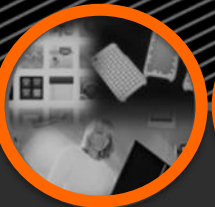# 3D SYSTEMS University

Cube 3D Printer

"Lesson – Setting up the Print Tip Wiping System"

Revision date: 09/20/13

# Objectives

*After completing this lesson you will:*

❑ Learn what the wiping system is and how it works.
❑ Be able to set the jet wiper height, wiping stick height, and wiping stick offset.

# The Print Tip Wiping System

The CubeX Print Tip wiping system is designed to clean excess material from your print tips when you start a print and during a multi material print whenever the machine switches between print jets. The Print Tip wiping system has three adjustable settings which must all be set correctly for the system to function correctly. These are as follows.
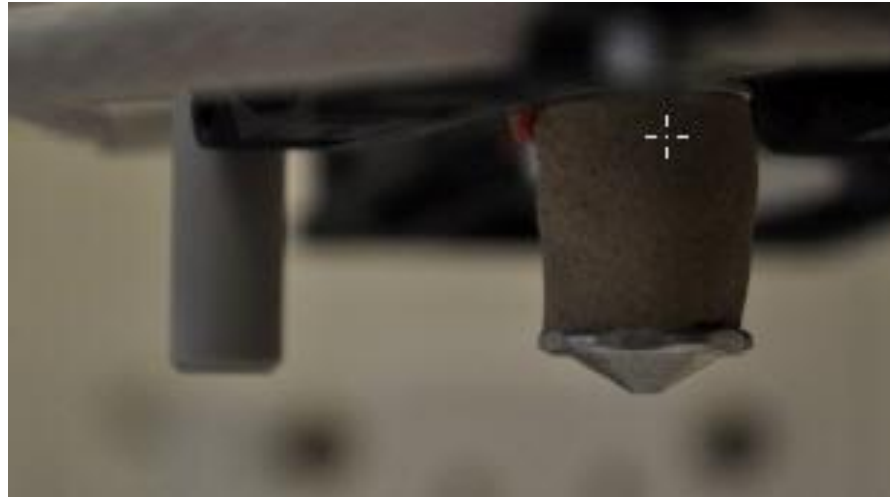
# The Print Tip Wiping System

1. The Jet wiper height



This is the height of the jet wiper relative to the Print Tip. This setting ensures all waste is correctly wiped from the Print Tip

# The Print Tip Wiping System

2. The Wiping stick height



This is the Wiping stick height relative to the Print Tip. This setting ensures that all waste is knocked from the Jet Wipe and into the waste collection bin.

# The Print Tip Wiping System
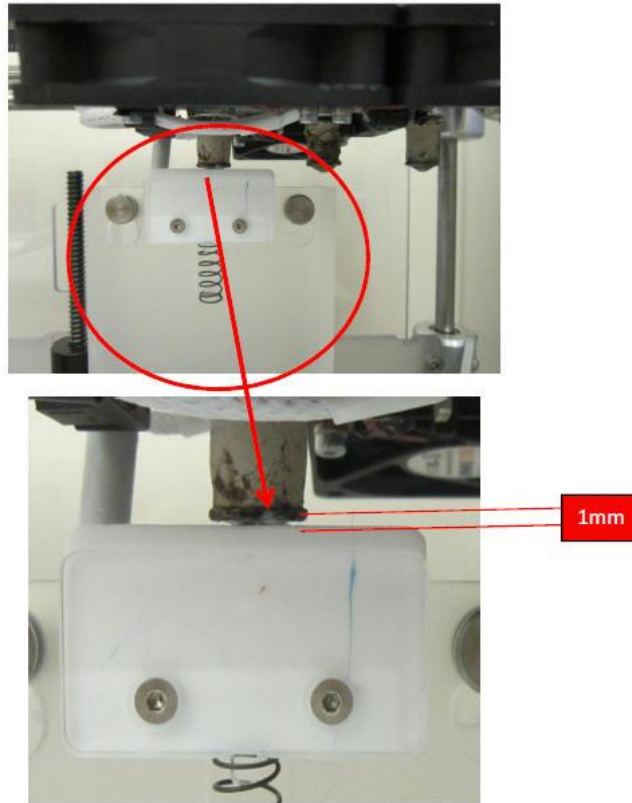
3. The Wiping stick offset



This is the Wiping sticks position relative to the Jet Wipe. This setting ensures that your Print Jets will be positioned correctly when heating up and that the wiping stick is in the correct position when performing the wiping movements.

# Before you Begin

Before you begin the set up process you must ensure that you have removed all

cartridges from the machine, your Print Tips are clean of any debris and that your
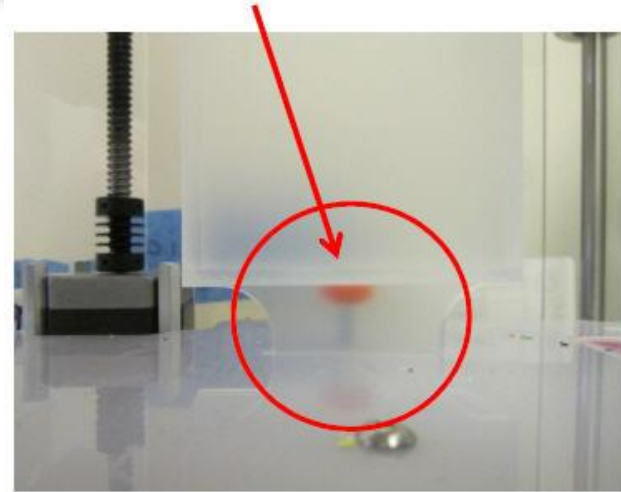
print pad is level.

# Leveling the Jet Wiper Height

☐ 1. The white plastic print jet wiper should be positioned roughly 1mm (0.040")
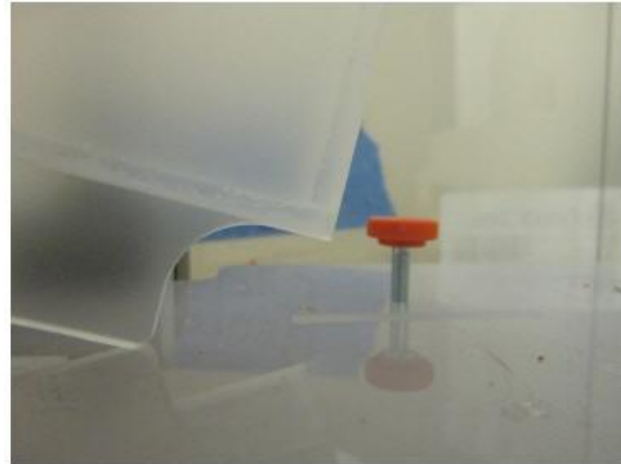below the bottom of the nozzle flange as shown below.
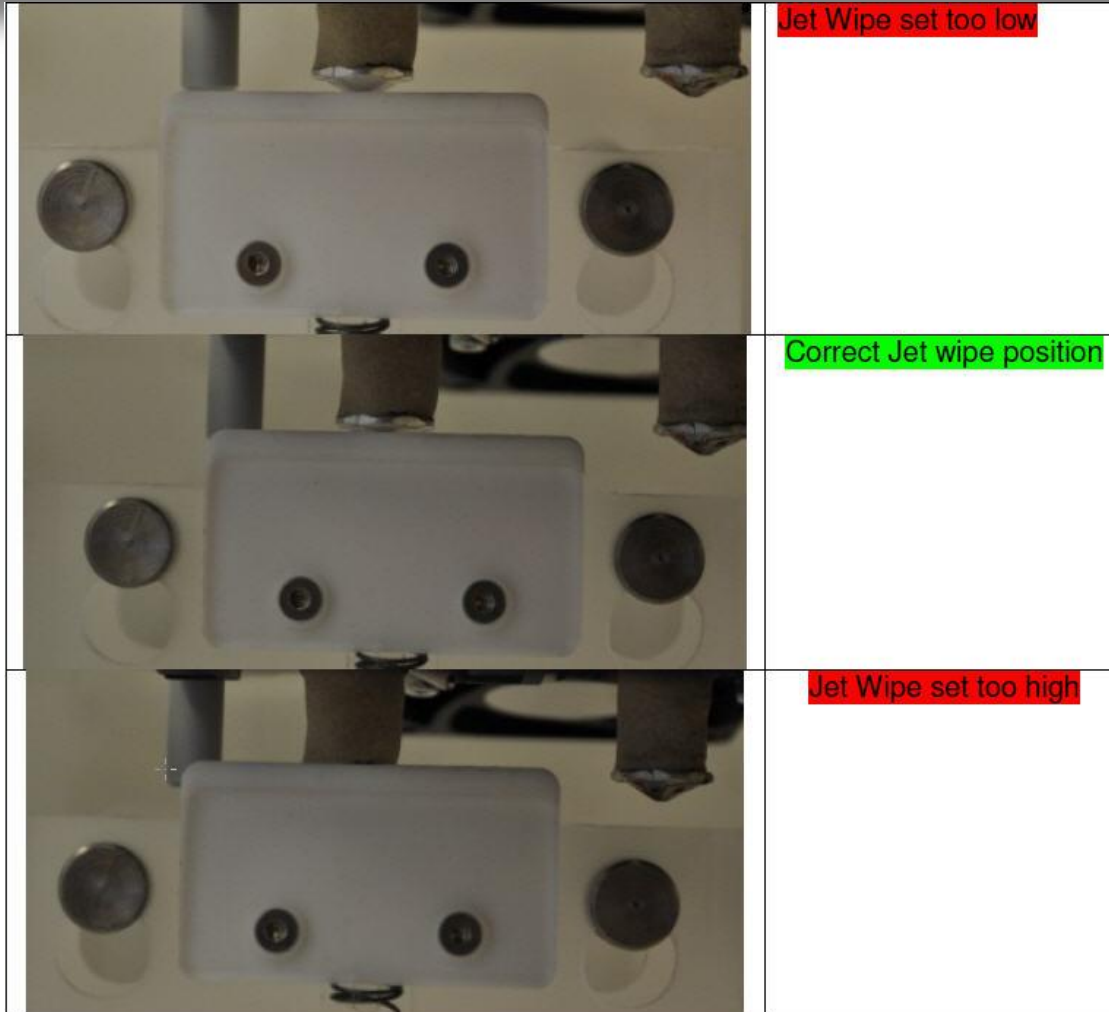
# Leveling the Jet Wiper Height

2. To adjust gap of print jet wiper twist the orange height adjustment knob below the jet wiper box.

3. Raise the print bed and lift the jet wiper box to access the orange height adjustment
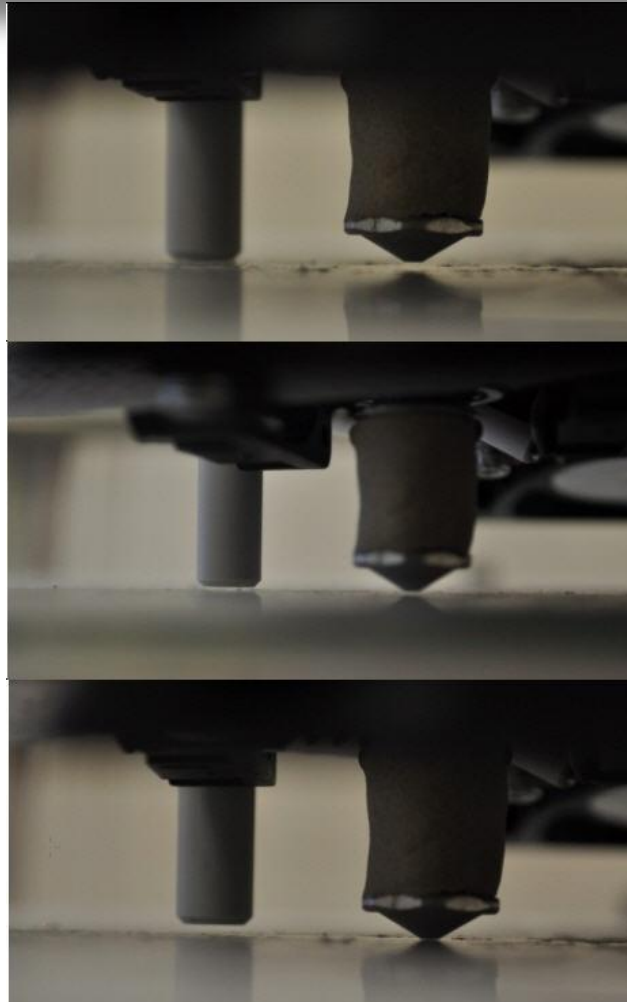
knob.

# Leveling the Jet Wiper Height



Jet Wipe set too low

Correct Jet wipe position

Jet Wipe set too high

# Setting the Wipe Stick Height

❑It is necessary for the Print Tips to be clean and for the Print Pad to be level before beginning this process as you will be setting the Wiping sticks height using them.

❑The Wiping stick needs to be the same level as the Print Jet. If it is higher it will not efficiently clear the Jet Wipe, if It is lower it will result in failed prints and potential damage to the CubeX.
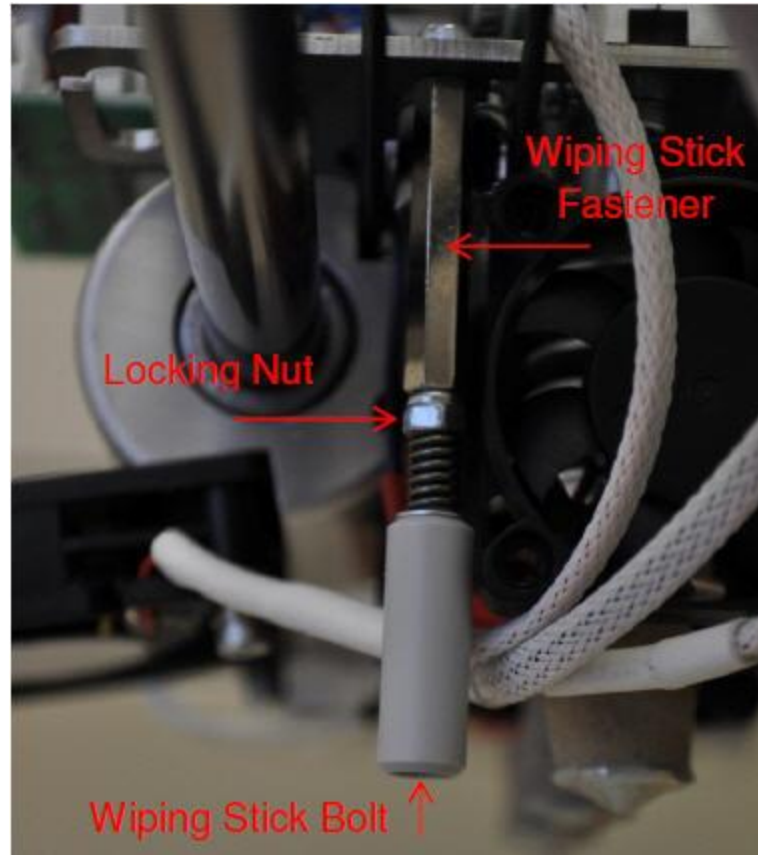
# Setting the Wipe Stick Height



Wiping Stick too Low

Correct Wiping Stick position

Wiping Stick too high

# Setting the Wipe Stick Height

☐ The wiping stick assembly
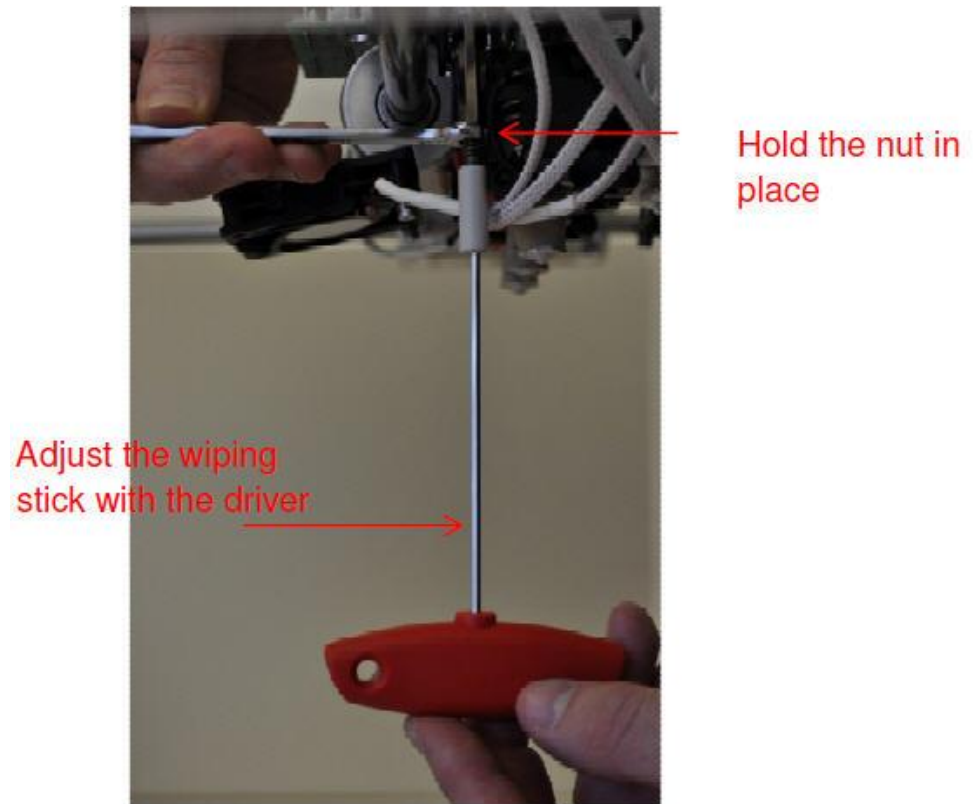
# Setting the Wipe Stick Height

Lower the bed to the bottom of the machine to gain access to the Wiping Stick.

To adjust the wiping stick you must first unlock it from the machine by undoing the locking nut found above the wiping stick with an 3mm wrench. You do not want to undo the wiping stick any more than is necessary to unlock it as this can cause you more problems when you come to lock it back in place.
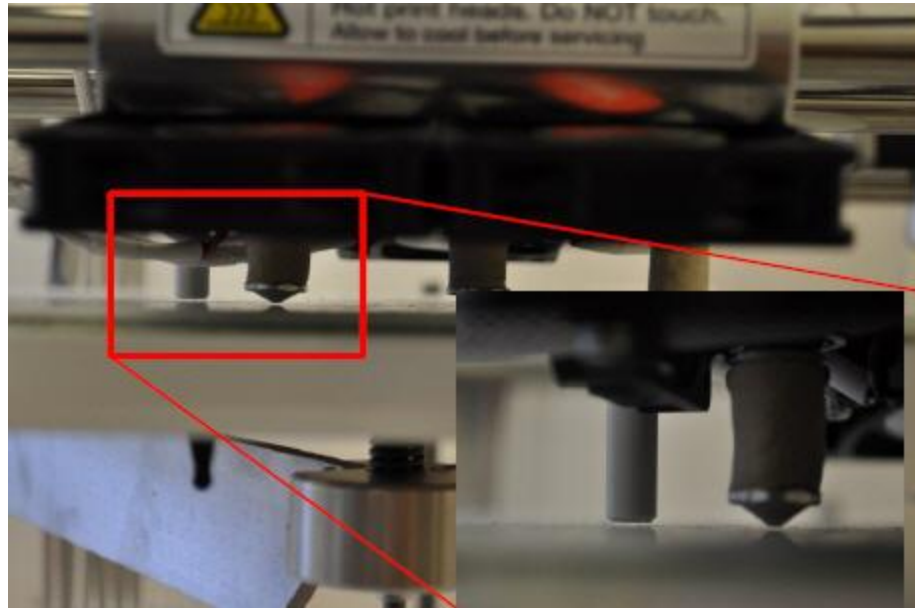
Holding the Nut in place with the 3mm wrench, use a 2.5mm hex driver to adjust the wiping stick bolt. Turning the driver clockwise will lower the wiping stick height and

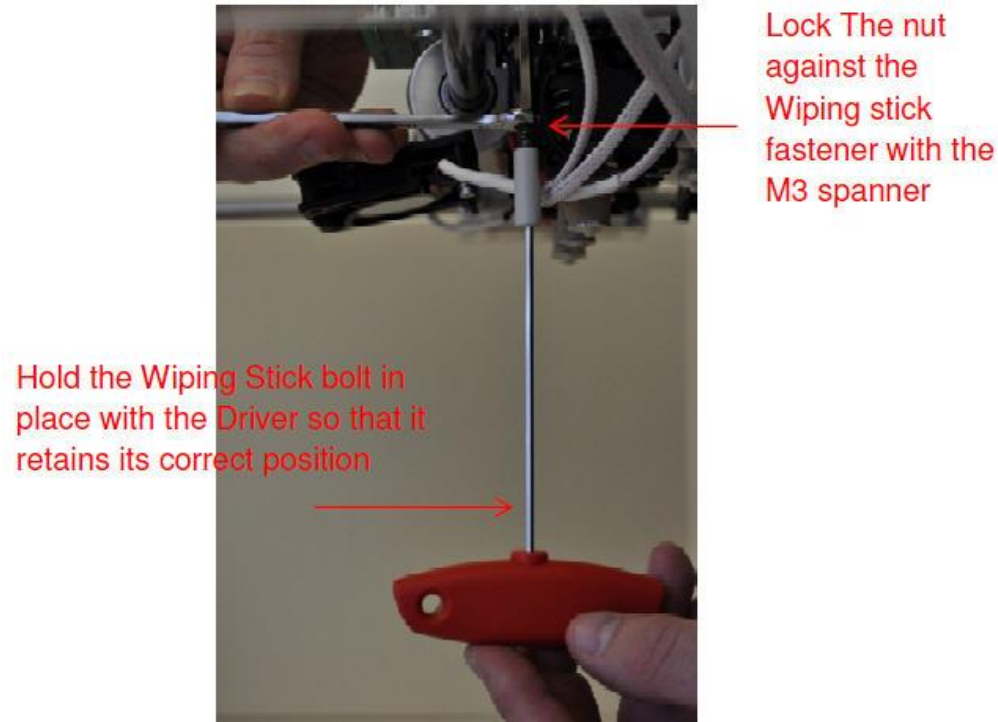turning it anti-clockwise will raise the wiping stick height.



Hold the nut in place

Adjust the wiping stick with the driver

Raise the bed until it is almost touching the Print Tips (you want to make sure there is a small air gap) to check if the Print Tips and wiping stick are aligned. If they are not repeat the process and adjust the wiping stick accordingly until it is in the correct position.
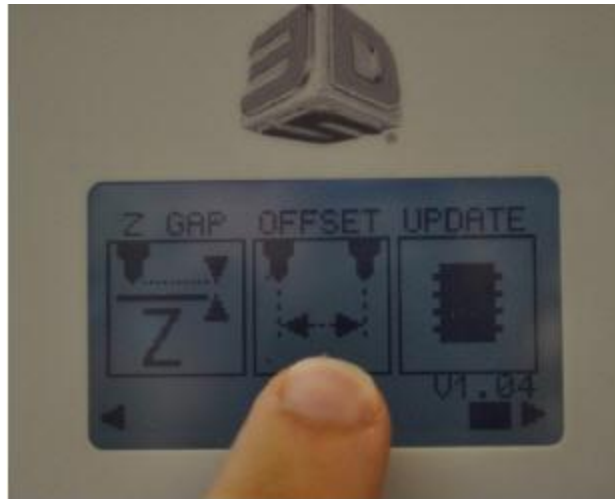
# Setting the Wipe Stick Height

Once your Wiping Stick is properly aligned to the Print Tips you will need to lock it back in place. This is done by holding the Wiping Stick bolt in place with the 2.5mm hex driver and turning the bolt with the 3mm wrench until is locked against the wiping stick fastener.



Lock The nut against the Wiping stick fastener with the M3 spanner

Hold the Wiping Stick bolt in place with the Driver so that it retains its correct position
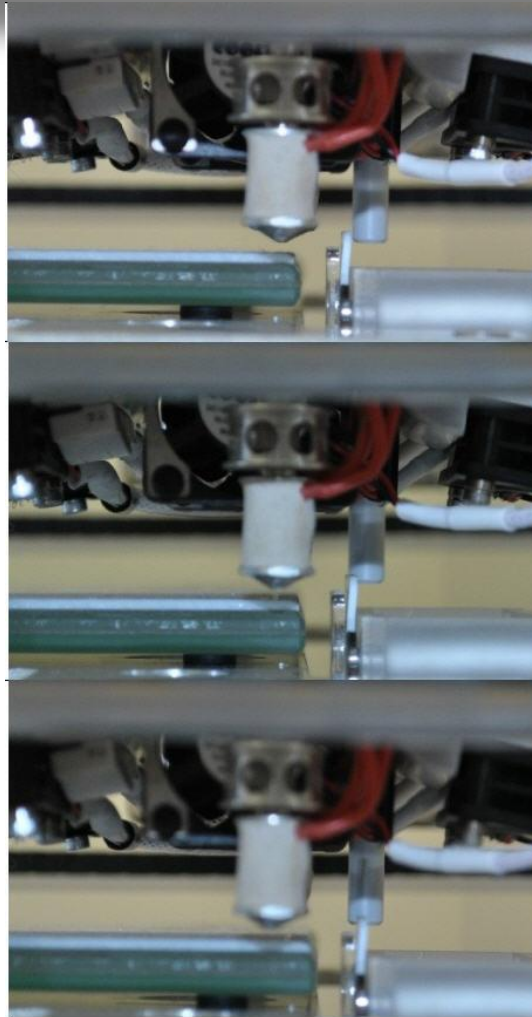
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# Setting the Wiping Stick Offset

Navigate the main menu to the Offset option and press it. The machine will automatically move into position for you to set the Wiping Stick offset.



The Wiping Stick offset needs to be set so that the stick will just touch the Jet Wiper as it moves past it. if it is too far behind the wiper it will not clean the wiper efficiently. If too much of the wiping stick hits the wiper it can cause printing problems such as shift in parts or in extreme cases damage to the CubeX.

# Setting the Wiping Stick Offset



| | |
|---|---|
| | Wiping Stick set to far behind the Jet Wipe |
| | Correct positioning of the wiping stick offset |
| | Wiping Stick set to far forward |

# Setting the Wiping Stick Offset

When in the offset menu you will need to select the numbers to the right of the WIPE option.

You then need to use the + and – signs to move the Wiping Stick to the correct position.

+ moves the Wiping Stick towards the back of the machine.

- moves the Wiping Stick towards the front of the machine.

Once you have positioned the Wiping stick correctly, Press the function button and then press the on screen tick to save your settings.