Lyle Jamieson Woodturning, LLC

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JAMIESON TOOL SYSTEM INSTALLATION INSTRUCTIONS

Please Note * These are newer set up instructions and supersede the set up instructions on the DVD. See the Jamieson In-Depth Hollowing DVD for detailed use techniques for both the boring bar system and laser measuring system.

PLEASE PAY ATTENTION TO DETAILS----SET UP IS CRITICAL.

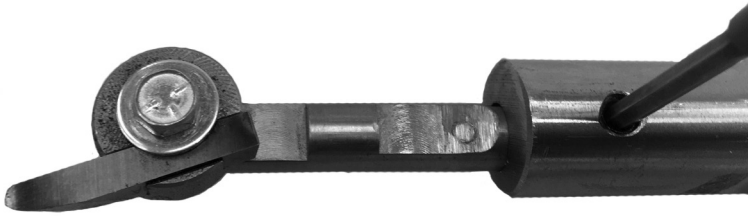
Start by removing all the plastic wrapping.

BORING BAR

Photo 1-1/8 inch allen wrench

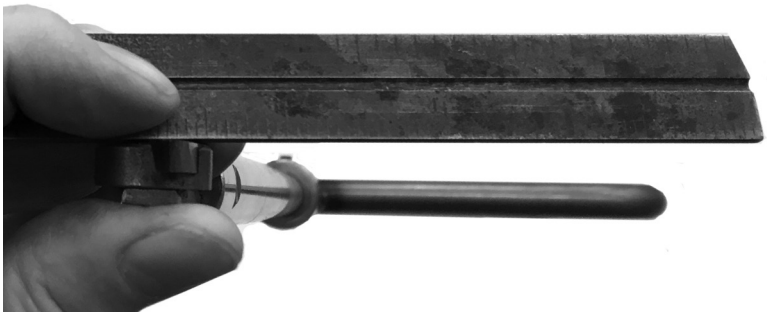
Let's start with the most important part of the set up. With the 3/4 inch boring bar set screw facing up insert the straight shaft swivel holder into the boring bar all the way seated to the bottom of the hole. The hex head bolt is facing straight up. I suggest getting a dedicated 1/8 inch allen wrench with a T handle for your boring bar system. [See Photo 1]

Slowly screw down the set screw from the boring bar on the swivel assembly shaft. At the same time, twist the swivel shaft right-left, left-right. This gets the set screw in the center of the flat spot. Tighten the set screw, very tight to make a significant mark. Take it out for inspection. The flat spot should have a nice round circle of a mark from the set screw. [See Photo 2] If not, note where the cresent shape mark is. Reinsert the swivel and slowly tighten again, twisting the swivel shaft right or left, to position the set screw in the middle of the flat with a round mark made. Now you have a good seat for the set screw. You might have to repeat it a number of times to get it right, but it is <u>important</u> to get it right. Tighten it down.



<u>Photo 2-Straight swivel assembly</u>

OK, let's do it again only this time on the handle end. Take the "D" shaped handle and place it with the set screw facing up. Put the 3/4 inch diameter boring bar in the adapter hole with the boring bar set screw facing up. Insert all the way to the bottom of the hole and screw down the set screw on the flat spot of the boring bar. Take it out for inspection. Get the seat with the round circle mark again. Adjust as necessary for a good seat using the same twisting method.



<u>Photo 3-Sight line down shaft</u>

Place a straight edge along the 3/16" cutter inserted in the swivel assembly, and sight down to the handle to make sure the top of the cutter is parallel with the handle, which is parallel to the floor. [See Photo 3] Tighten the set screw to make the circle mark. Adjust as necessary for a good seat.

The bottom line here is the cutter MUST be parallel to the floor when the bar and handle are on the back rest. It might take multiple tries to get it right.

This procedure must be done with every set screw. The bent swivel, the large hook capacity on the other end of the boring bar, the Jumbo bar, wherever there is a set screw on a steel shaft. The cutter must be parallel to the handle.

There is NO NEED for this procedure on the laser aluminum tubing set screws.

Photo 4-Three reach configurations

There are three reach configurations available to you to do any shaped vessel you could imagine. First, the straight swivel holder in the straight hole of the boring bar; second, the bent swivel assembly in the straight end of the boring bar and third, the straight swivel in the 45 degree hole in the other end of the boring bar. [See Photo 4]

LASER

Take a 7/16 inch wrench and tighten the black plastic holder from the laser upright support on the handle. [See photo 5] Tighten very tight; there should be no gap between the two plastic parts. <u>DO NOT ever remove the vertical aluminum post from the black plastic holder; it is pressed in for a tight fit to prevent vibration.</u>

Photo 5-Attach laser bracket

Photo 6- Position laser vertically

Take the laser out of the box and install batteries, <u>positive poles into long laser tube.</u> Use a Phillips screwdriver and loosen the laser holder screw on black plastic laser holder and slide the laser into the laser holder, tighten the Phillips screw. [See Photo 6] Place castration ring (it has never been used for its intended purpose) over the laser and slide up and down until the ring sits right on the on-off button to turn it on. Twist/roll it down to the off button to shut off the laser light.

CAUTION: Do not tighten the laser bracket screw on the laser too tight. It can pinch the tubing so the battery connection will fail.

Photo 7-”T” holding bracket

Put the “T” fitting from the horizontal aluminum tubing cross member laser support on the aluminum horizontal shaft. [See photo 7]
Loosen the knob on the laser holding bracket and twist the holder so that the laser is pointing directly down. Step back and look at the laser to see that the position is vertical, straight up and down and pointing at the swivel assembly cutter. [See photo 6 again]
Tighten the set screw on the T, tighten the set screws very tight pushing the tubing all the way into the T fitting. All the adjustments for the laser in use will be with the laser knob not the set screws from this point on.
I store the safety hair pin clip in the end of the laser tubing so it won’t get lost and it is a constant reminder to use it. Keep the safety clip installed in the handle at all times when hollowing.

BACK REST

Put the back rest base on your lathe. The butterfly steel plate will fit between the ways and twist it to catch under the ways as you tighten the knob down. Put the horizontal cross support section into the base, male into female posts. The whole idea is to get the ¾ inch boring bar with handle to be right on the centerline of the lathe. Measure (don’t assume) the distance between your bed and the center of the spindle. Subtract 3/8 inch from this measurement. Set the back rest horizontal support so that it measures 3/8 inch less than the swing. The measurement for the back rest is from the lathe bed to the top of the lower horizontal cross bar. Tighten the 9/16 inch bolt and this never moves again. All the adjustment for hollowing will be with the front, original tool rest, not the back rest. Take some 150/220 sandpaper and sand the paint off the sliding surfaces of the horizontal back rest edges. Clean up any slight irregularities on the metal surface so the boring bar handle will slide effortlessly. Use a candle, cheap candle (not beeswax it’s sticky) and coat all mating surfaces with a thin coating of wax. Put wax on boring bar, tool rest, handle top and bottom, back rest top and bottom. Do this waxing often in use to keep it sliding with fingertip control.

Photo 8-5/16 inch nut driver

Photo 9-Close-up of 5/16 inch nut driver

I highly suggest you invest in a 5/16 inch nut driver for the swivel assembly adjustment. It is a six sided hex head wrench so it will not strip the small bolt. [See photo 8 & 9)

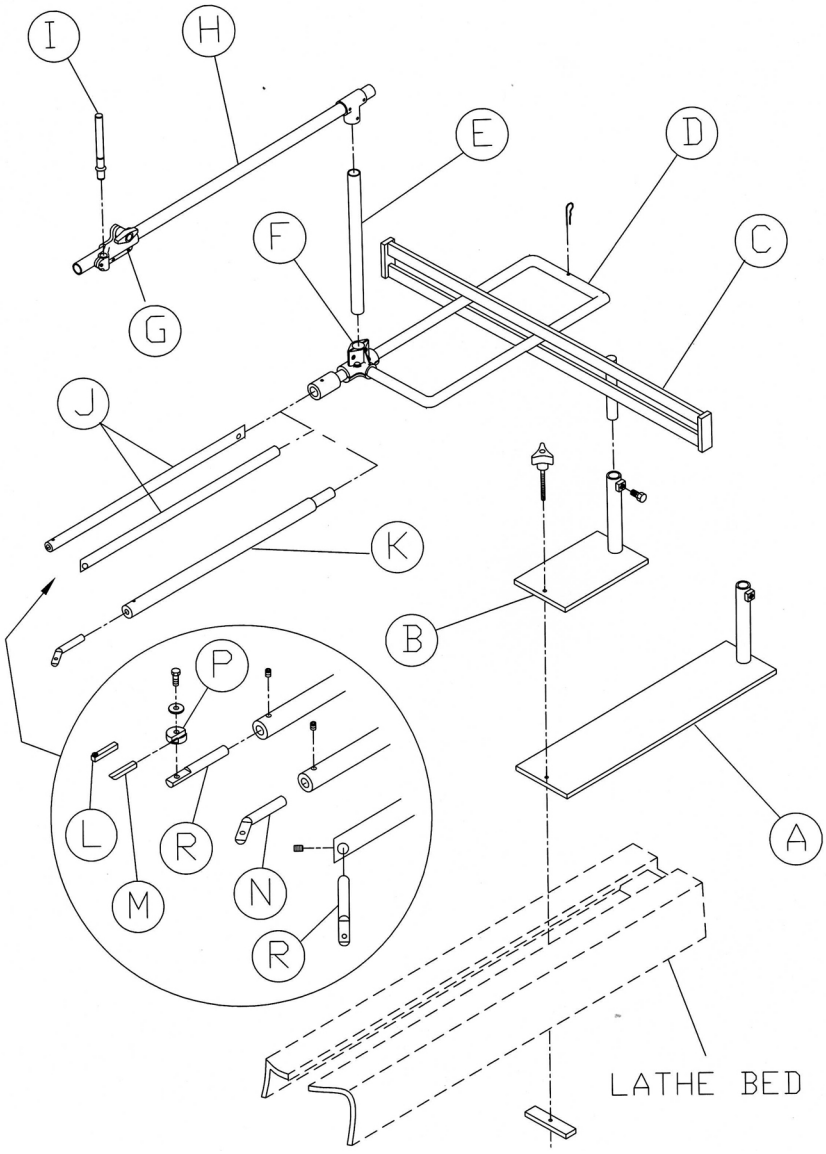


Photo 10-Schematic of system

A.) Back rest base for short bed lathes

B.) Back rest base for long bed lathes

C.) Back rest horizontal support

D.) “D” Handle

E.) Vertical laser tubing

F.) Laser system holding bracket

G.) Laser light holder

H.) Horizontal laser tubing

I.) Laser light

J.) Dual purpose ¾” diameter boring bar

K.) Jumbo bar, 1 1/8” diameter

L.) Carbide cutter assembly

M.) HSS cutter, 3/16” square

N.) Bent swivel shaft

P.) Swivel holder

R.) Straight swivel shaft

SOME USEFUL TIPS

Set the original, front tool rest positioned so the cutting tip is cutting on the center line, error on the high side. Never let the cutter get below center.

Vibration is the enemy! Don’t exceed depth limits, take small cuts to the left. You will hear a hissing sound with a good cut. Many small cuts can be done faster and easier than a large cut causing vibration of the bar or laser.

Always clean out the socket screw before using the allen wrench to prevent stripping the socket or wrench.

An accident at the lathe can happen with blinding suddenness; respiratory and other problems can build over the years. Take appropriate precautions when you turn. Safety guidelines are published online at woodturner.org/resources/safety.htm.

231-947-2348 www.lylejamiesonwoodturningLLC.com lyle@lylejamieson.com