

PRO-GRIND

SHARPENING SYSTEM

Version 1.0

Safety First



Disconnect tool from power source before performing any adjustments.



Always wear proper ear protection when working with machinery.



Use caution when handling sharp objects (saw blades, router bits, turning tools and so on). Use protective gloves whenever possible.



Always wear proper eye protection when working with machinery and tools.



Always wear proper respiratory protection when working near airborne dust particles.

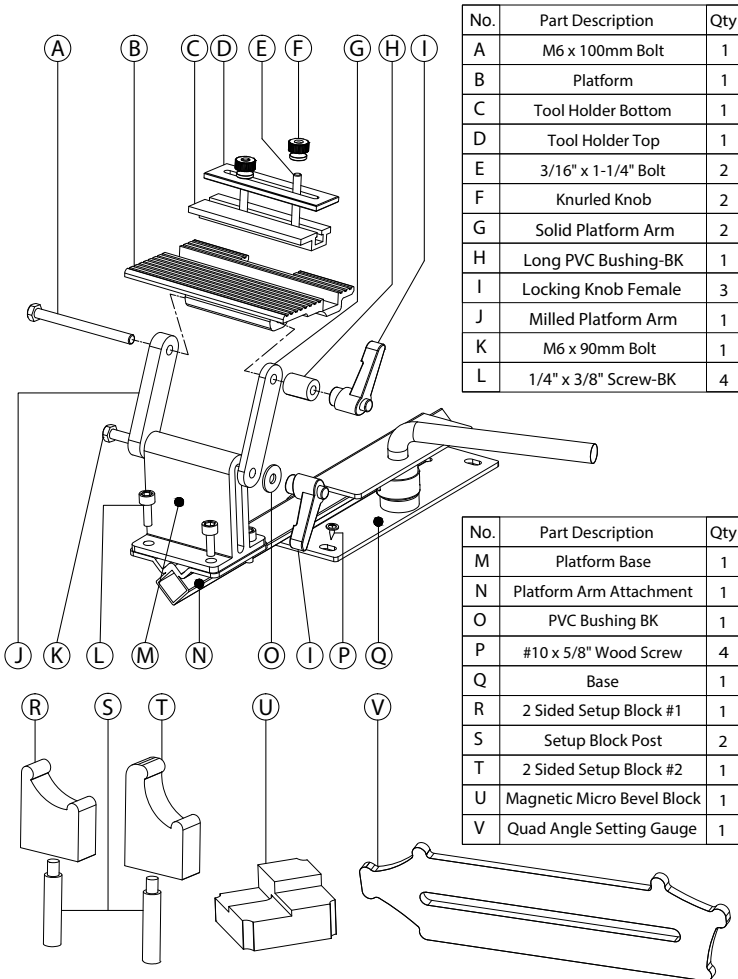
Please read and fully understand any and all safety materials that came with your power tools or machinery before operation. Always follow all safety guidelines set in place by the power tool or machine manufacturer.



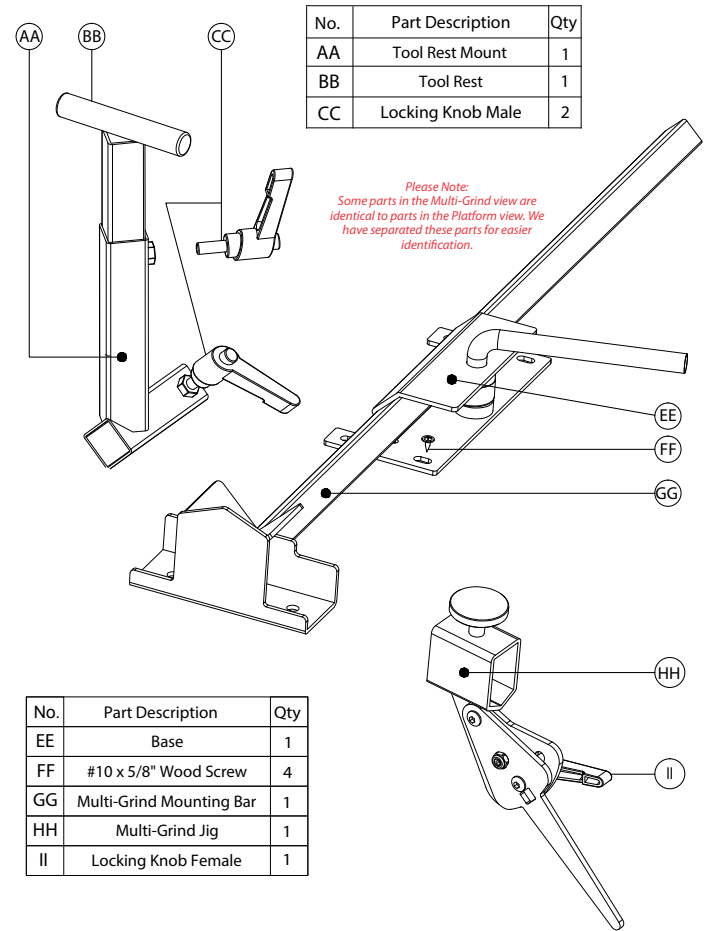
Part Identification

Lay out the parts and pieces to your new Pro-Grind sharpening system on a clean work surface. Review the drawings below and make sure you have all the parts and pieces as shown below before beginning with the setup process. Some basic assembly of the parts and accessories may be required before setting up the ProGrind System.

Platform & Accessories Exploded View

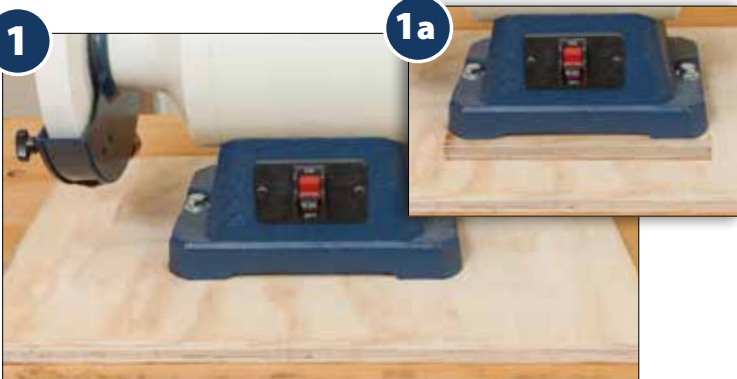


Multi-Grind & Accessories Exploded View

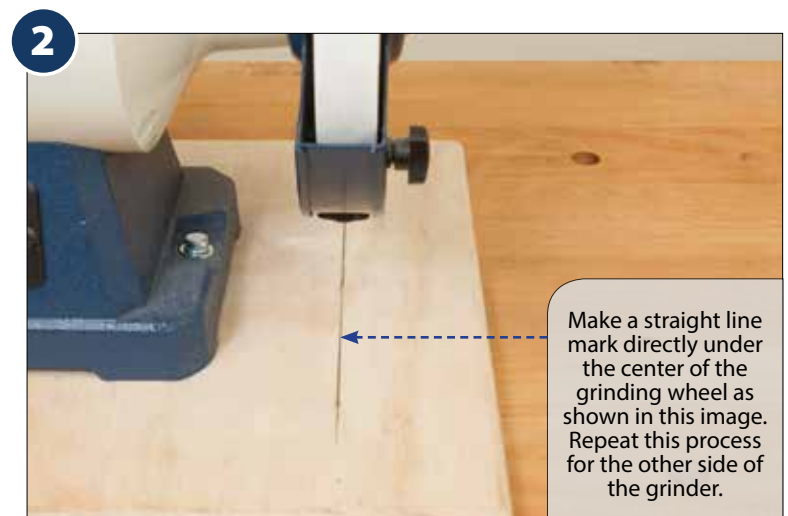


Grinder Preparation

For optimal performance, we recommend that your grinder and the Pro-Grind sharpening system be mounted on the same surface. Typically this is done by securing the grinder to a 3/4" piece of plywood that is slightly larger than the grinder. This ensures that the Pro-Grind system and the grinder will always be aligned.



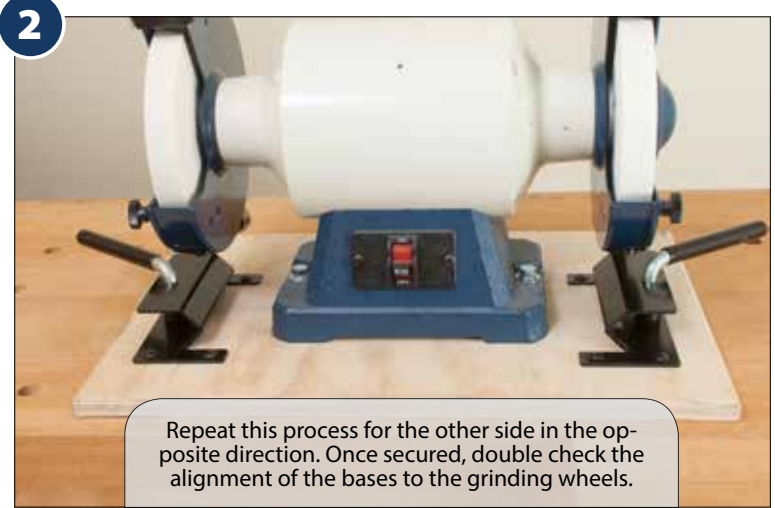
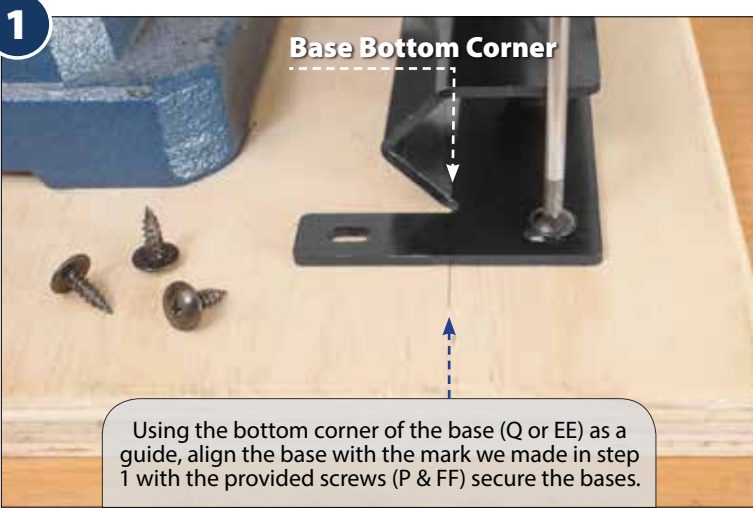
Secure the grinder to a piece of plywood. Leave room on the front side for the Pro-Grind system and square it to the plywood. In this example we used a 3/8" bolt with a t-nut, washer and lock washer on each side of the grinder. *Please Note that it may be necessary to add a "riser" block to gain clearance for your grinder wheels as shown in figure 1a.*



Make a straight line mark directly under the center of the grinding wheel as shown in this image. Repeat this process for the other side of the grinder.

Attach & Secure Pro-Grind Bases

When attaching and securing the two Pro-Grind bases (Q or EE) to the plywood base, be sure to keep the Pro-Grind bases running parallel to the grinding wheels. This is achieved by lining up the Pro-Grind bases with the lines marked in step 1.



General Use

The Pro-Grind sharpening system allows you to perform three basic sharpening processes or methods: The Platform, Multi-Grind and Tool Rest methods allow you to have the flexibility to sharpen many different types of turning tools without a whole lot of planning or math. We have done the math and legwork for you to make your tool sharpening process much easier.



Platform Method

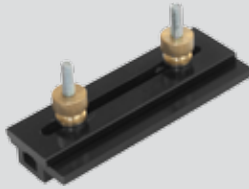
Using the platform gives you complete control over flat edge turning tools like skewers, parting tools and scrapers. Your tool fits neatly into the tool holder and can then slide back and forth in through the platform slot. The Quad Angle Setting Gauge (included) gives you the perfect angle settings for the four various tools that can be sharpened using this method.

Accessories Used for this Method

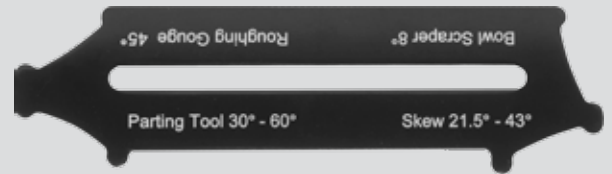
All are included



Platform Assembly



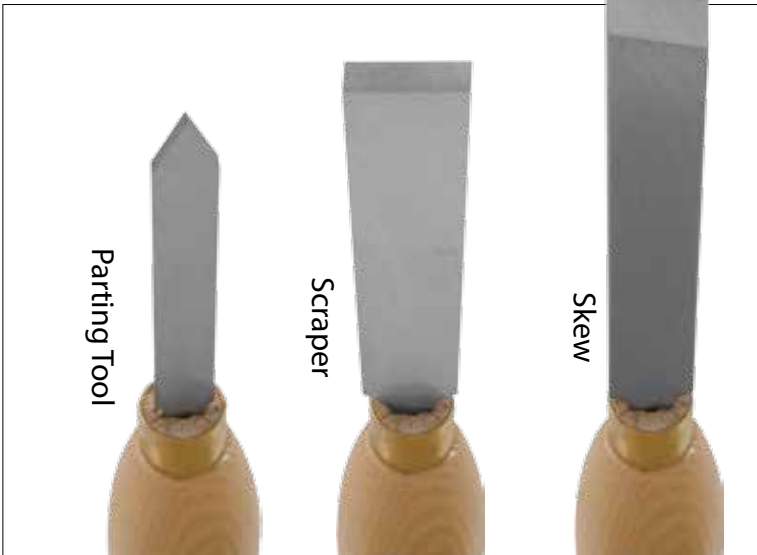
Tool Holder / Slot Guide



Quad Angle Setting Gauge

Platform Only

1 Choose your tool to sharpen



Platform with Tool Holder

1 Set the correct platform angle



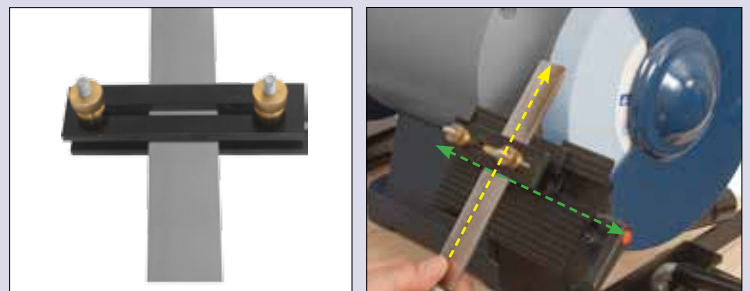
With the Quad Angle Setting Gauge, set the angle of the platform by identifying your tool on the gauge. Place the gauge on the platform and adjust the platform until the two points on the gauge touch the wheel. Secure the platform.

2 Set the correct platform angle and sharpen



With the Quad Angle Setting Gauge, set the angle of the platform by identifying your tool on the gauge. Place the gauge on the platform and adjust the platform until the two points on the gauge touch the wheel. Secure the platform and sharpen your tool using a side to side motion.

2 Use of the Tool Holder / Slot Guide



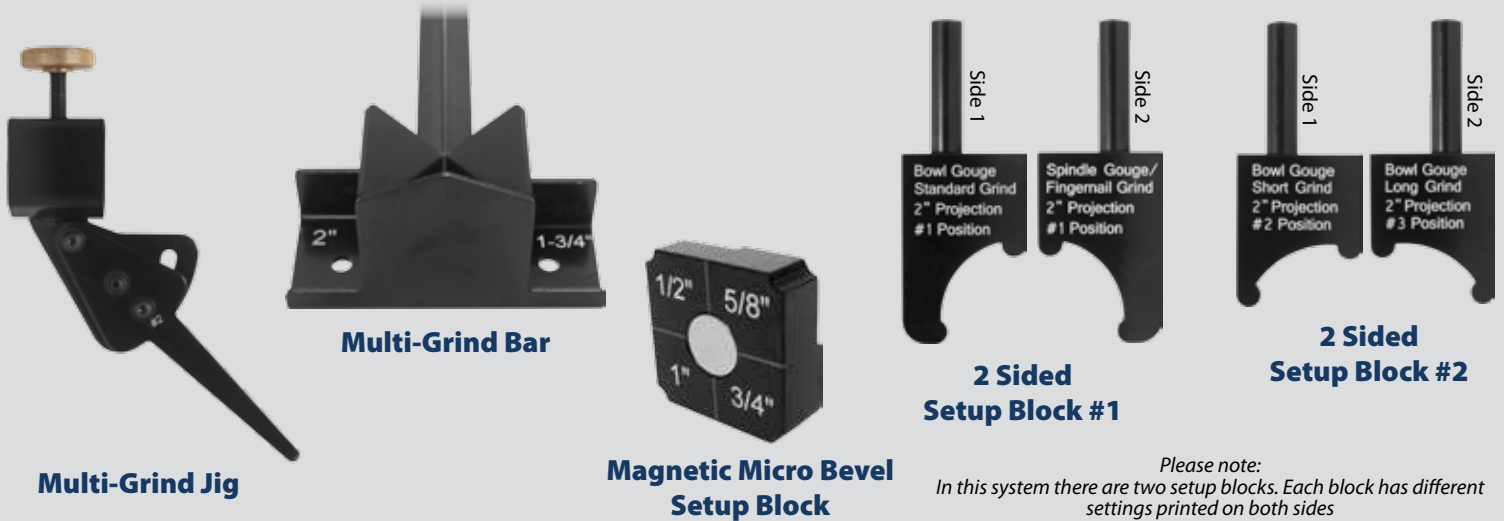
Place your tool to be sharpened into the Tool Holder / Slot Guide. Square the tool to the sliding assembly and secure the tool into the Tool Holder with the brass knobs. Place your tool with the Tool Holder and Slot Guide into the platform slot. Slightly loosen the brass knobs on the Tool Holder and slide your tool up toward the grinding wheel until it touches the wheel and secure the tool holder with the brass knobs. Make any necessary adjustments to the platform and secure the platform. Turn the grinder on and slide the tool side to side across the grinding wheel.

Multi-Grind Method

The Multi-Grind method helps you achieve a sharp keen edge on rounded edge tools like gouges. The rolling motion along with the ProGrind setup process gives you the ability to sharpen your gouges with ease and total accuracy without doing any math. We have done all the "legwork" for you, now it's time to sharpen those tools.

Accessories Used for this Method

All are included

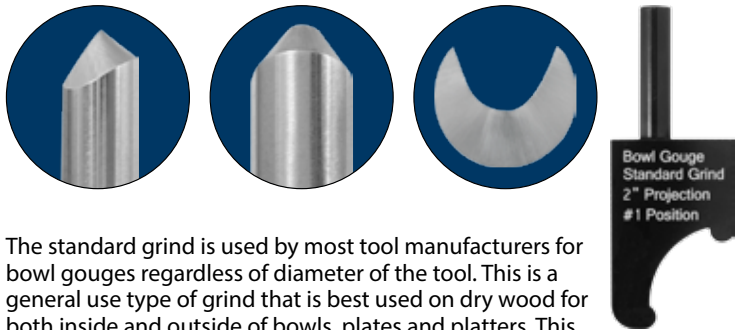


Please note:
In this system there are two setup blocks. Each block has different settings printed on both sides

4 Basic Types of Grinds

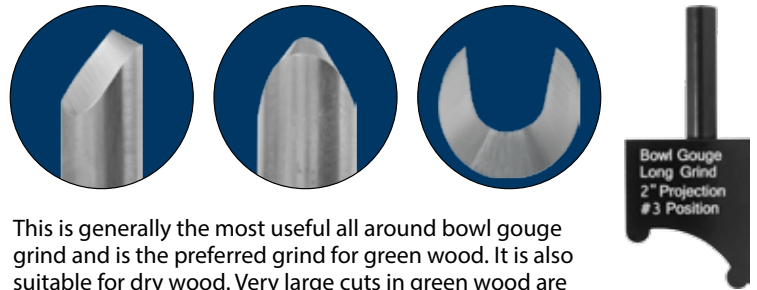
Before starting on the Multi-Grind method, it is a good idea to know the 4 basic grind types used in this method. The following grinds are useful for different turning applications. The following describes three common grinds for bowls, plates and platters and one for spindle work such as finials, pepper mills turned lidded boxes and many other spindle projects. Each of these grinds is achieved using the guidelines scribed on the sides of your setup blocks.

Standard Grind on Bowl Gouge



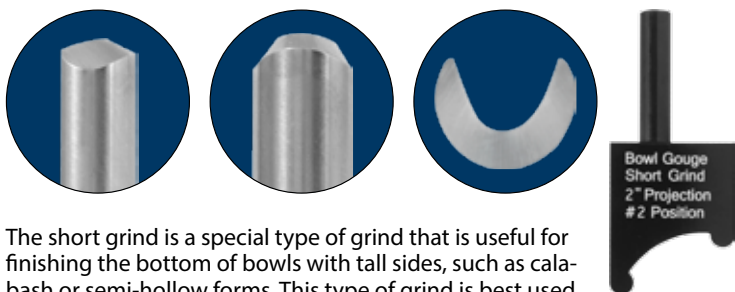
The standard grind is used by most tool manufacturers for bowl gouges regardless of diameter of the tool. This is a general use type of grind that is best used on dry wood for both inside and outside of bowls, plates and platters. This grind is easy to use for most skill levels.

Long Grind on Bowl Gouge



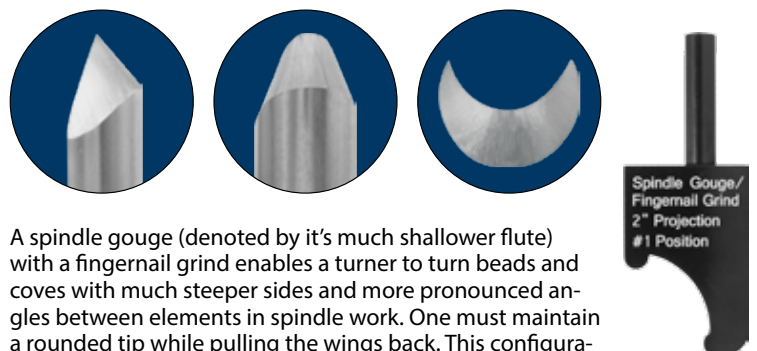
This is generally the most useful all around bowl gouge grind and is the preferred grind for green wood. It is also suitable for dry wood. Very large cuts in green wood are a breeze with this grind. Excellent for shear scraping both inside and outside of bowls, plates and platters. This type of grind is similar to the Ellsworth and the Irish or Celtic grind.

Short Grind on Bowl Gouge



The short grind is a special type of grind that is useful for finishing the bottom of bowls with tall sides, such as calabash or semi-hollow forms. This type of grind is best used with narrow openings which prevent using long grinds or standard grinds on the very bottom of the inside. It is also known as a "Bottom Feed Grind" by many in the woodturning world.

Fingernail Grind on Spindle Gouge



A spindle gouge (denoted by its much shallower flute) with a fingernail grind enables a turner to turn beads and coves with much steeper sides and more pronounced angles between elements in spindle work. One must maintain a rounded tip while pulling the wings back. This configuration avoids catching the edge of the wings when rolling a bead or scooping out a cove.

1

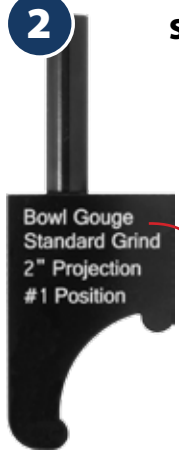
Choose your tool to sharpen



2

Select the corresponding setup block

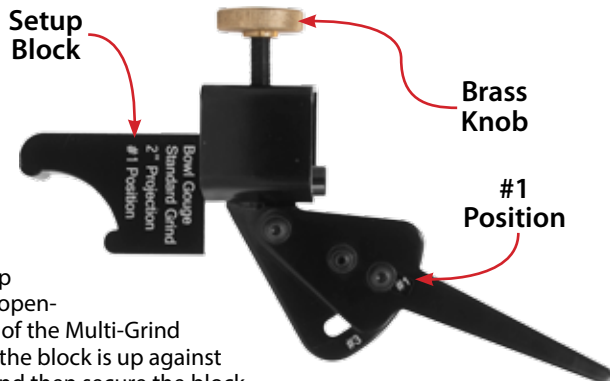
When selecting the proper setup block, you need to base your choice off of the tool you are sharpening. In this example we are going to sharpen a bowl gouge. This means we will select the setup block marked "Bowl Gouge" and in this case we will choose to do a "Standard Grind" so this is the setup block we will use.



**Bowl Gouge
Standard Grind**

3

Insert Setup Block into Multi-Grind Jig



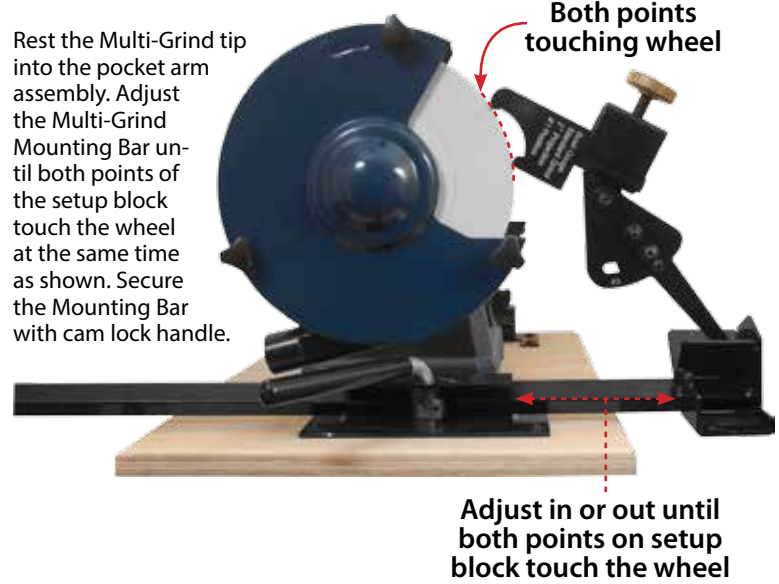
Insert the setup block into the opening on the top of the Multi-Grind Jig. Make sure the block is up against the opening, and then secure the block with the brass knob.

Refer to the setup block (Setup Block #1 - Side 1) to setup the Multi-Grind Jig position. Set the Multi-Grind Jig to position #1 as shown on the setup block. Secure the position with the locking knob.

4

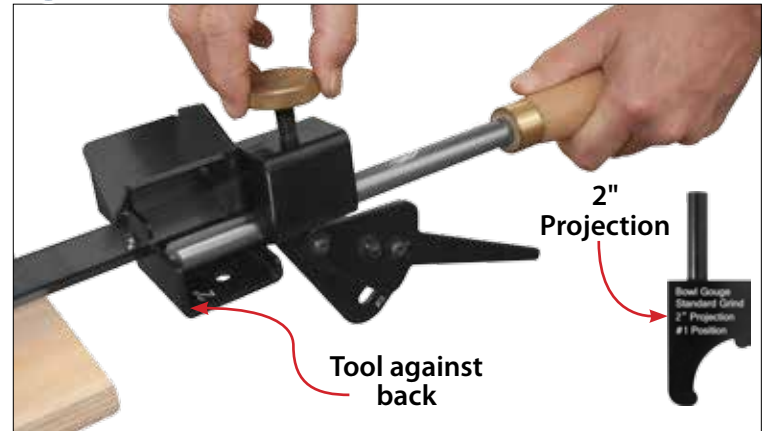
Adjust the Multi-Grind Mounting Bar

Rest the Multi-Grind tip into the pocket arm assembly. Adjust the Multi-Grind Mounting Bar until both points of the setup block touch the wheel at the same time as shown. Secure the Mounting Bar with cam lock handle.



5

Set Freehand Guide for Tool Projection



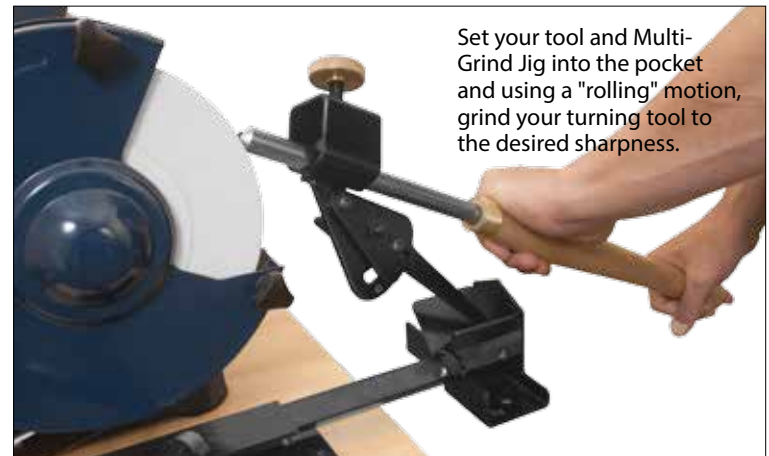
Remove the setup block from the Multi-Grind Jig and insert your tool in its place. Butt the Multi-Grind Jig up against the end of the Multi-Grind Bar on the 2" side. To set the correct "projection" of your tool with the Multi-Grind Jig we will use the end of the Multi-Grind Mounting Bar which has a built-in gauge for this purpose. We are using the 2" side in reference to the setup block. With the Multi-Grind Jig firmly up against the end of the Multi-Grind Mounting Bar, slide your tool through until it touches the back. Secure tool with brass knob.

Shop Note:

Typically, the 2" projection is the most commonly used projection depth. 1-3/4" can be used to create a more "blunt" tool edge depending on your preference.

6

Start to sharpen



Set your tool and Multi-Grind Jig into the pocket and using a "rolling" motion, grind your turning tool to the desired sharpness.

Microbevel Edge (Use of Microbevel is optional)

Many woodturners like to grind off the heel on bowl gouges to achieve cleaner cuts. This is especially true when turning the interior of bowls. The Magnetic Microbevel Setup Block offers 4 different settings to suit your needs. An embedded magnet keeps the block in place while in use.



Microbevel front



Microbevel back

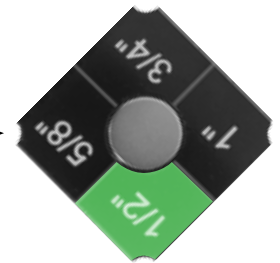
Microbevel Edge



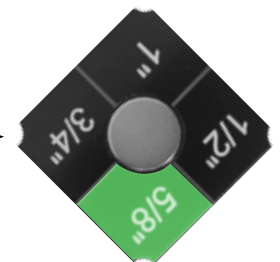
Once your gouge is sharpened to your liking, remove the Multi-Grind Jig and your tool from the Multi-Grind Mounting Bar. Place the Magnetic Microbevel Setup Block into the Multi-Grind Mounting Bar pocket with the desired grind depth to the bottom. In this example we are using a 1/2" depth setting as shown. Place the Multi-Grind Jig back into the Multi-Grind Mounting Bar pocket with the tip against the bottom of the setup block. Grind your tool in the same fashion as in step 6.

Below are the different Microbevel Setup Block settings and approximate angles. Green highlight signifies setting position in the pocket.

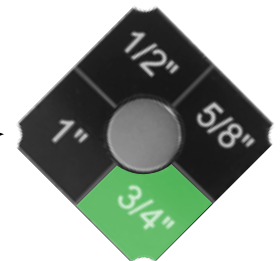
1/2" Setting



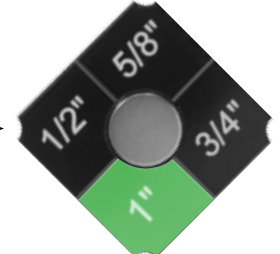
5/8" Setting



3/4" Setting



1" Setting



Tool Rest Method

Using the Tool Rest offers you the best possible way to achieve a precise edge to your bevels without taking off too much material on your tool. After all, we need our tools to last a long time, so why would you want to take off too much at a time? The tool rest fixes this issue with a few simple steps. This method is primarily designed to be used with a Spindle Roughing Gouge.

Accessories Used for this Method

All are included



Tool Rest



Multi-Grind Bar

1

Choose your tool to sharpen

Please Note:
The Tool Rest method is primarily designed to be used with a Spindle Roughing Gouge tool. This tool has an even bevel edge which makes it perfect for this type of sharpening process.



2

Attach the Tool Rest Assembly

Remove the Multi-Grind Bar from the base. Slide the Tool Rest assembly onto the Multi-Grind Bar.



3

Adjust the Tool Rest and Multi-Grind Bar

Slide the Multi-Grind Bar and Tool Rest back into the base. Set your tool into the pocket and adjust the Multi-Grind Bar so your tool sits at the correct angle. Lock the Multi-Grind Bar in place. Slide the Tool Rest towards the grinder so that it sits approximately 2" from the grinding wheel and secure.



4

Raise the Tool Rest

Take a dollar bill and place it on the tool rest. Raise the tool rest and dollar bill up until it touches your tool. Secure the tool rest. Remove the dollar bill. Sharpen your tool. Continue sharpening your tool until no more material is being removed. Once you notice that no more material is being removed, you are finished sharpening your tool. If you want to take off a little more material, you can fold the dollar bill in half and repeat this step to take off twice as much material if so desired.



Shop Note:

The dollar bill is approximately .004" in thickness. This provides a perfect offset in thickness for material removal. The tool rest provides the perfect stopping point so you don't "over sharpen" or remove too much material.