

# Instructions for performing white-light balancing for the color sensors of the OCCS2107-EMB series

The sensors of the OCCS2107-EMB series are factory-balanced to a white surface when they are delivered. In practice, however, it may be necessary to readjust the sensors because of external disturbing influences.

Such disturbing influences may be different optical fibers, different lengths of the optical fibers, installation-related different distances and impingement angles of the sensor heads to the object, etc. In such cases the person responsible for sensor adjustment must have the possibility to perform white-light balancing at the place of installation. The following steps must be carried out to perform white-light balancing.

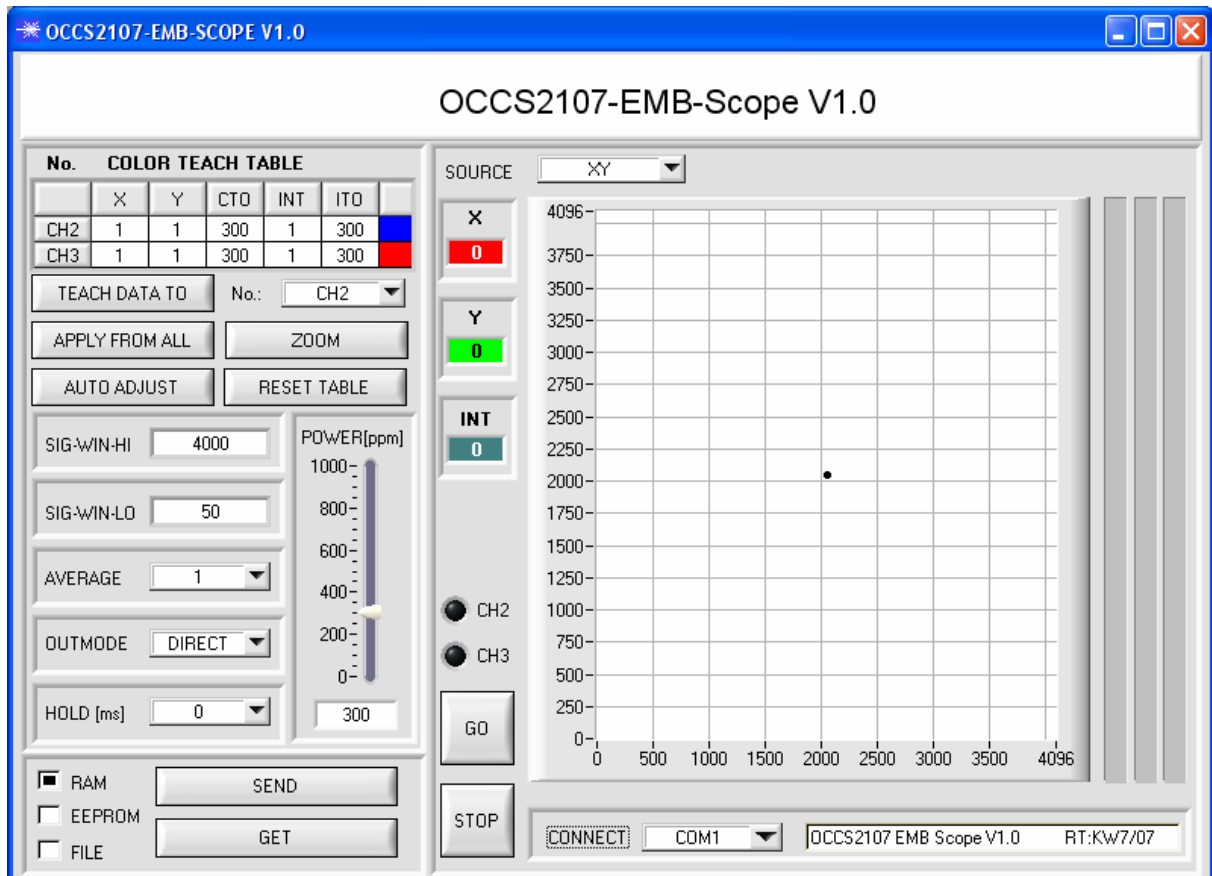
## Step 1:

Make sure that the sensor is properly connected and supplied with the required operating voltage. Furthermore the sensor head must shine onto a white surface (paper). For white-light balancing it is necessary to adjust the gain of the individual red, green, and blue channels. Operating voltage must be supplied to the sensor for approx. 5 minutes before balancing can be started (the electronic unit then has its operating temperature).

## Step 2:

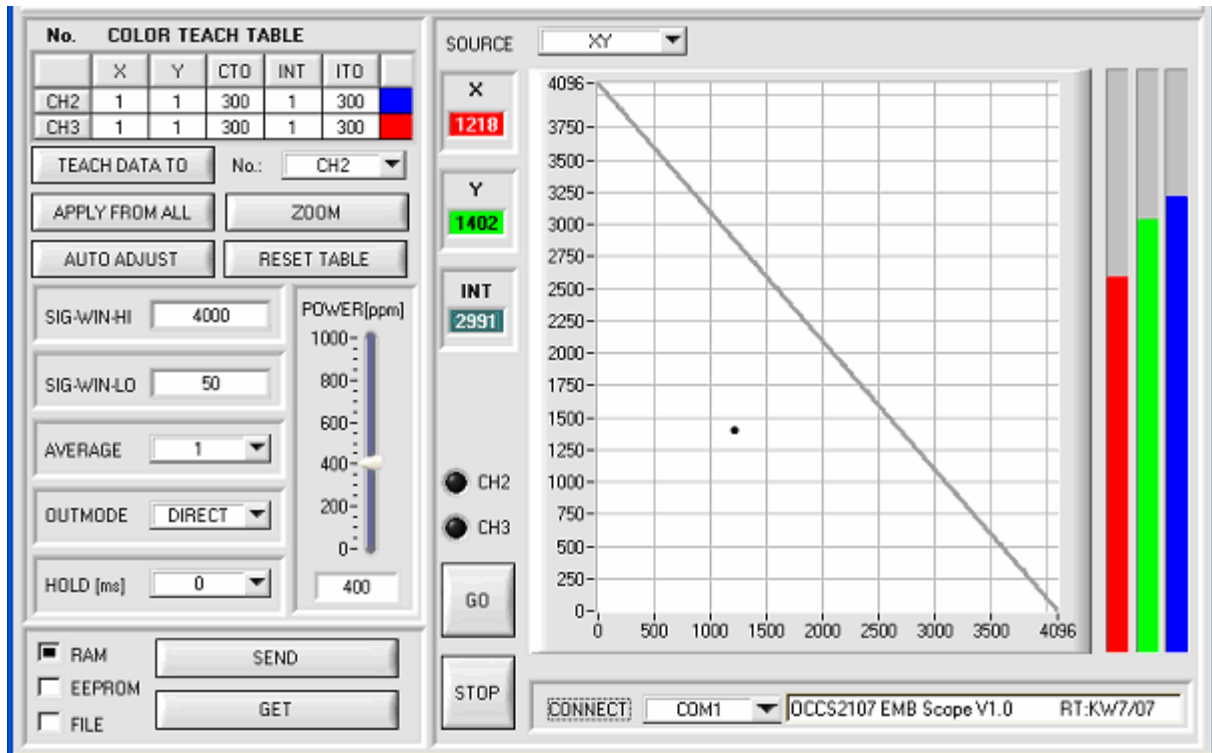
First start the OCCS2107-EMB-Scope V1.0 software.

Please make sure that the message "OCCS2107-EMB V1.0 RT:KW7/07" is shown in the status line in the right bottom.



Step 3:

Set a suitable POWER value such that the three bars are in the upper third of their dynamic range (see picture below).



As you can see, the three bars are not at the same level. This can be changed by setting the gain for the individual red, green, and blue contents by means of the three gain potentiometers.

The gain potentiometers are installed at the right side of the sensor housing (cf. image below)

→ Step 4



Step 4:

Use the gain potentiometers to set the gain for the individual channels such that the three color bars are approximately at the same level and lie in the upper third of their dynamic range (value based on experience!)



Gain

RED

GREEN

BLUE



Step 5:

You have now successfully completed the process of white-light balancing.