

Version: 1.0

Title -MCTouch how to find sound speed

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(Issue 2)

## How to find Sound speed in an unknown pipe

## Sound Speed

This is basically a calculator to work out the time delay and velocity when a leak position is already known.

This is useful when the pipe material or sound velocity is uncertain.

BETWEEN SENSORS	
DISTANCE FROM EITHER SENSOR TO LEAK	CALCULATION TIME DELAY: -100.0ms
$ \begin{array}{c c} 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \end{array} $	DISTANCE FROM CENTRE TO LEAK: 0.0m SOUND SPEED: 0.0000m/ms
	ACCURACY: +/-0.0000m/ms
	+/-0.0000m/ms

If the Main Correlation Screen displays an "Out of Bracket" warning, indicating that a possible leak has been identified outside the area between the two outstations, the Sound Speed screen shown above will display the velocity reading from this out of bracket correlation.

This velocity reading will be useful in the next correlation, when the outstation has been moved so that the suspected leak position falls between the two outstations. This will bring the leak within the bracket to get a correlation result. The operator can choose whether to use the velocity calculation from the Out of Bracket attempted correlation to generate a user defined material or to continue using the default material velocities.

## **Document History:**

Edition	Date of Issue	Modification	Notes
1st		Release	
2nd	17/09/15	Format update	