



How To Sharpen a Handplane

by [G S Haydon](#) on February 17, 2014

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I have had the good fortune of being able to work with wood for a living as a Carpenter & Joiner. My family have been professional Carpenters & Joiners since 1926 when my Great Grandfather started the business. I would spend time working with my Dad during school holidays which gave me a great introduction into the world of Joinery My information is based on my life spent as a joiner. I hope you enjoy my articles and find them useful. You might also want to visit my blog and sign up for free updates.

Intro: How To Sharpen a Handplane

This instructable will guide you through sharpening a handplane.

You will need;

Norton India combination stone size 8" x 2". This has a grey "coarse" side and an orangey brown "fine" side. This method works just as well on other mediums such as sandpaper, water stones and diamond stones.

Honing oil. Norton make their own product but I find baby oil is much cheaper and works really well.

If you don't fancy freehand honing buy a "side clamping" honing guide.

A piece of leather stuck to a block of wood.

Some metal polish like autosol.

A clean cloth.

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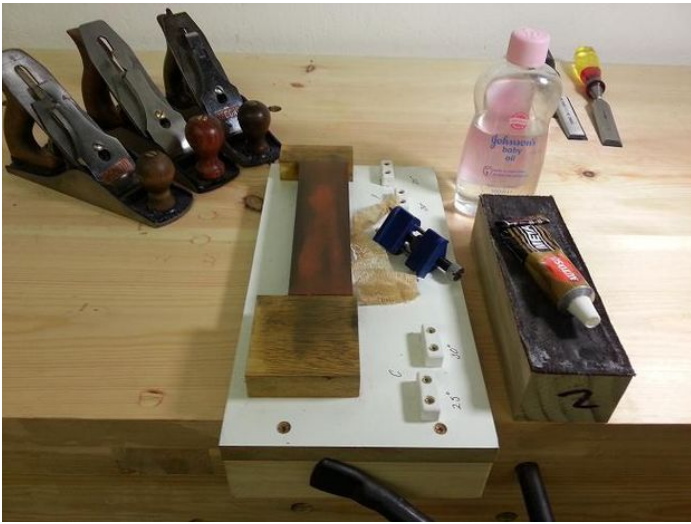
Step 1: The Set Up

A piece of melamine faced MDF makes a great way to locate your sharpening stone. The melamine facing makes it very easy to clean and the MDF stays nice and flat. If you don't have any, fear not, any scrap will do.

If you are able to cut two pieces of hardwood the same thickness as your stone do so. This must be done very accurately, if you don't feel able to do this just use some scrap or the like to locate the stone prevent it slipping around. The concept with these blocks is that they prevent you falling off the end of the stone while learning, ensuring full use of all the stone. The bigger piece nearest us allows the honing guide to use more of the stone.

Screw a batten to the underside to allow you to secure the sharpening station to the bench.

Many honing guides have information on them regarding how far the chisel needs to project to create a sharpening angle. The two white blocks nearest the camera are set to give a 30deg and a 25deg bevel. Having these blocks helps save time when setting.



Step 2: Work The Back

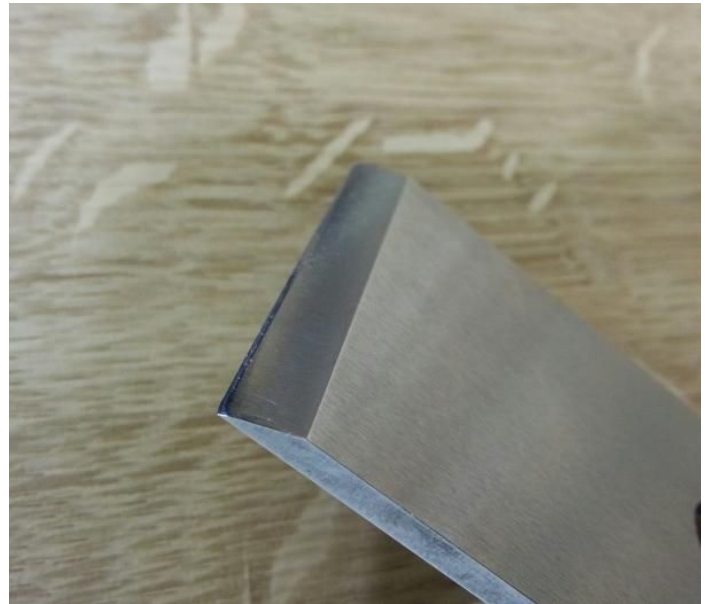
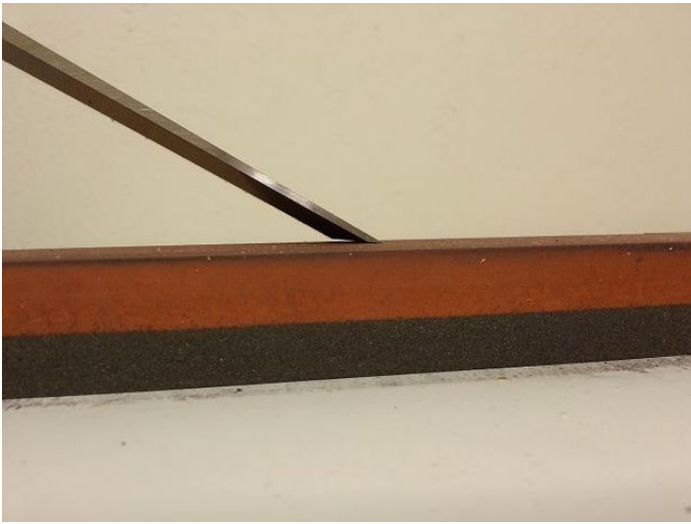
First off you will need to work will be the back. Remove the blade from the plane and then carefully remove the cap iron from the blade. The first photo shows clearly the swirly marks from the factory grinding process that can be present on plane blades. These need to be removed, especially behind the cutting edge to give good results. Make sure you hold the blade flat on the stone working over the whole stone evenly as you will see in the video. Once the factory marks are removed behind the cutting edge work the back on the leather strop with some autosol. The second photo shows the back of a plane blade ready for use.



Step 3: Honing The Edge

Now it's time to hone the edge. A typical hand plane you would buy has a factory ground angle of about 25deg to the blade. This angle is too shallow for normal work. We need to hone an angle of about 30deg. We do not need to change the whole angle. As you will see from photo 1 we only need to apply the 30deg angle to the tip of the blade and create a small secondary bevel. Offer the 25 bevel to the stone heel first (not the cutting edge) and then lift by about 5deg. Hold the blade steady and move it over the face of the stone. The video shows how to do this both free hand and with a honing guide. You will also need to break the corners of the blade. If you don't the blade will leave tracks in the surface of the wood. Breaking the corners is best completed when drawing the blade back toward you using light pressure. This is demonstrated in the video. After a few light passes you will create a burr that can be felt on the back edge of the blade we worked on in step two. Remove this burr by holding the back of the blade flat on the stone and rubbing it on the stone. This will then move the burr back to the other side. Very lightly and briefly hone once more, flip the blade over and work the back for the last time.

Now move to the strop, apply some more autosol if required and work the small 30deg honed bevel then turn it over and pull the blade back. You should now have a small 30deg polished bevel as shown in the second photo which is ready for work.



Step 4: Test The Edge

Caution! You have created a sharp edge. Carefully attach the cap iron/chipbreaker to the blade, setting it back about 1mm back from the edge as shown in the photo (for very fine work it can be set closer but that is for another day) . Place it back into the plane and set for a light cut. If all is well you should be able to produce nice fine shavings leaving a smooth pristine finish behind you. If not repeat the honing process.



Step 5: Maintaing The Edge

Once your edge is good, use it until it becomes dull. When it does go to step 3 and repeat. You can do this until the edge looks like the photo on this step. It has become thick. In the video I set the honing guide to 25deg and use the honing guide to redo the 25deg factory bevel using the grey coarse side of the stone. In future instructables I will look at doing this with a powered grinder. Do this until the edge is very fine again like the photo at the end of step 3. Now hone the edge and you are good to go again.

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Comments

2 comments [Add Comment](#)



technologyguy says:

Thanks for a fantastic Instructable on what has become almost a lost art. Nothing equals producing those perfect shavings. After 50 years of sharpening, I have now learned the correct way to do it.

Feb 17, 2014. 2:42 PM [REPLY](#)



G S Haydon says:

Thanks technologyguy but a word of caution! This method is perhaps the most widely documented and used but there are many equally valid methods. All you need is a reliable way to get a sharp edge that yields good results. I really appreciate your kind words :-).

Feb 17, 2014. 3:05 PM [REPLY](#)