

Recorder Status

Cs5recstatus helps the user to keep an eye on the most important parameters during sweep recording. So if obvious errors occur like active sensors outside the measurement area, deactivated reference sensors, broken sensors with striking RMS etc. the user is warned and can possibly solve the problem before sweep recording is started.

Cs5recstatus starts automatically when the recorder (cs5recorder) is started and displays with easy to understand symbols and colors the current recorder-status: **green**=good; **yellow**=warning; **red**=error

Please note: A green recorder-status does not guarantee error-free sweep recording. There are problems that can occur without influencing the channel status (detached non-reference sensors, taxonomic distance limit set to a very high value etc.).

The program has three display-sections:

- [Master-LED](#) (Figure 1-1)
- [Main-section](#) (Figure 1-2)
- [Detail-section](#) (Figure 1-3)

and three display-modes:

- Minimized = only the master-LED is visible
- Normal = master-LED and main-section are visible
- Maximized = all sections are visible

The display-mode at program startup can be configured in the settings dialog (see [Detail-section](#)).

The recorder status is set back (reset) when

- a channel is activated / deactivated
- head correction is initialized
- a new recording is started
- the *clear status*-button in the detail-section is clicked

A. Master-LED

In minimized mode only the master-LED is displayed in the status panel (Figure 2).

The master-LED always shows the worst status since the last reset (red if an error occurred).

A click on the master-LED toggles between minimized and normal mode.

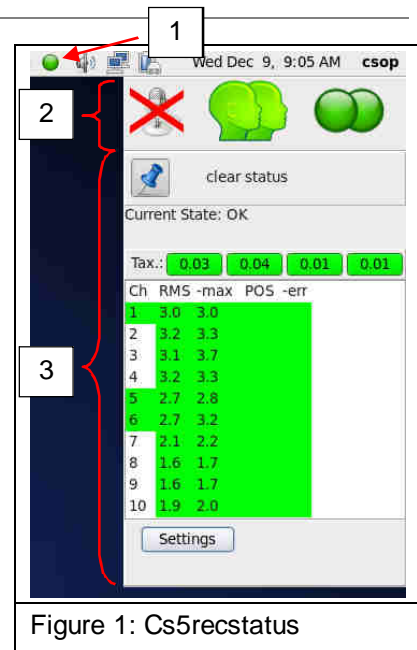


Figure 1: Cs5recstatus

B. Main-Section

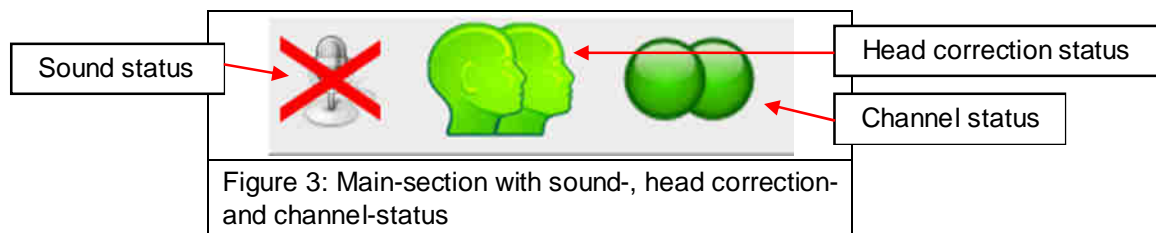
In addition to the master-LED in normal mode the main-section (Figure 3) is displayed.

While the sound status shows whether audio recording is activated, the head correction- and channel-status each show the current status on the left side and the worst occurring status on the right side of the corresponding symbol.

If head correction has not been initialized, the head correction symbol shows a grey head.

So if an error occurred since the last reset (i.e. start of a new sweep) the corresponding symbol will show red on the right side even if the current status is green.

When hovering with the mouse on the main-section the detail-section unfolds.



C. Detail-Section

The detail-section (Figure 4) is displayed when the program is in maximized mode or when the mouse hovers over the main-section of the program.

Beside the current and worst measured taxonomic distance (and standard deviation) it displays the RMS-values and positional status for each channel/sensor.

Inactive channels are greyed and reference sensors are colored green if activated or red if turned off.

Please note: The displayed values always show the mean or standard deviation of the real-time-positional data over the last 4 seconds of the measurement since the last reset. So during the first 4 seconds after a reset fewer samples are analyzed. Also keep in mind that the real-time-data is limited to 62.5 Hz sampling frequency so real-time- and recorded data are not identical.

a) Taxonomic Distance-values

Taxonomic distance values (Figure 4 from left to right):

1. Mean value (mm) over the last 4 seconds of the measurement.
2. Worst occurring mean value (mm) since the last reset of the status.
3. Standard deviation (mm) over the last 4 seconds of the measurement.
4. Worst occurring standard deviation (mm) since the last reset of the status.

b) RMS-values

RMS: Mean value over the last 4 seconds of the measurement.

-max: Worst occurring mean value since the last reset of the status.

c) Value limits

The taxonomic distance limits and the RMS-limit can be set in the settings-dialog.

For the taxonomic distance limits you can either use the limits used by cs5normpos or set your own custom limits for the real-time-status (recommended since the maximum distance of the real-time-data is usually higher than the mean over the whole sweep).

The status color will change from green to yellow when the observed value exceeds 2/3 of the set limit and will turn red if it exceeds the limit.

Example for RMS-limit 60:

RMS 0-40 → green

RMS 40-60 → yellow

RMS over 60 → red

d) Positional-status

POS: Current position

-err: Worst positional status since the last reset.

Green indicates that the sensor is within the optimal measurement sphere.

Yellow warns that the sensor is outside the measurement sphere but still inside the extended measurement area.

Red indicates an error. The position cannot be determined. Even if the real-time-display shows a seemingly valid sensor trace, the position calculation will fail for that sensor.

Please note: while in the detail-section the positional-status always shows yellow, when a sensor is in the extended area, it is possible to suppress this positional warning in the main-section and the master-LED by modifying the *Allow extended area*-option in the settings-dialog:

- None = all warnings are passed on to main-section and master-LED
- Warn for Ref-Sensor = only warnings for reference sensors are passed on
- All = no warnings are passed on to main-section and master-LED

