



Bad Axe Kerfing Plane DIY Instructions

Concept: These instructions summarize a list of tools and supplies and provide a suggested sequence of steps necessary to make your own kerfing plane. At the end of the day, you're kerfing a slit along the underside of a piece of wood shaped to your satisfaction whether you use our template or your own design, screwing the plate in place, and crafting a fence that slides on two rods that can clamp in place to your desired width of cut. How you employ your own woodworking background and quiver of techniques to arrive at this objective is entirely up to you.

Sourcing Your Wood: You'll need to source two chunks of wood; one for the kerfing plane body, and one for the adjustable fence. Each piece should consist of 4/4 jointed flat stock, either quartersawn OR laminated to mitigate wood movement with seasonal change and how that can potentially throw the plate out of true. Use the templates provided to identify minimal sizing requirements for the size of block.

Tools & Supplies List:

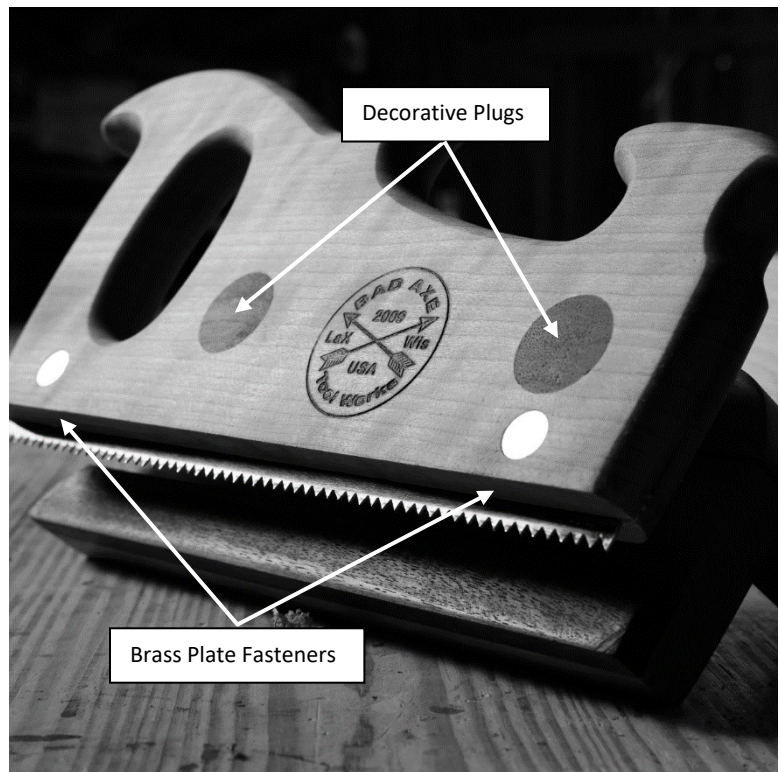
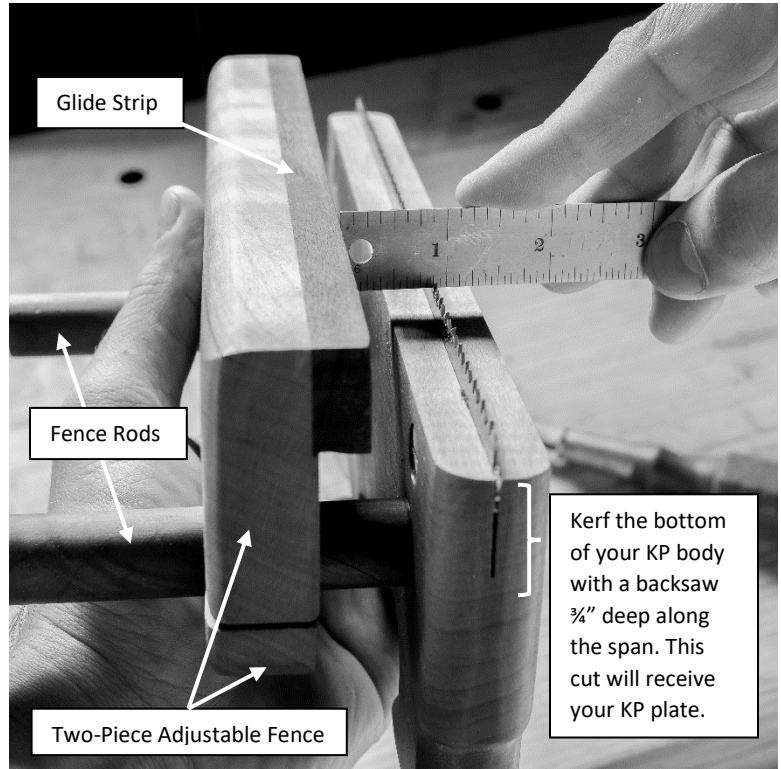
- **Forstner Bits:**
 - 1" Forstner Bit
 - ½" Forstner Bit
- **Drill Bits (for wood)**
 - 3/16" drill bit
 - 7/32" drill bit
 - 9/32" drill bit
 - 5/8" drill bit
 - ¾" drill bit
- **Transfer Punches:**
 - 5/8" transfer punch (2)
 - 7/32 transfer punch
- **Taps***
 - ¼" x 20 tap
 - ¾" x 20 tap
- **Other Items:**
 - ¾" thread cutter*
 - 1" diameter hardwood dowel*
 - 7/16" dia. tapered countersink*
 - 7/32 tungsten carbide-tipped drill bit ([Ace Hardware offers one for \\$8.59](#))

Included with your Bad Axe KP Plane Hardware kit bag & Templates
1 ea 10" Kerfing Plane Plate, 7 ppi
2 pr. brass/nut fasteners for KP plate
2 ea brass clamping screws (1 3/4" 1/4 x 20)
1 ea KP Body Template
1 ea KP Adj. Fence Template

*Note: [Rockler.com](#) is a good source for taps, countersinks, hardwood dowels and more.

1. Preliminary kerfing plane (KP) body prep work:

- Cut the outer perimeter for the KP body in accordance with the provided template.
- Cut a $\frac{3}{4}$ " deep kerf on center along the underside of the kerfing plane body using a backsaw. Ensure you are plumb in the cut, and that you have precisely achieved $\frac{3}{4}$ " depth of cut spanning the length of the stock. This cut will receive your pre-sharpened kerfing plane plate.
- Counterbore KP brass fastener locations with a $\frac{1}{2}$ " Forstner bit to a depth of $\frac{1}{8}$ " on both sides of the kerfing plane body where indicated on the template. Now drill a through-hole with a $\frac{9}{32}$ " drill bit on center halfway through the decorative side of the KP body (receives the nut), then drill a $\frac{7}{32}$ " hole halfway through the non-decorative side of the plane body to receive the bolt and connect the two through-holes.
- Cut two, 1" x $\frac{3}{16}$ " thick decorative plugs from the 1" dia. wooden dowel which serve to cover the through-holes receiving the adjustable fence rods on the opposite side of the KP.
- Mark center holes where decorative plugs will go on the side of the kerfing plane opposite from where the adjustable fence rods go. Now is the time to decide which side you want the adjustable fence—if you're a southpaw, you'll want the rods on the right and the decorative plugs on the left. If you're right-handed, you'll want the rods on the left, and the



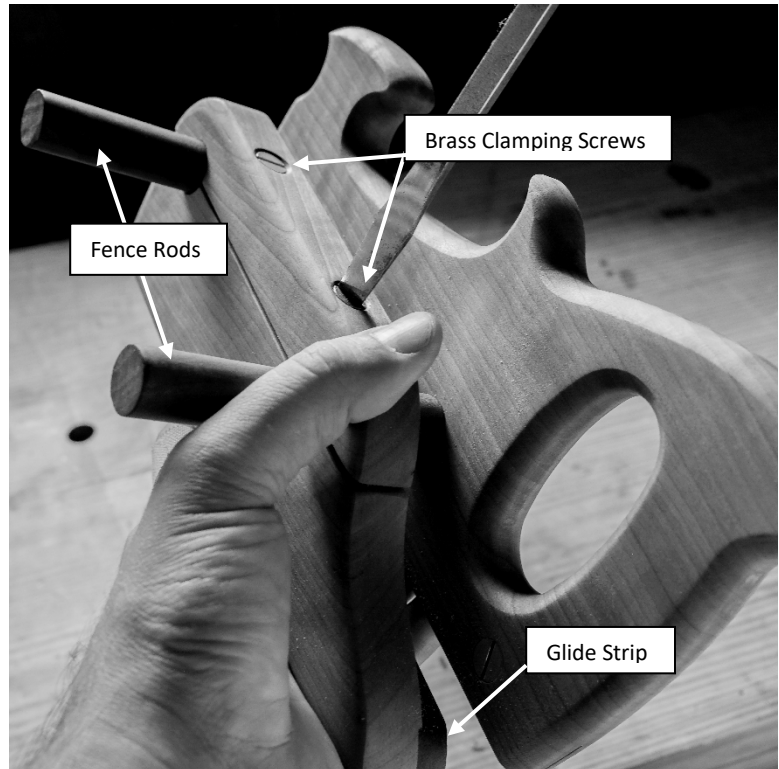


decorative plugs on the right.

- Drill counterbore locations for fence rod decorative plugs using a 1" dia. forstner bit. Bore to 1/8" depth from surface of KP.
- Bore a 5/8" through-hole through the centerpoint your Forstner bit left behind when making the counterbore.

2. Preliminary adjustable fence prep work:

- Cut out the adjustable fence as one piece with the provided template.
- Mark holes with transfer punch illustrated on template.
- Cut the glide strip IAW the provided templated, and glue it onto the inside of the fence flush to the bottom. After glue dries, sand fence assembly to satisfaction.
- Insert two 5/8" transfer punches into the 5/8" inside through-hole you drilled into the body to mark locations where the fence rods will pass through the fence, line up the adjustable fence in relation to the kerfing plane body, and mark centerpoints onto the adjustable fence in correct relation to the kerfing plane body.



- Using marks established by transfer punches onto the inside of the fence, drill 3/4" through-holes into the fence.
- Lay out locations for what will become the upper half of the fence which tighten onto what will become the lower of the fence. You will create the holes while the fence is still one piece to assure accuracy.
- Tap the brass clamping screws for the adjustable fence.
 1. The span for the brass clamping screws is 2 3/4" on center between adjustable fence rod locations. Mark out this area and establish center points on each end for drilling.
 2. Use your 7/16" dia. tapered countersink bit to start the hole at 1/8" deep before drilling; this will enable the brass clamping screws to fit flush to the surface when tightened.

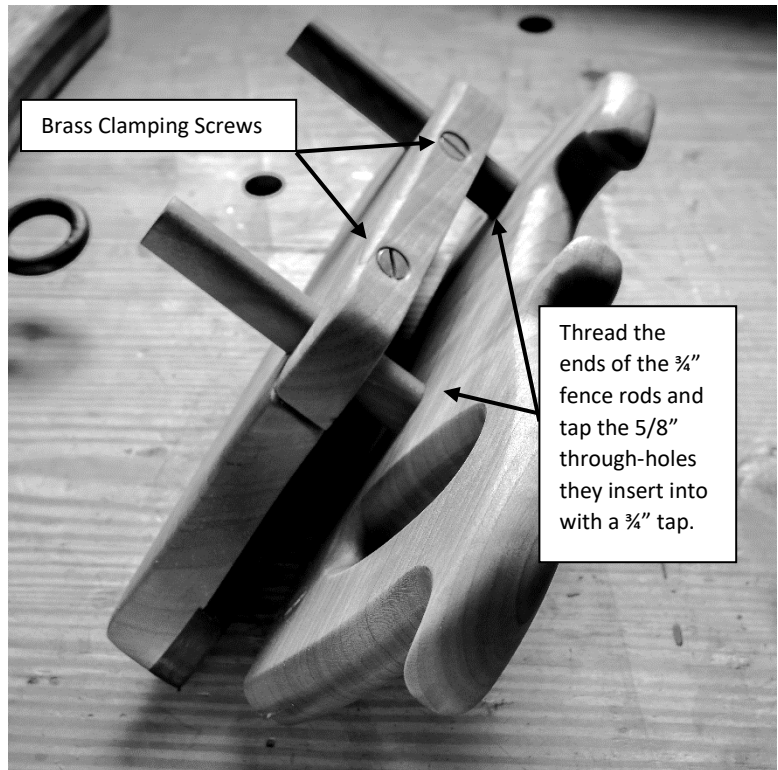


3. Drill 2" straight down (perpendicular to fence from the centerpoint) with a 3/16" drill bit.
4. Now tap the hole with a 1/4" x 20 tap for a total of 2" depth.

- Saw the fence apart with your backsaw along the center of the adjustable fence rod 3/4" through-hole locations where indicated on the template.
- Enlarge the entry point for the brass clamping screws with a 9/32 drill bit; sink it all the way through the upper half of the fence (do not drill out the lower fence).

3. Tapping the kerfing plane Body to mount the 3/4" adjustable fence rods.

- Tap the inside 5/8" through-hole with a 3/4" tap all the way through the body.
- Install the 1" x 3/16" thick decorative wooden plugs on the right side of the kerfing plane body (or left side for southpaws), leaving plug slightly proud from the KP body (you will sand KP body to final thickness of 7/8").



4. Creating the threaded rods for the adjustable fence:

- Cut two pieces from your 3/4" dowel to 6" lengths.
- Thread one end of each piece to a 3/4" span using a 3/4" thread-cutter.

- Do not mount the adjustable fence rods yet (easier to finish everything without the rods in the way).

5. Finish sand all wooden components to your satisfaction and take note of your final thickness (which has an impact on how we mount the kerfing plane plate).

6. Mounting the kerfing plane plate into the kerfing plane body.

- Mount kerfing plane plate into the 3/4" deep kerf you cut along the underside of the kerfing plane body in step one. Ensure it bottoms out inside the kerf.
- Using a 7/32 transfer punch, mark the plate using the through-hole as a guide.
- Pull the plate out and drill through the centermarks using a 7/32 tungsten carbide-tipped drill bit.
- Re-insert the plate and secure it with the 1/2" dia. brass fasteners from your hardware kit.



7. Complete the adjustable fence assembly and mount it onto the kerfing plane.

- Glue in the threaded adjustable fence rods into the tapped holes on the kerfing plane body.
- Slide on the adjustable fence to desired cut width.
- Tighten the adjustable fence clamping screws.

8. Complete any remaining finish requirements to your satisfaction, and you're done.

