SPECTRO2-Scope:
Changes after Software Update
from SPECTRO2-Scope V1.3 to V1.4

This manual summarises the changes that were made with the software update from **SPECTRO2 V1.3** to **V1.4**.

A software update from V1.x to V1.4 can be performed quite easily.
All you need is the FirmwareLoader V1.1 and the firmware files for version 1.4.
The FirmwareLoader V1.1 can be found on the CD that is provided with the sensor or can be downloaded from our homepage.
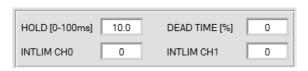The firmware files are available from your sensor supplier.
The respective procedure is exactly described in the **"Manual FirmwareLoader V1_1"** file
(see software CD/DVD: Folder Support Software → Version Update → FirmwareLoader V1.1).

Change 1:

HOLD and **DEAD TIME** now can be found under the **TEACH** tab**.**

Change 2:

INTLIM CH0 and **INTLIM CH1** were added as new parameters.

These parameters are used for background suppression.

If **CH0** is less than **INTLIM CH0** or **CH1** is less than **INTLIM CH1**, the outputs are switched as if **SIG** was 0.

INTLIM CH0 and **INTLIM CH1** are very helpful when **SIG** is viewed in a normed way, i.e. when **EVALUATION MODE CH0/(CH0+CH1)** or **CH1/(CH0+CH1)** is selected.
If in this mode the sensor looks into a "void", there will be very low values for **CH0** and **CH1** due to electronic noise or reflections.
Based on calculation these values may cause a **SIG** value between 0 and 4095.
The outputs therefore would switch permanently.

Example with **SIG = (CH0*4095)/(CH0+CH1)** and a signal noise of e.g.
CH0=12, CH1=4   → SIG = 3071
CH0=4,   CH1=12 → SIG = 1023
If, for example, the threshold was 2000, the sensor would switch permanently.

If you, for example, select a value of 50 for **INTLIM CH0** and/or **INTLIM CH1**, the sensor outputs the state as if SIG = 0.