45°, 60°, 90°)
- Cipoletti weir
- Replogle flume
- Rectangular weir (contracted/suppressed)
- 35-point user defined "Look-up" table

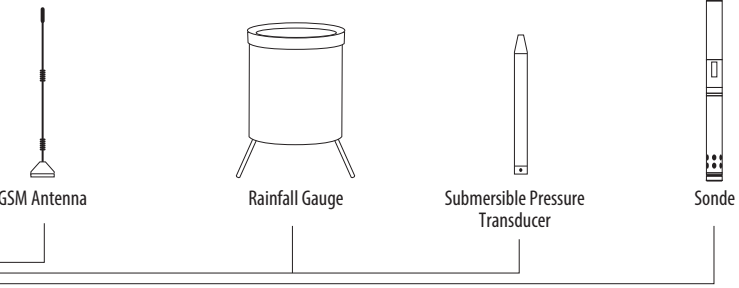
In the example shown, the HydroMace XCi is measuring the depth of flow across a broad-crested rectangular weir using a submersible depth sensor, converting this to a flow rate and totalising the result. Furthermore, water quality parameters are being monitored using a multi-parameter sonde and rainfall is gauged. With a MACE WebComm card installed, these readings are available 24/7 on the MACE website, as well as having the ability to be alarmed via SMS/email to any mobile phone.

HYDROMACE XCi

CARD SLOT CONFIGURATION



SENSORS/PERIPHERALS



www.macemeters.com

MACE - Australia
Unit 19 / 276 New Line Road, Dural, Sydney, NSW 2158, Australia
Phone: +61 2 9658 1234 Email: sales@macemeters.com

MACE - United States of America
In-Situ Inc. 221 East Lincoln Avenue, Fort Collins, CO 80524, USA
Phone: 1-800-446-7488 +1-970-498-1500 Email: sales@in-situ.com