
Buildstation Release 4.1

Software Installation

Instructions

This procedure covers the Release 4.1 software installation for the SLA-350/3500 and SLA-500/5000 Buildstations using the Windows NT operating system. It does not address loading Windows NT, PC-NFS for Windows NT or DiskAccess for Windows NT. It is assumed that both Windows NT and PC-NFS for Windows NT; (1) have already been installed on your system; or (2) will be installed at the factory for new SLA machines and Pentium upgrades; or (3) will be installed by a local field service representative.

In this regard, network configuration of Windows NT or PC-NFS for Windows NT is beyond the scope of this document. Procedures for performing Windows NT and PC-NFS for Windows NT installation and configuration are contained in the manuals that came with each of these software packages. Please contact your system administrator or your local field service representative for more information regarding these procedures.

Recommended Configuration

Release 4.1 was tested with Windows NT version 3.51 operating system, PC-NFS for Windows NT versions 2.1 and 2.2, and DiskAccess for NT version 3.0. Release 4.1 is NOT recommended for use with any other versions of Windows NT, PC-NFS, or DiskAccess. The following is the minimum required configuration for your control computer:

- 80486 CPU based controller
- 16 MBytes of RAM
- 500 MBytes hard drive with at least 100 MBytes of free space
- 3.5" floppy drive
- CD-ROM drive
- Network adapter card(3COM 3C503, 3C509, 3C590, or 3C900)

- Keyboard, monitor, and mouse

Checklist

During installation, you will perform the following:

Install 3D Systems Buildstation Software—using these instructions.

If you are currently a dos 1.8 customer, please refer to the section “Installing Buildstation Software”.

Configure network parameters in Windows NT—using the Windows NT Manual that came with your Windows NT software.

Setup user accounts—using the Windows NT Manual provided

Configure PC-NFS for Windows NT or configure DiskAccess for Windows NT using the manual that came with these packages.

Note	Before attempting installation you should be familiar with Windows NT operation. These instructions will not explain the use of a mouse, the selection of Windows-type icons, the use of Windows-type pull down menus or how to shut down a computer in Windows NT. If you do not have this knowledge or do not feel comfortable with these operating environments, please review the Windows NT Manual that came with your Windows NT software or participate in a Windows NT basic usage course.
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Buildstation Software Installation (Convert from DOS 1.7.4 or 1.8)

If you are presently running from buildstation 4.0, skip this section and perform only the steps listed in the “Installing Buildstation Software” section of this document.

If you are presently running buildstation software under DOS version 1.8, the mover program is no longer valid under any circumstances. You must do the following:

1. perform the procedures contained in “Before Installing the Software—DOS Users” prior to installing Buildstation 4.1 software.

2. perform the procedures contained in “Installing Buildstation Software”
3. perform the procedures contained in “After Installing the Software—DOS Users”

Before Installing the Software -- DOS Users Only

In DOS 1.8 locate the laser power calibration coefficient values for A, B, and C.

To do this :

1. Exit from Build Manager to DOS prompt with the F10 key.
2. From C: prompt, type CAL and press Enter.
3. From the Swallow Sensor Calibration screen, locate the “Previous” column values for A, B, and C. Be careful to copy the numbers exactly as they appear.

A= _____

B= _____

C= _____

4. Highlight “Quit” and press Enter.
5. Press Enter again to confirm.
6. Install NT Version 3.51 if not already installed.
7. Exit all windows applications and then Install Buildstation Software Release 4.1. Refer to the section “Installing Buildstation Software” for procedures on installing the software

Installing Buildstation Software

Follow these steps to install the Buildstation software. If you are currently using version 4.0, you can begin with these steps.

If you are currently using DOS version 1.7.4 or 1.8, refer to the section “Before Installing the Software—1.8 Users” before performing the steps in this section.

1. Turn on the system. If prompted to choose an operating system, select Windows NT. If the control computer automatically boots into DOS without providing an option to boot into Windows NT, your system may not be loaded with the Windows NT operating system. Loading of the Windows NT operating system is beyond the scope of this instruction and should be performed by a qualified technician or local field service representative.
2. When prompted, login to Windows NT by simultaneously holding down the <Ctrl> and <Alt> keys and pressing <Delete> .
3. Log into the Windows NT operating system using a valid user or network administrator account.
4. If not already open, open the Program Manager icon.
5. Access the controller diskette drive by removing the chassis panel. For the SLA-500, the buildstation controller is located in the electronics bay of the process module. For the SLA-350, the buildstation controller is located in the electronics bay of the control module. To remove the lower chassis panel, press each release button, one located near the bottom on each side of the panel, for the SLA-500 and one located near each corner on the bottom of the panel for the SLA-350. An appropriate tool (i.e. an Allan wrench) will be needed for this function. Pull the bottom of the panel out of the frame. Lift the panel off of the hook-retainer on the top of the panel and remove the panel from the frame. The controller diskette drive is now accessible.
6. Insert Buildstation Software diskette 1 in the 3.5" floppy drive.
7. From the File pull down menu located in the upper left corner of the Program Manager window, select Run.
8. Key In: a:\setup
9. During the installation, you will be required to follow the on screen prompts including removing and inserting diskettes. This instruction provides hints where additional information is required to continue.

HINT: When prompted for the installation directory, we recommend that you choose the default directory \WINSLA. However, you may choose your own custom directory. Remember to select Next at the bottom of the screen to continue.

HINT: When prompted for the machine type, choose the appropriate type that corresponds to your machine. All SLA-500 machines with a serial number of 960034 or smaller should be installed as a RIM type machine. An SLA-500/30 is the only configuration that contains the Coherent 326 laser. The SLA-500/30H and the SLA-500/40 machines contain the high power Coherent 328 laser. If you are unsure of your machine type, please consult with your local field service representative.

Note If a Chamber machine type was chosen inappropriately, the buildstation software will not allow you to start a build. However, all other machine functions will be available.

HINT: To perform a Desktop installation, select desktop installation when prompted. Desktop installation allows simulations and other functions without hardware interface.

HINT: When prompted for the program folder, 3D Systems recommends that you choose the default program folder Buildstation. However, you can choose your own custom program folder if that is more desirable.

The installation program will automatically create a new program folder, as defined by your selection, and three program application icons, Buildstation 4.1, Remote and ServDiag, if the default or

custom program folder and/or icons do not already exist. If they do exist, the installation program will overwrite the program application execution lines. Buildstation 4.1 starts the buildstation software. Remote software allows a networked system to view SLA building status. ServDiag is 3D Plus+ Field Service diagnostic software.

10. When prompted, remove the last Buildstation Software diskette, select the restart the control computer option and select the Finish button.
11. When prompted to choose an operating system, select Windows NT

You have completed the 3D Systems portion of this installation and setup of the Buildstation Software Release 4.1. If you are a 4.0 user can proceed with Windows NT network parameters installation using the Windows NT Manual provided, Windows NT user accounts setup using the Windows NT Manual provided and PC-NFS for Windows NT or DiskAccess for Windows NT installation and configuration using the PC-NFS for Windows NT Manual provided.

If you are a DOS user, you must perform the steps in the following section.

After Installing the Software -- 1.8 Users Only

1. Double click WINSLA icon in the Buildstation Program Group to launch the Buildstation application.
2. Go to the SETUP menu.
3. Click on Field Service... A screen will appear.
4. Click on the "Power..." button located in the "Calibrate" section of Field Service. A dialog box will appear.
5. Click on "Enter ABC" button.
6. Insert the A, B, and C values previously noted in the section "Before Installing the Software".
7. Click on OK. The new A, B, and C values should now appear in the "Current Column".
8. Exit the "Power Calibration" dialog box by clicking OK.
9. Find the "Position" section in the FIELD SERVICE screen.
10. Click the "Move To" radio button.

11. Click on the “Rest” button. Use the arrow keys to move the beam to an acceptable rest position (usually the front of the rim).
12. Click on “Define” radio button.
13. Click on “Rest” button.
14. Use arrow keys to move the beam to Sensor 1. Sensor 1 is located at the back right of the vat.
15. Click “Sen 1” to find the pinholes. The title bar of the screen should read “Field Service – Acquiring Profiler 1” during the search for the pinholes.
16. Once the title bar returns to “Field Service” click on “Move To” and select a sensor 1 pinhole (i.e. ½) to verify that the Avg., Min., and Max. values are non-zero.
17. Use the arrow keys to move the beam to Sensor 2. Sensor 2 is located at the front of the vat, near the sweeper “home” position.
18. Click on “Define” button.
19. Repeat steps 15 and 16 using “Sen 2” to define Sensor 2.
20. Make sure the “move to” radio button is selected and click on several pinholes on both sensors. Verify that non-zero values appear for avg., Min., And max for each pinhole.

The laser is now ready for a build.

Double click on System Menu button in upper left corner of FIELD SERVICE window to exit. If you are unsure about performing these remaining tasks, consult your systems administrator or local field service representative.

Attention: before starting a build, make certain to select the “smart power” check box in the build job options section of the buildstation main screen. The result is reduced build time for your parts.