Viper™ Pro and iPro™ SLA® Build Startup Tips
(assumes 3DPrint 0.99.55 software)

Quick Build Checklist

Post on each system
1. Dp/Ec for resin (on each side of duals, as applicable)
2. Build scale and offset values (on each side of duals, as applicable)
3. Vat temperature (per resin)

Prior to approaching system
1. Whenever possible, load and preview the file in Lightyear
   a. In bff file: Verify all parts are drawn on the same layer
   b. In pla file: Verify recoat parameters are correct

Starting the build (Quick pre-build Checklist)
1. Transfer file onto system control computer
2. Safely eject and remove flash drive (if used)
3. Check recoater is home
4. Check recoater blade is clean
5. Using File→Open, select desired bff file
6. Verify correct:
   a. Ec and Dp
   b. All options are checked except skip init and simulate
   c. Proper vat temperature
   d. Vat temperature and alarm temperature set points
   e. Check laser off timer (XX minutes, per your facility usage scenario)
   f. Machine scale is set to 1.000
   g. Build scale value correct
   h. Build offset value correct
7. Verify there are no bubbles in the build area
8. Press Play
9. Watch system until the second layer of supports is being drawn

After build
1. Offload platform for cleaning
2. Install new platform and pull to front stop
3. Verify platform is latched
4. Home recoater
5. Clean recoat blade
6. Move elevator just under the resin surface
7. For filled resins, level the resin

Details related to Quick Build Checklist

Quick Check Item	Details
Transfer file onto system control computer	Always build from the local system drive.
Safely eject and remove flash drive (if used)	If the memory stick will not safely eject, reboot the computer and then safely eject.
Check recoater is home	Check all three axes: Z: Visually verify that the Z axis is at the top of travel. Theta: The blade should be high on the side toward the center of the system. Y: Blade should be at the forwardmost position over the drip tray in the vat. If the blade is not home, enter the Manual Operations window and press the Home button in the recoater section.
Check recoater blade is clean	Using a gloved finger, slide across the bottom of the blade checking for debris. If cleaning is required, see "recoater cleaning" below.
Select desired bff file	Using File → Open, highlight the file which is in the local drive on the system. Verify no special characters are in the bff file name.
Verify Ec and Dp	On the machine options tab, check Ec/Dp are correct for that vat. Refer to the 3D Systems website for the latest Ec/Dp information on the resin datasheet.
Verify options: all checked except skip init and simulate	In machine options tab, all options should be checked except skip init and simulate.
Verify vat temperature	In machine status tab, check vat temperature is correct for that resin.
Verify vat temperature and alarm temperature settings	In machine settings, check vat temperature is correct for that resin. Check that alarm temperature is 30° (3D Systems resin), or as appropriate for your resin.
Verify laser off timer is set to XX minutes	On the machine status tab, check the laser off timer is set to an appropriate value for your operations. Depending on the build turnaround time at your facility, you may want to change the laser off timer to a different value (longer or shorter), as appropriate. If you start builds quickly one after another, it's best to leave the laser on. If several hours may elapse between builds, you should let the laser shut off, to save laser hours.
Verify machine scale	On the machine scale tab, check machine scale is correct for your setup.
Verify build scale	On the build scale tab, check build scale value. Refer to the scale and offset values posted on the system.
Verify build offset	On the build offset tab, check build offset value. Refer to the scale and offset values posted on the system. Do not use Build Offset for positioning parts.
Verify there are no bubbles in the build area	Remove all bubbles in the build area. Use a paper towel to sweep bubbles to the edge of the vat, pop the bubbles, or use the bubble remover utility.
Press Play	Don't press play more than once. Wait for the first layer to finish before aborting, pausing, or taking any other action.
Watch system until the second layer of supports is being drawn	This is to make sure that all appropriate actions are taking place before leaving the system unattended.

Install platform and pull to front stop	Verify the platform is not angled in any direction. Pulling the platform forward toward the front stops helps ensure positive latching and no angling.
Verify platform is latched	Gently grab the platform to verify the platform is latched properly.
Home recoater	This puts the recoater at a good position for the next operations.
Clean recoat blade	Using a gloved finger, slide across the bottom of the blade checking for debris. If you can remove debris with your finger, remove it. If it is more stubborn, use a wooden tongue depressor to remove the debris. If more stubborn than that, clean the blade in your solvent tank. If you have solvent cleaned your blade, fully flush with alcohol and water, dry the blade, and cure in your PCA for ½ hour before reinstalling.
Move elevator just under resin surface	This puts the platform latch into the resin, rather than leaving it in open air. If left in open air, resin is more likely to start to gum up the latch mechanism, preventing proper platform latching.
For filled resins, level the resin	This saves time at the start of the next build, since resin leveling in filled materials can take longer