**PIAS-II System Software v.3.0 Release Notes**

The latest version of the PIAS-II system software, now available as an optional upgrade, offers important advances over earlier releases. Users with earlier releases will benefit from the many enhancements now standard in V.3.0.

*V.3.0 will maximize the benefits of the PIAS-II for our users. Significant improvements include:*

* *Support of the latest operating systems*
* *Enhanced support of color measurements*
* *Improved accuracy of color and density measurements*
* *New features for existing tools*
* *New functions and new tools*
* *Support of many powerful new hardware and software options*

***Support of the Latest Operating Systems***. V.3.0 now supports Windows® 7 to 10, 64-bit.

***Improvement in Color Accuracy*.** Color measurement is critical in assessing print quality. A noteworthy enhancement to the PIAS-II software is the ability to use an ICC color profile for the input image source. Doing so significantly improves the accuracy of color measurements.

For customers who want to generate their own ICC color profiles for specific media/ink combinations, an optional Calibration Builder package with the required software and instructions is available from QEA at additional charge. With the necessary experience and the proper tools, including a calibrated, traceable densitometer and calibrated, traceable spectrophotometer, the Calibration Builder will enable you to perform recalibrations whenever your measurement targets change. If you need to generate profiles for multiple printers, inks, toners, or media, you can do so readily once you master the technique.

However, generating your own ICC color profiles does involve a learning curve and expensive tools, namely the calibrated densitometer and spectrophotometer. The Calibration Builder instructions are given in detail, but we can provide additional remote support on a limited basis only.

Users who prefer not to generate their own ICC color profiles may commission QEA to perform calibrations using the customer’s own reference targets. Though recalibrations by QEA do involve a fee each time, this approach offers another way to take advantage of an important PIAS-II enhancement.

To ensure compatibility with previously collected data and references, ICC profile users can also continue to use the factory default calibration.

***Improvement in Optical Density Calibration*.** An improved density calibration method is included with the new color profiling tools. Again, the users will have the flexibility of choosing between the previous calibration method and the new density calibration method.

***New Features for Existing Analysis Tools*.** Among many other improvements implemented in the v.3.0 upgrade, the most significant include: the addition of calibrated spaces (reflectance) under color channel selection in the Dot, Line, Edge and Background tools and, correspondingly, the reporting of analysis results in calibrated units (i.e., reflectance, density and color in CIELab). The use of calibrated units is very important for ensuring consistent analysis results and agreement between instruments. However, for backward compatibility, the system allows continued use of the uncalibrated RGB space in analyses. In the Dot tool, a new “roughness” metric is also added. This metric provides a valuable measure of dot (blob) characteristics in many applications.

***New Functionalities and Tools.*** An important new addition to the PIAS-II analysis toolbox is the Text and Graphics Tool. The Text and Graphics Tool extends dot analysis to include objects (blobs) with counters (inside holes) and reports results with both the outside contour and the inside counter included in the analysis. This tool can be used to analyze many important features such as Asian characters, or the alphabets and scripts of other languages. Like the dot, line, edge and background tools, the text tool supports the use of calibrated color channels for the analysis, and reports analysis results in calibrated units of reflectance, density and color.

***Improved Support of Specialized Optics Modules.*** The power of the PIAS-II lies not only in its analytical software, but in its interchangeable optics modules for advanced configurations. These modules provide many standard as well as specialized functions. We continually add new optics modules to our portfolio to address new application requirements and opportunities. To provide better control for some of the specialized optics modules, an “Imager” control function, supported as an option with the v.3.0 system software, is now available. Please consult QEA for further details.

***Improved Support of Quality Control and Process Control Applications.***  To facilitate use of the PIAS-II in a production QC or routine testing setting, a “Process Control” module is offered as an option in the v.3.0 system software. In “Process Control” mode, the user has the option of using the PIAS-II interactively (as is typical) or in a programmed “Sequence” mode. During execution of a sequence, there is no need for the user to record the data manually―a database logs the data automatically for data management and reporting purposes. “Process Control” mode greatly enhances the usability of the PIAS-II by operators with minimum experience or training. This capability is critical to extending the use of the PIAS-II beyond the laboratory and onto the production floor. Please consult QEA for further details.

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With the new v.3.0 software, the PIAS-II now runs on the latest operating systems (Windows® 7 to 10, 64-bit). Significant advances greatly expand the system’s usability, consistency, and capability, while ensuring backward compatibility for users who want flexibility in choosing between old and new capabilities and functions.

Version 3.0 is a technically and functionally important upgrade for any PIAS-II user. The range of enhancements incorporated in v.3.0 is just the latest demonstration of QEA’s commitment to our customers and to continuous improvement in the tools we provide.

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