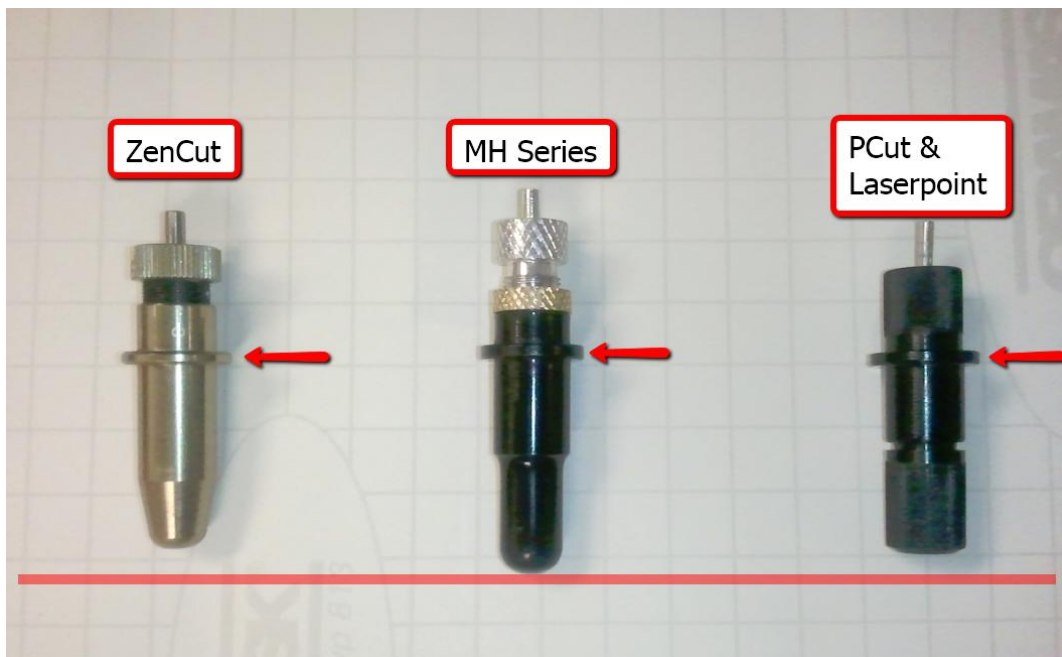# Blade-Holder

Setup Guide

This guide is designed to assist with the installation, calibration and trouble shooting of your Roland® compatible vinyl cutter blade and blade-holder.

Different cutters use different styles of blade holders. It is important to note that blade-holders are not universal, they are designed specifically to fit a particular machine, or series of machines. In the image below we can see that when three different blade-holders are lined up side by side, the flanges (or outer ring) are on the same plane, yet the blade-end of the holders stop at different lengths. Please use only the blade holder meant for your cutter.

ZenCut   MH Series   PCut & Laserpoint

Step #1: Loading the blade into the blade-holder

If your cutter came with a 3-pack of blades, open the blade pack and remove a blade from the foam packing material, then remove the red rubber protective cap. The red caps indicate a 45 degree blade. The blue caps are 60 degree. Be careful when handling the blade as the cutting end is very sharp.

Most blade holders will have a magnetic metal pin or "plunger" on the back end. This is meant only for loading and removing the blade so that re-calibration is not required. Insert the dull (cone shaped) end of the blade into the blade-holder and depress the metal plunger. You might hear a "click" when the blade makes contact with the internal magnet. If you don't hear the click or if you can't tell if the blade has seated all the way into the blade-holder; simply give it a gentle push on a firm surface as shown in the image to the right.

The blade is a consumable item and you'll always get the best quality cut with a newer blade. Replace with a new blade when: 1) the tip is broken, 2) The cutting traces are not as good as they were, 3) The blade will not cut cleanly, even though the force/pressure has been increased.

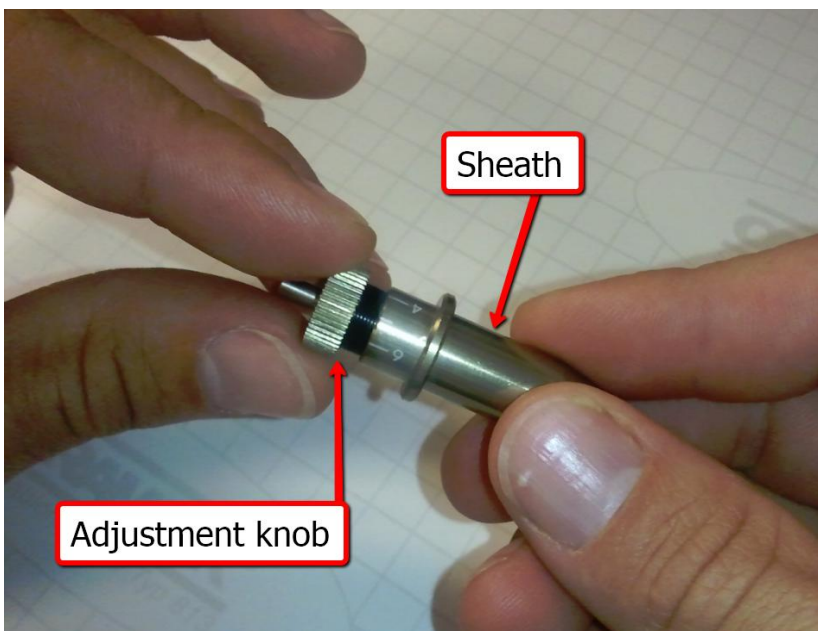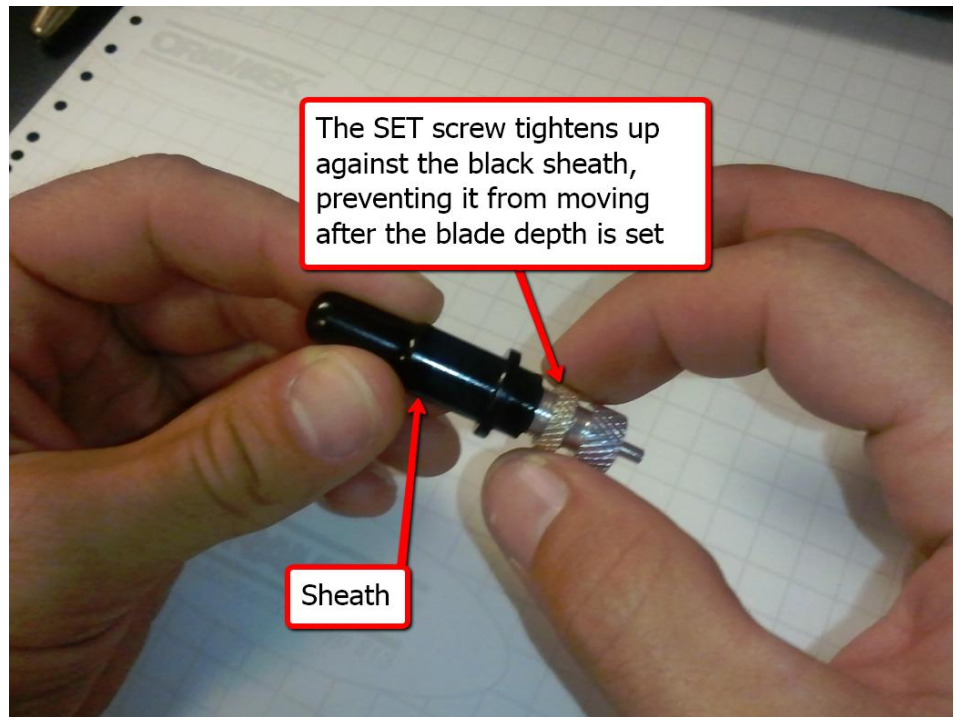A typical blade holder and its main components are pictured below.

Pin

Cap

Pin

Set Screw

Adjustment Knob

Sheath

Outward ring

Pin

Adjustment depth knob

Step #2: Setting the depth of the blade (or "blade calibration")

For this step you'll need either: a pack of post-it notes, a legal pad or a stack of notebook paper and a debit or credit card.

Each blade holder will adjust in a different way but with all blade-holders, the blade stays stationary once it is inserted. The blade will only swivel; it is the cap or sheath of the blade holder that determines how much blade is actually showing.

The MH blade holder uses a sheath and set screw. When holding the blade-holder as shown in the image to the right; screwing the sheath on clockwise will work to expose more blade. Unscrewing it (counter-clockwise) will cover or reduce the amount of blade exposed.

The SET screw tightens up against the black sheath, preventing it from moving after the blade depth is set

Sheath

Sheath

Adjustment knob

The Zencut blade holder uses a sheath and adjustment knob. When holding the blade-holder as shown in the image to the left; screwing the adjustment knob clockwise will expose more blade. Unscrewing it (counter-clockwise) will reduce the amount of blade exposed.

The Creation blade-holder (also known as a Roland blade-holder) for the Laserpoint & Pcut uses only a cap with a rubber 'O' ring. The cap will either be solid black or solid silver in color. When holding the blade-holder as shown in the image to the right; screwing the cap on clockwise will work to expose more blade. Unscrewing it (counter-clockwise) will reduce the amount of blade exposed.
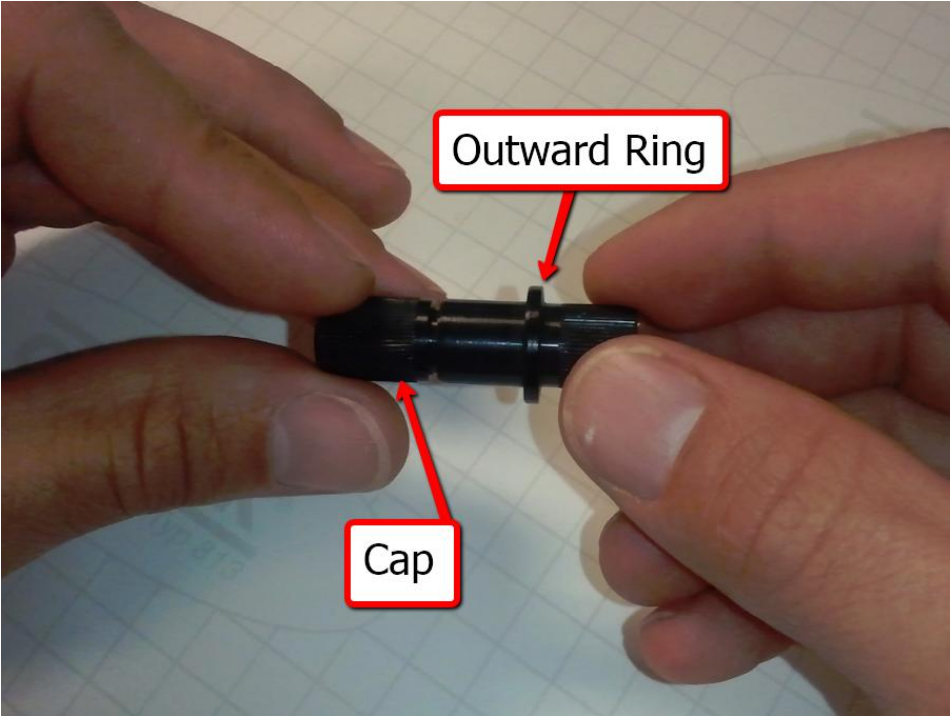
The "ball-park" length of blade that you'll want exposed will be equal to half the thickness of a credit card. Hold the blade edge-wise against the side of your credit card. The tip of the blade should end half-way through the thickness of the credit card. If the tip of the blade goes past or reaches the other side of the card as pictured to the left, then you have too much blade showing.

Your blade should look similar to the image below. Note: this method is an approximation. Even this will likely be too much blade!

Step #3: Testing and fine-tuning the depth of the blade

The following assumes you'll be using typical adhesive or heat transfer vinyl, with a thickness of between 2 and 5 mil. Take the blade holder (with the blade inserted) as shown below and -keeping the blade holder straight up and down- cut a circle. Don't be afraid to use a bit of force.

The goal for this test is to set the depth of the blade so that you can cleanly cut a circle out of a single sheet of paper, while barely leaving a scratch on the piece directly underneath it.
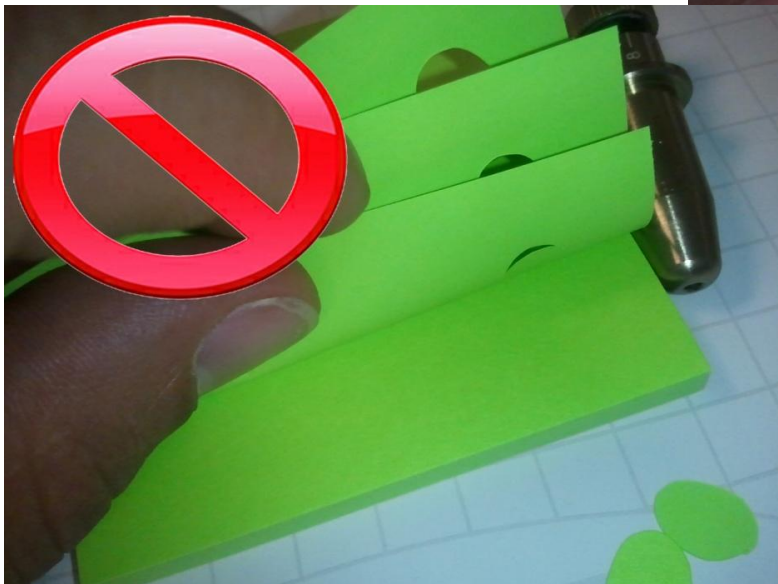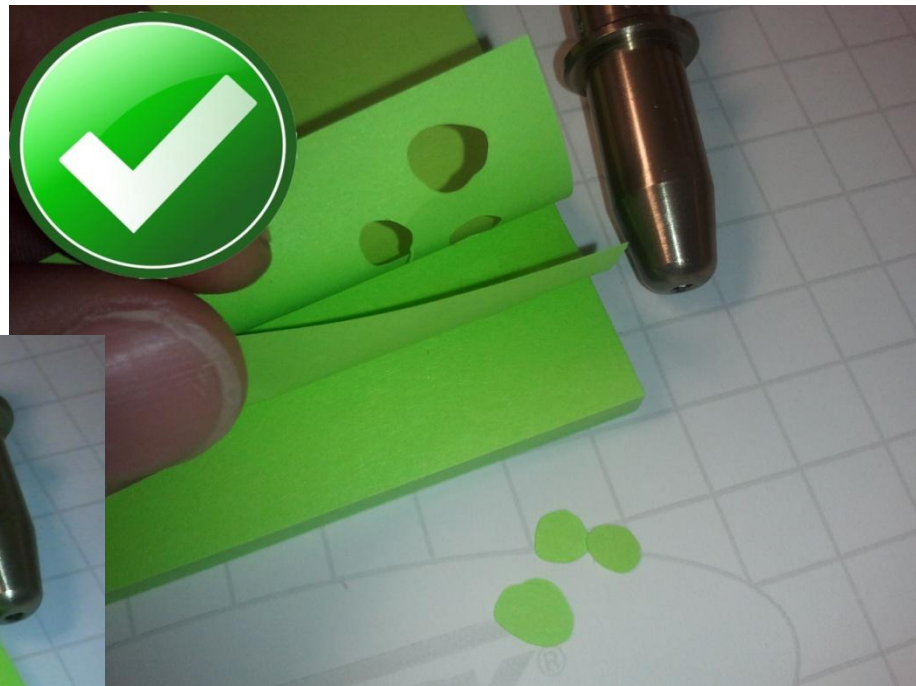
If you cut through any more than a single piece of paper (as shown below) you have too much blade exposed.
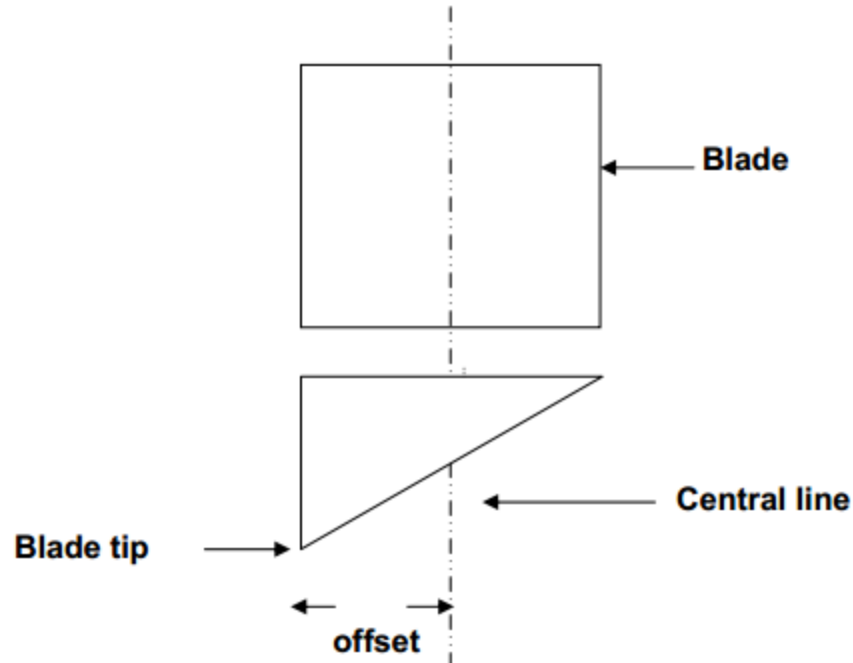
Addendum:

Blade Specifications

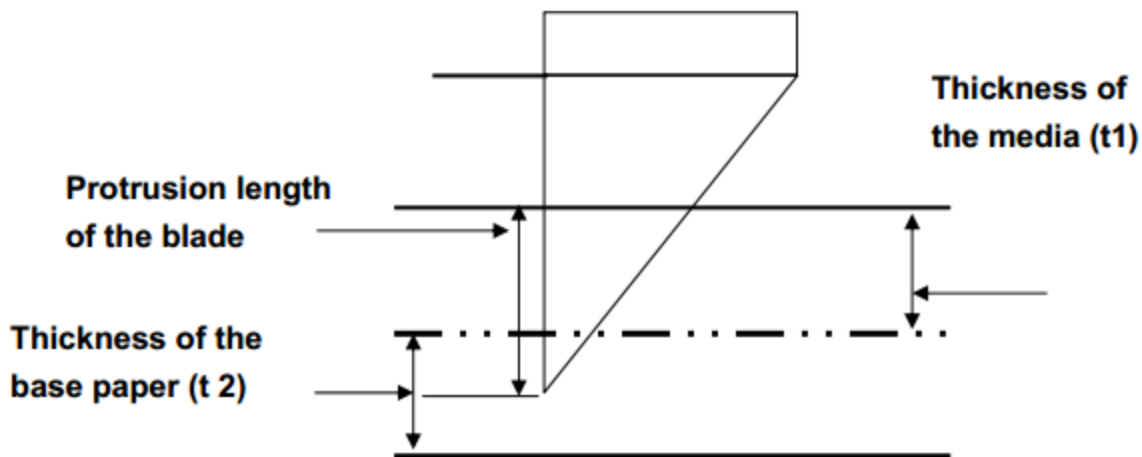| 26500057G | For cutting thick fluorescent and reflective vinyl. Also for cutting detailed work in standard vinyl. |
	The blade is 45° with **Red Cap**, 0.25 mm offset
26500058G	For cutting reflective vinyl, cardboard, sandblast, flock, and stencil sharp edge.
	The blade is 60° with **Green Cap**, 0.50 mm blade offset
26500059G	For cutting thin sandblast mask and stencil with friction feed or sprocket feed machine.
	The blade is 60° with **Blue Cap**, 0.25 mm blade offset
26500060G	For Cutting small text and fine detail. Sharp blade with smallest offset.
	The blade is 0.175 mm blade offset with **Black Cap**

About the Blade

A generic term referring to the blade that cuts the sheet, the pen that does plotting, and the LED bombsight (option) used for pointing to the reference point.

OFFSET is the distance that the blade tip is displaced from the centerline of the blade.
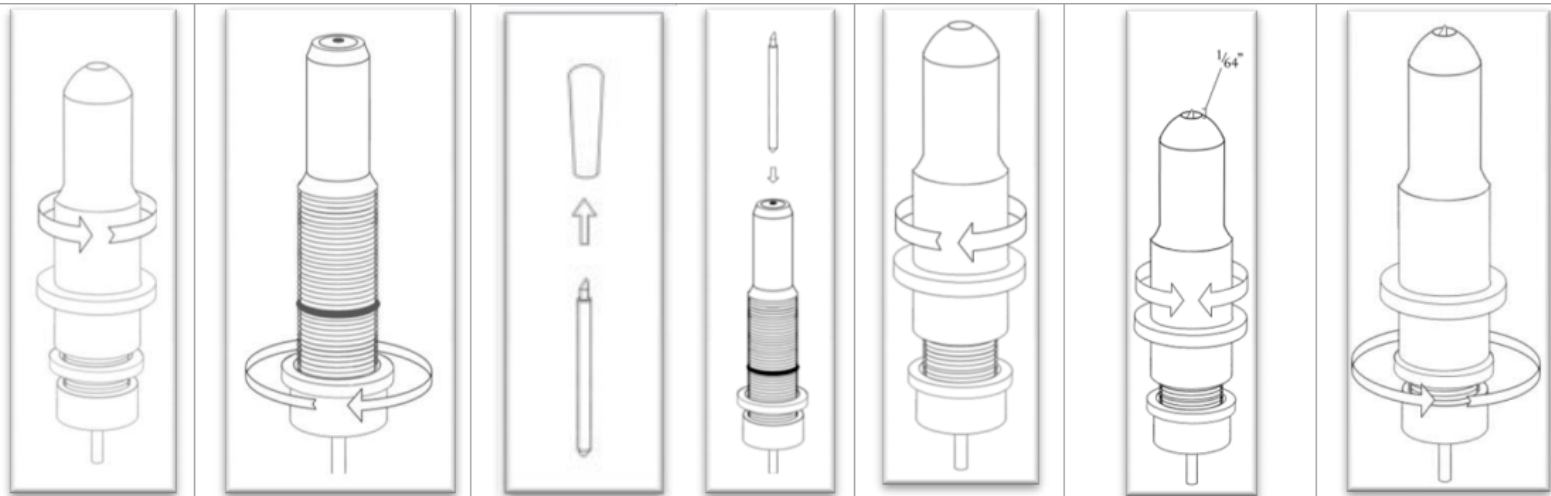
Blade

Central line

Blade tip

offset

Protrusion Length of the Blade

Thickness of the media (t1)

Protrusion length of the blade

Thickness of the base paper (t 2)

Length of protrusion = t1 + t 2/ 2, but for your convenience you may just set it about 0.3mm ~ 0.5mm beyond the blade holder tip.

MH Blade Holder Exploded View:

Creation Blade Holder Exploded View: