Manual

Tipping Bucket Flow Gauge

Model 6506G and 6506H

Revision History

File name / Revision	Date	Authors & Change Details	Checked/ Approved
Previous version BX	2004	RS/ JH	MS
Unidata Manual - 6506 Tipping Bucket Flow Gauge Issue 2.0	2007	AB/CB/JH/MS/KC	MS
Unidata Manual 6253 - 6506G&H Tipping Bucket Flow Gauge Issue 3.0	2013	BP/ PC/MS	MS
Unidata Manual 6253 - 6506G&H Tipping Bucket Flow Gauge Issue 4.0	11/09/2013	MP	MS
Unidata Manual - 6506G&H Tipping Bucket Flow Gauge Issue 5.0.docx	12 12 14	IM/CB Update	MS

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1.0 INTRODUCTION

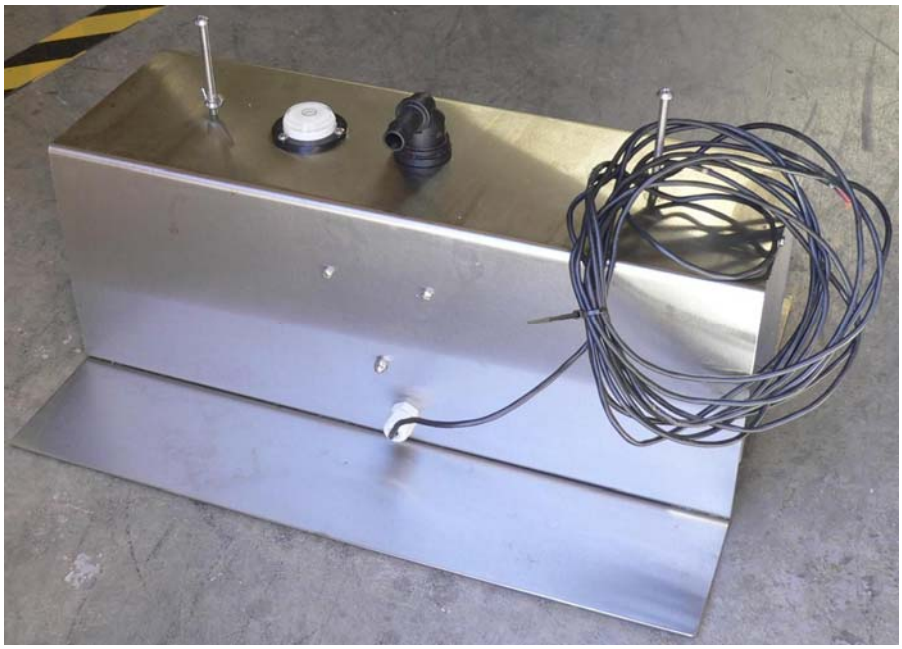
This manual describes the operation of a tipping bucket flow gauge (Model 6506G and 6506H) in a Unidata data logging system. This gauge is used for small volumetric flows which exceed the capacity of common rainfall gauges.

Flow is measured using a tipping bucket mechanism inside a stainless steel enclosure.

The 6506G is calibrated to measure in 75ml intervals which will cause the bucket to tip. It can measure up to 3 litres per minute.

The 6506H is calibrated to measure in 130ml intervals. It can measure up to 4 litres per minute.

A flow pipe directs liquid into the enclosure. Typical applications include: monitoring rainfall under a tree canopy, water flow in small creeks, or leakage from water storage dams.



2.0 INSTALLATION

1. Mount the instrument above ground level to allow the liquid being measured to drain through the gauze covered holes on the bottom of the instrument. Place weights on top of the base to ensure that the instrument is stable. Position instrument in shade if possible.
2. Level the instrument using the bullseye attached to the top of the instrument.
3. Connect flow pipe to black fitting on top of the instrument.

3.0 CONNECTION TO THE DATA LOGGER

The signal output is a series of digital pulses which are logged by the data logger via a counter channel.

The following connections are for **Counter Channel 0**. For other Counter channels, refer to the Data Logger hardware supplement.

Wire Colour	NRT	Starlogger and Prologger	
	FTS	6103E FTS	7100E FTS
Black (Signal)	C0	9	9
White (Gnd)	Gnd	10	10

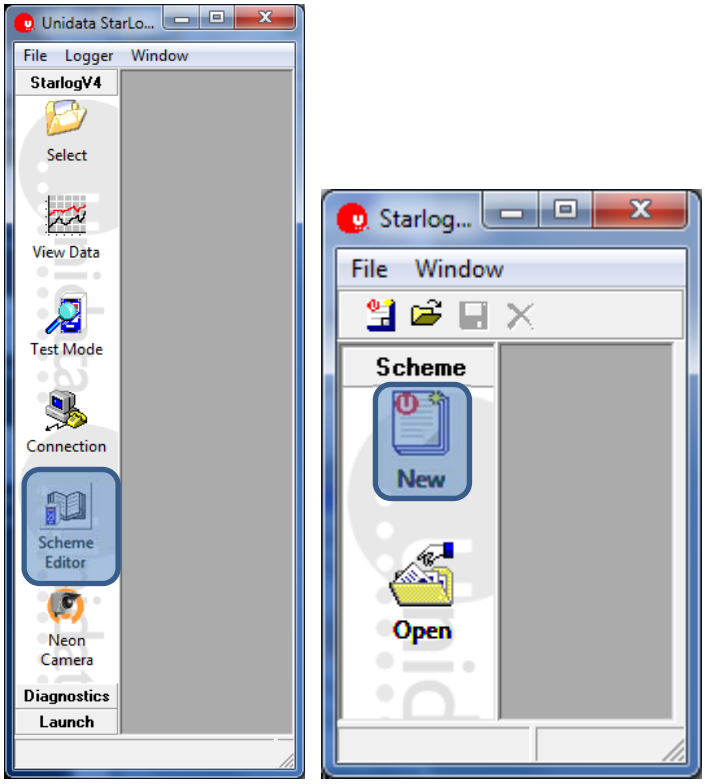
Counter Channel Prescale for the channel used should be set to 1 (one).

4.0 SETUP USING STARLOG SOFTWARE

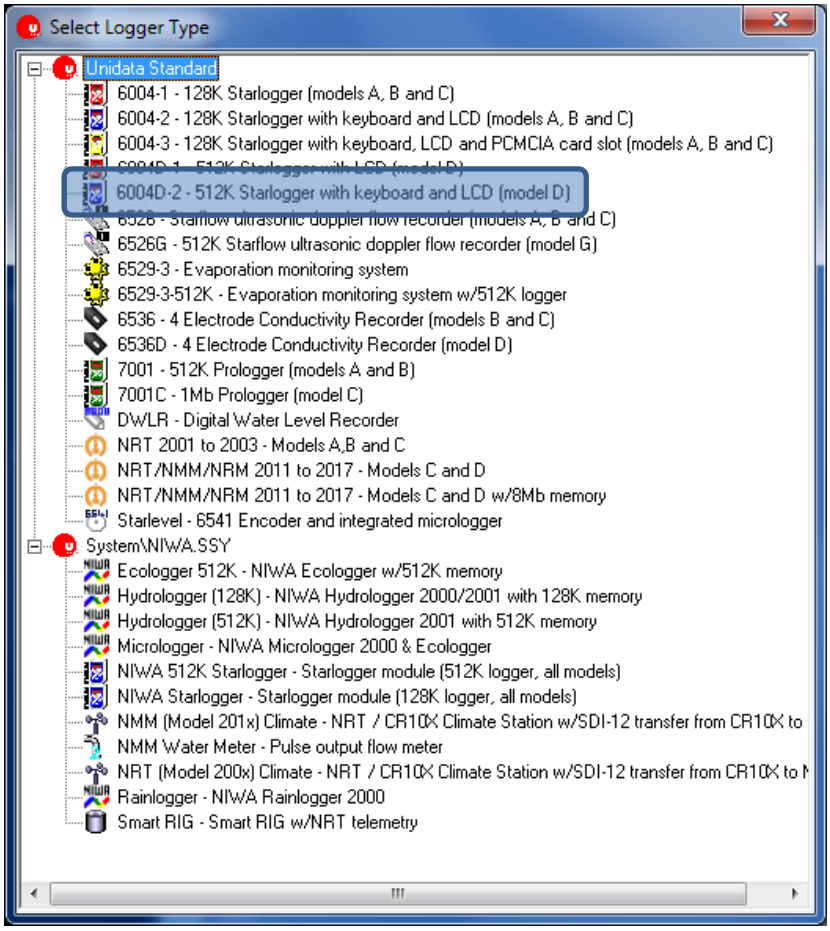
Using Starlog Software V4 an instrument must be created with the following transducer for Counter 0.

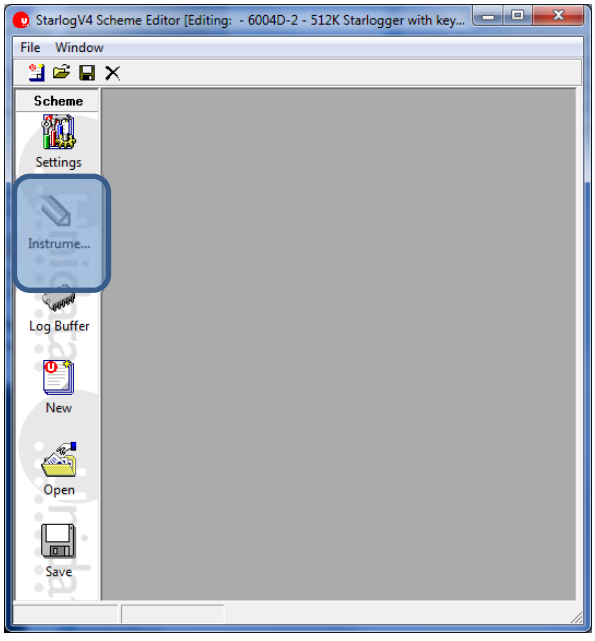
When setting up the scheme's logging definition using Starlog 4, choose the instrument "Rain gauge"

To create a rainfall monitoring scheme, select a Scheme Editor, New

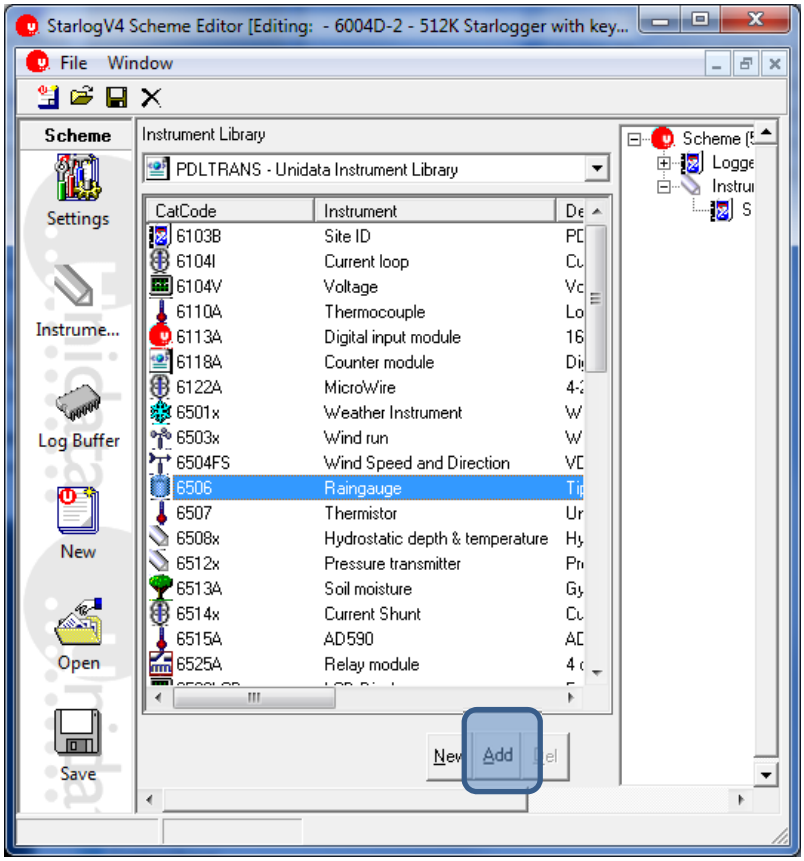


Select logger that you intend to use (e.g.6004-2 512K Starlogger), select Instruments

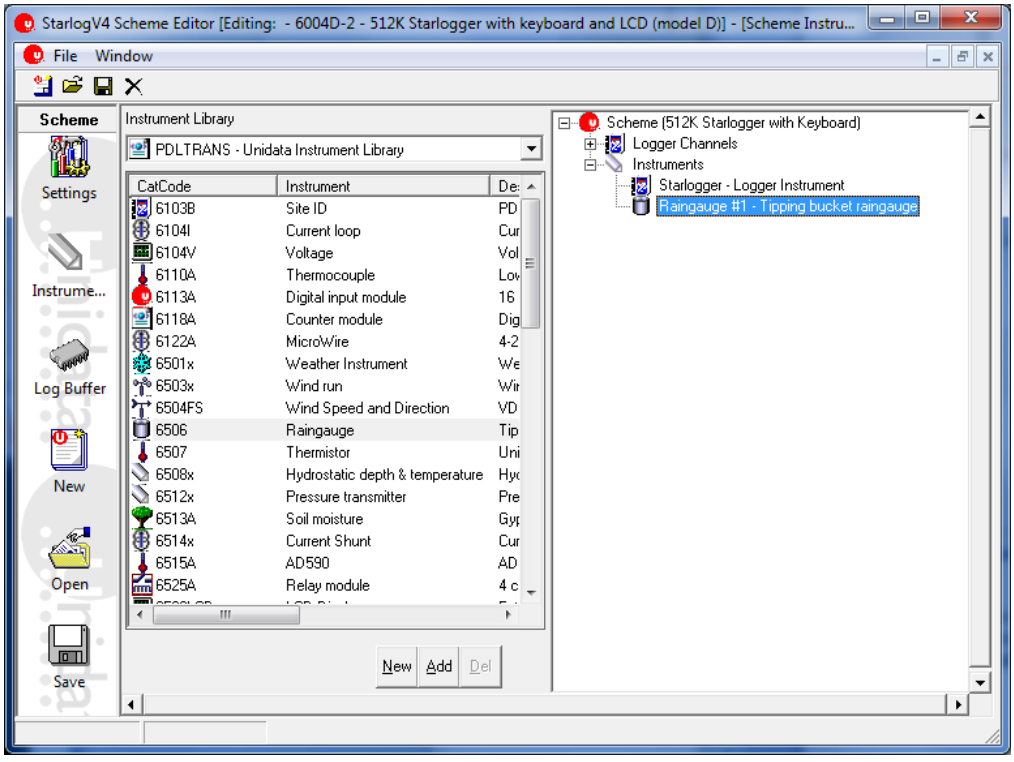




Select 6506 Raingauge and Add



Double click on selected scheme



Select counter channel (default C0), and Tip Size: User,
Set User Multiplier to 75 for 6506G or 130 for 6506H
OK