

How to test an AC-63 sensor

Possible Tests

1. Testpulse

In GeoDAS you can send a testpulse to the sensor

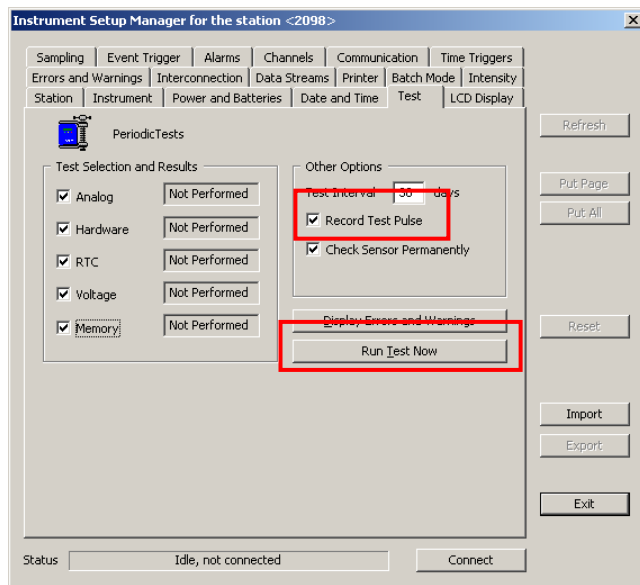


Fig 1. Instrument Setup Manager tab "Test"

To record the testpulse, make sure to enable the event trigger. At least "Level" or "STA/LTA" has to be set to "Yes"

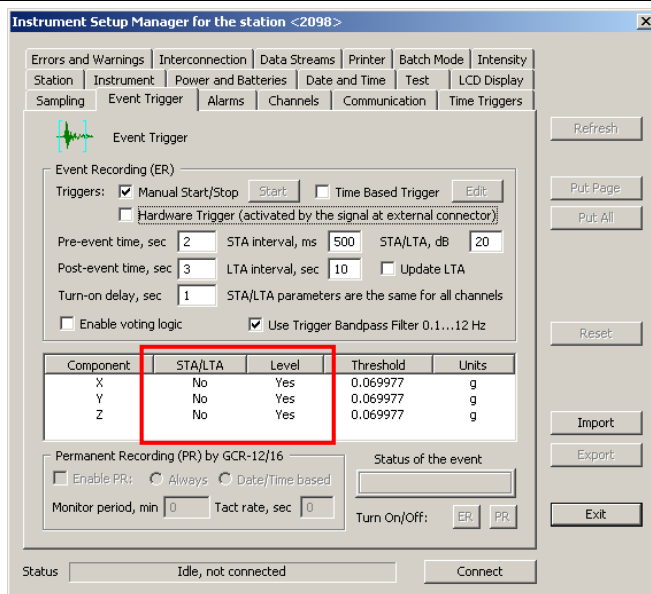


Fig 2. Instrument Setup Manager tab "Event Trigger"

It will look like this.

As on the AC-63 each cell creates its own testpulse, it can look different; especially the level can be different.

So make always sure, to compare testpulse results only from the same sensor.

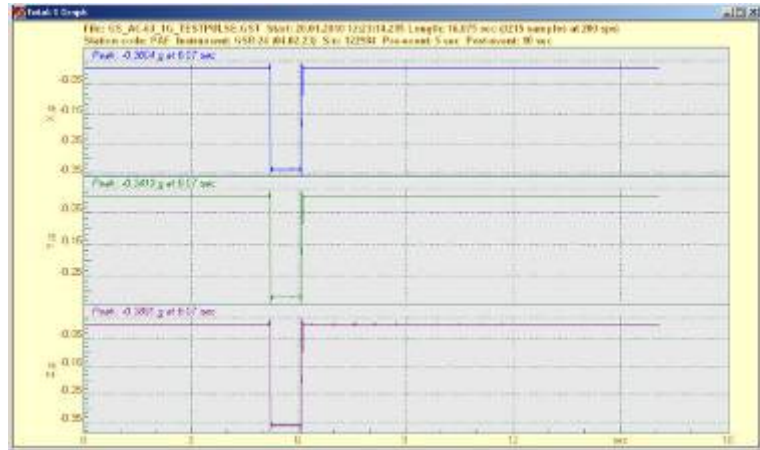


Fig 3. Testpulse AC-63

2. Tilt Test

On AC-63 it is possible also to make a tilt test.

Tilt the sensor on X / Y axis + and - 90° to get 1 g on the output.
For the Z axis you turn it upside down to get 2 g, except on a 1 g sensor you will get only 1 g.



Do always baseline corrections before you test

Baseline correction

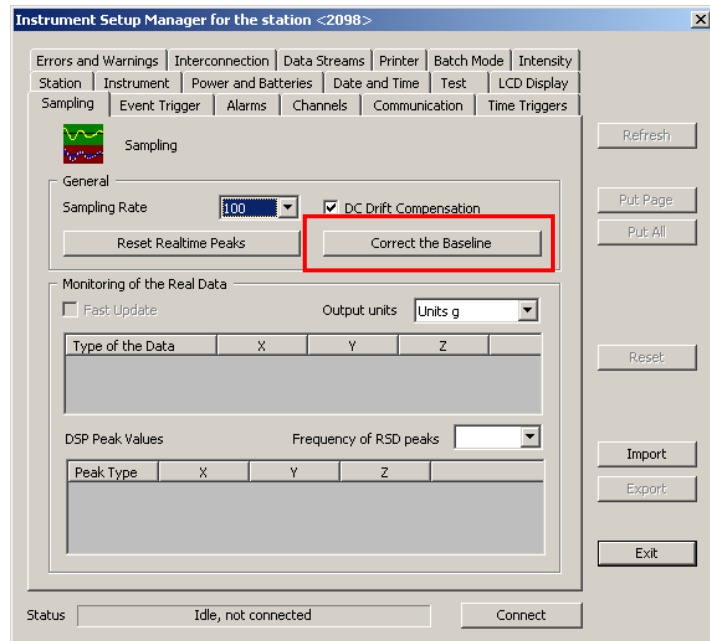


Fig 4. Instrument Setup Manager tab "Sampling"

Tilt in each direction and hold the sensor for a moment in each position.

Examples of tilt-tests

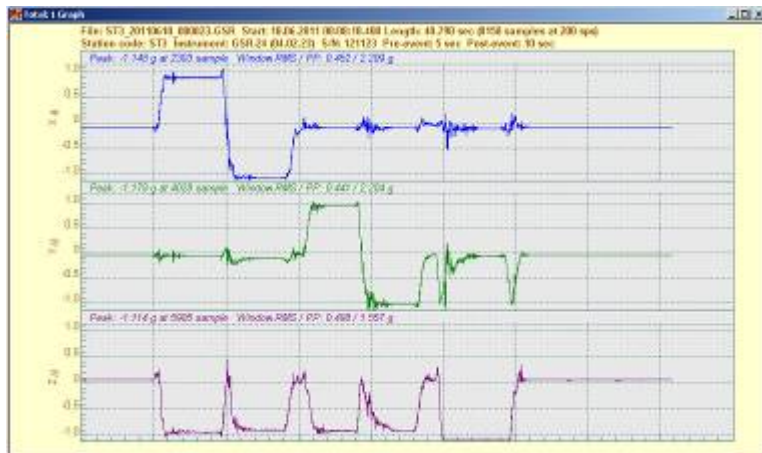


Fig 5. AC-63 1g tilt-test



Fig 6. AC-63 2 g tilt-test

X – Axis

(Pictures show standard orientation calibration

Depends how the sensor is calibrated, see the calibration label on the side)



Fig 7. tilt X - axis

X : +/- 1 g

Y : 0 g

Z : - 1 g

Y - Axis



Fig 8. tilt Y - axis

X : 0 g

Y : +/- 1 g

Z : - 1 g

Z - Axis



Fig 9. tilt Z - axis

X : 0 g

Y : 0 g

Z : - 2 g (except on a 1g sensor)

3. Eventtest

By shaking in each direction you can check if the sensor reacts properly and can reach the fullrange.



Fig 10. shaking in X direction*

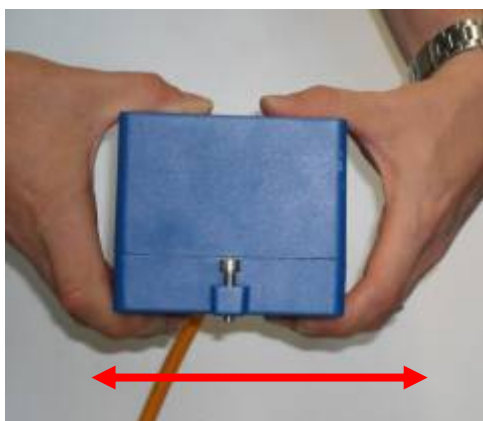


Fig 11. shaking in Y direction*

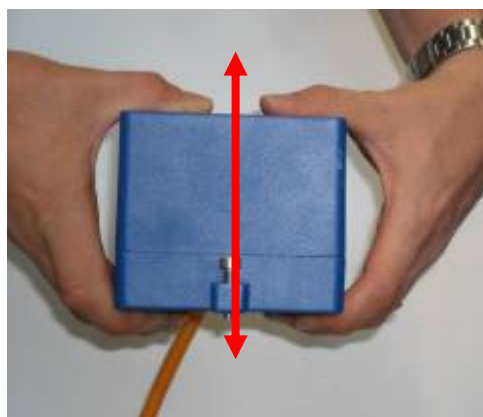


Fig 12. shaking in Z direction*

* depends how the sensor is calibrated, check the label on the side of the sensor

Example of an event test

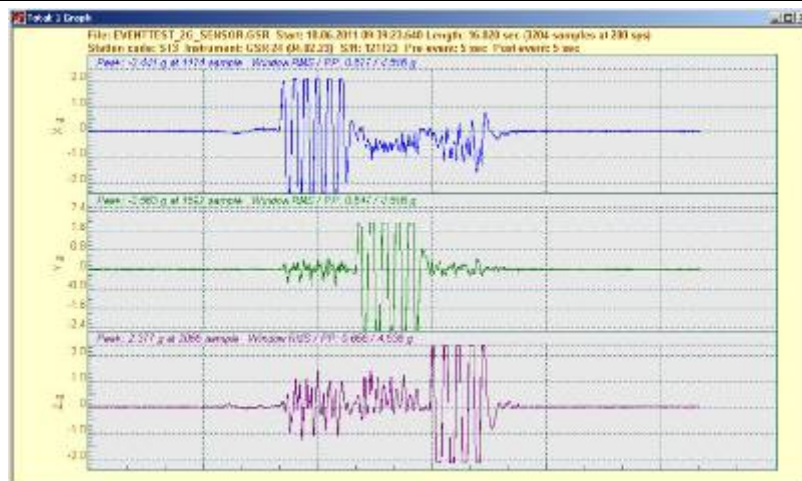


Fig 13. Eventtest on a 2 g sensor