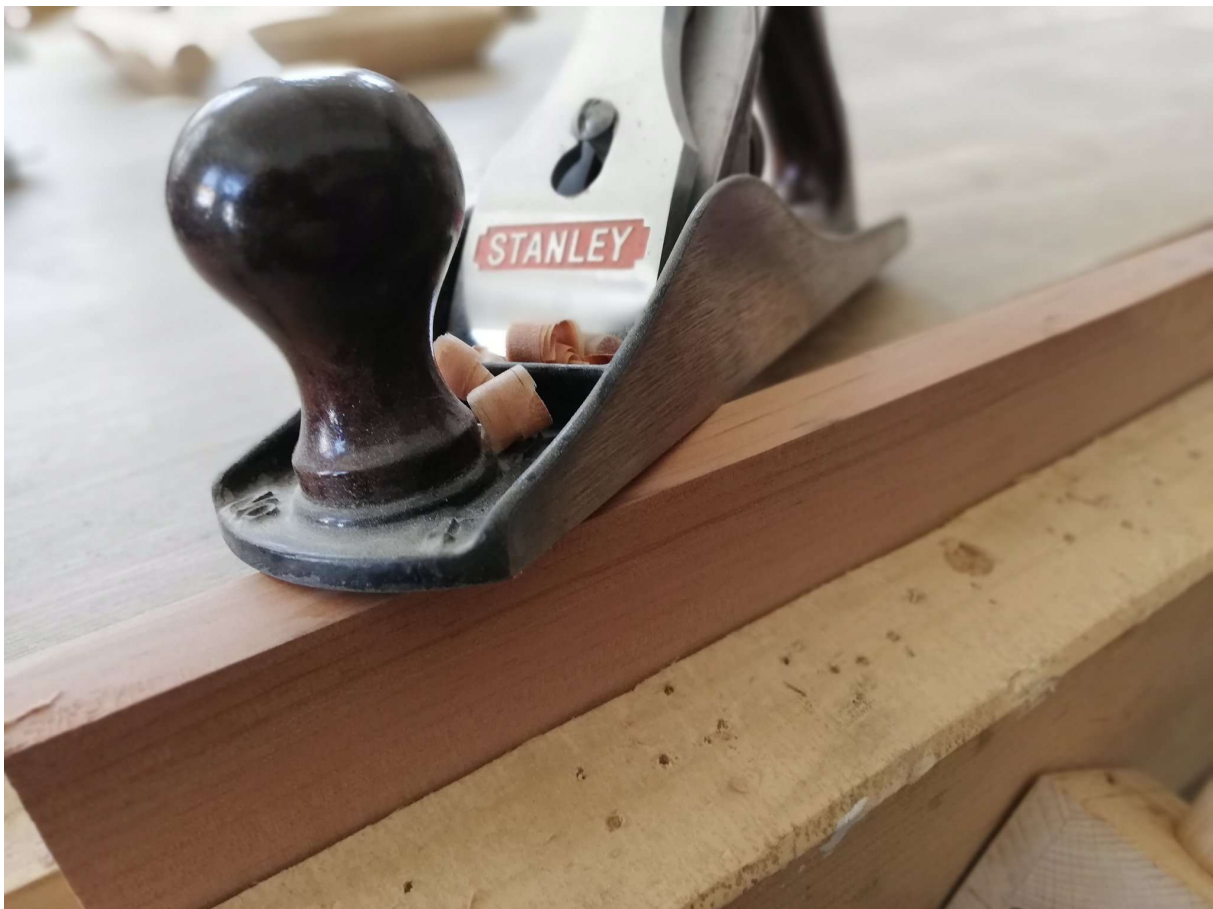


## **Tip # 1**

If you're a beginner woodworker you've probably never thought about the direction of the wood grain when using a hand plane. Always check the direction of the grain, always go with the grain and not against it. The result will be a beautiful, clear surface with less effort.



## **Tip #2**

When you use a marking gauge, the traditional way is to set the distance you want and place the pin on the surface and score a mark on the surface of the wood... sometimes we don't want that, we don't want a permanent scratch. So instead of that, take your gauge, set the distance you want, measure it and then take the pencil against the end of the gauge and pull it and you've got a nice, crisp line to work.



### **Tip # 3**

Sometimes, when you have to drive a nail in the end of a piece of wood, If you drive that nail just on its own, without pre-drilling it, is a good chance the end of that wood will split. So always pre-drill a pilot hole.



## **Tip #4**

Sometimes, when you want to join 2 pieces of wood together with screws or nails, but the screw or nailhead looks ugly what you want to do is to pre-drill a pocket hole, drive in the screw or nail, and then use a wooden plug that will cover the head of whatever you sunk in there. Add a little bit of glue in the hole, drive in the plug, leave it to dry, and then trim it, plane it or sand it flush.





## Tip # 5

When you first bought a new dovetail saw or a tenon saw and you start working with it, it starts biting on the wood as soon as you offer it to the wood and it's not going smooth. Take my advice and take off the tip, the first 4-5 teeth using a flat-file. The saw will cut very smooth now, it will just glide into the wood every time with no stumbling at the start.



## **Tip # 6**

Never put a ton of pressure on your wood while sanding. Using too much pressure while sanding can cause the surface of the wood to become uneven or gauged. If you use the right kind of sandpaper with the right grit, then force won't need to be applied a lot. Press lightly and use a circular motion.



## **Tip # 7**

When you are cutting narrow pieces of wood, never use your fingers to guide them. Try using a push stick or thin wood strips to push that piece through your saw. This will ensure that you keep all ten of your fingers, which are all necessary for you to continue working with wood.



## **Tip # 8**

Here's a glue-up trick that I use often, you can see it in my videos. When you want to glue 2 pieces of wood together but you don't have the time to wait for the good ol' regular wood glue to dry I'll add some regular glue and some CA glue in between. The CA glue will act as a clamp allowing you to go on with the project while the regular glue cures.





## **Tip # 9**

If you glued 2 pieces of wood together and for some reason, you have small gaps between them just add some CA glue and start sanding on top of the gap. The resulted sawdust will mix with the CA glue and fill the gaps. And since the sawdust is the same species as the wood it will blend in nicely.



## **Tip # 10**

Always use regular painter's tape when crosscutting the veneer on plywood...if you don't use tape you'll get a tear-out edge. So if you're using a table saw to cut it place the tape underneath, if you're using a jigsaw place the tape on the top of the piece. It's about the orientation of the blade's teeth, you'll have tear-out at the exit.



## **Tip # 11**

Sometimes you're gonna come across a piece of wood with 2 rough edges that are not straight and if you need to cut a straight line there's nothing to reference up against the fence. In this case, you take a piece of plywood with 2 opposite straight edges, glue some sandpaper on top for better grip, place it between the fence and the blade, place your board on top. Now you have a straight edge to reference against the fence and also a straight edge to reference against the blade. Once you have a straight edge you no longer need the piece of plywood for the second edge.



## **Tip # 12**

Sometimes you run out of clamps, sometimes you don't have clamps or you don't have the right clamps. A lot of times, painter's tape will work just as well. You're not gonna get the clamping pressure but for small, crafty items it works great. So...what I do, is I get things lined up and I pull it real tight, that way it'll pull the pieces together. I use this trick, especially with small boxes or small items in general, and it works great. The point is that the tape will keep the pieces tight together while the glue dries.





## **Tip # 13**

Another alternative to clamps when making small items is to use a scrap piece of plywood and screw down 2 pieces of scrap wood. The space between them should be slightly bigger than the item you are trying to clamp. The extra space will allow you to use some wedges to tighten the item and you'll get a nice tight fit with no clamps.

## **Tip # 14**

Always try to clean up the excess glue with a wet rag when you're gluing up. I've heard people say that using a wet rag on joints as they're drying is not good because it is going to weaken them. In all the years I've been woodworking, I've never had a joint fail. So Just keep cleaning the excess glue with a wet rag, it's gonna make your life easier down the road.

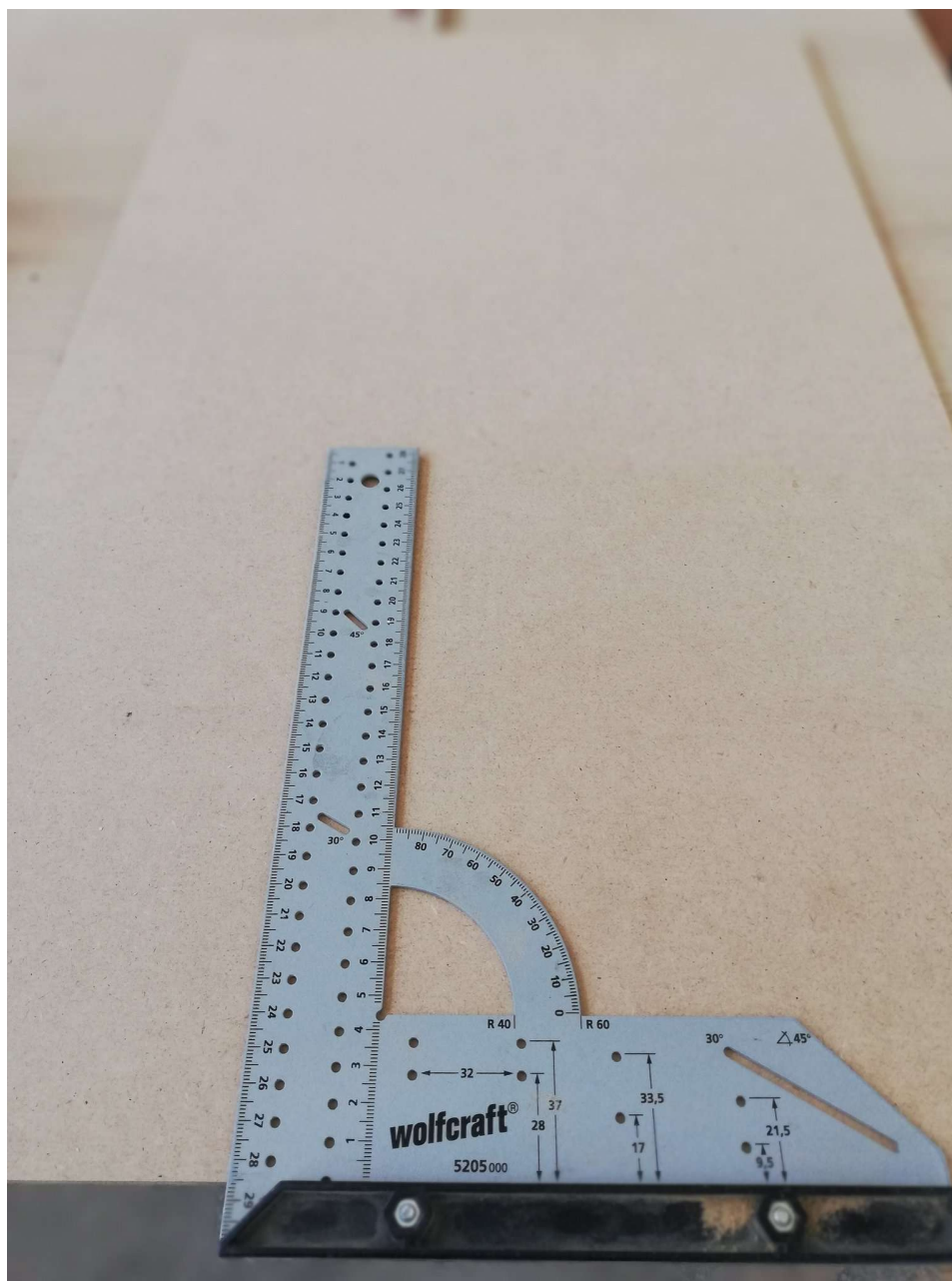


## **Tip # 15**

If you have a dent in a piece of wood from a hammer blow, just place a wet cloth on top and run a regular household hot iron a few times, it will fix the dent.

## Tip # 16

If you want to check if your square is square because sometimes they do go out of square for no reason or you just don't trust a square, you can use a piece of plywood with a straight edge and you just put your square to the edge, strike a line and then flip your square over. As long as it is still showing square on the same line then the square is still square, it's still good.





## **Tip # 17**

When you're using sandpaper and it gets clogged, you might be out on a job and you don't have some extra sandpaper, you just take an eraser and erase the particles from the surface of the sandpaper, and you can carry on sanding as though it has never been used.



## **Tip # 18**

I found that one of the best things for my clamps is to glue a piece of plywood to the surface of the heads because it works so well and it doesn't mark the wood when you clamp with it. I just use some double-sided tape, attach the pieces of plywood to the heads, bring the heads close together and, sinch them tight. They will stay on for years.



## **Tip # 19**

You are out on a job and you need a rasp to shape the inside of a rounded piece. You forgot to bring one so the simple solution is to take a piece of a broom handle, cut it in half, stick on some sandpaper and I have everything I need for a poor's man rasp to finish the job. You get a round face and a flat face on the same piece.



## **Tip # 20**

Sometimes when you're using a piece of wood, you're running that gauge line and it jars along the way bouncing on the surface. The quick and easy fix for this issue is to take the stem out as much as possible and run some beeswax on it and also on the face of the gauge that runs on the edge of the board. Then it will run so much more smoothly and it'll glide along with the wood so easily it's worth repeating the process every 2-3 months.





## **Tip # 21**

An important thing you want to watch out for when you're joining two boards together is alternating your growth pattern from board to board. The boards will curve around, cup as we say, following the natural rings of the tree, so to prevent that you have to alternate the pattern every other board.



## Tip # 22

The same principle applies when you want to glue two boards together to make a table or a chair leg. Always observe the direction of the grain. In this picture, you can see the flow direction of the grain.



You established the grain flow, now, to avoid warping you have to place them like this.



This way the pull will be toward each other and there will be no warping.

## Tip # 23

Let's talk about gluing boards together. You've probably noticed in my videos that when I join boards together I'm not putting any biscuits or dominoes in there the reason being it is a complete myth that biscuits or dominoes help with the actual strength. A well-glued joint is gonna be stronger than the board itself. What biscuits and dominoes do is help with the alignment meaning, help you get the boards nice and flushed together by locking them in place. The most important thing you need to watch out for is clamping pressure. Many people put the clamps on and tighten them as hard as they can. You don't need to do that if your boards are milled properly. The right amount of clamping force is gonna hook those boards together. The problem is you start tightening the clamps on one side super tight, it's gonna start to lift up the edges of your tabletop for example and it's gonna dry in that position. What I do, is I lay down all my boards on a flat surface (my workbench for example) and I clamp the edge of the two outside boards to the workbench so that as I put the clamps on there if I overtighten, those outer edges can't lift.



## Tip # 24

Let's talk about routers for a second. The first question that pops into my head when it comes to routers is how do you know what direction to push the router because that matters when it comes to the direction of the blade's spinning. The confusing part often is when you have to do the outside than the inside of a tabletop for example or just a little cutout. Well, the answer is very simple, this is an awesome trick that any woodworker should know. You take your right hand with your thumb against the piece, the edge you're going to route on, and whichever direction your finger is pointing, **that is the way you are going to push the router.** ( you're gonna see that it works great in any direction, up, down, left, right)





## Tip # 25

Many of us woodworkers use a mix of glue and fine sawdust to make wood filler to fill gaps, cracks, or imperfections. There's nothing wrong with that, it's actually great and it matches really well, except that when you need to apply stain or finish it will not take well to glue. So, I used to finish a lot of my pieces with shellac, lacquer, or varnish or, wipe-on polyurethane. My idea to solve that issue was to replace the wood glue when making my filler with the finish I use over the top.



**IMPORTANT**: This trick will not work with oil-based finishes because it will not harden.

**IMPORTANT**: If you're using lacquer or varnish you got to work really quick because it dries very fast.



## Tip # 26

Whenever you buy wood stock from the big retailers you'll notice a million price tags on everything which is super annoying because you wanna use that wood and if you want to put finish or stain on it, there's always a square wherever the price tag was. My quick fix to this problem is a heat gun. All you need to do is take a heat gun or a blow dryer and heat the price tag. It will come right off in one piece and you don't have to worry about the glue residue anymore.



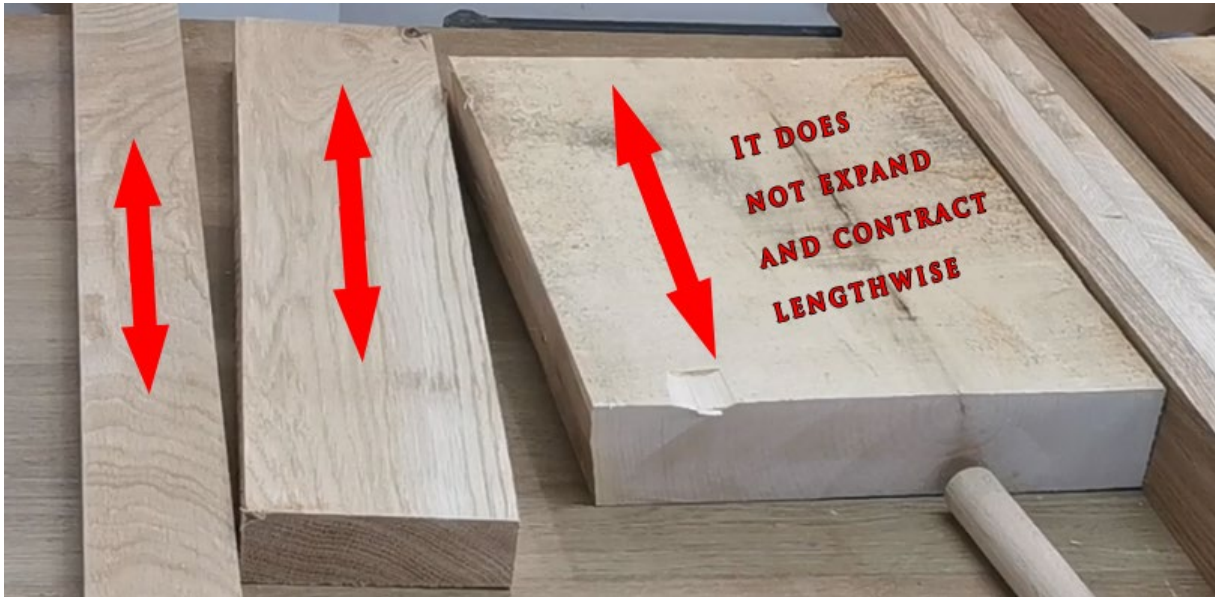
## Tip # 27

Let's talk about the expansion and contraction of the wood for a second. You have to keep in mind one very important aspect, the wood will expand and contract along the width of the board seasonally as the moisture content of the wood changes, like this.



The more moisture, the more will expand, and then as the moisture leaves the board it will contract back. It does not expand and contract lengthwise.





So, when you're building a piece of furniture, this is what you want to keep in mind. There are certain things that you just don't want to do, for example:

You don't want to take a bunch of boards, glue them together, like the tabletop for example, and then miter in a border, locking them in place that will give them nowhere to expand and contract. I've seen many tables that are glued up with a solid border around them and I guarantee you it's only a matter of time until that's not gonna look so good.

So, expansion and contraction across the width of the board it's something to know and think about when you're designing furniture.

## Tip # 28

Here's a tip that you might already know but I think it's super helpful so I thought I'd err on the side of caution and talk about it anyway. Who knows...this might help somebody out there.

We've all probably been there where you're trying to install a cabinet door inside of a cabinet and you drill the holes and it's just a little bit off, but the amount that you need to move it is so slight that you can't move it because the next hole would be just next to the hole that you already drilled...so what do you do?

Well...I found out that the q-tips (yep, you read that right) the ones with the wooden shaft, are perfect to plug those holes giving you the possibility to drill a brand new hole right next to the existing one. You can also use matchsticks, dowel rods, or small pieces of wood.

So, how does this work? You take the q-tip/ match/ dowel rod and put a little bit of wood glue on it and insert it into the hole then you take a flush-cut saw and cut off the excess, sand it down and now you can drill the new hole right next to it without the risk that you make a big hole and nobody will know 😊.



## **Tip # 29**

Let's talk about the jigsaw. First of all, if you need a super clean-cut, well, the jigsaw won't be able to give you that. But there are times when you really have to use it because you have to do some weird curve freehand. You might have noticed when you use the jigsaw, it always up-cuts so you get a nice, clean-cut on the bottom and the top is usually all blown up and it looks terrible. I got this tip from one of my friends and I find it awesome. What he taught me, and it's so simple and it makes so much sense, is that if you know the line you're gonna cut with your jigsaw, you just take a marking knife and with the help of a metallic ruler and you're gonna score that line.

**Important:** Whenever you're scoring a line, your first pass should be nice and light, and then you increase the pressure gradually as you go. If you start with full pressure off the bat, your marking knife is gonna follow the wood grain and you're not gonna get a nice straight line. So...start light and do a couple more passes increasing the pressure gradually.



Now, what you do is you pre-slice the wood fibers on the top of the board, that way when we're gonna make our cut with the jigsaw if you stay just outside of that scoreline, you're not gonna get all that chip-out because you've already broken all those fibers previously.



## Tip # 30

I don't know if you ever experienced this, but one problem with the jigsaw, especially if you're doing thicker stock is that it's really hard to get a perfectly flush, square-cut because the blade can be a little flimsy, and the problem is as you start cutting that blade deflects sideways. So You might be perfect at the top but then it's going to slope out as you cut through your piece.

So, to avoid this, first of all, make sure you have the right blade. This usually happens when you have a blade way too long so you're going way farther through the piece than you need. The longer the blade the more deflection you get.

Second, you wanna make sure you're not putting any unnecessary pressure one way or the other because obviously if you put pressure it's gonna tilt that blade angle and you're gonna get that slope.



## **Tip # 31**

I'm gonna talk to you about how to fix the jigsaw problem we mentioned above. Let's say you've already cut your piece and you got that slope but you want it to be perfectly flush. You can try and sand it but you can just ruin it even more. Well...there's a little trick that can help you fix this problem. So, your line looks perfect from the top but because of that blade deflection is not a square cut.

First, flip the board bottom up. You're gonna use the top line, which was almost perfectly cut, as a template for the router to square that edge. You're gonna need a bottom-mounted flush cut router bit.

You're gonna set it as far down as you can go and still be on the stock, pass the router on the edge and you'll get a perfectly square edge without having to re-do that piece.



## Tip # 32

Another tip that I wanted to share with you is how to obtain very fine sawdust so you can make your own wood filler. This trick comes in real handy especially when you're working with a specific species and you can't find a wood filler to match. The biggest problem that I encountered was that I always find that looks like this:



But you know that to make your wood filler you need fine, dusty sawdust.

I tried using the belt sander and collecting the fine dust, I tried using a palm sander but they'll never produce a large quantity of sawdust quick enough but I got a little tip that will get you as much dust as you want in no time and it'll only cost you about \$15, a one-time investment. I am referring to a coffee grinder...yep the good old coffee grinder. It doesn't matter what brand.

Then you just grab a hand-full of sawdust of choice and you just grind it like your favorite coffee roast.





You'll obtain a beautiful, fine powder that is perfect for making wood filler.



All you have to do is mix it with wood glue or whatever finish you're using (polyurethane, lacquer, varnish...etc) and obtain a nice wood filler that's gonna be the exact same color as whatever wood you're working with.



## **Tip # 33**

This is a quick tip related to the one above. This is a trick I use pretty much whenever there's a tiny crack in a piece of wood, it's not compromising the integrity of the piece but it's there and you just want to fill that little crack and keep moving on.

What I do is take a little glue and fill up that crack as best as I can, I like to use my finger and work it down best as I can. Then I take my orbital sander, disconnect the dust extraction, you want a lot of dust for this process and just sand directly over the glue, and because the dust extraction is not on all that dust is gonna mix with the glue and make the wood filler right under the sander, fill the crack and you're good to go.



## Tip # 34

I remember as a newer woodworker one of the techniques I found to be the trickiest to get just right were boxes with mitered corners especially if I wanted to do something that had a grain match or a waterfall edge. One of the issues that I ran into the most was my miter joint being a tiny bit open on that outside corner which is really the most important spot from an aesthetic standpoint.



There are plenty of reasons why this might happen but a common factor is that when we attempt to set our blade at exactly 45 degrees, we miss it by just a fraction of a degree. The problem is that when this happens because these joints have two bevel cuts, that small error is doubled which can create that gap I was talking about previously. To combat this we can use a very simple trick and that is instead of attempting to set your blade at exactly 45 degrees intentionally set it to just past that, at 44.9.



What this does, is guarantee that we will cut the bevel just a hair past 45 and that will result in our miter joints being closed at the top of the corner instead of the bottom when gluing up the entire box.

## **Tip # 35**

This tip is about how to eliminate tear-out by...well...not eliminating tear-out. I know this sounds like nonsense so let me explain. 😊

We've all dealt with tear-out when making cuts and more specifically when making cross-cuts, cuts that are perpendicular to the grain.

So, what I wanted to tell you is that it's all about the order in which we do the cuts so that any tear-out from a cross-cut will ultimately get removed when a part is cut to the final dimension with a rip cut since that cut is made parallel to the grain direction. In the simplest terms, the idea is to cross-cut then rip whenever possible.

I use this technique mostly when I do my drawer boxes. When used in the right situations this is a great technique that doesn't take any extra time or extra tools or materials.



## Tip # 36

This tip is such a core skill within woodworking that I thought it would be a great tip to include in our list. It has to do with a nice panel glue-up whether you have a jointer or not.

Whenever you're putting together a panel typically one of the last things that you're going to do before actually clamping everything together is to rip your boards but to do this your blade should be at an exact 90 degrees angle. As you know more than often there's a decent chance it's not.

Now the problem with this, and I'm giving an extreme example, is that if your blade is off from 90 degrees rather than making boards for a flat panel, a tabletop, you'll end up making staves for a barrel, and the wider your panel is the worse things are gonna get.

Now...the most common solution to this is to use a jointer and what's called the in and out method. Basically, you line up your boards in the orientation that you want them to be when you glue them up and you write in and out on the mating edges.



You take one board and you take a pass thru the jointer with the face of your board positioned either in or out (the fence) based on your labels. This will create complementary angles so you end up with a nice flat panel even if your edges are not perfectly square.



## **Tip # 37**

But what if you don't have a jointer? How can you solve the problem exposed above with only the table saw? Well...all you have to do is mark your boards UP and DOWN instead of IN and OUT and then rip your boards to the final width, with the faces of the boards facing either up or down based on the labels.



You will see that even with this extreme example with a blade that's way out of square you end up with a pretty flat panel. It's a trick that can take what's normally a very big problem in woodworking and turn it into a piece of cake.

## **Tip # 38**

How to get a straight edge onto a board without using a jointer?

I know not everyone has a jointer in their shop so hopefully, this can help some people out.

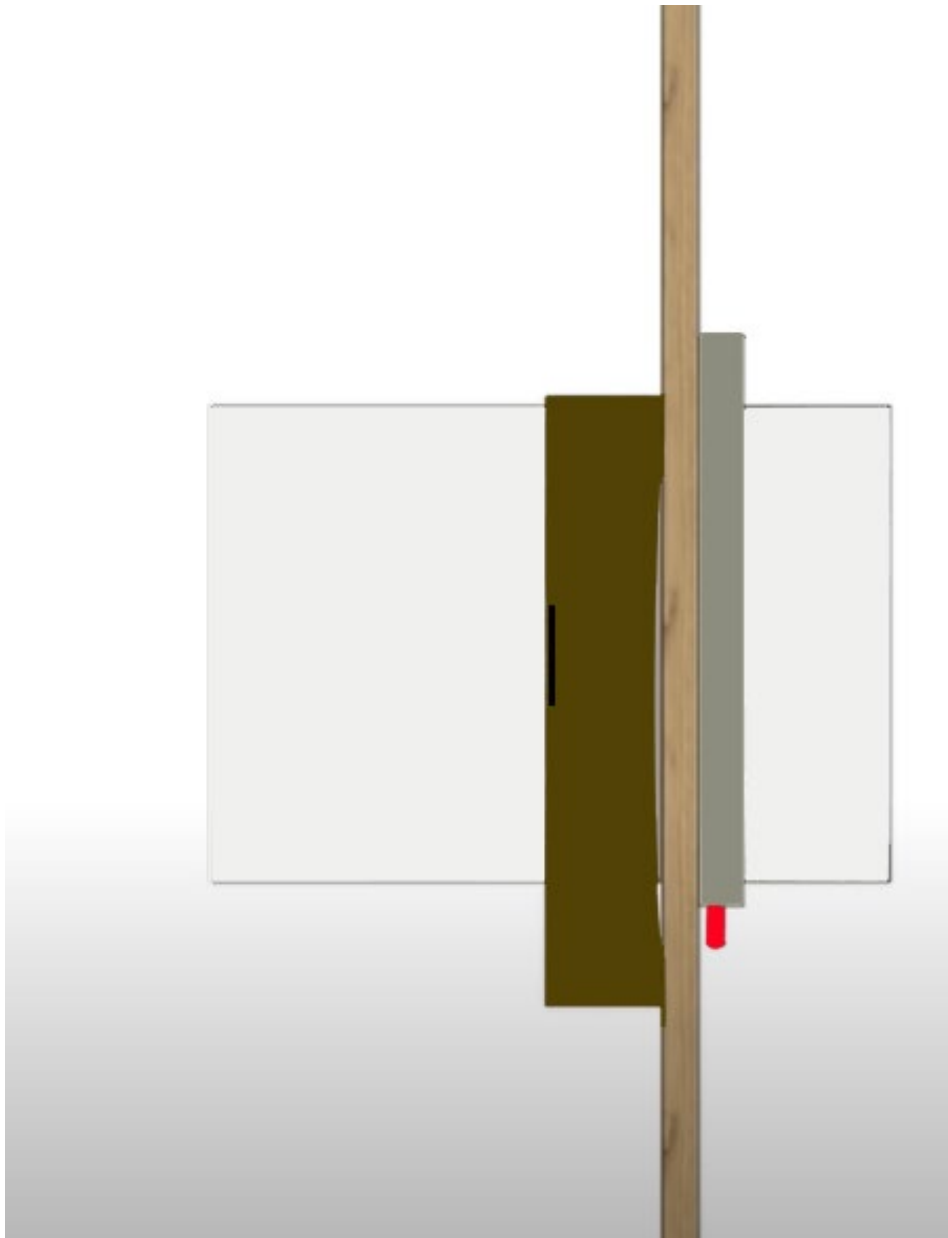
As you know the first step in about any woodworking project is to get your material nice and straight and the jointer is usually the preferred tool for the job but of course, you can get similar results using other tools that you have in the shop and specifically I'm gonna explain how you can do this on your table saw.

**IMPORTANT: If you like these techniques and you'd like to give them a try just remember to be safe and understand the concepts and your machines before trying anything new.**

This method uses a long straight edge that can be attached to your fence (or an 8ft long level which is nice because you already know it's perfectly straight)

The idea is to clamp your 8ft long edge to your table saw fence and what this does is extend the length of your fence which allows us to run a crooked board to the saw and as long as the board is oriented with the concave side against the long fence it can maintain 2 points of contact thru the entire cut.





So with the first edge cut straight, you can remove the long fence and cut the other side as you normally do. One limitation of the setup is that the board you're cutting can't be too long and it potentially loses those two points of contact.

## Tip # 39

So for this next tip, I'm gonna explain how to deal with longer crooked boards using the same method. We're gonna use the same 8ft long edge or level if you have one, and instead of clamping it to the table saw fence we're gonna run it along your workpiece when making the cut. It's basically the same concept the only difference is your workpiece can be as long as your straight edge and since they're pushed thru the saw together the two points of contact are maintained throughout the entire cut. This technique takes a little bit of practice to keep your workpiece nice and snug against the straight edge to get a clean cut.

**Important: This technique is great with crooked but not for bowed or twisted boards.**



## Tip # 40

How to use a speed square to find the center of a board:

So you want to find the center of the board without doing any of that pesky math stuff? Just take your speed square and mark a line to one of the short edges.



Then is just a matter of marking 2 diagonals using the square and making sure that the tips of those diagonals hit the perpendicular mark at the edge. Whenever those two lines meet is the center of the board.



If you want a centerline along the entire length of the board just strike another of these X's and draw a line that goes thru the two points.





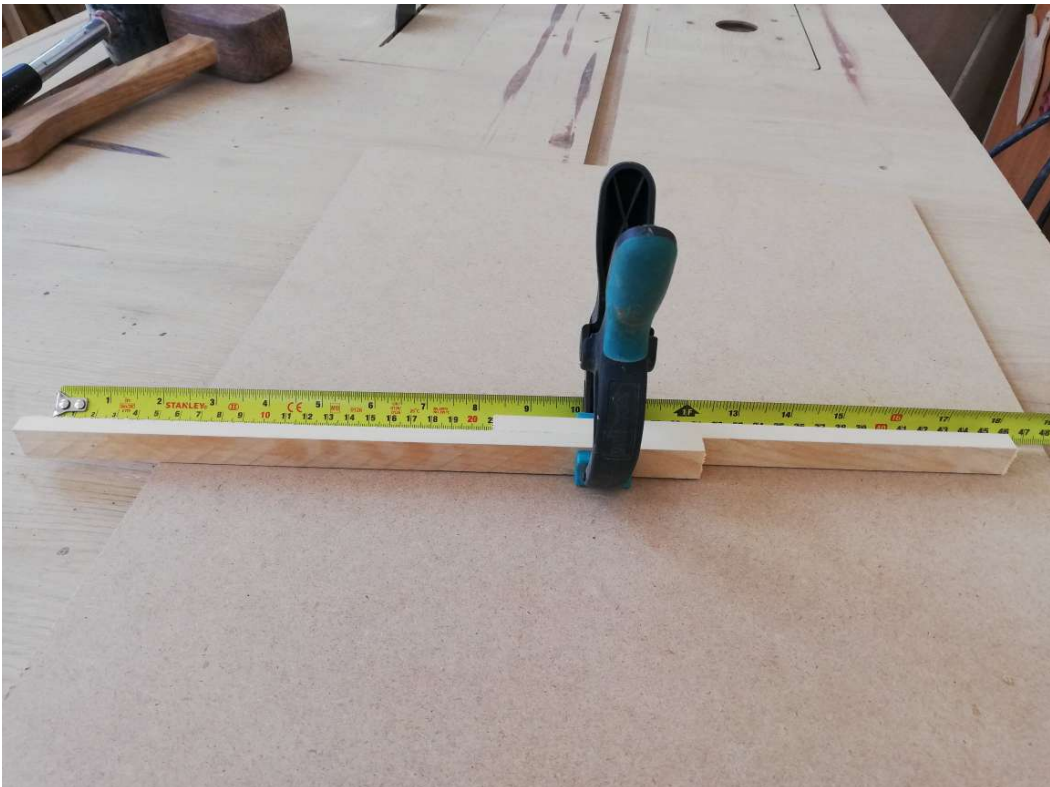
## **Tip # 41**

How to take inside dimensions measurements accurately.

We've all run into situations where we're trying to measure the inside of a cabinet and we try to jam our tape measure into the corner and fold it up against one side and pretend this is good enough.



But let's be honest...it's not... but luckily there are better ways to do it. What I do is take a couple of sticks. As long as they are longer than half the width of your opening you're fine. All you have to do is push them to either side and clamp them together where they overlap in the middle then you can take this hove thing out of the cabinet and measure end to end to have a much more accurate measurement simple and effective.



## Tip # 42

Let's talk about cove cutting. Cove cutting is a cut on the table saw where you're actually using the profile of the blade to cut a cove into a piece of wood. This is one of the easiest cuts to do on the table saw. Some people are very intimidated by these because you have to use the table saw unconventionally.

Now...there's a right way to do a cove cut and there's a very wrong way to do a cove cut. To get that profile of the blade shape cut into a cove on our piece what we have to do is not run the board parallel with the blade but at a slight angle to the blade so that we can mimic that profile shape of the blade. This means we can't use our regular fence but an auxiliary fence that's at an angle to the blade. All you're gonna need is a scrap piece of plywood or a scrap board, you just need a straight edge.

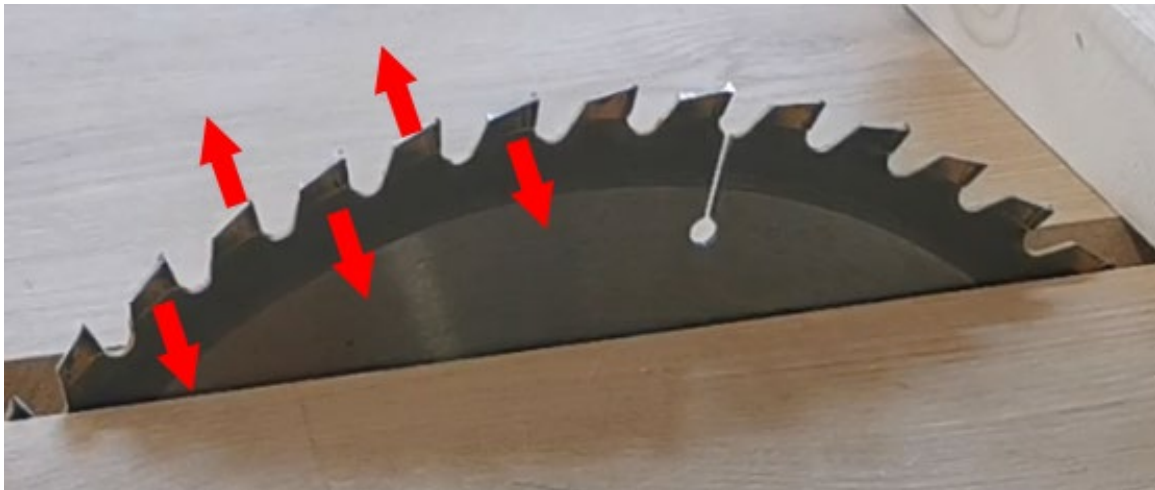
What I like to do is pin one corner against my existing fence and then pin the other end with a couple of screws to my outfeed table which is not metal. If you don't have a wooden outfeed table just clamp the other end to the table.

Now...**a very important step is to remove the riving knife.** You want just the blade...so, before you start, make sure you removed it. The biggest mistake people make when they're trying to do cove cuts is they try to cut off too much at once. This will work only if you're using just the teeth of the saw blade to make the cut. You don't want to go more than 1/8" to 3/16" each pass. Lower your blade to 1/8", do the first pass, bring it up another 1/8" and do another pass, and so on. The more drastic the angle of your fence the wider your cove is gonna be.

This is a nice technique to have in the bag when you need to use it.

## Tip # 43

This is a tip that I find very useful...especially when you have to do multiple cuts. What I'm gonna do is mark my table. So...you have to take a straight edge and stick it to the table saw blade (maybe you already know that your saw blade teeth alternate left to right so you have to make sure you're on the same alternation on the back of the blade and the front of the blade so that your straight edge is perfectly in line with the blade. If you're on one of those alternating teeth it's gonna be slightly off and you don't want that)



So you make sure you're on the correct teeth, it's very important that you're on the teeth and not on the body of the saw blade, you take a razor blade and score the table putting a nice line.







This line is exactly in line with my blade. Once I do one side I flip it over and I do the other side.

Yes...this does mar up your table saw with two lines but it also shows you at the front of your saw exactly where your saw blade is and this comes in handy when you're making multiple cuts and you're referencing on this line. This just speeds up your productivity because you don't have to turn off your saw to reference to the blade every time you make a cut.

## Tip # 44

The use of a sacrificial fence.

I know we've all been there...you scoot your fence over too close to your blade and put a gauge in the side of our fence. You usually do this when you try to put a little groove on the very edge of a piece of wood, maybe you're making picture frames or a frame for a mirror and you need that inset groove to be right on the edge but it's hard to do that without totally messing up your fence. Now...a lot of you probably know this but if you just take a scrap piece of wood and clamp it in there in what's called a sacrificial fence...then, with that clamped you can put it right up to your blade. If you need to take off a 16<sup>th</sup> of an inch you move it over so your blade's just sticking out a 16<sup>th</sup> of an inch...then once you're done, you unclamp that and you just throw it away.

## Tip # 45

Every now and then we're gonna find ourselves having to cut thin pieces of wood along the fence. Most of the time you try and cut it so that piece falls on the outside of the fence but sometimes it can't be avoided. So when you have to make multiple cuts and the thin piece is on the inside, between the blade and the fence, the number one thing you want to remember is to **use a zero-clearance insert**. If your saw doesn't have one of these you can make one in about 5 minutes with a scrap piece of plywood. You take a piece of half-inch ply, trace out the original insert that came with your saw, cut it, stick it in there, make sure your fence is over it, holding it down, and just slowly crank your blade up to cut your kerf mark...it's that easy.

## **Tip # 46**

If you're like me I bet that when you started woodworking you couldn't afford a \$2000 table saw to rip down full sheets of plywood so I had to improvise. I had some scrap wood a circular saw and I made a straight edge that took me 5 minutes and used for years. As a matter of fact, I still do, and still works great. I'm gonna explain how you can make one because it comes real handy in the shop.

It's an easy concept...you just need a piece of quarter-inch plywood and then a 3-quarter inch piece of wood on the top. This piece of wood should be about an inch and a half wide. The piece of quarter-inch plywood should be at least 10 inches wide. When you attach the piece of wood to the piece of plywood make sure it's square to the edge and leave about an inch and a half on the backside. The overhang on the backside is for the clamps, so you can clamp this straight edge to the piece you're cutting. The distance between the guide and the edge of the plywood should be bigger than the plate of your circular saw. When you place your saw on it the blade is gonna sit up so you're gonna start the saw and run it down and cut the excess off making sure that the plate stays right against the guide. This is how you customize this straight edge for your saw.

## **Tip # 47**

I'm gonna approach a math problem with this tip. Let's say that you have a board at a width that's a little too hard to do math with...let's say for example  $7 \frac{7}{16}$ " and I need to divide this board into equal parts whether it's in half or by 5 the easiest way to do that is to turn your tape measure keeping the starting point flush to the board and then find on the tape measure a number that is easy for you to divide...let's say 10 inches. Now...if you make a mark at 5 inches it'll be the center (you can check that by measuring the right way). You can even divide it into 4-5 equal parts for example marking at 2,4,6 and 8 inches). The best part of this trick is it works with any number.

## **Tip # 48**

How to find the center of a circle without doing the math:  
There's an easy trick to finding the center of any circle, any size. All you need is a construction triangle and a square, place them together so that the right angle of the square meets right at the angle of the triangle. Once they're together use a clamp and clamp them together, it just makes it easier to handle, and then you place your circle, doesn't matter the size, right at the right angle of the square. Trace a line, turn it a little bit, and trace another one. The intersection of these 2 lines is the dead center of your circle. Doesn't matter what size your circle is it will always find the exact center.

## Tip # 49

This next tip is something I use quite often in my shop especially when I have to work with templates at the router. You know that the template has to be fixed to the piece you're working and one of the fastest ways is to take a piece of regular painter's tape and tape it on the template and another one on the board you need to work on, take some CA glue, apply it on the painter's tape, on the other side spray the activator and fix them together.



Now you can run them thru the router, do your pattern. The trick to this is that when you need to separate the pieces the painter's tape is gonna tear out and both pieces are not gonna suffer any damage from the CA glue.





## Tip # 50

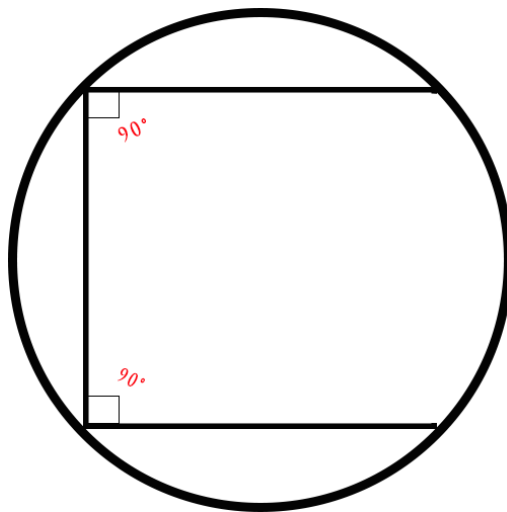
Whit this tip I want to help you shop for hardwood at a lumberyard. Now...the difference is that at big box stores they sell lumber in linear feet and at a lumberyard or lumber dealer they sell it in board feet and board feet can be confusing and intimidating to many beginner woodworkers. Basically, a board foot is 144 cubic inches (that's a board that's one foot by one foot by one-inch thickness so if you have a board and you multiply the length times the width times the thickness, divide that by 144 and you have your board feet. To make it more simple I'm giving an example: You have a board 8 feet long, 6 inches wide, and 1 inch thick, which is commonly referred to as 4 quarters then that board is 4 board feet. If you keep this in mind it makes things a little bit easier when you have to buy lumber from the lumberyard.



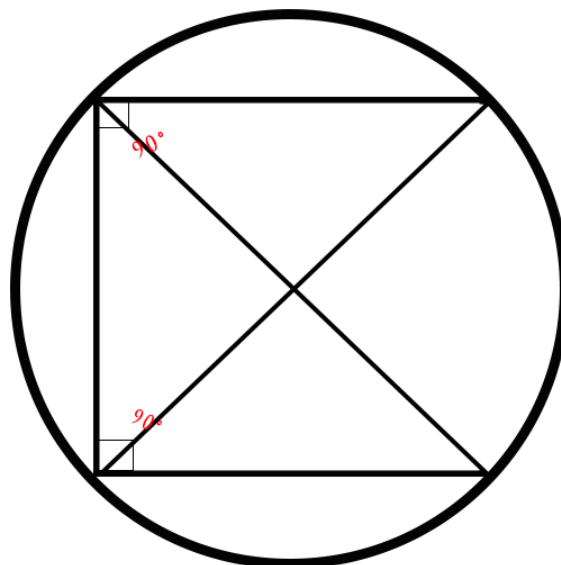
## Tip # 51

Another simple way to find the center of a circle:

You can do this with every item that has a 90-degree angle, even a piece of paper. You take the piece of paper and line it inside that circle and trace that 90-degree angle. Then you line the piece of paper with one of the lines you just marked, it should look like this.



The final step is to draw the diagonals and connect the corners.



The meeting point of the diagonals is the exact center.

## **Tip # 52**

A depth gauge for your drilling bit:

Many of you may already use this but I am sure not all of you. If you need to go partway thru a piece of wood and you don't know how far you have to stop you just use a piece of tape, regular painter's tape, on the drill bit so that you know when to stop.



## **Tip # 53**

This next tip deals with gluing 2 pieces of wood together. Most of the time when you want to glue 2 boards together, stack them, when you want to clamp them they begin to slide sideways. The most common and fast fix for this issue is to sprinkle some regular salt on the glue before stacking the boards then you can go on with clamping them. I guarantee you the boards won't slide anymore.



Salt creates just enough friction between the two pieces of wood that it will prevent them from slipping.

## **Tip # 54**

Paint:

Whenever you open a new can of paint before you go to use it take either a nail or an awl, go around the perimeter of the can, and add some holes. That way when you go to use the paint and you clean off your brush on the side or of the paint can that paint goes back into the can as opposed to rolling down the side collect around the rim.





## Tip # 55

In order to get perfect 90-degree holes into a piece of wood, most people use a drill press but if you don't have one there's a great shop hack that you can use to drill directly into a piece of wood. You need a piece of wood and a combination square. You draw a 90-degree line to the side of the piece of wood.



Use that line to calibrate one direction and the wood itself to calibrate the other direction as long as you keep them in line you'll get a straight hole every time.



## Tip # 56

Extension cords:



Something I do, and I am sure most of you use every day in our shop. If I only need 4-5 feet of extension cord I don't want to unroll a 50-foot length...that's ridiculous...not to mention putting it away. That's a waste of time...so instead of winding it from the ends wind it up from the middle...that way if you don't need to use all 50 feet of the cable you can just unwind what you do need and have both the cable side and the plug side at your disposal...Then, when you're done you put those 5 feet that you use back in and you're ready to go.

## **Tip # 57**

Whenever I'm taking something apart and I wanna make sure I don't use any of the nuts or bolts or screws I take a small magnet and I put it on the bottom of the metal container I'm using to hold them. That way it offers a lot of extra strength to make sure nothing gets lost.



## Tip # 58

Since we already talked about finding the center of things now I wanna talk to you about finding the exact center of the side of a board which I often need to do in my shop.

You're gonna need a piece of wood, 2 dowels, 1 pencil, a tape measure, and a drill bit that matches the dowels. Make 3 equidistant marks on a straight line on your piece of wood(example: 4"x2")

Drill out each of those 3 marks with the drill bit matching the diameter of the dowels you are using. Fix the dowels in the outer holes and the pencil in the middle hole. And you are ready to go.





## **Tip # 59**

The next shop hack I get to talk about is one of my favorite inventions of all time...That's Velcro...Velcro is one of the most useful things ever invented and in my shop, it keeps me safe so I absolutely love it. I have machines everywhere, extra cables...and they're organized so they're not dangerous and the way I do that very easily is by wrapping everything up and putting Velcro around it. It's still very accessible and it's still very safe.



## **Tip # 60**

Round over the tip of your spear point marking knife and do not sharpen it too much because you'll get a slightly better line with the rougher edge and running over the tip gives you control and reduces the chance of metal breaking off in the wood.



## **Tip # 61**

Having a slight radius blade on your smoothers often time will give a smoother sensation to the fingers because we would not feel the undulations but we will feel any alight ridges left by a straight blade and if you ever need a lower angle blade well...if you just queue the plane a little bit it accomplishes the same thing.



## **Tip # 62**

Try not to put a chisel or gauge in the center of your palm and then start pushing with it because that's where all your nerves are and you can cause some serious damage.



It's better just to hold it and use a mallet.

## **Tip # 63**

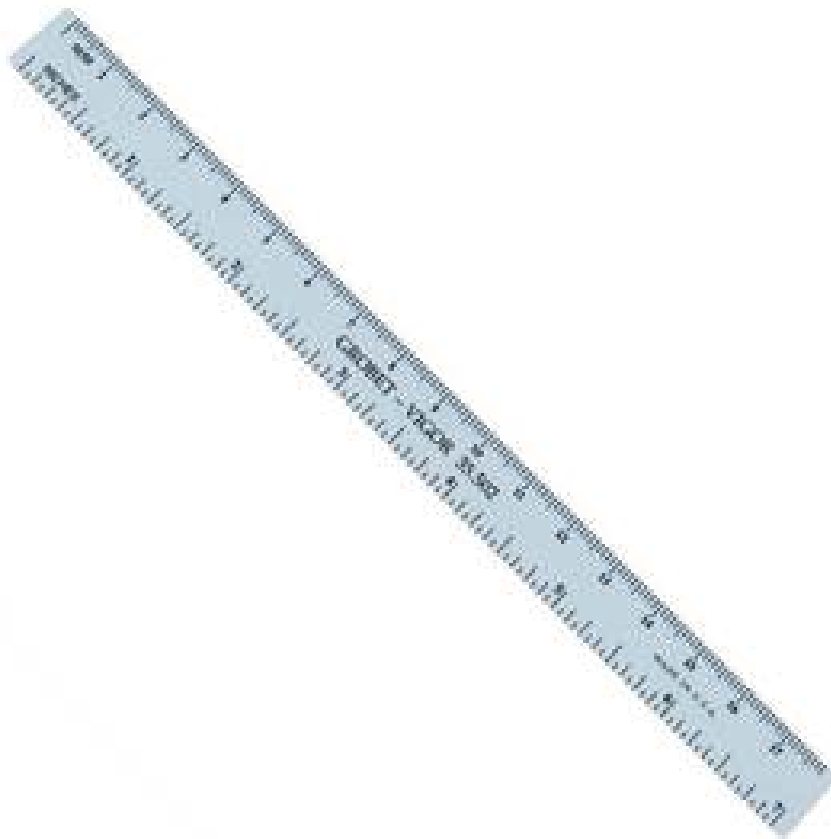
Sharpening your chisels a little bit on a strop often will maintain the edge a lot longer and make them a lot more useful than sharpening them a whole bunch on the sharpening stones every now and then.





## Tip # 64

I've learned the hard way that the inch is not always an inch. Be sure to check your rulers because a lot of times if you get rulers made overseas or for a different market the inch is slightly different. I learned that the hard way by buying stuff at Harbor Freight.



## **Tip # 65**

Learn more about different kinds of wood and their characteristics. The wood varies from type to type. Different types of wood will react differently to various stains. Splintering will also be different depending on the type of cuts you use. And, there are quite a few varieties when it comes to grains. All of these will become factors in your woodworking project.



## **Tip # 66**

Before gluing your project together, you should try dry fitting first to make sure the pieces fit together properly. When you try to move things around after applying the glue, you'll likely end up with a big mess. Doing a dry-fit gives you a chance to see how everything will go together when you apply glue.



## **Tip # 67**

If you're using loud equipment for woodworking, always make sure to protect your ears. Machinery can be very loud. Exposing your ears to these things for a long time can cause hearing loss. Get a pair of inexpensive earplugs, or buy a great pair of noise-canceling headphones. Regardless of your personal choice of ear protection, make certain you always use them when woodworking.



## **Tip # 68**

Stir stains and finishes instead of shaking them to mix. Certain ingredients in such items tend to settle with time. Shaking can cause bubbling which prevents the products from mixing properly. Stir completely, allowing all settlements to blend evenly and smoothly.

## **Tip # 69**

Understand your budget's limitations. Many people are surprised at how much it costs to make some woodworking projects. It is important to have all of the items fit in your budget. This is why you should do some homework before starting to avoid surprises in the future.





## **Tip # 70**

Account for new tools in your budget. It's easy to just overlook things because you're thinking of the cost of lumber and that's all. There may be things that you need and will have to get which may become budget breakers unless you plan for it.

## **Tip # 71**

Gel stains are fantastic when you stain furniture. Traditional liquid stains have a tendency to run. Gel stains grab onto the wood better. Also, gel stains are thick and their pigment stays consistent.



## **Tip # 72**

A golf tee is a wonderful fix for wiggling hinges. Take the door and your hinges off the door's frame and softly tap your golf tee into every screw hole. Trim the golf tee until it is flush with the surface, and then reinstall the door. The golf tee gives the screw something to bite into.



## **Tip # 73**

Whenever you work with a saw, make sure that the blade is in tip-top shape before you start. A dull blade will make it nearly impossible to cut something as needed. It can also create errors with the wood that can be quite costly.



## **Tip # 74**

You want to be sure that you have the right size nails for your project. Too large of a nail can split your wood, resulting in it not holding properly. Nails that are too small may not hold wood together. Make sure you get nails that are just right.



## **Tip # 75**

It is often helpful to increase the spring in your grip. There are some times when you have to try using a spring clamp, but you may just be only able to use a single hand. These clamps may be difficult to open with one hand. You can make it easier. It's a good idea to get all of your clamps assembled on a piece of scrap wood before beginning a glue-up project. That allows you to pop them off and use them with one hand.



## **Tip # 76**

Test stain in an area that will not be seen or on a scrap piece of wood. This will allow you not to have any surprises later if the stain's color looks different when it is applied. Different woods can affect stains differently. Sometimes wildly different. Testing first is the best way to know what something will look like.

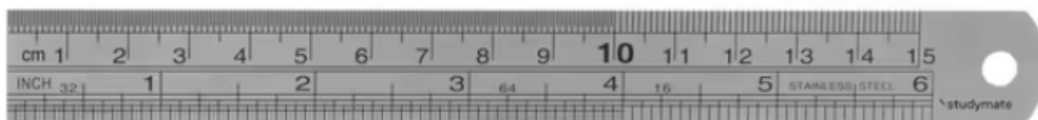
## **Tip # 77**

Every shop that does woodworking needs to contain a stair gauge. Commonly used to scribe stair jacks, it can also be used to attach to your carpenter's square. This will make them into guides for a circular saw. The square will get you wonderfully straight cuts all the time.



## **Tip # 78**

While you might like keeping a small ruler handy in your pocket, you probably find that it falls out every time you bend over. Instead of wood, choose a metal rule and keep it with your magnet. This will keep the metal objects in your pocket.



## **Tip # 79**

Proper footwear is important when you are working with tools and doing projects. There may be sharp objects lying around your work area. You will want to make sure your feet are protected from injuries. Your footwear should make it safe for you to walk around.



## **Tip # 80**

Recycled wood is often cheap and good for the environment. Some woodworking shops discard useful scraps. Flooring stores and home improvement outlets tend to throw out wood they don't use. Take advantage of this and look for pieces that might help your project. You will find in time that you are saving a good deal of money on each project.



## **Tip # 81**

When planning projects, be sure to determine the best wood for them. If you want to make a table, avoid easily scratched softwoods like pine. Remember that different varieties of wood have different colors when they are finished.



## **Tip # 82**

Always know the specific characteristics of the wood you are working with before you begin a staining project. If the wood is paint grade, the quality isn't as good. If it is stain-grade wood, it is meant to be stained. Particleboard and products labeled as "veneer" do not absorb stain evenly. Choosing the right wood will ensure your woodworking project turns out its best.

### **Tip # 83**

Do you want to tighten a screw but don't have space to fit the screwdriver and your hand? You can solve this problem. Just grab a 12-point socket set. Put the socket on your screwdriver and then attach your favorite ratchet.

### **Tip # 84**

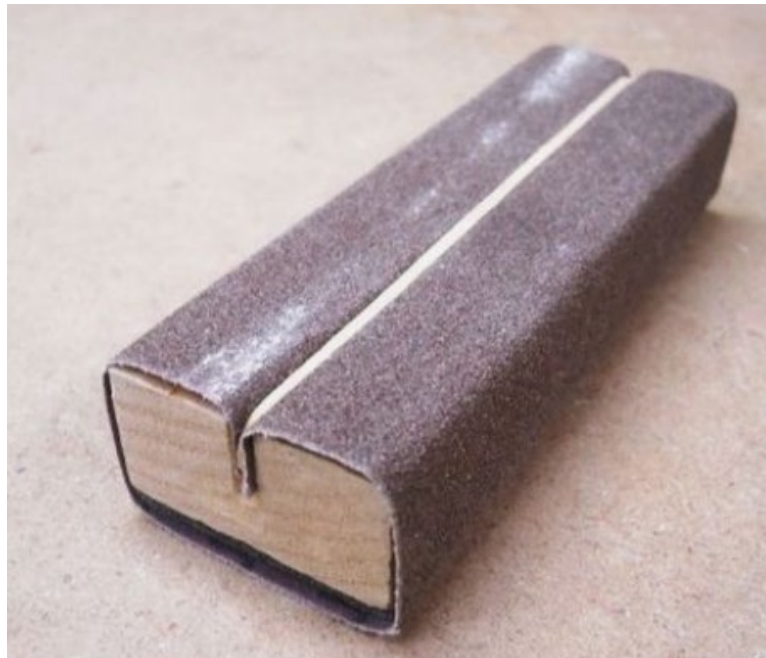
If you are new to woodworking, one of the best things you can do is to read your plans before you start. Make sure they are complete without any missing information. If the plans aren't complete or if you're confused, ask someone at a hardware store for help.

### **Tip # 85**

A good circular saw guide is stair gauges. Usually, they are used for matching up the notches and the run and rise of stair jacks. By attaching them to a carpenter's square, you can use them for circular saw cuts instead.

## **Tip # 86**

Try making sanding blocks that are reusable on your own. Cut six blocks from some plywood that you have laying around for every piece of sandpaper that you use. Your blocks should be 2.5 x 4.75. Spray adhesive on your blocks and also the cork square tile. Place one block onto the cork and make sure the cork is cut flush with a sharp knife. Spray adhesive on your sandpaper, and then stick it to every cork block, facing down. Finally, you can cut the sandpaper so it's flush with the cork and then you can label each block.



## **Tip # 87**

As you work through your budget, make note of any tools that will be necessary for the tasks you have in mind. It's easy to forget this when you are just focusing on the cost of the wood. But, if you need other things that you don't own and didn't think about, you can really mess up your budget and may not be able to finish your project.

## **Tip # 88**

You can make cuts without a tape measure. Story sticks can help you out and it's wise to slowly work up to the cut you want. There's always time to practice a cut on scrap first. You can avoid becoming bored by planning your cuts in various ways.

## **Tip # 89**

You may enjoy drinking a beer while you are doing woodworking. This is not a good idea and can impair your judgment. Avoid using any alcohol when working on a project. Also, you never want to use illegal drugs or prescription medication when woodworking.

## **Tip # 90**

Are you aware that your workbench height is critical to your work quality? To find the perfect height of your workbench measure the distance between the midline of your waist and the floor. This is the perfect workbench height.

## **Tip # 91**

When you're using any kind of laminate while working with wood a good way to trim your laminate is to use tin snips. The tin snips make it easy to cut the laminate down to whatever type of shape or size that you need. You should buy tin snips that you will use specifically for cutting the laminate to make sure they stay sharp.



## **Tip # 92**

When creating crosscut guides, use a stair gauge. Clamp them on the carpenter's square. Mark the notches in them. You have a great crosscut guide when you put each of them on the carpenter's square together.

## **Tip # 93**

Always make sure your work area has amply lighting. Woodworking requires accuracy in measurements. Not being able to see your tools when you use them can be detrimental. If you do not have the proper lighting in your workspace, then you risk making mistakes or getting injured.

## **Tip # 94**

Look around at yard and estate sales for woodworking tools and equipment. You can find a great deal on top of the line tools and equipment when you buy used. As a result, you can save money on your woodworking projects

## **Tip # 95**

Take advantage of the services of the rental company when renting a tool. They can tell you how to use unfamiliar equipment. There are often specialists available to help you learn how to use the tool quickly. If you ask, they might have a list available with some other tips to help you later.

## **Tip # 96**

You should keep an eye out for free wood around your area. Lots of businesses have pallets they do not need and are willing to give them away for free. You can also get a lot of good ideas online.

## **Tip # 97**

Look for furniture on the side of the road. These will often be cheap and many times free! Also, think of ways you can use the pieces from older furniture. Even if the dresser isn't able to be fixed, you may be able to arrange the drawers into a good bookshelf.

## **Tip # 98**

Whenever you're thinking of cutting a piece of wood that's narrow, don't try to use your fingers to guide it. Use a piece of thin wood instead or a push stick to help push along the piece. This will help ensure you keep all of your fingers, making woodworking much easier



## **Tip # 99**

Another alternative to clamps when making small items is to use a scrap piece of plywood and screw down 2 pieces of scrap wood. The space between them should be slightly bigger than the item you are trying to clamp. The extra space will allow you to use some wedges to tighten the item and you'll get a nice tight fit with no clamps.

## **Tip # 100**

This is a trick I use pretty much whenever there's a tiny crack in a piece of wood, it's not compromising the integrity of the piece but it's there and you just want to fill that little crack and keep moving on.

What I do is take a little glue and fill up that crack as best as I can, I like to use my finger and work it down best as I can. Then I take my orbital sander, disconnect the dust extraction, you want a lot of dust for this process and just sand directly over the glue, and because the dust extraction is not on all that dust is gonna mix with the glue and make the wood filler right under the sander, fill the crack and you're good to go.