3D SYSTEMS University

CubeX Printer

"Lesson – Setting the Print Jet Offsets"

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Objectives

After completing this lesson you will:

❑ Understand the Print Jet offset function and it's use

❑ Be able to read the offset print and adjust the Print Jet offsets accordingly

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Introduction

The CubeX Print Jet offsets are used to compensate for the relative positions of the Print Tips. Setting them correctly ensures that multi-color / multi-material prints work correctly.

The offsets are adjusted in the X and Y axes.

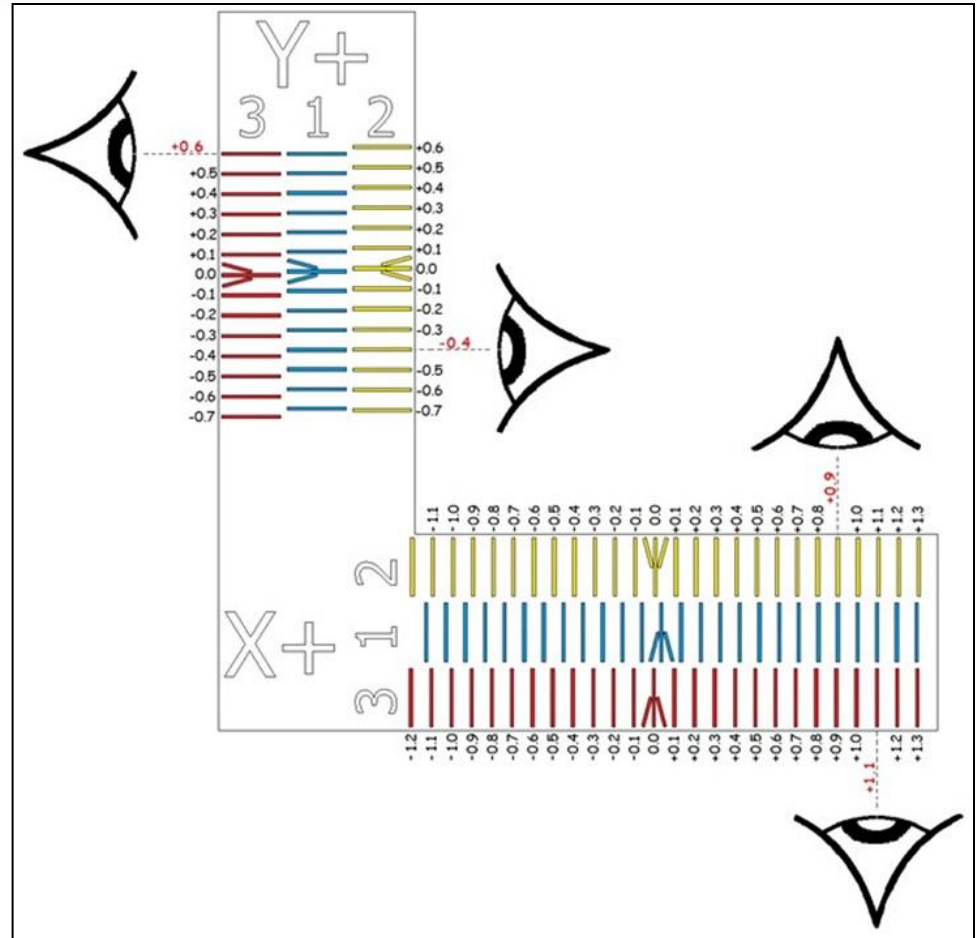A calibration file is used to determine how the offsets need to be adjusted.

The offsets only need to be adjusted on the Duo and Trio models.

 CAUTION: Do not use the offset menu unless you have been advised to do so by Cubify Support, as changes to this may affect the quality of multi-material prints.
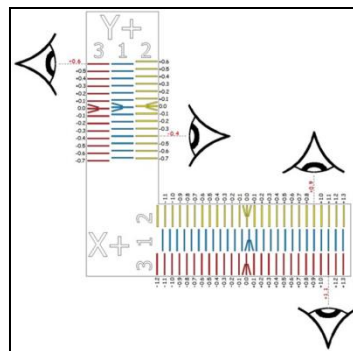
Setting the CubeX Print Jet Offsets

- Print the appropriate calibration file for the machine in question (CubeX Duo or Trio)

- Contact Cubify Support to get the calibration files

- Use the calibration print to adjust the offsets as necessary

Setting the CubeX Print Jet Offsets

| PRINTING THE CALIBRATION FILE	Print the CubeX calibration file as you would any other print file.
READING THE CALIBRATION FILE	The lines on the calibration print are offset by 0.1 mm. The amount of misalignment can be calculated by counting the amount Scale 2 or 3 is offset from Scale 1. • Scale 1 is printed by Print Jet 1. This is the reference print jet. All offsets are relative to Print Jet 1. • Scale 2 is printed by Print Jet 2. This error amount is the amount Print Jet 2 needs its offsets to be adjusted. • Scale 3 is printed by Print Jet 3. This error amount is the amount Print Jet 3 needs its offsets to be adjusted.
HOW TO ADJUST THE OFFSETS	Touch the relative offset to activate it, a plus and a minus will appear at the side of the screen. Use this plus and minus to adjust the offset.

Setting the CubeX Print Jet Offsets

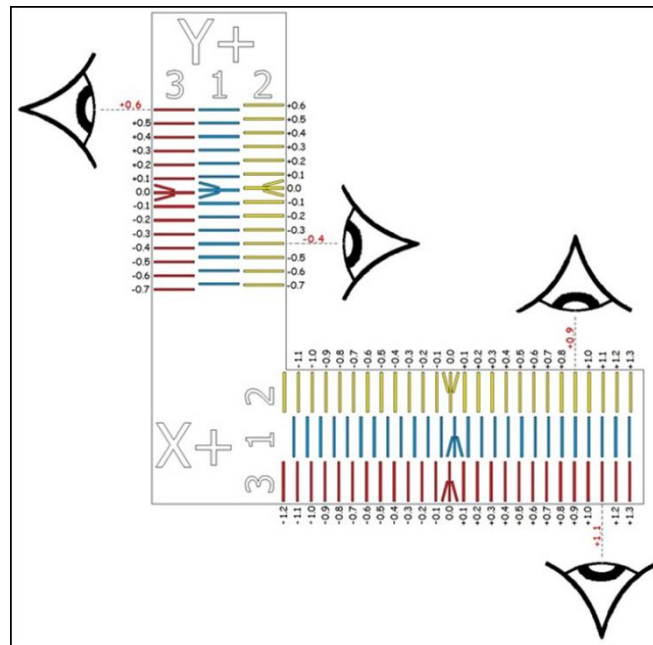| PRINT JET 2 Y OFFSET	Compare the lines on "Y scale 1" and "Y scale 2" to find the ones that most accurately line up. Because variation is small, it may be easiest to spot 3 that look like they all line up. If this is the case, use the middle one as the correct one. Mark this line with a pen for easier identification. On "Y scale 2" count from the center line (with the arrow) to the marked line. If you are counting down, the scale the number is negative. If you are counting up, the scale the number is positive. Write down the offset. • In the example shown in Figure 123, the Y offset for extruder 2 is -0.4mm.
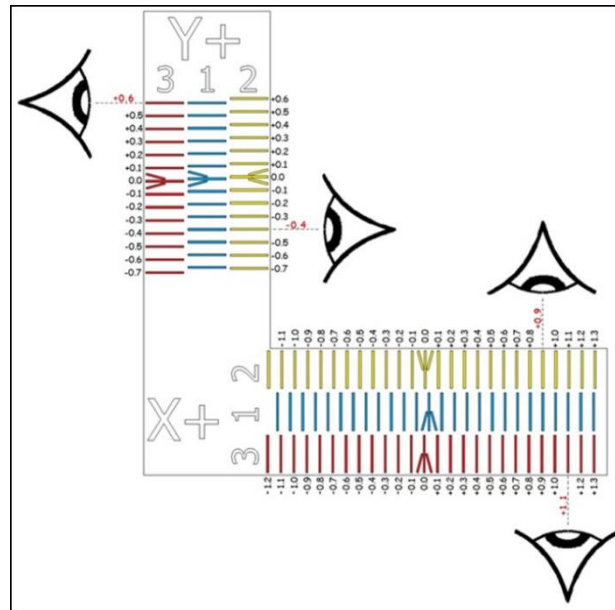
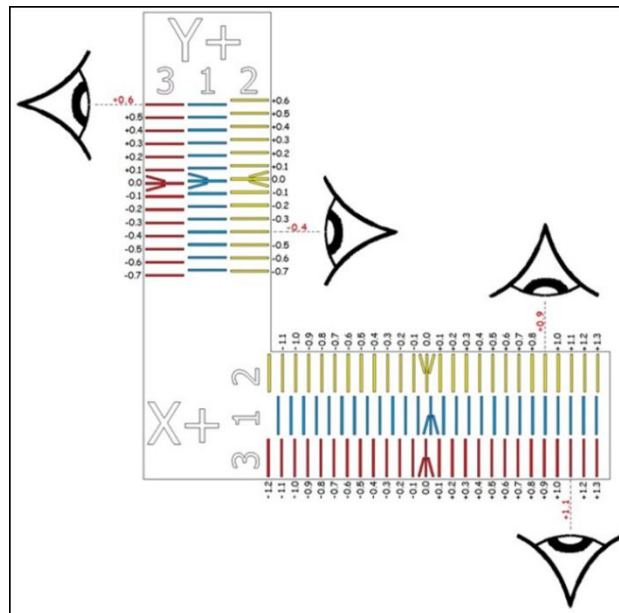| PRINT JET 3 Y OFFSET	Compare the lines on "Y scale 1" and "Y scale 3" to find the ones that most accurately line up. Because variation is small, it may be easiest to spot 3 that look like they all line up. If this is the case, use the middle one as the correct one. Mark this line with a pen for easier identification. On "Y scale 3" count from the center line (with the arrow) to the marked line. If you are counting down, the scale the number is negative. If you are counting up, the scale the number is positive. Write down the offset. • In the example shown in Figure 123, the Y offset for extruder 3 is +0.6mm.

Setting the CubeX Print Jet Offsets

PRINT JET 2 X OFFSET	Compare the lines on "X scale 1" and "X scale 2" to find the ones that most accurately line up. Because variation is small, it may be easiest to spot 3 that look like they all line up. If this is the case, use the middle one as the correct one. Mark this line with a pen for easier identification.
	On "X scale "2 count from the center line (with the arrow) to the marked line. If you are counting left, the scale the number is negative. If you are counting right, the scale the number is positive. Write down the offset.
	• In the example shown in Figure 123, the X offset for extruder 2 is +0.9mm.

Setting the CubeX Print Jet Offsets

PRINT JET 3 X OFFSET	Compare the lines on "X scale 1" and "X scale 3" to find the ones that most accurately line up. Because variation is small, it may be easiest to spot 3 that look like they all line up. If this is the case, use the middle one as the correct one. Mark this line with a pen for easier identification.
	On "X scale 3" count from the center line (with the arrow) to the marked line. If you are counting left, the scale the number is negative. If you are counting right, the scale the number is positive. Write down the offset.
	• In the example shown in Figure 123, the X offset for extruder 3 is +1.1mm.