



# KNEW CONCEPTS

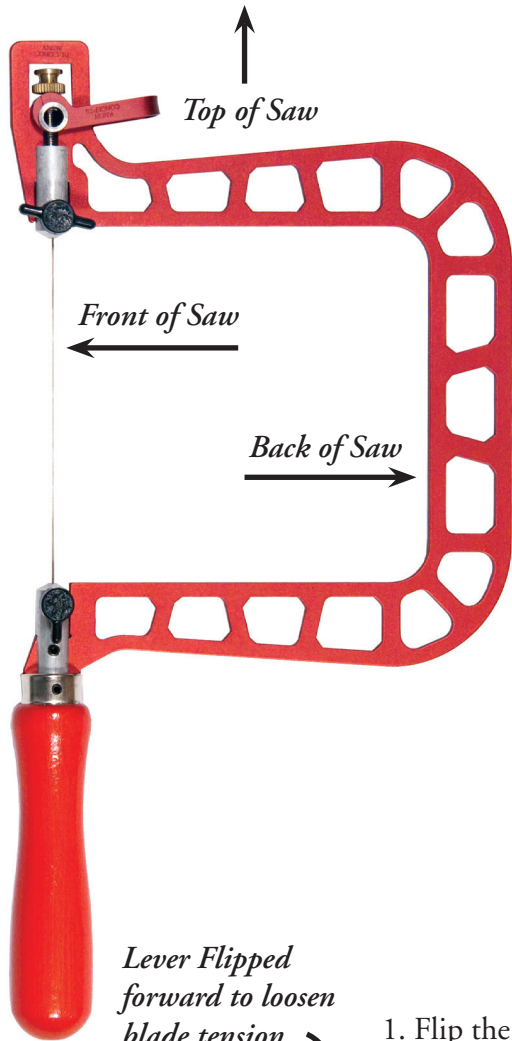
*A Cut Above*

## Using the Knew Concepts Precision Saw Frame with Lever Tension Release

V1.0

### Features:

- Cam release tension lever
- Screw for fine tension adjustments
- Clamp knobs readily switched from one side to the other for left or right-hand operation.



Lever in blade tight position

Screw for fine tension adjustment

Clamp Screw

Blade Holder

Photo of saw with optional blade swivel installed.

### Blade Removal

1. Flip the lever 180 degrees, towards the front, as shown at left.
2. Loosen both of the clamp screws by turning them counter-clockwise.
3. Remove saw blade

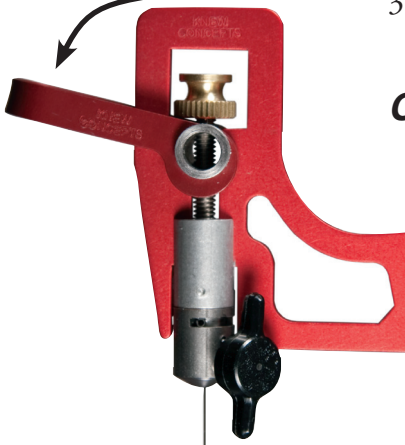
### Check the Saw Blade length

Before sawing, check the length of the saw blades.

**The standard length for jewelers saw blades is 5 1/8".**

If the blades are too long, use wire cutters to shorten the blades.

Blades that are shorter than standard will not work. Return them to the source they were purchased from as defective.

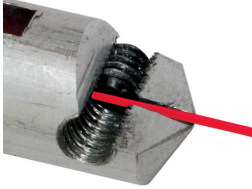


## Blade Installation

1. Flip the lever forward to release the tension.

2. Check that the saw blade is 5 1/8 inches long.

3. Insert blade into one of the holders, making sure that it is fully inserted, and tighten the clamp screw. Touching the threads at the bottom of the blade hole stops the end of the blade.



### End of blade fully inserted

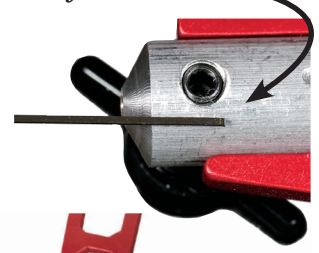
The end of the blade is stopped by touching the threads at the bottom of the blade hole. (The blade has been colored red to make it easier to see.) As you can see in this cut-away view, the blade is gripped at the very end. The tension must be relaxed before inserting a blade so that the blade will touch the end of the hole

4. If you are piercing, thread the blade through the hole in the metal.

5. Pull the blade clamp barrel down towards the handle.

Check the other end of the blade with the blade clamp screw. After clamping the blade in one clamp, the loose end of the blade should cover the threads of the screw. This makes sure that the blade will be clamped properly before tensioning, as shown to the right. If the blade is 5 1/8", but does not extend as shown, loosen the tension more.

End of blade should extend just past end of anvil screw.



6. The blade will bow slightly when the ends of the blade contact the bottoms of the holes, when the lever in the forward/loosened position.

The image at right shows a blade bowed after inserting into the clamps, before the blade is tensioned. This sort of flexing shows that the blade will be tensioned and clamped well and correctly. If the blade isn't bowed, check that the lever is in the loosened position, and try gently moving the blade carrier downwards a bit.

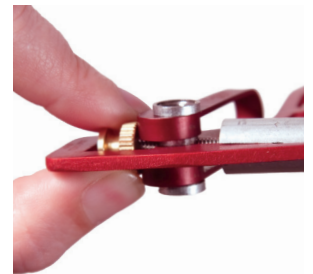


7. Tighten the clamp screw into the blade holder.

### Tensioning the blade:

Tension the blade by flipping the lever back, above the frame.

- If it feels difficult to move the lever all the way, stop, and then loosen the tension by turning the gold knob counterclockwise.
- Flick the blade with your finger — a taut blade “sings”.
- If the blade is the same as the previous blade, no further adjustment should be necessary. If desired, the tension knob can be turned to fine-tune the tension.



### Installing the next blade, after a blade wears or breaks:

Remember to loosen the tension, by flipping the lever to the front, which lowers the blade-holding barrel. This is essential, so that the clamp screws can grab the blade ends.

### Tensioning the New Saw Blade:

If the new blade is the same size as the previous blade, the same tension is achieved simply by flipping the lever.

- If the tension is not the same as before, then check that the blade is installed fully and correctly.
- The tension can be adjusted by turning the gold tensioning knob. If it is difficult to turn with the lever in the tensioned position, flip the lever, turn the knob, and then re-tighten the lever. Repeat as needed.

## Tips & Troubleshooting

### **If you are unable to get the blade tight,**

Make sure that you remembered to loosen the tension, so that the tips of the blade will touch the ends of the holes. Also, check the length of the blade. It may be too long or short; standard length is 5 1/8”

### **Tightening means to turn a screw clock-wise.**

Some people like to remember this by saying, “Lefty-Loosey, Righty-Tighty”

### **If the blade breaks before you start sawing,** either:

- The blade is over-tightened, or
- The blade is too brittle. Some brands don't have the tensile strength to stand up to the users' desire for blade tautness.

**If the blades pull out of the holder prematurely,** unscrew the knob, and check for broken bits of saw blades inside the hole.

**Note: The bottom clamp knob has only one lever.** The opposite side has been removed to prevent bumping into the bottom of the bench pin.

## Changing clamp knob orientation

### **If you prefer to have the clamp knobs on the opposite side of the frame:**

Remove the the clamp screws and set screws (use a 5/64” allen wrench/hex key for the set screws).

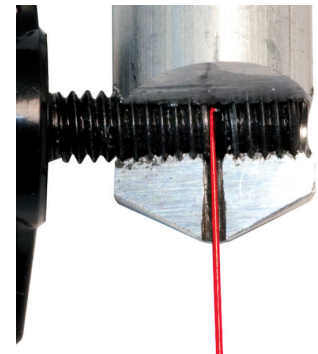
Re-install the set screws so that they are flush with the outside of the barrel of the blade holder.

Adjust the position of the lever on the lower clamp screw to prevent it from hitting the bottom of the bench-pin on the “up-stroke”, which can often break the blade:

- Install the lower clamp screw with your favorite size blade
- Tension the saw blade.
- If the lever on the knob points upward (10 to 2 o'clock), loosen the clamp and adjust the set screw “in” slightly, so that the “tight” position of the lever will be lower.

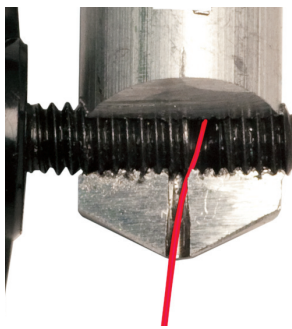
### **Correct alignment**

Because the anvil screw can be moved from one side to the other for those left handed folks out there, its alignment is important. This cut-away provides a visual of what is going on inside the blade clamp. When properly aligned, the blade will go in easily, and when the clamp knob is tightened, the blade will stay straight.



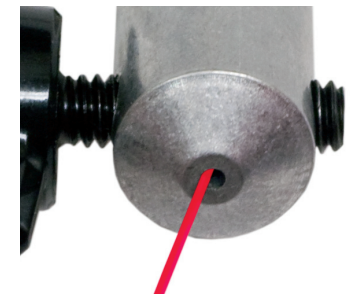
### **Anvil screw out too far**

This shows what usually causes bent or broken ends. Adjust for correct alignment.



### **Mis-alignment**

This shows an extreme example of the anvil screw out of adjustment. As you tighten the clamp knob, notice blade movement. If it wants to angle to one side or the other, the anvil screw must be adjusted.



The loose end of the blade usually tilts toward the side that's in too far  
Use a 5/64” hex key to adjust it.

*These instructions have been written by Lee Marshall and Cynthia Eid.*

*Suggestions for additions and corrections are gratefully received at [ceid@cynthiaeid.com](mailto:ceid@cynthiaeid.com) & [knewconcepts@yahoo.com](mailto:knewconcepts@yahoo.com)*

*Photography & Graphics by Brian Meek.*

# Precision Work Requires Precision Tools



## About Knew Concepts and Lee Marshall

I am dedicated to helping you pursue your work and your passion for well-made tools that bring pleasure to the task. My products may feel luxurious to use, but they are never extravagant, as they are designed and made with you and your needs foremost and are made to last a lifetime. Reward yourself for all of your hard work!

Knew Concepts is the logical continuation of what began in 1990 as Bonny Doon Engineering, when I developed a series of hydraulic presses and tooling for shaping and forming jewelry.

### The “Back Story” of this Saw Frame

Several years ago, Lee Marshall developed the Precision Saw Guide 2 for making blanking dies. Cynthia Eid found that she *really* enjoyed the saw that was developed for this system, because of the blade tensioning mechanism. She started using this saw for *all* of her sawing, and she kept telling Lee that he needed to develop this saw as a “stand-alone” tool. Finally, he got the message!

### About this Saw Frame

**THIS IS THE LIGHTEST, MOST RIGID FRAME ON THE MARKET!**

#### Weight:

Aluminum three inch deep frame weighs 3.4 ounces/96.4 grams.

Titanium\* three inch deep frame weighs 4.0 ounces/113.36 grams.

*\*Titanium is much stronger than aluminum, though slightly heavier.*

#### Rigidity:

The rigidity of the frame determines how much blade flex occurs.

A weak frame increases blade flex, increasing blade breakage.

A weak frame reduces your control of the blade.

**Have a question? Visit our forum at [WWW.KNEWCONCEPTS.COM](http://WWW.KNEWCONCEPTS.COM)**

**or contact us at [knewconcepts@yahoo.com](mailto:knewconcepts@yahoo.com)**

ENJOY!

Lee Marshall, “The Saw Guy”