Buildstation 5.0 Release Notes

Welcome to Buildstation 5.0

Buildstation 5.0 is 3D Systems' newest version of SLA control software for SLA 350, SLA 500, SLA 3500, SLA 5000, as well as our new flagship platform, the SLA 7000. ***Buildstation 5.0***, with essentially the same user interface as its predecessor, ***Buildstation 4.1.1***, fixes some program defects and builds on the powerful functionality of version 4.1.1 by adding new power and convenience in features like:

- ✓ Smaller BFF files. The new build file eliminates redundencies within the file structure that allows BFF files that are from one-half to one-tenth the size of Maestro build files.
- ✓ Integrated motion control dialog.
- ✓ More compact and easier to use logging, including automatic purging.
- ✓ Support for the high-power SLA 7000 dual spot size laser.

...And, much more.

IMPORTANT NOTE!

Buildstation 5.0 accepts only BFF build files produced by the corresponding release of SLA file preparation, ***3D Lightyear 1.0***. Maestro-produced BFF build files require the SLA system to be running Buildstation 4.x. For that reason, upgrade customers should follow the Installation Instructions for ***Buildstation 5.0*** carefully. Doing so, preserves the copy of ***Buildstation 4.x*** so that if the need should arise, it will be available for running files prepared with Maestro.

Supported Operating Systems

The ***Buildstation 5.0*** SLA Control software runs equally well under Windows NT® 3.51 with Service Pack 5, and Windows NT 4.0 with Service Pack 3 or higher. Support for both OSs allows users with NT 3.51 to be able to upgrade to the new control software without having to also upgrade to Windows NT 4.0.

Both Windows NT 3.51 with Service Pack 5, and Windows NT 4.0 with Service Pack 4 have been declared " Year 2000 Compliant" by Microsoft®. Customers who want to upgrade to Windows NT 4.0, should contact 3D Plus Customer Service for more information.

System Requirements

Customers using SLA 500 sytems with a i486-based controller with at least 32MB of RAM and running Windows NT 3.51, should be able to run ***Buildstation 5.0***. Generally, if a system could run ***Buildstation 4.1.1***, it should be able to run ***Buildstation 5.0***.

Major Program Changes

Below we list several significant changes in ***Buildstation 5.0*** compared with ***Buildstation 4.1.1***.

Improvement in System Logging Functions

With ***Buildstation 5.0*** we have modified the user-accessible logs as well as the diagnostic logs. BuildLog has been removed from the database, since its existence contributed to the database's growing to unmanageable sizes over time—a familiar complaint of users of earlier versions of Buildstation. Now, as users have requested, build log information is available as a readily accessible text file.

Much of the old configurable logging has been removed to streamline the interface. It has been replaced with self-purging binary system logs. The new logs work continually without user intervention. These logs allow 3D Systems to diagnose problems even weeks after they've occurred with minimal customer interaction, and will allow better preventive maintenance procedures in the future.

Streamlined User Interface

The following items have been removed from the user interface.

- ✓ Set Elevator Start Position dialog
- ✓ Event Logging dialogs
- ✓ Laser Logging dialogs
- ✓ Smart Laser Power
- ✓ Stir resin (from the toolbar)

System Licensing

Unlike previous versions of the control software which were not licensed, we have implemented licensing for ***Buildstation 5.0***. The software is licensed per site, therefore, once your site obtains the software, you may install and license it on all the SLA systems you own. ***Buildstation 5.0*** desktop does not require a license to run.

Software Defects

Buildstation 4.1.1 had, as does all software, a few software defects, many of which have been corrected with ***Buildstation 5.0.*** Specifically, it corrects:

- ✓ Sweeping fully, to the front or back of the machine continually while Smart Sweeping
- ✓ Resin Parameter and Blade Gap problems
- ✓ Waiting for layer end
- ✓ Database growing too large

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Other Changes

Other changes have been made to improve the performance and usability of the software. Some examples are:

- ✓ The Motion Control dialog has been rewritten to integrate all motion related dialogs. Recovering from blade crashes, setting start position, and service activities can now be performed with a single visit to this dialog.
- ✓ Build Time Estimator rewritten for higher accuracy.
- ✓ SLA Performance Dialog has been rewritten to allow saving and loading of a machine's performance characteristics. This allows better preventative maintenance, and allows desktop build time estimates to have high accuracy by using the performance characteristics from the machine where the building will occur.
- ✓ Improved build sequencing, which incorporates flexibility in power setting and various delay times.
- ✓ "Delayed" build function which allows you to specify what time you want the build to start.
- ✓ Build options that are dignostic in nature have been removed from the standard interface. The "Advanced Build Options" checkbox in the " Customize..." dialog under the " Setup" pulldown allows access to the full set of options.

Outstanding Issues

The following lists the known issues in this release of ***Buildstation 5.0,*** and specifies workarounds where available. We are always striving to improve our products. If you find a problem with the software, or have a suggestion for an enhancement, please e-mail your request or suggestion to *ProductSuggestions@3dsystems.com*.

Running Buildstation from a Non-Administrator User Account

There have been reported problems during Beta testing when Buildstation 5.0 is run from a user account that does not have Administrator priviledges. In these situations, the Main window is completely inactive, although the clock on the status bar continues running.

Workaround: Run Buildstation 5.0 from a user account that has Administrator privileges. Contact 3D Plus Customer Support if this solution is not practical.

Part Positioning

In the part positioning dialog, the spacing between parts sometimes reverts to 0.25 inches even though the user has specified different spacing.

Workaround: Avoid changing the spacing between parts.

Build Time Estimates

The Build Time Estimates for Buildstation 5.0 running on an SLA 7000 can be very accurate. Unfortunately, they can also range as high as ±20% error. Our Engineering Department is constantly refining the algorithm to improve accuracy. As our database of builds expands, the Estimator function will improve. We will be forwarding patches to the estimator to the installed user base as they become available.

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