SPECTRO-3 Series
Changes from SPECTRO3-Scope V3.1
to SPECTRO3-Scope V3.2

The text below provides a short summary of the changes made with the software-update from **SPECTRO3-Scope V3.1** to **V3.2**.

Change 1:

A new **delta C**olor display has been added. This display shows the deviation from a color hit, **delta C** corresponds with **ΔE** that is calculated in a color measurement.

In **FIRST HIT** evaluation mode **delta C** represents the distance from a color hit. When no color has been hit, **delta C** is calculated in relation to the last valid color in the color table (depending on **MAXCOL-No.**).

In **BEST HIT** and **MIN DIST** evaluation mode **delta C** also represents the distance from a color hit. If, however, no color has been recognised, **delta C** assumes the value of -1.

In **COL5** evaluation mode **delta C** is not calculated.

When the current intensity (**INT** or **M**) falls below the **INTLIM** parameter, **delta C=-1** will be displayed.
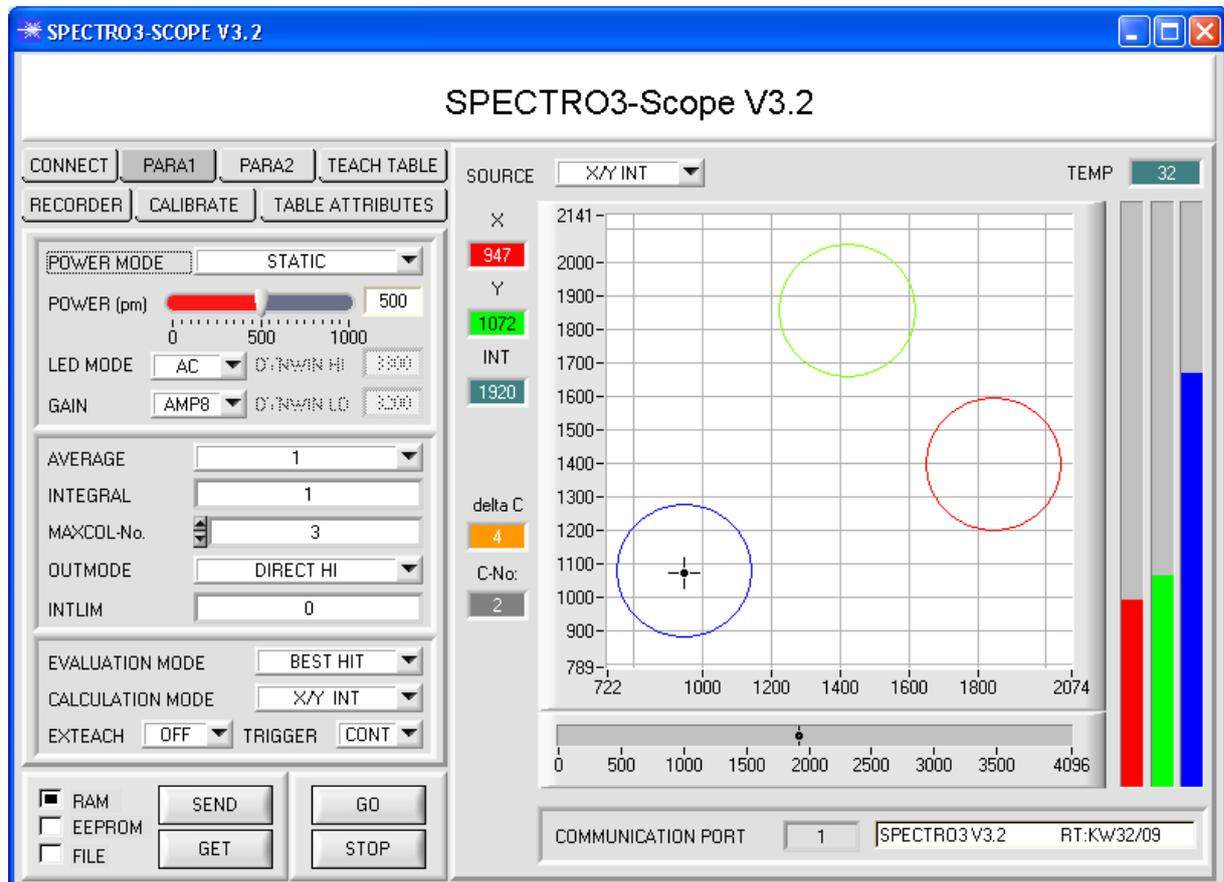
In **CALCULATION MODE X/Y INT** and **s/i M delta C** represents the distance from the cylinder axis.

In **CALCULATION MODE X/Y/INT** and **s/i/M delta C** represents the distance from the centre of the circle.

INT, M

CALCULATION MODE:

X/Y/INT or s/i/M

TOL
(sphere radius)

P (X, Y, INT)
P (s, i, M)

Y, i

CALCULATION MODE:

X/Y INT or s/i M

(0.5 x cylinder height) ITO

CTO (cylinder radius)

MTO

siTO

X, s

Change 2:

The recorder automatically pre-initialises the record file in the system directory with the extension "**RecordFile.dat"**.

Of course it is always possible to select another file with **SELECT RECORD FILE**.

Change 3:
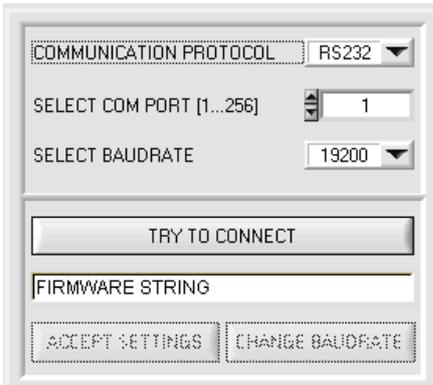
It is now possible to set the baudrate for data transfer through the RS232 interface.
This is necessary if a high-speed connection is needed for data transfer through the serial interface.
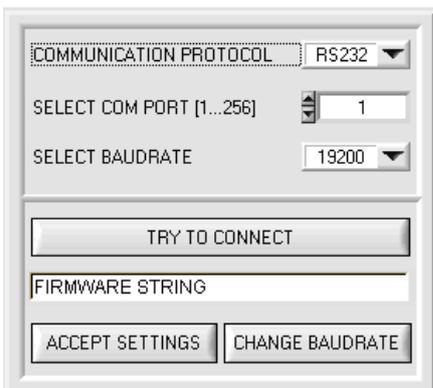
If the baudrate should be changed, a connection must first be established by clicking on **TRY TO CONNECT**.
The **CHANGE BAUDRATE** button will then be active.
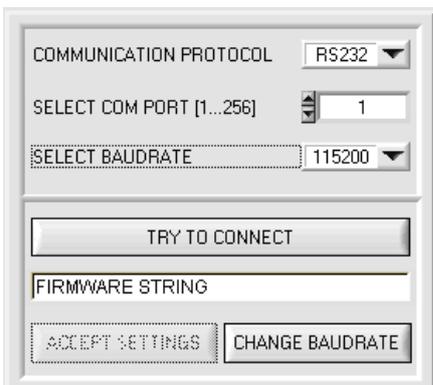
Now a new baudrate can be selected under **SELECT BAUDRATE**.
A click on **CHANGE BAUDRATE** sends the new baudrate information to the sensor.
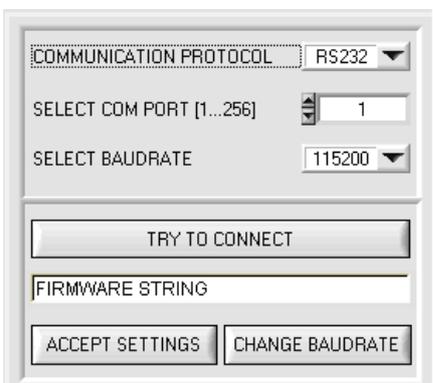
When the new baudrate information has been successfully sent, the sensor operates with the new baudrate. A window will pop up, prompting you to select **EEPROM** and then to press **SEND**. After a hardware reset the new baudrate only will be used when **EEPROM** and **SEND** have been pressed.

A click on **ACCEPT SETTINGS** saves the current interface settings, which will then be automatically set when the software is restarted.

Change 4:

The new **INTEGRAL** parameter has been added.
This function field is used for setting the number of scan values (measurement values) over which the raw signal measured at the receiver is summed up. The integral function allows a reliable detection even of extremely weak signals. A higher **INTEGRAL** default value increases the noise of the raw signals of the receiver unit, and at the same time reduces the maximally achievable switching frequency of the sensor.

To ensure the proper operation of this integral function, offset calibration or zero-point calibration must be performed after a software update from an older version (please refer to the manual).
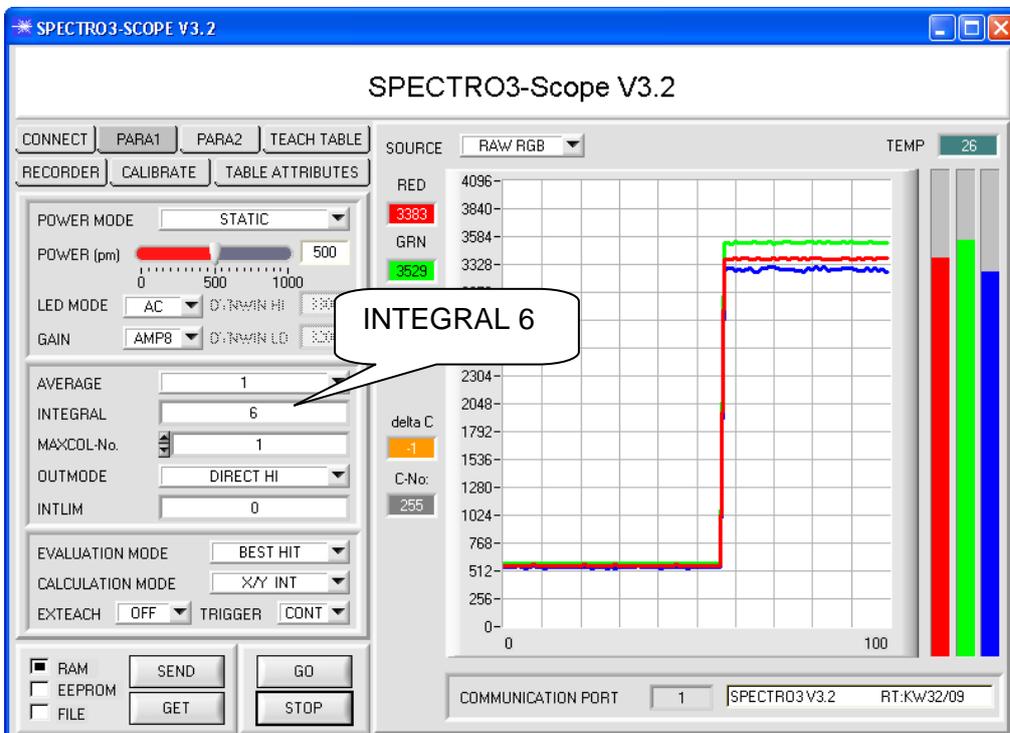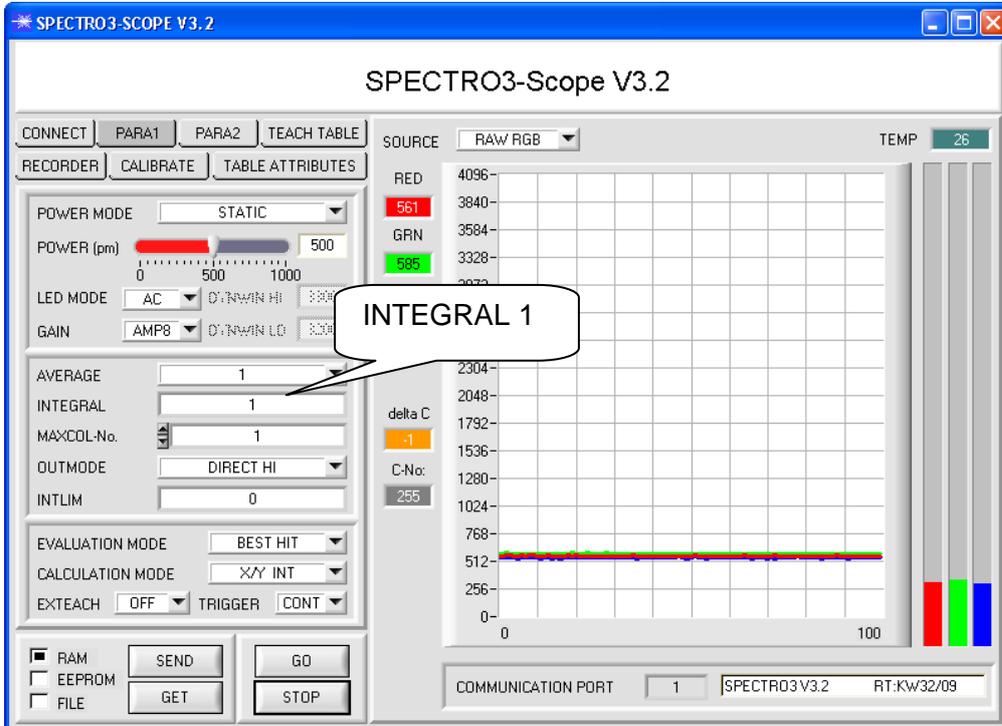
Change 5:

The **TEACH REC VAL** button has been added.
A click on this button (**teach recorded values**) opens a panel on the right side which, after a click on the **START** button, starts to record data and display them in the three graphs. This function is useful if the material to be detected cannot be directly placed in front of the sensor, for example because it is transported on a conveyor belt that cannot be stopped or cannot be exactly stopped at the position required for teaching. After some time, area centres will become apparent that can be assumed to be the objects to be taught. The screenshot below shows 5 of these positions.
After a click on **STOP** the cursor can then be positioned on such an area centre in any of the graphs. The cursor will be automatically positioned in the other two graphs.
With **TEACH TO TABLE** the current cursor position can then be transferred to the **TEACH TABLE**. Teaching will be performed to the row that is set under **ROW No.:**.

RESET can be used to reset the graphs and the counter.
CLOSE takes you back to the main panel.