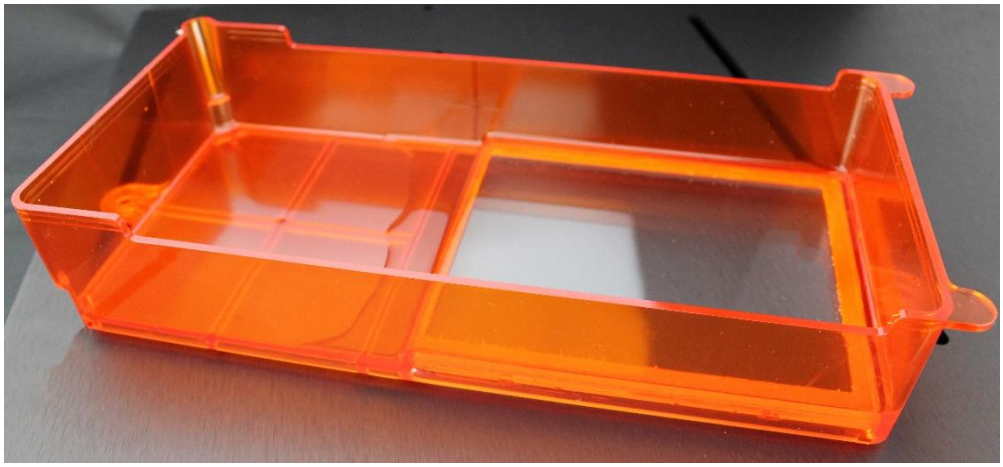
B9Creator Vat Upkeep

Summary

This document contains information for proper vat upkeep, storage, and vat replacement.

I. Things to Know

Below is an image of a new vat (B9A-VAT-010), with the packaging removed:



The window of the vat is coated with a protective layer, referred to as PDMS. You may notice what appears to be excess PDMS on the left portion of the vat, as seen above. Do not attempt to remove this overflow from the vat, as it is intentional and does not affect the functioning of the printer.

Perform a visual inspection of the vat to ensure there are no scratches or visible debris on the PDMS or glass. Any debris should be removed before use to ensure the highest possible print quality. Debris removal is as simple as removing any large pieces with wiping the vat with a damp paper towel or soft, lint free cloth.

II. Vat Cleaning

To clean your vat after use, pour unused resin into a separate light blocking container for storage. **Do not pour used resin back into the new resin bottle.** Using a paper towel, wipe out the inside of the vat to remove any remaining resin residue then rinse with warm water. **It is crucial to be very careful not to scratch or damage the PDMS by applying excessive pressure to the protective coating.** Finally, let the vat air dry and store covered in a cool, dark place to prevent debris from accumulating inside the vat.

III. Vat Storage

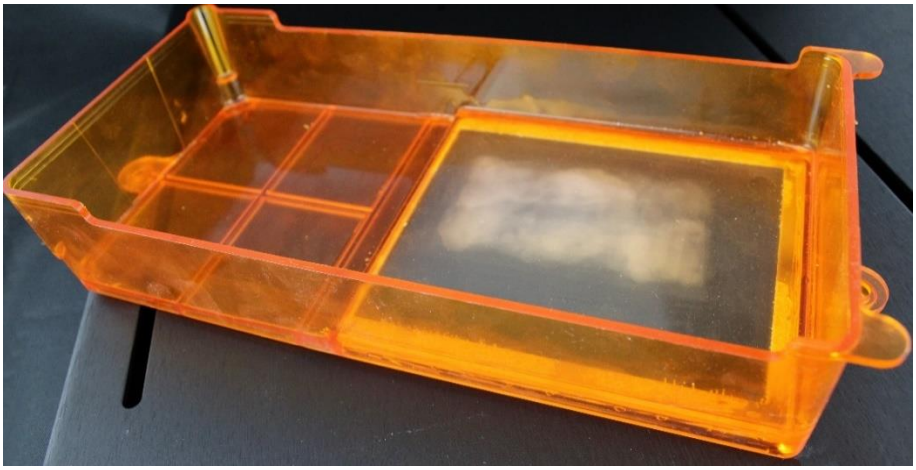
If the vat contains resin, there are two options for storage:

1. The vat may be left in the machine, with the lid closed, to prevent the resin from being exposed to UV rays.
2. Second, the vat can be stored in a clean place, out of direct UV light exposure, such as a drawer or box.

If the vat is empty, as stated before, store covered so no debris accumulates inside the vat.

IV. Vat Replacement

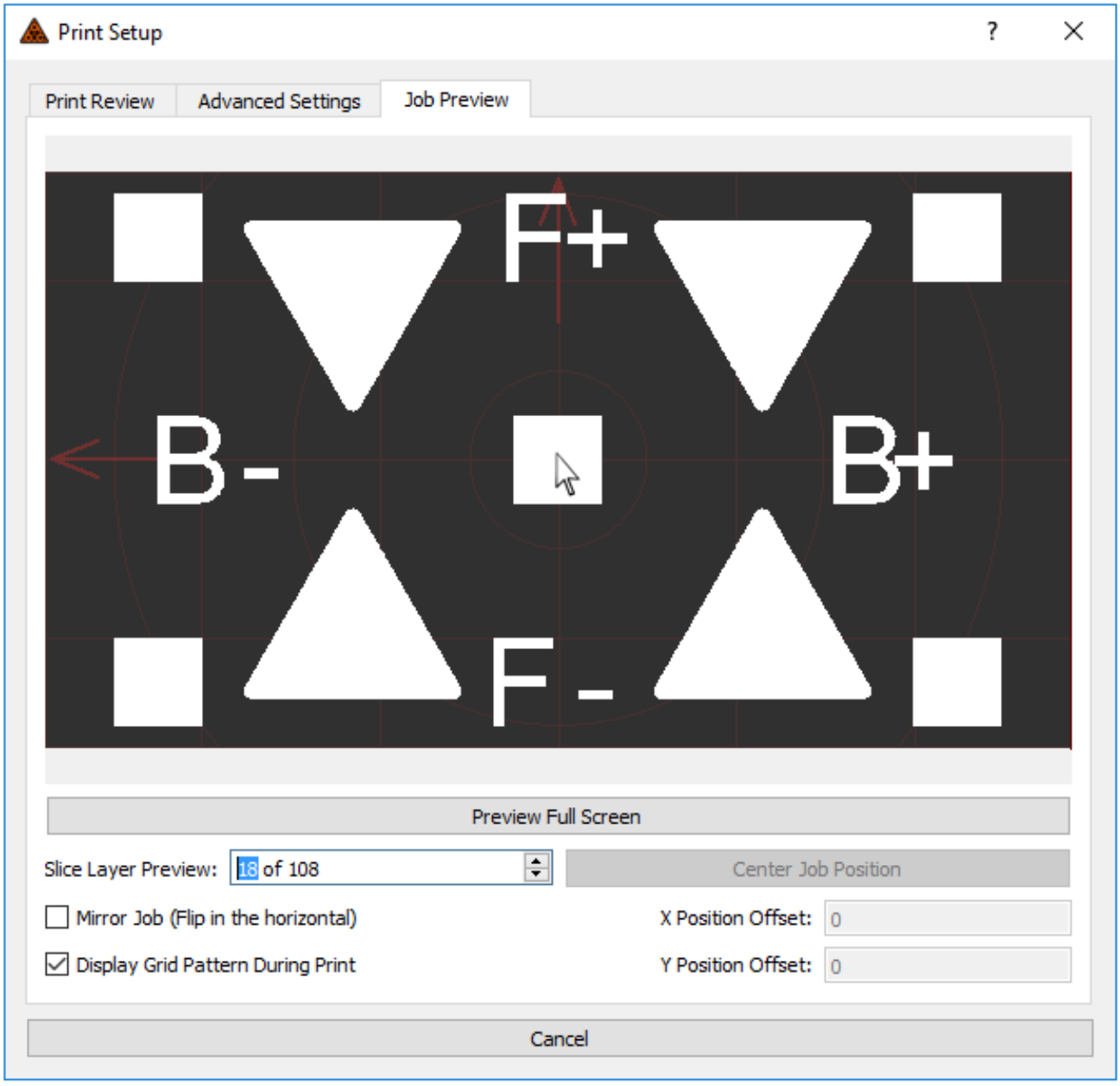
Vat replacement is necessary when the vat's PDMS layer gets too cloudy. Some clouding is normal on the PDMS, but excess cloudiness distorts the image from the projector, causing loss of print quality or print failure. Print size, the frequency of duplicate prints, and the methods of orientation and supporting all contribute to excessive clouding. Below is an example of a vat with clouding that needs to be replaced:



V. Extending Vat "Life"

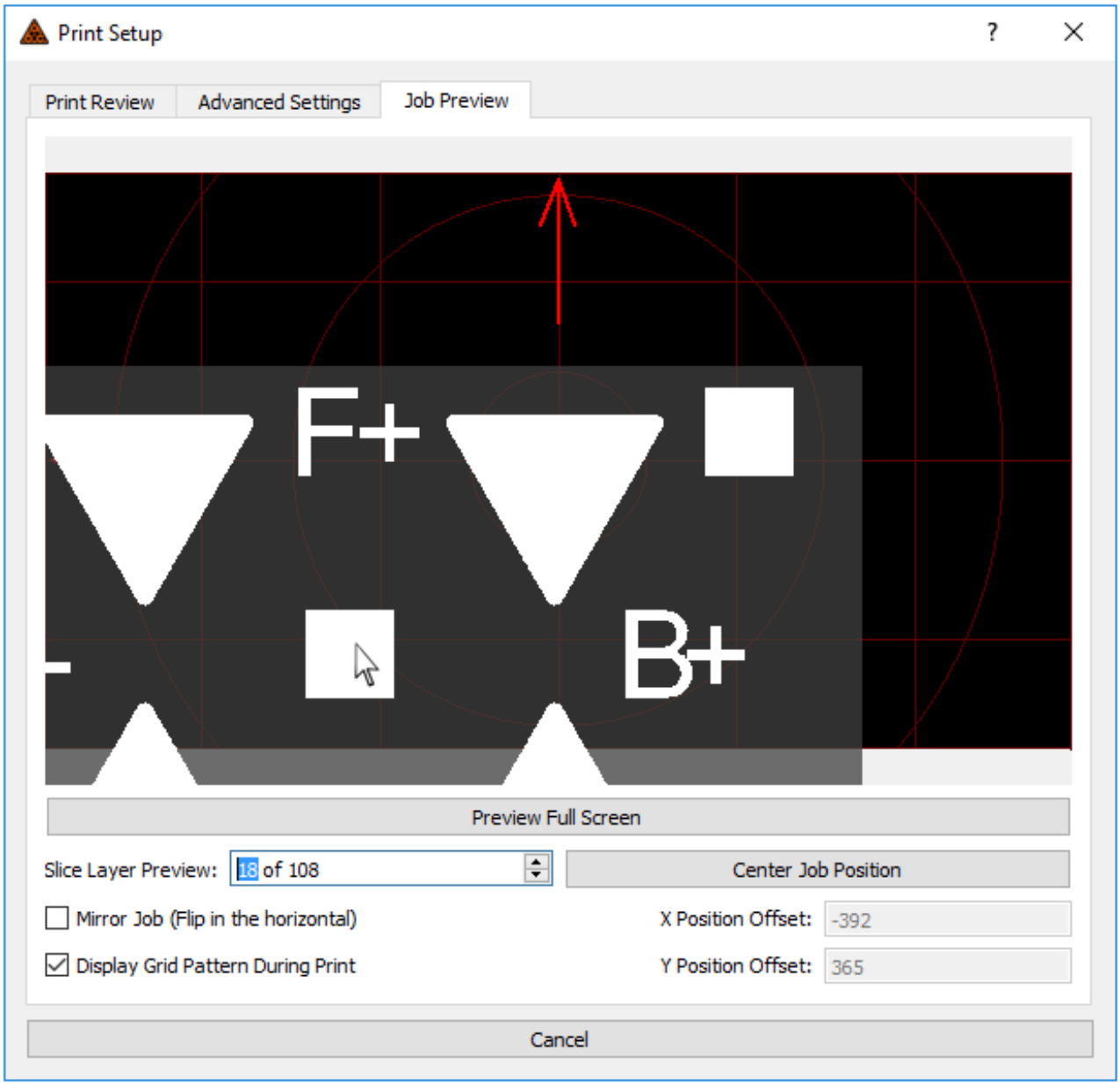
It is recommended to that, when laying out your part, there are no straight, vertical walls and to use slanted supports in order to widen the usage of space on the vat. Otherwise, there are two options which can extend the life of a vat. One option is relocating prints on the build table in order to use the entire build area. To do this, follow the steps below:

1. Open the B9 software. Click on the "Print" button and select the desired print. Then select the "Job Preview" tab. (The example shown below is a 30xy calibration print)



2. Click and hold your mouse over the print slices as shown below:

3. While holding the left click button, you can move the print around the build table as shown below:

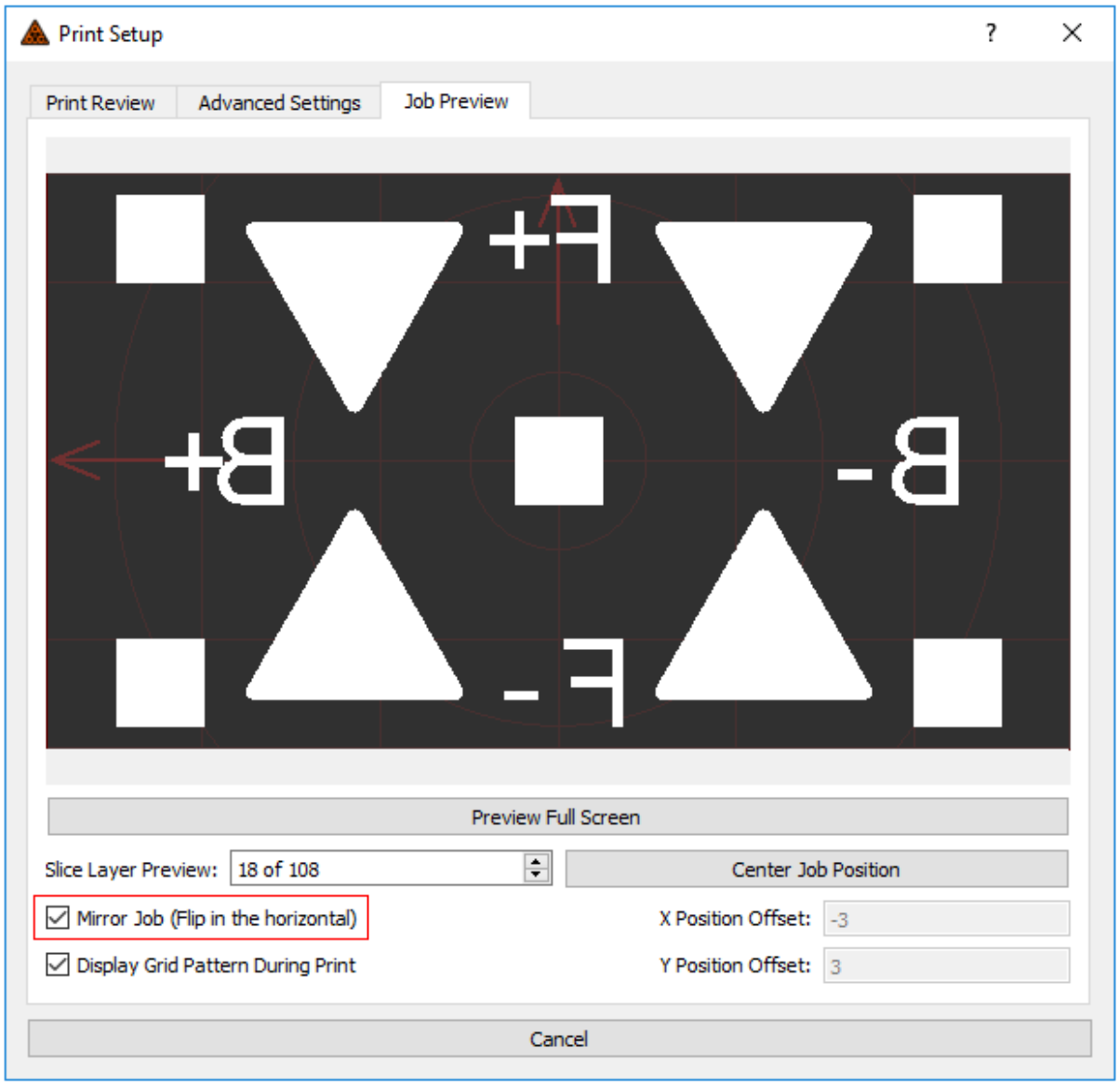


This option provides the best results, but only allows you to relocate the entire job file on the build table, not move the individual parts of the file.

The other option available is “Mirror Job”. This feature allows you to reverse the print image on the build table. To use this function, follow the steps below:

1. Open the B9 software. Click on the “Print” button and select the desired print. Then select the “Job Preview” tab.

2. In the lower right corner of the tab, click in the box marked “Mirror Job (Flip in the horizontal)”, as shown below:



This option may not result in a large change to the build layout, depending on the placement of parts of your layout, but it will modify the location of the print on the PDMS enough to help prevent excess wear. **If your parts contain text or direction specific dimensions, this function is not recommended.**

If you have any questions or comments regarding your B9Creator or vats, please contact us at support@b9c.com.