

SPECTRO-3 Series

Changes from SPECTRO3-Scope V4.0 to SPECTRO3-Scope V4.1

Compared to the previous V4.0 version the new SPECTRO3-Scope V4.1 software version contains only minor changes that were made to make the sensor even more easy to handle.

It is possible to update the software from V3.3 to V4.1. In this case, however, an intermediate step is required to save the data.

The respective procedure is exactly described in the "[Firmwareupdate SPECTRO3 V3.x to SPECTRO3 V4.x](#)" file.

A software update from V4.0 to V4.1 can be performed quite easily.

All you need is the FirmwareLoader V1.0 and the firmware files for version 4.1.

The FirmwareLoader V1.0 can be found on the CD that was provided with the sensor.

The firmware files are available from your sensor supplier.

The respective procedure is exactly described in the "[Manual FirmwareLoader V1_0](#)" file.

The text below summarises the changes that were made with the software update from **SPECTRO3 V4.0** to **V4.1**.

Change no. 1:

Many of the changes that were made will not be noticed by the user, because they were made in the micro-controller, primarily with the intention of making the sensor faster and even more stable.

Change no. 2:

A new **SCOPE** tab that visualises an oscilloscope was introduced.

Depending on the **TRIG MODE** the display shows the **R G B** or **X Y INT** or **s i M** signals, and the status of the digital outputs.

A click on **GET CYCLE TIME** displays the current sensor scan frequency in **[Hz]** and **[ms]**. The current scan frequency must be determined for the correct calculation of **deltaX[ms]**. Please give the sensor 8 seconds to determine the correct scan frequency before you click on **GET CYCLE TIME**.

In **TRIG MODE = SINGLE SHOT** a click on **SCAN** records a data frame and displays it in the graph.

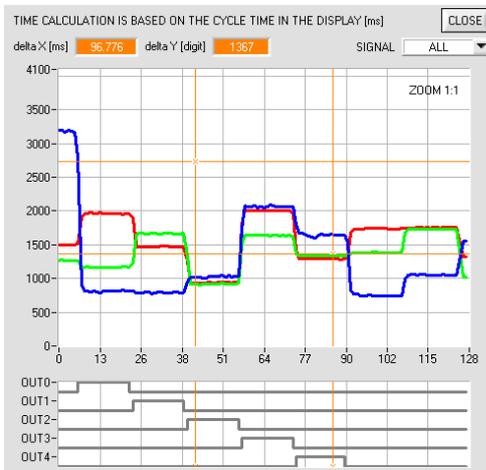
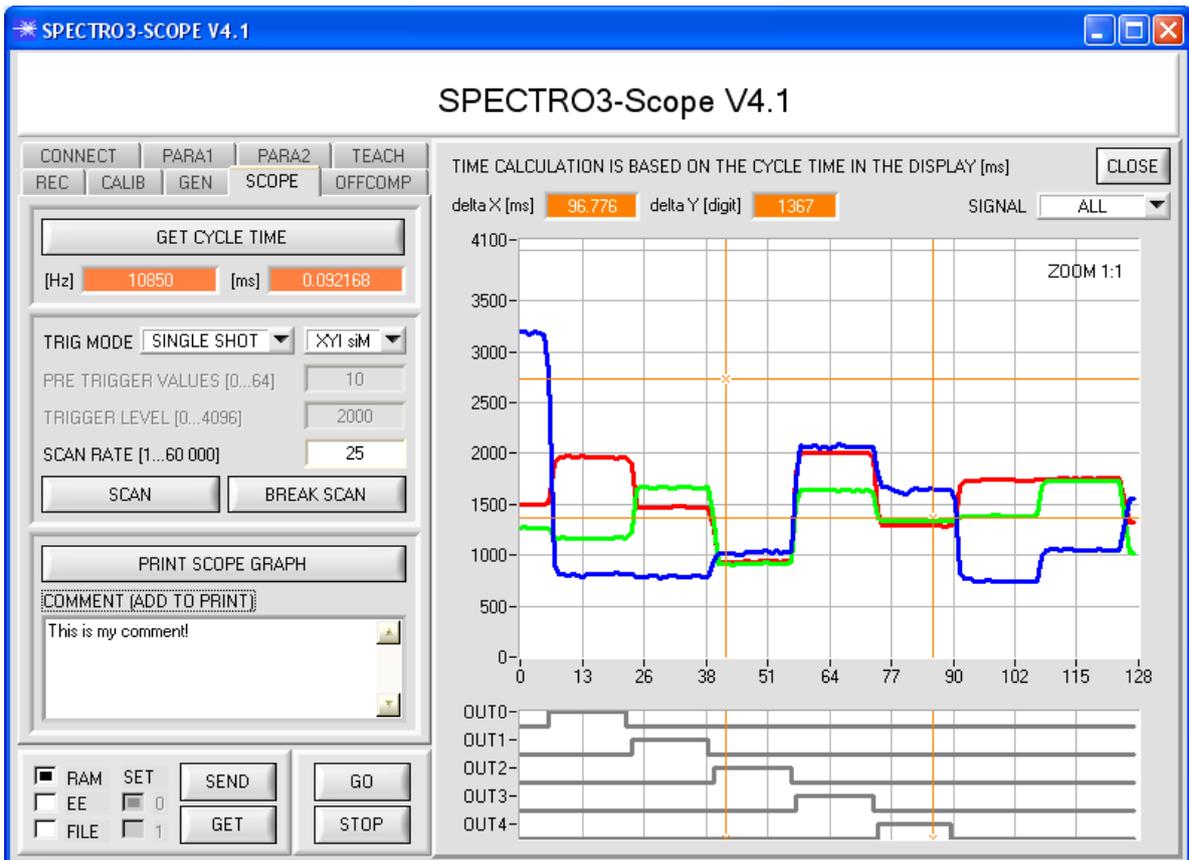
In **TRIG MODE = FALLING EDGE** and **RISING EDGE** a click on **SCAN** starts triggered recording. A trigger start can be defined with **TRIGGER LEVEL**.

Triggering is done either to **BLUE**, **INT** or **M**, depending on the signal that should be recorded (**R G B** or **X Y INT** or **s i M**). In the graph this is the blue line.

In **TRIG MODE= INTERN C-No.0** recording starts stand-alone once C-No. 0 is detected.

In **TRIG MODE= EXTERN IN0** recording can be started external via input IN0.

SCAN-RATE can be used to delay or accelerate recording. This corresponds with the **TIMEBASE** function known in oscilloscopes. **PRE TRIGGER VALUES** can be used to define how many values should still be displayed before the actual trigger start.



The zoom function in the graph can be activated by holding the control key (CTRL) and drawing a window with the mouse.

A click on **ZOOM 1:1** cancels the zoom function again.

The two orange cursors can be moved with the mouse. The **deltaX[ms]** and **deltaY[digit]** displays will be updated.

deltaX[ms] shows the time between the cursors in X direction.

deltaY[digit] show the difference between the two cursors in Y direction in digits.

SIGNAL can be used to display individual curves.

PRINT SCOPE GRAPH prints the current screen together with the text in the **COMMENT** text field.