

Flow Performance LLC

FP Flow Bench Setups

[Setup for testing via vacuum \(intake ports, intake manifolds, carbs\)](#)

[Setup for testing via positive pressure \(exhaust ports\)](#)

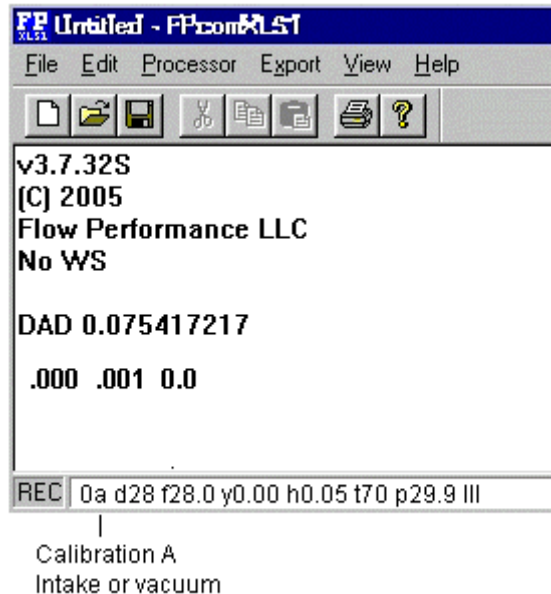
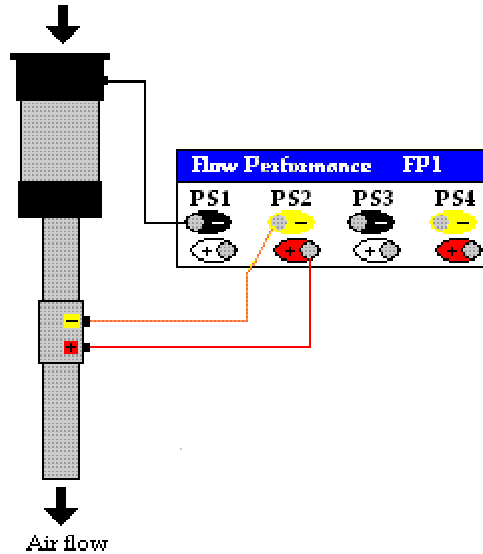
[Regulating test pressure](#)

[Estimate cfm \(not regulating test pressure\)](#)

[Velocity probe connection to FP1 PS2](#)

[Velocity probe connected to optional FP1 PS3](#)

Intake (vacuum)

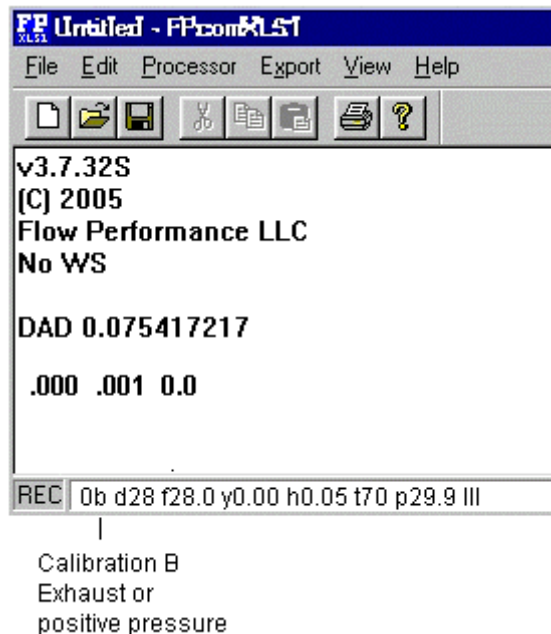
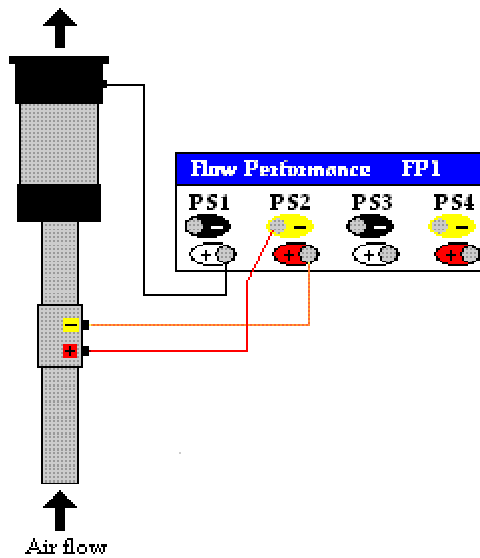


Calibration A is usually the calibration that is used when applying a vacuum to the flow bench. For Flow Performance flow bench kits, the A in the FPcom status bar should be a lower case a.

Select calibration A using the M command (M [ENTER] a [ENTER]), or Ctrl-A key combination, or clicking on the CAL A icon on the Fpcom tool bar.

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Exhaust (Positive Pressure)

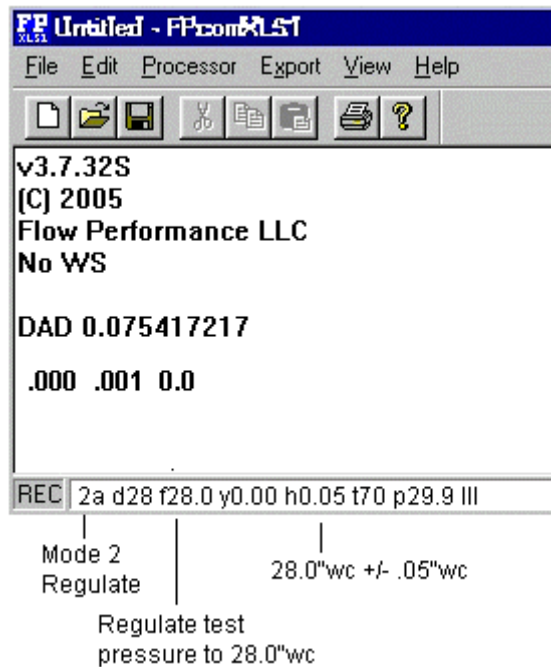
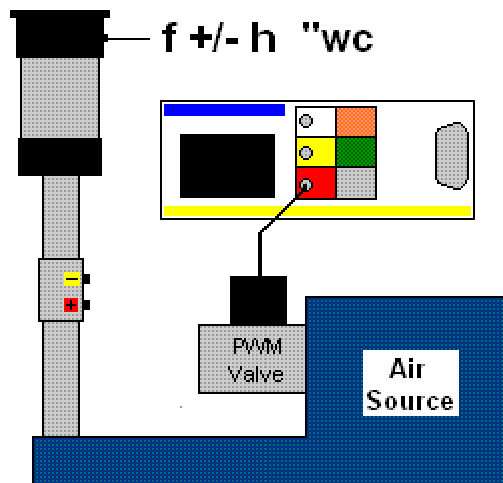


Calibration B is usually the calibration that is used when applying a positive pressure to the flow bench. For Flow Performance flow bench kits, the B in the FPcom status bar should be a lower case b. Select calibration B using the M command (M [ENTER] b [ENTER]), or Ctrl-B key combination, or clicking on the CAL B icon on the Fpcom tool bar.

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FP Flow Bench Setups

Regulate Test Pressure



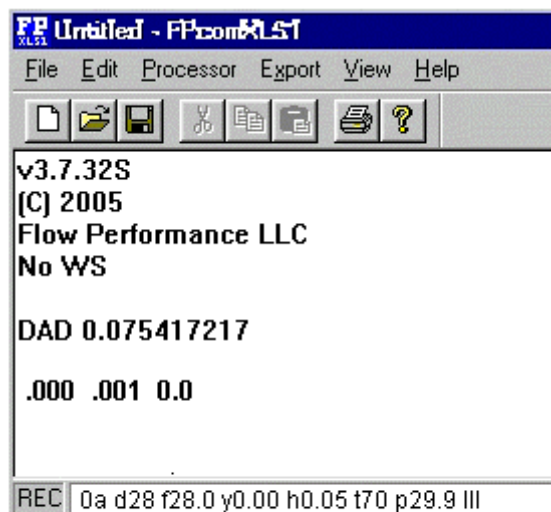
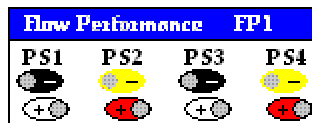
The test pressure of a flow bench is often regulated to a constant test pressure, usually 28"wc for typical automotive part testing. The flow bench operator can regulate the test pressure manually, or a Flow Performance PWM valve can be connected to the FP1 for automatic test pressure control.

When regulating the test pressure, mode 2 should be selected (m [ENTER] 2 [ENTER]). The desired test pressure should be entered into f (f [ENTER] 28 [ENTER]), using 28"wc as an example, and the test pressure tolerance entered in h (h [ENTER] .05 [ENTER]).

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Estimate CFM (not regulating test pressure)



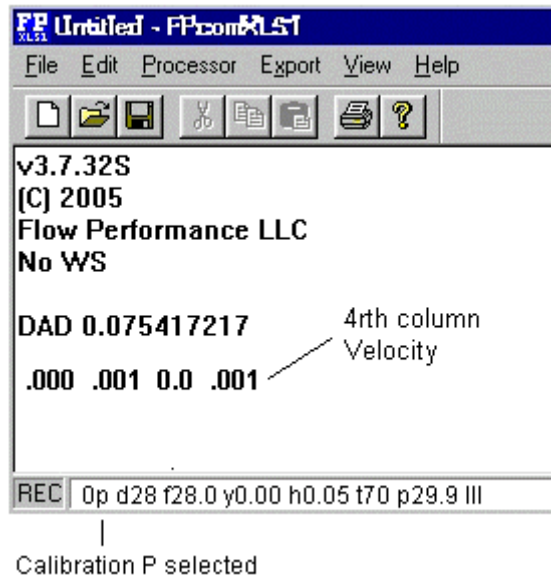
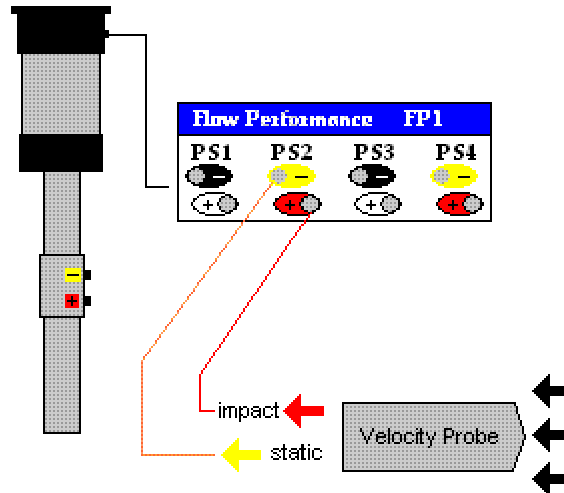
Mode 0 Estimate
Estimate to 28"wc
test pressure

The Flow Performance FP1 can estimate cfm to a test pressure other than the current test pressure. This allows flow testing without having to regulate test pressure. The flow bench operator enters the desired test pressure into d, usually 28"wc (d [ENTER] 28 [ENTER]). Mode 0 (zero) is selected for cfm estimation.. (m [ENTER] 0 [ENTER]). While in mode 0, the cfm is estimated to the value entered into d, no matter what the actual test pressure.

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Velocity probe on PS2



A velocity probe can be connected to the FP1 PS2. The user will have test pressure and velocity readings, but the cfm readings that will be generated by the velocity probe will be relatively meaningless (unless further settings are entered).

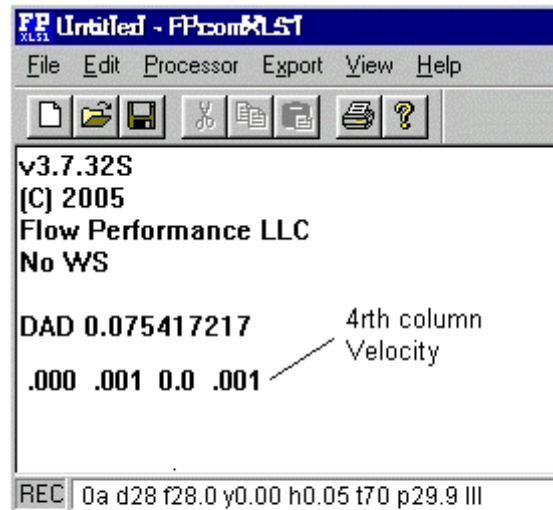
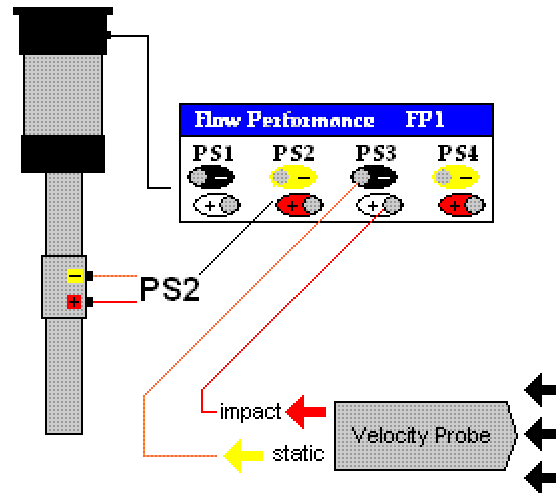
Calibration P is selected to enable PS2 for a velocity probe using the M command (M [ENTER] P [ENTER]), or the Ctrl-P key combination, or by clicking on the CAL P icon in the Fpcom tool bar.

Note, if a test pressure is present but the velocity reads zero, the connections to PS2 are probably reversed.

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FP Flow Bench Setups

Velocity Probe on PS3



4th column
Velocity
Calibration a or b
is selected
Not CAL P

The optional FP1 PS3 allows a velocity probe to be connected to the FP1 with full flow bench functionality.

PS3 is enabled with the a command, by setting a to 1 (a [ENTER] 1 [ENTER]).
PS3 is disabled with the a command, by setting a to zero (a [ENTER] 0 [ENTER]).
Disabling PS3 when not needed will speed up the operation of the FP1.

Note, if a test pressure is present but the velocity reads zero, the connections to PS2 are probably reversed.