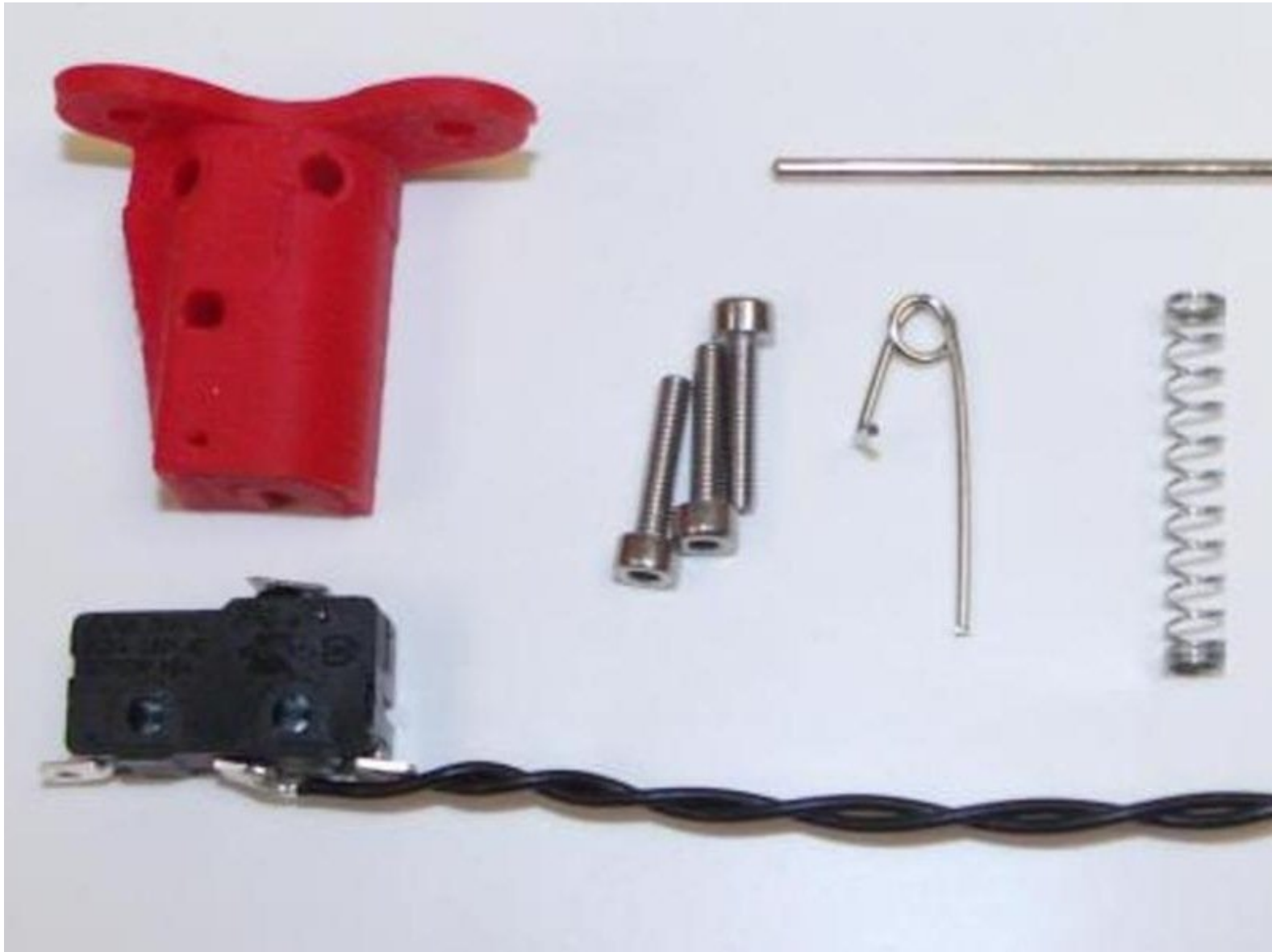


# HKBay.com

## F - Z-Probe Assembly

Written By: HKBay

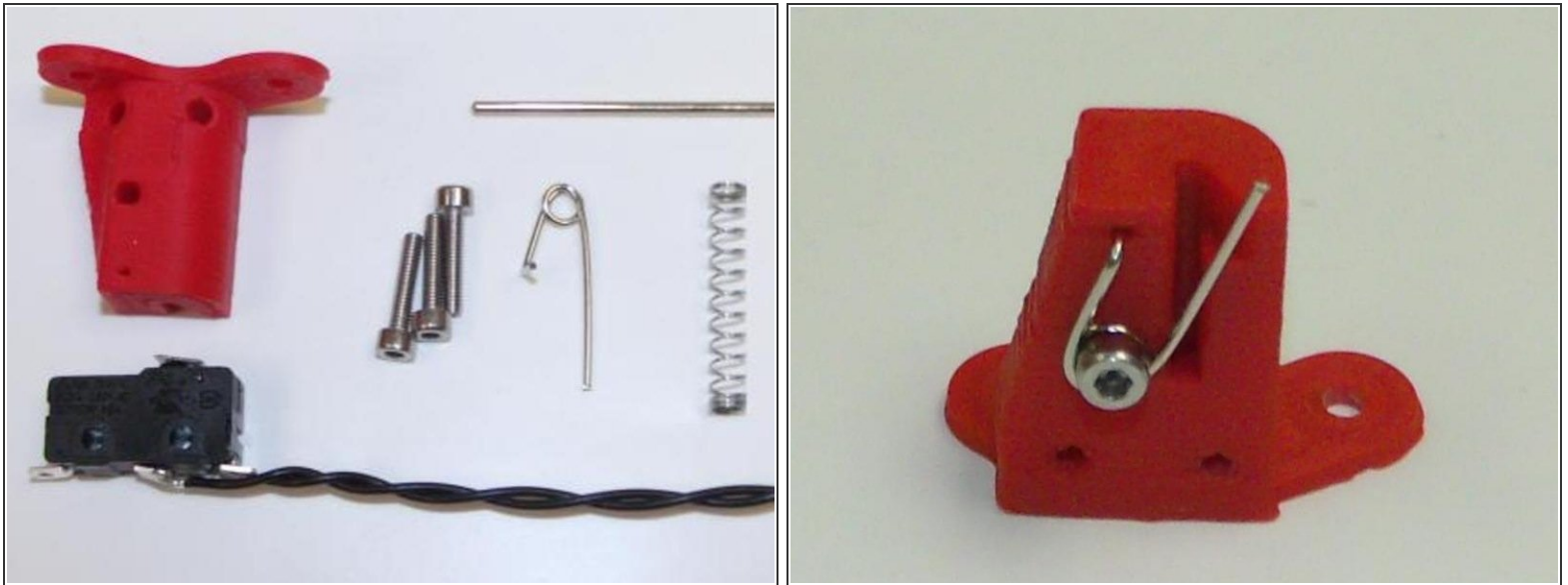


 **TOOLS:**

- Hex key; ball ended, long arm, 2.5mm (1)
- Hex key; ball ended, 2.0mm (1)
- Wire Cutters (1)

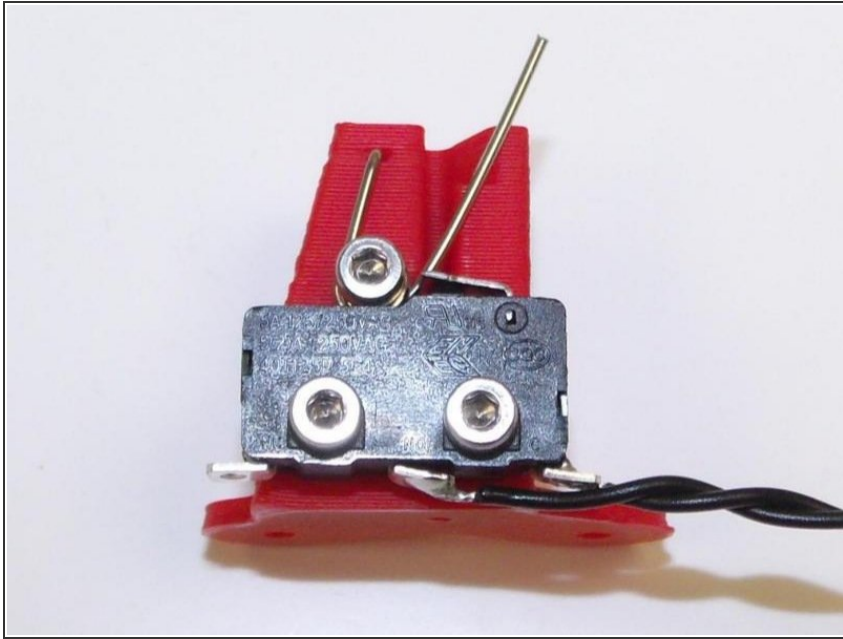
 **PARTS:**

- Z-probe holder (1)
- Z-probe micro-switch with 4 cables (1)
- 1.5mm hex key with heat-shrink tube (1)
- safety-pin (1)
- spring (1)
- terminal block (1)
- M2.5x12 screws (3)
- heat-shrink tube (1)

**Step 1 — F - Z-Probe Assembly**

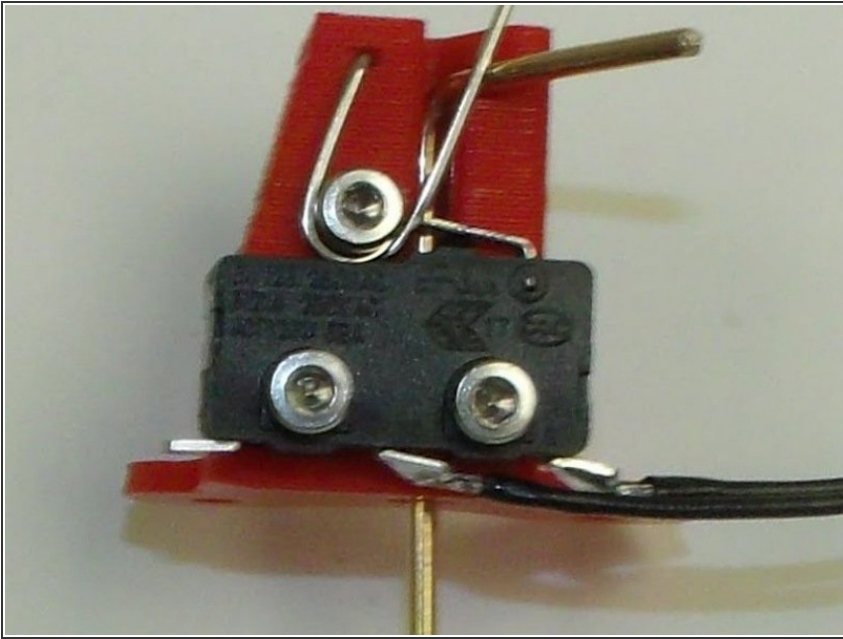
- Cut off top ends of safety pin. Insert the left leg into the small hole at the top of the printed Z-probe holder and bend the pin so that the loop aligns with the hole. Secure with one of the M2.5x12 screws.

## Step 2



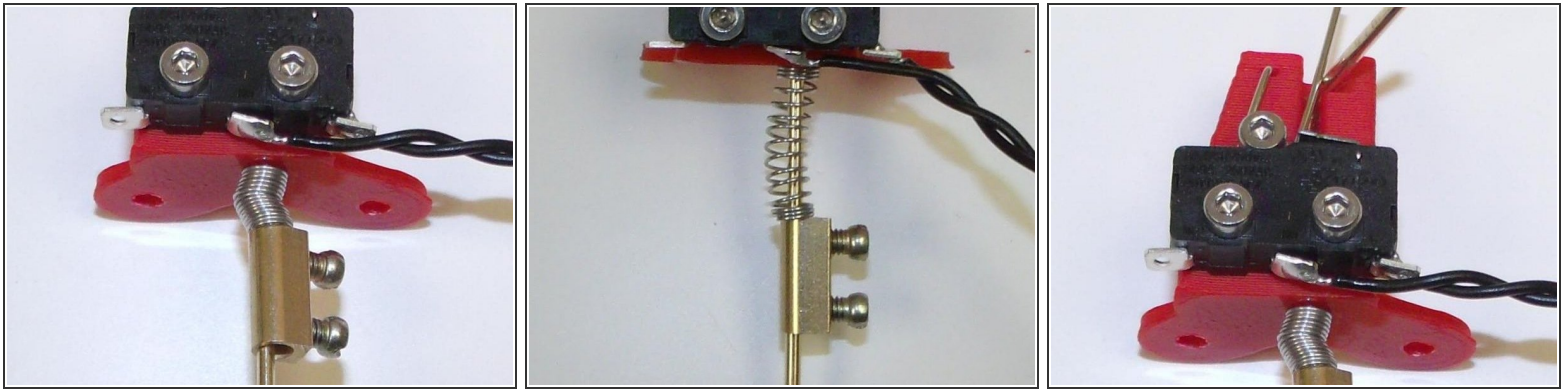
- Fit the micro-switch with the cable leading to the right, using another two M2.5x12 screws.
- ⓘ The orange switch needs to be aligned with the groove in the probe holder.
- ⓘ The legs probably need to be bent sideways, as shown in the picture.
- ⓘ Make sure the micro-switch is held firmly against the holder while being careful not to over-tighten the screws!
- ⚠ Double-check that the micro switch is held firmly with no movement whatsoever, as this would negatively affect your printers' accuracy!

### Step 3



- ⚠** Before inserting the hex key, please make sure that it's straight as an arrow. If it's slightly bent, try to bend it as straight as possible.
- Then insert the hex key into its groove/hole from above.
- i** Ensure it moves freely and smoothly through the hole - if it doesn't, enlarge the hole and the slot and/or use some lubricant.
- ⚠** If necessary, cut the heat shrink tube near the bend in the hex key, so that it does not touch the plastic holder or the micro-switch anywhere!

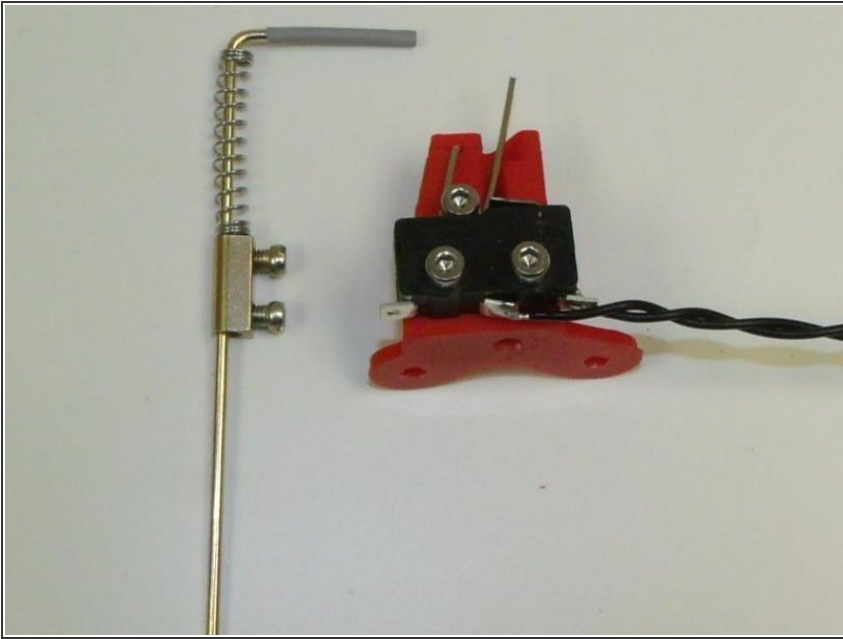
## Step 4



- While hex key is in upper position, fit the spring and terminal block from below, compress the spring about 80% (not 100% as shown in the picture!), and tighten the terminal screws.
- Trigger the probe by flicking the short leg past the safety-pin spring into the deployed position.
- ⚠ Confirm it is pushed down hard enough by the spring to activate the micro-switch - you should hear the micro-switch click.
- Push from below against the probe leg until the hex key pushes back up past the safety-pin spring. Check that it retracts correctly.
- ⓘ You may need to bend the safety-pin spring leg to adjust the force required.
- Push from below against the probe leg until the hex key pushes back up past the safety-pin spring.
- ⚠ Check that it retracts correctly. You may need to bend the safety-pin spring leg to adjust the force required.
- Repeat several times to confirm that the probe will work reliably. You may need to oil or grease the brass rod during commissioning.



## Step 5



- Add a second heat shrink tube to the one that's already on the key to make it longer.
- Remove the hex-key, spring and screw terminal - these can only be finally fitted after the Z-probe holder is mounted on the effector plate.
- ☑ Set aside for the next step.