

QUICK SETUP GUIDE – FLOCCA FLOW

1.1 Install Flocca controller unit

- Hang unit on the side of the IBC with the bracket provided
- Open external door with key
- Open internal door with key and remove battery isolation strip as per instruction sheet included (if required)
- Close internal door



1.2 Solar Panel

- Set up the solar panel on top of the IBC
- Face panel north as much as possible
- Ensure no shadow on panel as this can significantly effect the solar panel efficiency
- Secure with zip ties to prevent it from moving or blowing off
- Attach cable to underside of Flocca unit



1.3 Install outlet assembly

- Screw connector onto IBC
- Attach rest of assembly to connector with the camlock clamp. Secure with pins. Keep solenoid upright
- Open IBC valve (the solenoid is default in shut position)
- Attach solenoid cable to underside of Flocca unit
- Attach flow meter cable to underside of Flocca unit



1.4 Install ultrasonic sensor

- Drill minimum 50mm hole in inlet pipe or over channel, at least 0.3m from the end of the pipe. Prefer 0.5m from end
- Make sure the hole is directly vertical above the invert of the pipe
- Secure the ultrasonic sensor with the nuts (or plates) provided
- Make sure the sensor cannot drop through the hole in the pipe!
- Measure the internal diameter of the pipe
- Measure the longitudinal grade of the pipe, with survey if possible (Note pipe grade is the most important factor in determining flow rate)
- **Delay attaching ultrasonic cable to underside of Flocca for now**



1.5 Turn on Flocca

- Open external door with key
- Turn on controller with switch next to screen

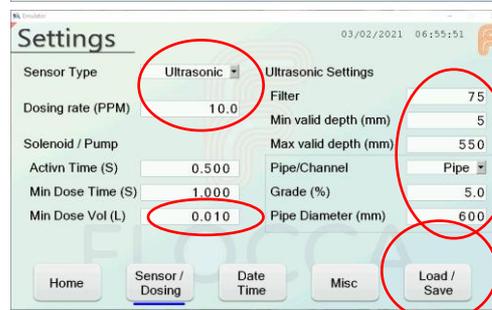
1.6 Enter time and date

- Enter New Date and Time using the touch screen and press Set
- Press Load/Save – Save to Flash (always save to flash, not SD)
- It is important to enter date and time correctly so that data logs are accurate



1.7 Enter sensor and dosing settings

- From Main Screen, go to Settings. Password is 123321
- Sensor Type > using the dropdown, select Ultrasonic
- Dosing Rate (PPM) > enter value as specified by jar test
- Min Dose Vol (L) ⁽¹⁾ > ensure value is at least 0.1L
- Filter⁽²⁾ > default value is 50. To aid with calibration, set to 5 for now.
- Min valid depth – normally set to 20mm
- Max valid depth – set to pipe size less 50mm
- Pipe/Channel > using the dropdown, select Pipe
- Grade – enter % value as measured (longitudinal), say 1%
- Pipe diameter (mm) ⁽³⁾ – enter value in mm (ie 600)
- Press Load/Save – Save to Flash



(1) **Min Dose Vol** – 0.1L has been found to be a reasonable average. For small basins or slow pump rates can be adjusted but will need to use inline tap to slow down flow rate.

(2) **Filter** – default value is 50 to prevent noise. This is the speed at which the ultrasonic reacts to signals. For calibration enter filter = 1 which is maximum speed. For general use enter filter = 50 to limit interference

(3) **Pipe diameter** – diameter and grade must be entered accurately since the controller will use these values to calculate the flow rate



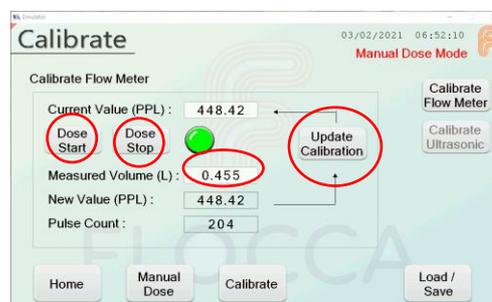
1.8 Calibrate Flow Sensor – step 1

- First perform manual dose to fill any voids and air pockets in outlet
- From Main Screen, go to Manual/Calibrate
- Dose Fixed Volume (L) – enter 0.5L
- Press Start (No need to press Stop, dosing will stop automatically)
- This first dose will fill any voids in the outlet assembly and hose



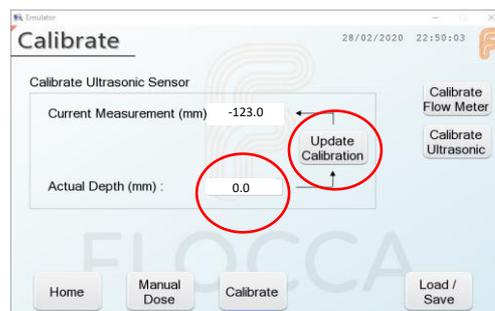
1.9 Calibrate Flow Sensor – step 2

- From Main Screen, go to Manual / Calibrate – Calibrate Flow meter
- Select Calibrate Flow Meter
- Remove hose and place measuring jar under solenoid outlet (or place at end of hose)
- Press Dose Start (solenoid will open and system will start dosing)
- When jar approximately 75% full, press Dose Stop
- Input volume in jar into Measure Volume (L)
- Press Update calibration. The Current Value (PPL) will update to site value
- Press Load/Save – Save to flash



1.10 Calibrate Ultrasonic

- Refer section 1.7 – in Settings set filter value to 1
- Now connect ultrasonic cable to Flocca unit
- From Home Screen, select Manual Calibrate - Calibrate
- Select Calibrate Ultrasonic
- Enter Actual Depth (mm) as 0
- Select Update Calibration
- Please be patient, there is an intentional lag and the system will take about 30 to 60 seconds to adjust to the correct value. The actual depth value will adjust to a value near 0, usually between -2 and +2.
- Select Load/Save – save to flash



Note: actual depth (mm) would only ever have a value if there is water running through the pipe at time of installation i.e. it is raining. In that case you will need to measure the actual water depth with a tape measure.

Once you are happy with the ultrasonic calibration, make sure to go to Settings and change the filter value back to 50.

If you wish to perform an additional test dose to double check dosing volume is correct (recommended), refer below

1.11 Manual (test) dose

- Place measuring jug at outlet hose, or remove hose and place at solenoid outlet
- From Main Screen, go to Manual/Calibrate
- Dose Fixed Volume (L) – enter 0.5L
- Press Start (No need to press Stop, dosing will stop automatically)
- Check that volume in jar matches fixed volume, within 10%
- If unsuccessful, perform step 2 in section 1.9 again.
- Set Volume (L) back to 0
- Press Home



Finished, your Flocca is now good to go!

Remember to flush the flow meter and solenoid with clean water when changing IBC's or before storing. The flocculants and coagulants used crystallise rapidly when exposed to sun and air and can clog the flow meter when not flushed.