

SPECTRO1-Scope:

Changes due to software update from SPECTRO1-Scope V2.8 to V2.9

This manual summarises the changes that were made with the software update from **SPECTRO1 V2.8** to **V2.9**.

A software update from V2.x to V2.9 can be performed quite easily.

All you need is the FirmwareLoader V1.1 and the firmware files for version 2.9.

The FirmwareLoader V1.1 can be found on the software CD/DVD that is provided with the sensor or can be downloaded from our homepage.

The firmware files are available from your sensor supplier.

The respective procedure is exactly described in the "[Manual FirmwareLoader V1_1](#)" file (see software CD/DVD: Folder Support Software → Version Update → FirmwareLoader V1.1).

Change 1:

Some optics units may show a certain level of intrinsic reflection.

To avoid an increase of this offset when using the integral function (parameter **INTEGRAL**), the offset can be eliminated by means of offset calibration.

The screenshot displays the software interface for SPECTRO1-Scope. It shows a sequence of steps for offset calibration. The first panel shows 'CHANNEL OFFSET' set to 'ON' and 'ASSIGN OFFSET' for 'CH0' with a value of 0. The second panel shows 'CHANNEL OFFSET' set to 'OFF' and 'ASSIGN OFFSET' for 'CH0' with a value of 0. Below these are 'GO' and 'STOP' buttons. The third panel shows 'CHANNEL OFFSET' set to 'ON' and 'ASSIGN OFFSET' for 'CH0' with a value of 124. Below this is a 'SEND' button. The bottom panel shows various settings: 'POWER MODE' set to 'STATIC', 'POWER (pm)' slider at 500, 'LED MODE' set to 'DC', 'DYNWIN HI' set to 3300, 'GAIN' set to 'AMP5', 'DYNWIN LO' set to 3200, 'AVERAGE' set to 1, and 'INTEGRAL' set to 1.

CHANNEL OFFSET:

With **CHANNEL OFFSET = ON** the offset value for **CH0** is subtracted from the current signal.

To determine the current offset, first work with **CHANNEL OFFSET = OFF**.

Place the surface with the offset to be subtracted in front of the sensor.

If you wish to compensate the intrinsic reflection of an optics unit, let it look into empty space.

Press **GO** to start the data exchange.

Make sure that the sensor is correctly parameterised (POWER, GAIN, etc.).

Press **STOP** and then select **CHANNEL OFFSET = ON**.

With **ASSIGN OFFSET** the current channel value is adopted as the offset value.

Then press **SEND** to save the data to the sensor.

ATTENTION!

If the sensor should already run with an offset, this offset must first be set to zero.

This is not necessary if **CHANNEL OFFSET** was **OFF** before.

With **CHANNEL OFFSET = ON** certain setting possibilities that may influence the offset are grayed out. If you wish to change such settings you must first select **CHANNEL OFFSET = OFF**, then make the respective settings, and finally determine the offset anew.

Change 2:

OPERATING MODE	NORMAL
SENSITIVITY	32

OPERATING MODE	DIFFERENTIATOR
SENSITIVITY	32

There are two new parameters.

OPERATING MODE can be used to set the sensor's operating mode.

With **NORMAL** the sensor operates as usual.

DIFFERENTIATOR means that the analog input signal is picked up differentially by the receiver, i.e. the emphasis is on changes of the signal.

The **SENSITIVITY** parameter is used to set the sensitivity of the differentiator.

Example:

If a value of e.g. **SENSITIVITY=32** is set, an average is formed from 32 recorded values.

The difference of this average from the current value is added to 2048.

This means that for **CH0** the resulting value is 2048 if there is no change.

If for example the distance from the surface or the surface structure changes, the resulting value will show a deflection that may lie below or above the value of 2048

