JETI LiVal

Changelog

V8.2.1 (11.05.2026)

[Changed]
- using JETI SDK V4.8.11

V8.2.0 (17.04.2026)

[New]
- Uncertainty calculation with Monte Carlo
- support for specbos 2511

[Changed]
- using JETI SDK V4.8.10
- new normalization options
- Menu ‘Extra | Generate Color Samples’ – up to 1024 samples are possible
- Menu ‘Options | Continuous Mode’ - A maximum number of measurements can now be specified

V8.0.8 (28.04.2025)

[Changed]
- Support for 16 calibration files for the specbos 2501

V8.0.7 (08.04.2025)

[Bugfix]
- title showed the previous version -> fixed [Changed]

V8.0.6 (02.04.2025)

[Changed]
- JETI SDK V4.8.9 from 21.01.25 included
- Color samples generator can save longer color samples list in config.ini

V8.0.5 (05.12.20249

[Changed]
- JETI SDK V4.8.7 from 04.12.24 included

V8.0.3 (11.07.2024)

[Changed]
- JETI SDK V4.8.4 from 11.06.24 included

V8.0.2 (11.07.2024)

[Bugfix]
- The program crashed with spectra that only contained negative values -> fixed

V8.0.1 (22.04.2024)

[Bugfix]
- The primaries display in the RGB widget was not updated-> fixed
- In the RGB option widget, only integer values in the "manual" RGB color space could be entered with the system setting "," as the decimal separator -> fixed

V8.0.0 (01.02.2024)

[New]
- specbos 2501 integrated
- For specbos 2501 option for automatic darkening of the power button during measurement has been added.
- SSI calculation added (Spectral Similarity Index)
- "Generate Color Samples" added
- Hazard Efficacy Coefficients added
- Hazard: R-curve added according to ICNIRP guideline
- Export of multiple spectra in one .isd file added
- Option to select that the metamerism calculation is also performed if the spectrum does not fill the entire wavelength range

[Changed]
- JETI SDK V4.8.1 from 17.01.24 included
- Menu item "Observer" changed to "Color Matching Function"
- Color Matching Function is used for the CCT calculation
- Hazard:
  * additional table column for hazard parameters alpha, FOV and R(IEC 62471)/R(ICNIRP) added
  * E_ir is weighted with 0.3 between 780nm and 1000nm (as with hazard effectiveness coefficient K_ir,v)
  * dEqResult is always displayed in scientific format with 3 decimal digits; precision of TMax depends on the value
- Added warning message when loading CSV reference files if integration time=0
- When saving a spectrum as a .spc file, the name of the measurement is now saved instead of the file name (just like when saving multiple spectra)
- "Options/Table" window redesigned:
  * the settings have been distributed across several tabs
  * Request if colorimetric values have been selected in the table options widget, but no observer has been selected.
- Excel table export: all texts are right-aligned
- Minor GUI changes

[Bugfix]
- When changing the observer activation/deactivation (Options/Luminous efficiency function), the lv observer label was not changed back on cancel -> fixed
- The observer was not taken into account when restoring measurement data after a program crash -> fixed
- adapted averages were not exported with spc- and csv-export and were set to 0 during import -> fixed; without specification of the adapted averages they are set to 1 by default

- Hazard:
  * the correct unit was missing in the table -> corrected
  * Hazard units are now determined in the table and for export according to the hazard type, not according to the measurement mode
  * in Irradiance mode, the FOV field was dimmed after selecting "Retinal thermal alternative" or "Retinal thermal weak alternative" until a measurement was performed -> fixed
- When loading many reference files or adding many measurements to the table, the progress bar was often no longer updated -> fixed
- As soon as an error occurred when querying the laser status, the target button was always set -> fixed
- No abort of a continuous measurement if an OutOfMemory error occurred when filling the table -> fixed
- Ephot label was missing during CSV export and it was displayed as a label in the table view and not in the first column -> fixed
- In the spectrum view, the y-position of the cursor was no longer aligned with the spectrum when navigating in x-direction -> fixed
- Minor bug fixes

V7.4.1 (03.05.2023)

[Bugfix]
- Program crash when importing a faulty CSV reference file if the separator was missing in a line -> fixed
- If an error occurred when setting the max. integration time, sometimes no error message was displayed -> fixed.
- Calibration:
  * For devices with stray light correction, the display was not updated after saving changed calibration files -> fixed
  * After executing "Calibration * ratio", previous measurements were discarded when the calibration window was closed -> fixed

V7.4.0 (23.02.2023)

[New]
- Scotopic luminance, illuminance ... including Excel and PDF export and selection via customize menu added and CIE (1951) Scotopic V'(lambda) function added
- Display of self-measured RGB color spaces in comparison to standard color spaces
- Selection of typical synchronisation frequencies added
- MEER (melanopic equi-energy (E) efficacy ratio) added to the Circadian widget

[Changed]
- Hazard: for manual blue light measurement, risk group is now determined independently of FOV (previously FOV=11mrad -> min. RG 1) and FOV is no longer preset according to IEC 62471
- Circadian:
  * Circadian is now calculated in all measurement modes, not only in Irradiance mode
  * MEDI and MDER calculation adapted to DIN SPEC 5031-100 2015
  * Decimal separator display standardised to system settings (only in the PDF protocol is a dot always used)
- The Cancel button is dimmed during adaptation if, for specbos, the integration time is less than the sync period duration, as cancellation would not work.

[Bugfix]
- Hazard:
  * In Radiance mode according to IEC 62471, for >RG0 with incorrectly connected FOV optics, an error was only displayed in the Hazard window, but the measurement was started anyway -> fixed.
  * In Irradiance mode, when switching between IEC 62471 and manual measurement, no information text about the FOV was displayed -> fixed.
- Deleting data can lead to program crash if multiple widgets with graphs are open -> improved
- Error during measurement with correction file could cause a program crash -> fixed
- In "dark screen mode" toolbar was still visible -> fixed
- End value in transmission widget was not set -> fixed
- when changing from logarithmic to normalised logarithmic scaling in the spectrum widget, two drawing steps were visible -> fixed
- Error on reconnection fixed: Target button was always displayed regardless of the measurement mode
- With PDF export, the measuring mode was not taken into account for photometric and radiometric symbol letters, but always "L" was written -> fixed
- When setting a fixed integration time, no comma could be entered as a decimal separator -> fixed
- Circadian:
  * Calculation and display for Imperial units corrected
  * Removed the label "MEER" for a(mel,v) in the Circadian widget and corrected the EML calculation.
- Added error message and cancel import for "Load reference" if the name of a dataset to be imported already exists in the previous measurements.
- After closing the calibration window, the identifiers and units were not adapted to the set measuring mode -> fixed

V7.2.0 (10.11.2021)

[NEW]
- Widged NDVI added
- EML (Equivalent Melanopic Lux) added to Circadian widget
- Show measurements selection extended by display option of selected spectra (not only active or all as before) - concerns Spectrum, Chromaticity xy and uv, Spectral calculations and L*a*b* (plane). The selection is now always applied to all these widgets.
- Row names of the table view can be displayed and hidden as table labels

[CHANGED]
- Export of the table added again as a menu item
- Changed "Xmel" to "Xe,mel" for Circadian
- When screenshotting graphs, only the graph is saved, not the entire graph panel.
- The selection of saving the measurement information for He/Hv, Hazard and Museum values when saving the reference is now only possible if corresponding measurement values also exists.
- After loading a reference file, the last loaded spectrum is marked as active and selected.

[BUGFIX]
- In the PAR widget, selecting the Ephot values via wavelength ranges did not work for the current measurement -> fixed
- Line shift in table according to Circadian with measuring mode != Irradiance -> fixed

- Removed yellow marking for stray light correction for "Load reference"
- If the original settings for museum and/or hazard measurements were not saved, these values are no longer calculated after file import. Previously, these values were sometimes displayed with incorrect measurement settings after import.
- Auto-zoom in xy- and uv- diagram only worked when showing the active spectrum -> fixed
- Selection of measurements is now retained even after pressing the Normed button in the spectrum view
- Added check to system directory (e.g. "C:\" or "C:\Program Files") when saving files, as files are otherwise moved to the VirtualStore by the UAC virtualisation if LiVal was started without administrator rights.

V7.0.0 (25.05.2021)

[NEW]
- Support for devices with stray light correction
- Blue Measurement – Widget
- Optional screen darkening during the measuring process
- Hazard measurements:
  * Alternative method of hazard measurement for blue light, retina thermal and retina thermal weak in irradiance measurement mode
  * User guidance for blue light measurement according to IEC 62471
- Calculation of Luminous Exposure (Hv) and Radiant Exposure (He):
  * If using table view: only available for continuous measurement in Irradiance measurement mode
  * If using history view: available in irradiance measurement mode over all current measurements
- Spectral calculations: Added display options "Log scale", "Normed" and "Colored" as well as the display of all measurements or only the active measurement similar to "Preset/Spectrum".
- Widget "Circadian Metrics": Added calculation of Xv,mel,D65 (MEDI) and mv,mel,D65 (MDER)
- L*a*b (plane)- Widget: Added selection option all measurements / active measurement
- Added export as Instrument Systems Data File .isd

[CHANGED]
- PDF export redesigned and extended (free text, heading, footer, page break, export of the Hazard and Blue Measurement values, additional setting options)
- Table:
  * Table window redesigned
  * When changing the measurement mode or calibration file, the entries shown in the table are no longer always deleted and can still be exported. The actually measured values are deleted as before.
  * The table can now be copied to clipboard including row labels.
- Hazard measurement redesigned:
  * The calculation is now only available in Radiance and Irradiance measurement mode.
  * Settings for future measurements (left widget side) and the display of the measurement results (right side) are now independent
  * In Radiance mode, the set Fov must necessarily correspond to the Fov of the calibration file, otherwise measurement will not be carried out
  * The calculation and displayed values are based on the calibrated wavelength range of the selected measurement, no longer on the wavelength range of the currently connected device and also independent of the selected

Calculation Range.
- Measurement mode Radiant Intensity:
  * Distance query removed from the menu items "Options/Photometric units/SI Units" and "Options/Photometric units/Imperial units"
  * When loading the saved measurements from SPC, CSV and Temp files, the distance is now read from the file.
- revised correction measurement with auxiliary lamp in Radiant Flux measuring mode and saving/loading of different correction spectra enabled
- Extended of the wavelength range to support NIR radiometers
- Purely photometric widgets and menu items are now hidden if the entire measured spectrum is outside 380-780 nm
- extended tooltips in the custom window
- Added possibility to save the last target setting with and without focus and automatically adjust it according to the calibration file.
- minor GUI changes

[BUGFIX]
- Line shift in table with metamerism display in UV range -> fixed
- Program crash when exporting a large number of measurements to an SPC file -> fixed
- History: Jumbled of graphs when reading stored measured values -> fixed by time sorting
- Missing error message that LiVal cannot be started if the screen resolution is too low -> fixed
- Endless query after switching to another measuring mode with active sensor and answering the question whether all measured data should be discarded with "No" -> fixed
- When answering the question about changing the measuring mode with "No", the menu, button labelling and setting of the measuring mode were not completely reset in some cases -> fixed
- When restoring unsaved measurements, the measurement mode was not checked. As a result, it could happen that measured values with different measuring modes were loaded and displayed in the wrong measuring mode. -> fixed
- Measurement mode Radiant Intensity: In the online mode, the label for the measuring distance of the offline mode was displayed on the measuring button in addition to the actual button labelling -> fixed
- PDF export: Units for Circadian corrected
- When loading CSV and SPC files in offline mode, the menu selection was not changed when switching the measurement mode and summer/winter time was ignored when loading and saving SPC files -> fixed
- Simultaneous display of different messages led to incorrect display text and to the program hanging up -> fixed
- Change of measurement mode or calibration file during a continuous measurement was not detected -> fixed
- Read-in measurement results could only be displayed if at least 2 measurements were present in the selection list -> fixed
- Correction measurement with auxiliary lamp: after cancelling, the procedure did not start correctly again -> fixed
- Error message for overexposure missing when laser mode is switched on -> fixed
- Sometimes there was an incorrect displayed spectrum when logarithmic y-scale was chosen -> improved