



The
COMPLETE GUIDE
To Sanding And Refinishing
Wooden Floors



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Introduction

Everyone dedicates their books to someone, and if I had to dedicate this book to anyone, it would be to my 4 month old (as of writing) son, Chester. The proceeds from this little eBook will be put aside so he has a better childhood than I did.

10 years and 1 month ago, I started a new job as a floor sanding professional. I received no training at all, I was just put on the tools and that was it.

I hated it for the first **3 years**. My boss had told me that he had been doing it for 7 years when he had only been doing it for 4 months. We were making every mistake imaginable, and there were a lot of mistakes to make. He did have a good attitude towards learning though: try everything and see what works best.

Like many people, I found mastery and then passion, not the other way round. It is a profession that comes with a lot of job satisfaction. In a fairly short period of time, you start with something that is very old and tatty. By the end of the job (from 1 day to a week), you have something stunning that looks better than everyone expected.

After those first 3 years, I began to meet many other pros whilst helping out other companies. I asked so many questions about theory, practice, technique, products and sanding machines. Even now, I am regularly annoying other floor sanders by asking them questions, regardless of whether they have been doing it very long or not!

Floor sanding is an art! Make no mistake about it. Fortunately for the DIY enthusiasts, the art is in refining the final 10% of the skill. 70 – 90% of the skill can be taught and learned very quickly. That is what the goal of this book is: to give you the 70 – 90% of the skill needed to get your floor looking as good as if a professional had sanded it.

Floor Sanding

How To Use A Floor Sander

There are many different forms of floor sander. I am going to try to give you the broadest information for operating belt- or sheet-fed drum sanding machines. These machines have a big (8inch+) belt that spins in a way that pulls the machine away from you when you apply the drum to the floor.

Before we can fire up the sander and start tearing away the surface of your floor like a maniac, we first need to load some sanding paper into the machine. No matter what machine you have, there will be some door, flap or lid that will allow you to access the drum.

Now, here is where there are going to be a lot of differences. Most professional floor sanding machines have a drum with a roller above them. The roller is usually used as a tensioner, applying tension to the belt (continuous sanding belt). The Lagler Hummel (and many other machines) have a lever outside of the casing of the sanding machine that you can turn to lower the roller, thus de-tensioning the sanding belt. You can then remove this belt, which can be fiddly, so give it a jiggle. Check the underside of the belt to ensure the underside of the belts have arrows pointing to the back of the machine. Sometimes the arrows go in both directions so it doesn't matter which way you insert the belt. Turn the lever back to its original position, which should then raise the roller, tensioning the belt.

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Other cheaper forms of floor sanding machine have drums without tensioners. Some of them have continuous belts that you just slide onto the drums (as opposed to onto the drum and another roller). Then we have the most common rental sander (at least in the UK), the Hiretech HT8. With the HT8, you have to remove a small metal plate and wrap a sheet of sandpaper around the drum so it overlaps where the plate screws in. There are little notches in each end of the sandpaper sheets which provide space for the screws to go through the plate and paper and into the drum. Make sure the sandpaper is tight around the drum before tightening the plate.

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Professional floor sanding machines often have 3 settings which control how much pressure the drum puts on the floor when it is active. Personally, I don't use these functions and I just leave the drum on the heaviest setting. If you feel you need to go to a lighter setting on later grits, then you can go to medium, but I really recommend NOT putting the machine on the 'fine' setting as often this means you are only lightly skimming the surface and not removing the scratches from the previous grit.

Loading the sandpaper, setting the pressure and turning on the machine should all have been demonstrated to you by the company that loaned you the device, so I will swiftly move on to the meat of this chapter which concerns the operation of the machine.

You must ensure the sandpaper is not in contact with the floor while you power up the machine as it could blow a fuse or cause an accident. Some sanding machines require you to tip the machine back to lift the drum off the floor, whereas others have levers next to the handles that allow you to lift and drop the drum with more control.

Rule #1: The sandpaper should not touch the floor if the machine is at a standstill. This means

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the machine must be in operation when the sandpaper first comes into contact with the floor. It **also** means the sandpaper must be lifted from the floor before the machine comes to a complete stop.

When you are using the sander, the motion of the drum touching the floor is going to be like an aeroplane landing at the beginning of the runway and then taking off again when it gets to the end. Start moving forward, then lower the drum onto the floor, continuing to move forward as you get to the edge of the room. Then, slow down slightly, before lifting the sander up before you get to the wall.

The reason this is the #1 rule is because if you don't do this, you will see a long drum-shaped dent in the floor. Even if the machine is still on the floor for a fraction of a second, it will leave a mark.

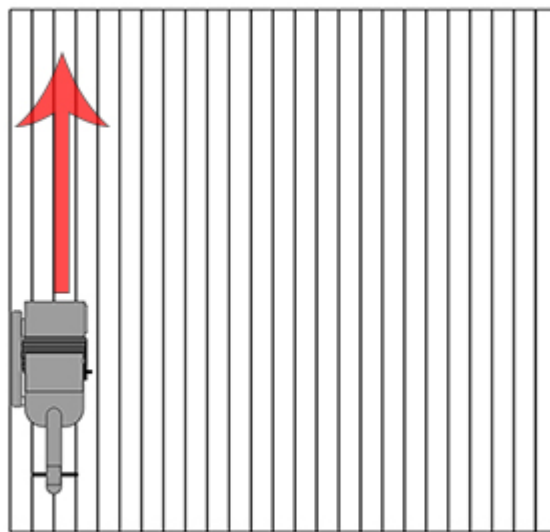


It isn't the end of the world if you do create a mark like this (and I can tell you that it is extremely likely that you will, at least until you are used to the motion of the machine), because they can be smoothed out fairly easily. We just want to sand off as little wood as possible.

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Now you have got to grips with the motion of the machine, it's important to know exactly where to start and how to move over the floor. I could leave you with the motion and just say 'keep going' until all of the surface is sanded. In reality, we need a method to do this as efficiently and smoothly as possible.

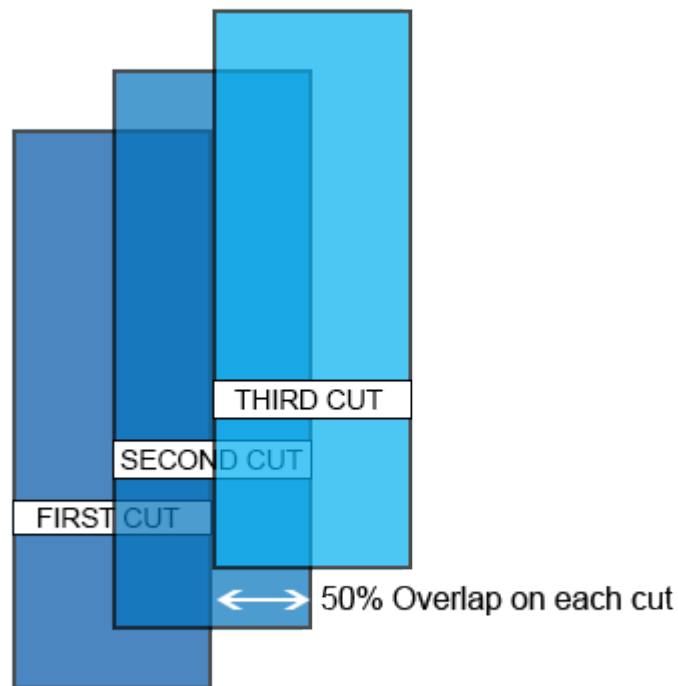
You should start (while holding the handles of the machine) with your back and left shoulder against a wall, so you are in the back left corner of the room, ready to move forward into the left front corner. See the image below for clarification.



Start from this position. Run the sander along the floor, pulling it up just before you get to the wall. Then, move backwards and lower the drum to sand across the exact same path you have just taken. Don't forget to lift up before you stop!

Once you have made your first cut, you need to make the second. Before you do, it's important to know how far apart to do them. Ideally, you want to space them out as much as possible as this will get the job done quicker, but the drums on these sanders aren't flat, they bow out slightly in the middle. That means that it doesn't sand quite so well at the edges. You need to overlap each cut. As a standard, I overlap by 50%, so as I look down the front of the machine, the centre of the drum will pass over the right edge of the previous cut.

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Sometimes, when a floor is really uneven or has a really tough/sticky finish or is just really difficult to sand, I widen that overlap to 75%. Then again, on a particularly flat and easy floor (some floors are a joy to sand), I may decrease that overlap to 25%.

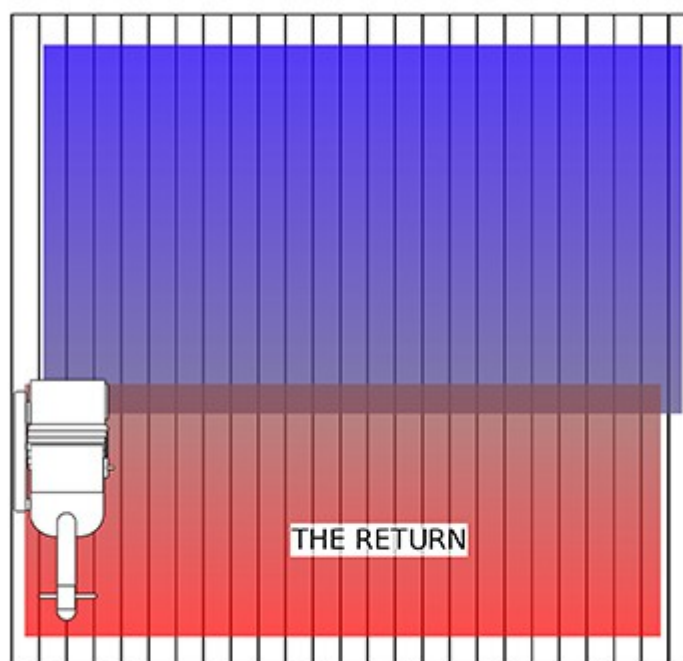
There is a reason I recommend to start on the left side of the room (from your perspective). Most machines are made specifically to move to the right on each cut, and this is because the left wheel is out from behind the drum, whereas the right wheel trails behind. On your first cut, the left wheel will be rolling over an unsanded (and potentially uneven) floor. The right wheel, however, will be travelling over a sanded, and thus slightly smoother, floor. If you were to move from the right to the left, the left wheel would always be travelling over unsanded floor. This is quite a subtle distinction, but abiding by this rule can help create a smoother finish.



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At this point, you have performed your first and second cut. Repeating this process, you can slowly move across the floor until you get to the right side of the room. When you are sanding close to the edge of the floor, it is true that you want to get as close as possible to the wall (or whatever is beside the floor) so that you have less work to do with the edging sander, but do not try *too* hard to sand every inch you can. Very often this can result in chipping paint off window sills and doorways, leaving marks on the wall and even chipping fireplaces and damaging radiators (old radiators can leak even if you just give them a mild knock). It's also possible to wedge the machine against skirting (running boards), holding it there and creating a drum mark in the floor.

What you need to do now is turn around and do what we call **'the return(s)'**. This means sanding the area that you couldn't get to because you and the machine were in the way. Usually, this area spans the room and is around 1.2m deep. All you need to do is lower the drum onto the floor just before you get to this unsanded area – but not before. You don't want to turn around and sand the full length of the floor because this means there will be a large square in the middle of the floor that gets sanded twice with every grit, and by the end of the job it would be much thinner and lighter than the areas that have only been sanded once.



Yes, there *will* be a **slight overlap** where the initial long cut and the return meet. This brings me neatly to my next point. If you started with, for example, a 36 grit on your first go, on your next grit, you should start with your long cut in the opposite direction to your previous one. This way, the overlap is on the other side of the room. Change direction with grit of sanding.

That's the long and the short of using a floor sander. Now it's time to move onto the edge sander.

How To Use An Edge Sander

After sanding the main body of the floor, you are left with a border around the floor that the sander just couldn't reach. This can be between 3 and 8 inches wide depending on the floor sander. The most efficient way to sand this area is to use an edge sander (as opposed to a palm sander or belt sander, for example).

Edge sanders have a 6 or 7 inch disk at the front and 2 wheels at the back. This tripod effect is what allows the disk to touch the floor at exactly the right angle to produce as smooth a finish as possible. The disk spins clockwise at some 3000rpm.

Some edge sanders, such as the Hiretech HT7 (a common rental sander in the UK) require you to bolt the sanding disks on the machine disk. Other, more professional machines, have Velcro pads that you can just press on and tear off. If your machine has a Velcro pad, ensure that the disk is pressed on centrally. If it is too off-centre it will cause sparks, damage the disk and can scuff the skirting (running boards).



Before you turn on the machine, tip it back on its two wheels so that the disk is not in contact with the floor. Then, turn on the machine before slowly lowering it onto the floor. Again, you don't want to be touching the floor with the disk if you have come to a stop. It isn't quite as important as with the floor sander but you want to keep the machine moving as much as possible to prevent creating dips.

When the disk is in contact with the floor, move it backwards and forwards rather than left to right. This is because the edge of the disk furthest from you is where the disk is applying the most pressure. By moving left and right, you can create ridges in the floor that may not be visible until you are applying your finish of choice. The exact right way you should move the edger is a subject of contention among professionals but this method is what I consider to be best under all circumstances.

Not only should you move the edger backwards and forwards, you should do so while moving your body to the right so you travel around the room anticlockwise. The reason for this is quite

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subtle (please feel free to skip to the end of this paragraph if you don't want to hear the geeky stuff and are prepared to just act on the instructions). The disk obviously has the highest pressure at the furthest edge, but what you would be forgiven for dismissing as just a fault of the machine is that the point with the highest pressure is actually not at its furthest edge but slightly to the right of it as you are looking down (pictured below). There are several reasons for this. One of them is that it would be more difficult to extract the dust. Another reason is that as you move around the room to the right, the trailing edge of the disk is slightly softer and smoother, applying less pressure. If you were to go anticlockwise, the trailing edge would be the slightly harder, higher-pressure edge. Hopefully this makes sense.

It's important that you remove all of the previous finish or old worn wood from the surface while you are using the edge or floor sander. It's common to leave small areas unsanded when edging. The majority of edge sanders have a light attached to them so that you can see the floor very clearly as you are working. Sometimes, you might have to go over a certain area a few times (back and forth) to get the surface flat and smooth or to remove the finish. Make sure you do this on the first grit.

There are other areas you may want to sand entirely with the edger, such as hallways, in which the boards run across the width and not the length of the floor. If the floor is particularly tough, you can run the floor sander over it quickly, directly across the grain. This is the only time sanding directly across the grain of the wood is OK and it's only a very quick pass to make it easier for you with the edger.

One last thing: edgers can gouge skirting (running boards/kickboards) and fireplaces and put holes in radiator pipes (not too easily, but it does happen). Be careful to keep your distance and finish the very edge with a detail sander (a delta sander) or by hand. Full disclosure: it's possible for professionals to go right up to the edge of the floor with the edger and slip the sanding disk just under the skirting. This requires a lot of experience as the disk needs changing regularly to ensure the edge hasn't curled over and there needs to be at least a 1mm gap between the floor and the skirting.

After sanding around the edge of the floor, the only parts of the floor that aren't sanded are the corners. I will be covering how to take care of this in the next chapter.

How To Sand The Corners

Having sanded the floor using the floor sander and the edge sander, the corners remain unsanded. In most cases, this can be taken care of by folding a sanding disk for the edger and just sanding it by hand. If, however, you have the option to rent a detail sander (triangular/delta sander or a very small belt sander) then by all means do so. It will save you time and effort.

The corners only need to be sanded twice, once with a rough grit (after the rough grit edging) and once with a fine grit like an 80 (the very last bit of sanding you should do).

In both cases, you may want to rub the pad, or run the belt, against the grain of the wood so you are scratching across the grain at 90 degrees. This helps to remove more material and get more work done faster, but always finish by sanding with the grain to keep it neat and tidy. We don't want scratches across the grain.

If your floor was particularly uneven and you have ended up with a little step going into the corner, you can flatten this by chopping it off with something like a Bosch multi tool or Fein multi-master (which is what I use). Even faster than this, but only really applicable to floors with very straight running grains, is to chisel off the corners. Don't do this if there is a knot in the wood in that particular corner of the floor. The grain runs in funny directions near knots and you could end up ripping a chunk out of the floor.

Rough Grit Sanding. (24 grit, 36 grit, 40 grit and 50 grit)

Vital Information: Read How To Use A Floor Sander and How To Use An Edge Sander.

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Your primary objective with rough grit sanding is to remove the existing finish, dirt, dents, scratches and any lumps, bumps or dips that may be in the floor. We want the floor to be simply bare, flat, clean wood. To do this, we need a coarse grit on the sanding machine.

The rough grit sanding is usually the toughest part of the job. It's also very often the stage of the job that most starry-eyed DIY enthusiasts decide to give up. The floor may be uneven, requiring many passes with the sanding machines to get flat, or it may have a substance on the surface which keeps heating up and sticking to the belts (which renders them useless).

Add this to the fact that most people start on medium to fine grits and you have a recipe for failure: hours and hours of hard, dusty work with little to no progress.

Firstly, I'd like to say that **it is possible** to start the sanding process with a 60 grit or even an 80 grit belt. This is usually the case when you have a floor that is quite flat but that you want sand because the surface is worn and covered in small dents and scratches.

The problem with starting on finer grits when you don't have much experience is that you think you have sanded off all of the previous finish when, actually, there are small areas of the floor that still aren't done. To the untrained eye, the floor is completely clean. This problem doesn't show itself until you apply your first coat of finish and it soaks into the wood all over the floor apart from these small areas that have been missed.

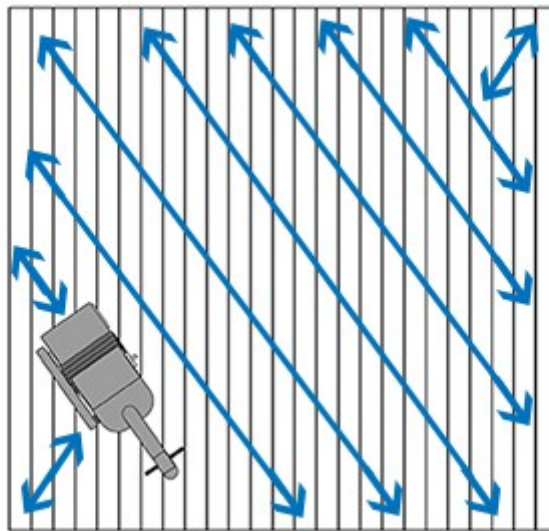
By all means, I encourage you to start with a 60 or 80 to give it a try. If you are making very slow progress and finding it difficult, drop to the next grit down.

As a standard, I start sanding with a 36 grit belt. It's only on the odd occasion that I notice the floor might be suitable for higher grits. By starting on a 36 grit, I can get the floor flat and all the finish and dents removed faster. Despite popular belief, this doesn't mean that I will be sanding a lot deeper into the floor. I may be sanding deeper, but only marginally, as I am moving so much faster.

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If your floor is covered in carpet glue, or maybe it's a sappy pine that just doesn't want to be sanded, you may need to move down to a 24. For me, this is very rare, and very unlikely for you too.

Ideally, we want to start sanding the floor using the method depicted in “How To Use A Floor Sander”, but if the floor you are sanding is particularly uneven, you may want to start by sanding it diagonally across the grain, that is, between 30 and 45 degrees from straight (with the grain).



It's important to run over the floor with 36 grit going with the grain if you have previously sanded the floor diagonally in the same way. This is because you want to remove the diagonal scratches and they may not be removed using a higher grit.

If there are dips or dents in a small area of the floor that are very deep (5mm+), I would recommend not trying to sand them out. It will create an unwanted dip in the floor and remove a lot of wood, potentially removing the possibility of sanding in the future. On floors that are fitted onto joists, it may actually weaken the floor to the extent that it will flex.

Instead, you can either leave it as part of the character of the floor, sand it with the detail

sander or, in the case of dents, fill them with wood filler TK.

You should use a hammer and nail punch to punch nails below the surface of the floor if it is face nailed. However, sometimes, there are staples and tacks everywhere. You don't have to punch every single tac and staple down, as the sander can sand over them without complaint, so long as they are not proud from the surface of the floor. If anything metal is protruding from the floor by more than 2mm, it can tear your sanding belt in half.

Just bear in mind that when you sand over one nail, it will create a line in the sanding belt where you ran over it, and will leave that line on the floor wherever you sand it after that. This isn't really an issue until the last grit which I will cover later on.

Once all the 36 grit belt sanding is done, you can move onto the 36 grit edge sanding. If you found that quite tough with the first belt sanding, the chances are you are going to find the first edge sanding even more challenging. Just persevere and get through it. Remember, once the rough grit sanding is done, it gets a lot easier.

What to do if your belts keep getting clogged:

It's important to remember that the sandpaper and the sanding machines are designed to sand wood. They are not, however, necessarily designed to sand the finish on top. This is because the number of different finishes or dirt, grime, glue and even concrete (rarely, but I have done it) cannot be taken into account by the manufacturers of the sanding equipment and sandpaper. Often, these substances heat up and stick to the belts very quickly. This can make 'roughing off' very time consuming, expensive and difficult. But here's a little trick: when you are sanding with the large floor sander, you are walking forward and backward applying the drum to the floor. Try only putting the drum down on the floor when you are walking backwards. This allows the floor and the belt some time to cool down, and sanding while walking backwards is more powerful than when walking forwards. The advantage you gain from this trick may be marginal, but it may also be huge, so give it a try.

Climbing the Grits

One of the many concepts that is taught in professional floor sanding courses is that you cannot just go straight from the 36 grit to the 120 – you have to gradually work your way up. The 120 grit paper will not remove the deep gouges created by the 36 grit, nor will the 100 or 80. In order to be sure of removing the scratches of any grit of paper, the number of the next grit must be less than double that of the previous one. For example, after 36 grit, you can't use anything higher than 60. Some people will moan that 60 grit is too high and that you should use a 50 after 36, but personally I go to 60 grit every time and never have a problem. However, going from 60 to 100 is a bit of a jump. As the grits get finer, the jump needs to be smaller.

As a standard, my process is like this: 36, 60, 80, 100, when using the belt sander. You may have heard that you should sand to 120 grit. In certain situations this is acceptable but I will cover that in the Finishing Sanding section.

I'm not sure whether I should reveal this, but there are some woods that can bear you jumping from 36 grit to 80 grit. We used to call them 'white woods'. I'm not sure if that is an actual category or definition, but these woods do seem to be of the same family. They are beech, maple and birch (as well as some others). For some reason, these woods are composed in such a way that makes finer grit sanding much easier than with other woods. I think this is because they are dry and relatively hard, despite being quite light in weight. Whatever the reason, if you know your floor is beech or maple (though birch is extremely rare in floors), you can skip 60 grit, provided you are slow, consistent and thorough with a solid 50%+ overlap on your cuts.

Moving on, we also having the edging to work into the mix. After belt sanding with a 36 grit, you can do the 36 grit edge sanding, then 60 belt sanding, then 60 edge sanding and then, finally, 80 grit belt sanding. This is where the process changes slightly. If we are finishing on 100 or 120, they need to be done before the 80 grit edging. The reason for this is that doing 100 and 120 after the final edging can cause what is known as a 'picture frame' to be left around the edge of the room. The final edging can be used to smooth out and blend in that picture framing. "But why 80 grit and not 100 on the edger?" I hear you cry. Rotary sanding produces a much

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smoother finish than linear sanding, and edgers spin very fast. 100 grit edging will produce a finish around the edges smoother than the body of the floor even if you do that at 120 grit! You might also find that edge sanding with 100 grits will require many, many disks as they keep heating up and burning the floor.

36 grit belt sanding

– 36 grit edge sanding

60 grit belt sanding

– 60 grit edge sanding

80 grit belt sanding

100 grit belt sanding

– 80 grit edge sanding

Full disclosure: I never use 60 grit on the edger. After years of experience, I (and most professional floor refinishers), can remove all the scratches from the 36 grit edging with the 80 grit without missing anything. Doing 60 grit will just give you 2 chances to remove all scratches and it will also make your 80 grit edging easier. I don't recommend skipping the 60 grit without a lot of experience.

Finishing Sanding



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In Finishing Sanding, I'm going to cover the final belt sanding, final edge sanding, final corner sanding and the real finish sanding; buffing.

As with all grits, you want to make sure all the scratches from the previous grit are taken out. Be fairly slow and thorough. Make sure that if you filled the floor (covered later), all the filler has been removed from the surface. This can be difficult because it may appear to have been removed completely but it may remain on some areas that might dip, or you may have simply missed a bit. It's not obvious now, but when you put the lacquer down, it will stick out like a sore thumb.

As I mentioned earlier, nails can burr a line in the belt that will leave a line in the floor wherever you sand. If there are many nails in the floor, it might be worth making a second pass with the same 100 grit belt. The reason for this is that after covering the whole floor, the whole belt will be pretty much blunt, and by going over the floor again, it will create a smoother finish with no lines.

Now the final belt sanding is complete, you can move on to the final edging. On the edging, you need to concentrate on moving it in the fashion outlined in How To Use An Edge Sander. Back and forth and back and forth, then a long line against the edge, then back and forth and back and forth then a long line against the back edge. Don't press on the machine, especially as the machine is moving away from the wall and towards you. Let the machine do the work and make sure it's creating as smooth a finish as possible. Also, don't go too heavy into the corners and create a lip that then needs to be sanded down to get it smooth. Just swiftly move into and out of the corners.

Working out from the middle and into the corners, you have now finished the belt and edge sanding, leaving just the corners. Using 80 grit, you may have to press hard and move against the grain of the wood to remove the scratches from the 36 and to convert that area to an 80 grit surface. You can then rub the floor in the corners with the grain to get it even smoother and to remove the scratches across the grain. Don't forget any corners, as this is a common problem.

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Finally! We are now at the part of the job that reveals the biggest difference between professionals and amateurs: buffing. 'Buffing' is a broad term, but there is no specific term for this part of the process, except for maybe 'finishing sanding'.

Until a few years ago, this was only done with buffing machines, that is, a rotary machine with a 16 or 17 inch plate that spins at around 150 to 300 rpm (or slower, ideally). Since then, there have been many machines made to do the job better, such as the Lagler Trio, Bona Flexisand, Usand and many others.

The idea is to remove, smooth over, or blend in the scratch marks created by the floor and edge sanders. The floor sander, as mentioned earlier, leaves long lines in the floor, no matter how smooth the grit. The edger leaves swirly marks in the edge of the floor, regardless of the smoothness of the paper. If you were to just use the belt sander and the edge sander and then stain the floor, you would notice a picture framing effect where the stain is absorbed differently in the edges to the rest of the sanded floor. By using a finishing sander, you can smooth over the whole floor.

These finishing sanders have very large surface areas in contact with the floor, while also sanding in a motion that is a lot less prone to causing scratches and much more prone to producing a smooth finish. If you finish the floor with 120 grit sandpaper on the floor sander, then you finish the floor using 80 grit. For example, with the Lagler Trio, you will find that 80 grit will produce a far smoother surface than that produced by the 120 grit on the floor sander.

If you didn't already think that these machines were an awesome tool to add to your toolbox of machines, they are also very easy to use! As well as this, they are safer than the edge or floor sander. I highly recommend you spend the extra money on renting one of these machines. It will turn the quality of your sanding from DIY to PRO. So, let me quickly go over how to use these machines.

Changing the sandpaper involves tipping the machine back, laying it down on the floor and

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tearing the papers from the Velcro (I know, terribly complicated right?). If you have a buffing machine, it's a little trickier. You either need a buffing pad that is coarse enough to grip the pads or a 120 grit 'screen' or 'mesh' for the sanding disks to grip on to. In this case, you should lay the disks down on the floor (edging disks will do) either with 3 in a triangle or 4 in a square, and then put the 120 grit screen on top of the disks. Then, lift up the machine and, as accurately as you can, lower the buffer plate onto the mesh/disks. Fortunately, I have never seen a rental shop offering buffers for finishing, but I just thought I would offer up the information. Buffers are a little more difficult to control without experience, unlike the professional floor finishing machines mentioned above.

Again, make sure you get information about operating your particular machine from the hire company. Buffing machines must be faced down with the buffing plate in contact with the floor before being turning on. The trio, however, won't power up unless it is tipped back with the plates off the floor. Turning on a trio while the plates are on the floor may damage the engine so make sure you have the appropriate information on your particular machine (there are many out there).

Unlike the floor or edge sanders, this machine won't cause a problem if you leave it still. In fact, you have to leave it still for a minute or more to create a mark and they are always moving around slightly. This is also why you can't just rent these machines to sand your floor entirely. They aren't aggressive enough to actually remove old varnish or sand the floor down deep enough to remove dents and scratches. Again, the whole point is to smooth out the fine scratches created by the other sanding machines, not to sand the floor itself.

Another benefit to this is that you can do the whole length of the floor without having to do 'returns' like you do with the floor sander. That's because you can pretty much go wherever you want with it. Ideally, though, we want to use a method that is as fast and effective as possible.

The first thing you want to do is to go around the whole perimeter of the floor slowly with that first fresh, sharp set of sanding disks. It's imperative that we get out those scratch marks from

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the edger and just smooth the intersection between the edge sanding and the main floor sanding. If you have a very large perimeter (for example if you are sanding several rooms, or even just one large room), you may have to put on new disks halfway through, as they do become blunt and less effective. The disks can last for varying amounts of time, covering varying amounts of floor depending on the type of wood. Occasionally, you can finish sand a whole floor with 1 set of disks but usually you need at least 2 or 3.

Once the whole perimeter of the floor has been smoothed over, you then want to move the machine along the boards with the grain from one end to the other. Just like with the floor sander, overlap each time you go across the floor and, again, a 50% overlap is a good place to start just to be sure that you are smoothing over the floor as thoroughly as possible.

Fortunately, these finishing sanders do tend to make the scratches in the floor more visible, so you can be sure you have removed them before you move on. Take your time with this bit and don't rush it. Pay attention to the floor. If you are unsure about a certain area, get down and run your hand over the area. Does it feel smooth or rough? Remember, this is an old wooden floor that will never be perfect, so don't go over the top. If I were sanding a newly laid floor, I would be looking to create a perfect factory-like finish.

When you are using a finishing sander, you should be stepping down in grits. This means that if you finish on an 80 belt, you are going to struggle to remove the scratches with 80 grit disks on the finishing sander. You need to either drop down to a 60 grit on the finishing sander or go higher on the belt sander (100 grit). If you are staining the floor, I recommend the latter, and then you may want to go over the floor with 100 grit with the finishing sander, or at least cover the floor again with blunted (used) 80 grit disks.

Some of these machines will not perform so well if the floor is uneven due to slopes, ramps or dips, but this is usually on 100+ year old floors. The buffer doesn't suffer so much with this problem. If your floor is fairly uneven, make sure you ask your hire shop if their finishing sander works well on uneven floors.

It will surprise you how using a finishing sander can take your floor to the next level!

Filling The Floor

One great thing you can do to improve the appearance of your floor is to fill the gaps, meaning the cracks, holes and knots between the blocks or boards. There are other benefits to filling the floor, such as preventing draughts from rising between the boards, but sometimes you may not want to fill the floor because the gaps are too large or the floor is too flexible. This means the filler will come out of the floor much sooner than usual.

Most fillers that require you to mix them with the dust from the wood have warnings on the label advising you not to fill any gaps any bigger than 2mm. This is just a disclaimer, however, as most professionals are filling gaps much larger than these.

Filling the gaps between fine floorboards can be a bit of a problem, as pine expands and contracts so hugely throughout the year. These fillers were generally made for parquet and hardwood floors where the gaps are smaller and there is much less expansion and contraction.

I'm just saying this to advise you on how long the filler will last on some floors. It will not last forever.

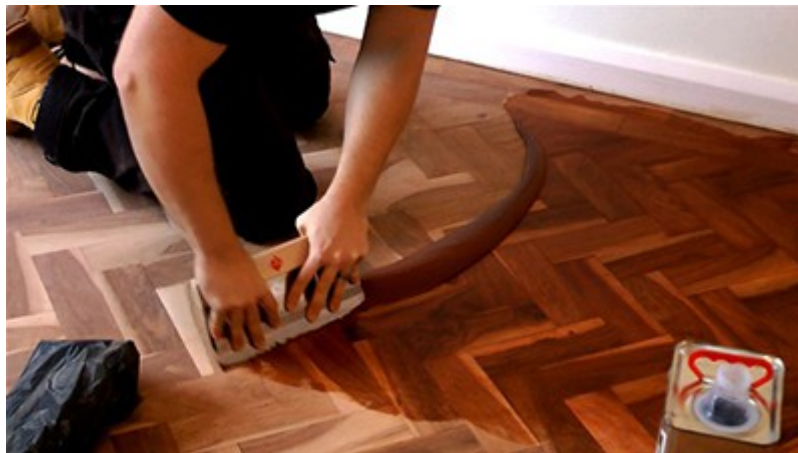
So how do we do this? The floor should be filled before the final grit as you will need to sand the filler off the surface. I personally fill the floor after the 80 grit on the floor sander, using the dust from that sanding (be sure to empty the bag after the 60 grit to keep the dust as fine as possible). That way, I can sand it off with the final 100 grit floor sanding and 80 grit edging.

The best way to mix up the filler is in a small bucket, or you could cut a large milk bottle in half and mix it in that. Empty some wood dust into the bucket, then pour in some filler. Start mixing, adding some filler or wood dust until you find the right consistency (there is no magic

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here). The mix should make a fairly viscous paste. Make sure it is not too viscous or you will use all your energy filling the floor. Once you have mixed your filler, you can either use a filling knife to spot-fill the floor straight from the bucket or you can use a filling trowel to mass-fill it instead.

If you are mass-filling the floor, just scoop out all of the filler and slap it on the floor. Ideally, start in a corner. Using the filling trowel, spread the filler across the floor in a long, curved, figure 8 pattern, occasionally slowing down to get a little closer to the edges. The idea is to spread it across the floor so it is pressing the filler into the gaps AND to remove any filler that is left on the surface. Spreading back and forth, slowly bringing the trowel towards you, slowly move backwards across the room, around the edge and then into the middle in a kind of spiral pattern. The pattern in which you move doesn't matter too much. What is important is that the gaps are filled and as much filler is removed from the surface of the wood as possible.



Water-based fillers need to be left overnight to dry, whereas solvent-based (for those from the US I think you would call it oil-based) fillers can be dry enough to sand off after 30 minutes if left in a room with good air circulation. The only problem with solvent fillers is that they aren't quite as flexible as water-based fillers.

If you decide to fill larger gaps, you may find the filler shrinks as it dries. If this is the case, you can fill it over the top again if you like. A floor of 15m² (~165ft²) can take anywhere from 1 to 5 litres of the mixture to fill depending on the size of the gaps. As I write this, I have just finished

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a job of that size which took 8 litres of filler. It was an ancient parquet floor with **huge** gaps and very deep blocks. I have never used that much filler before. I feel I need to say this because I can't get over how much I used.

Buy around 5 litres per 30m² (330ft²) of flooring and you should be safe. If you are filling a pine floor with large gaps, you may need more.

Floor Coatings and Finishings

Lacquering

The finish I most commonly apply is lacquer. 100% Polyurethane lacquer to be exact. Acrylic is soft, cheap and useless, which is a coincidence because many of these products have names such as Ronseal's 'Diamond Hard', when in fact they are the weakest lacquers you can buy.

Polyurethane is tough but malleable so it doesn't crack when it is dented, and it is waterproof and durable. I give it the thumbs up.

Before we start, the floor should be thoroughly vacuumed by going along the boards in a methodical fashion. Like sanding with the floor sander, you need to overlap your hoovering 'cuts'. Also, use the hose to vacuum all the way around the edges and into the corners.

What you need:

- 8 inch roller (and handle and pole)
- Brush
- Finishing product of choice
- Bucket, or at least a paint tray (needs to be wide enough to get the roller in)

I use a professional lacquering roller (Junckers Aqua 25) but most large lacquering companies will have their own (they're all pretty much the same). However, I used to use a high quality decorating roller. If you go down to your local decorating shop, you basically need to look for the most expensive roller. A medium pile, no loss, gloss roller. If you buy the cheapest roller they have, you WILL have problems, without a doubt. Even the more expensive ones are not going to be as good as rollers made by the lacquer manufacturers.

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As for the brush, it's not so important so long as it's clean (new). If you use a very low quality brush you may spend a lot of time picking bristles out of the lacquer, which would just slow you down, and this can cause problems in itself.

Shake the can thoroughly before pouring its contents into the bucket. Make sure you check the instructions to find out how much area 1 litre or 1 gallon of your finish covers so you don't pour too much. It may be worth pouring slightly more than you need, you just don't want to pour out the whole can if you only need a little. If your product is a 2 pack, pour the hardener in slowly while stirring.

Instead of lacquering the whole floor in one go as some online videos indicate, I advise you to lacquer the floor in strips. The strips should be about 2 to 3 feet wide and run along the grain of the wood.

Ideally, you should start in the corner farthest from the door, working your way back towards the door, 1 strip at a time.

Brush the lacquer along the ends of the boards, coming out from the furthest corner, to about 2 to 3 feet from that corner, then down along the furthest edge going with the grain, against the back wall about 4 or 5 feet (as demonstrated in the video). Then, dip the roller in the bucket, rolling it around a bit to get it fully laden with lacquer. Next, lift it out and start lacquering the area you have drawn a border round.



The roller should be moving along the grain of the wood up and down the boards, no wider than the 24 to 36 inches and as far down the boards as you can before the lacquer starts getting a bit thin (4 or 5 feet is about right). Once you have covered an area, don't be shy of just running the roller over the whole area again just to even it out before moving on.

If you are having to press down with the roller to get the lacquer onto the floor, then you don't have enough lacquer on your roller. You don't want puddles of lacquer, but at the same time you need enough on there that it can form a smooth surface as liquids generally do. If it's too thin, the lacquer can dry with an orange peel effect on the surface.

Once you have rolled out that first area, continue brushing down the side of the board against the back wall another 4 to 5 feet. Lacquer that area in keeping with the first, moving along the boards. Repeat this until you are at the end of the room, brushing another 2 to 3 feet along the ends of the boards before lacquering that area.

Now you have a strip along the back edge of the floor lacquered, several boards wide from end to end. Go back to the other side of the floor and brush the ends of the next few boards, again 2 to 3 feet wide. You don't have to brush along the back wall, all you have to do is brush the ends of the boards and roller on the lacquer in between. Repeat this whole process of lacquering from one side of the room to the other in strips until you have covered the majority of the floor and you are standing on the boards that lead out of the door.

Just like the beginning, you have to brush along the ends of the boards and along the wall, but this time you need to do it with smaller sections at a time. Only partially dip the roller in the

bucket. Doing this will help prevent you accidentally making a huge puddle by the end of the floor.

Lacquer your way back out of the door and to safety. Pop the champagne.

Wow, that's tough to explain. I'm sure you can make sense of it from the video.

When lacquering your wood floors, you should put down one coat of primer or wood seal and 2 coats of lacquer. Some lacquers and varnishes don't have a primer, so rock on with the lacquer. In the video, I am lacquering a stained floor, and stain can act as a primer in itself.

Before putting down the final coat, you should lightly key it (rub down) with 120 grit paper. You should do this, again, in strips about 2 feet wide, no more than an arm's length. Rub it down along the direction of the grain. Don't press too hard but make sure you are actually lightly scoring the surface. Vacuum the floor and you are ready to apply the final coat. If you want to put on more coats, I would recommend rubbing down and vacuuming between each one.

Hardwax-Oiling

If you have chosen to use Hardwax Oil on your floors, the method is largely the same as outlined above in "Lacquering". What is important to remember is that Hardwax Oil takes a lot longer to dry. Hardwax Oil should be applied with a thin pile roller. Even using a thin pile roller you need to stretch it out a bit.

Since it does take longer to dry, you have slightly longer to work with it and it won't create dry lines quite as readily as lacquer. Bearing this in mind, once you have finished a 2 to 3 feet strip across the floor, it's worthwhile running the roller up and down over the whole length a few times to ensure it is all even and that there are no small puddles left on the floor.

This is vital as the floor could be dry within 24 hours and have patches that take as long as a week to dry. Take the time to even out the finish as you are working.

You only need 2 coats of Hardwax Oil, generally, and most manufacturers say that you don't need to, or even shouldn't, rub down between coats. Personally, I do anyway but I don't use anything coarser than 150 grit.

If you have leftover Hardwax Oil, don't throw it away as it can be used for patching areas or even applying another coat after a year or two.

Staining

So now you have your floor sanded and smooth. You have thoroughly vacuumed and you're ready to change the colour of your floor.

There are 2 ways to do this. One way is with a coloured finish, such as browned lacquer, a floor paint or white oil. In this case, the colour stays in the finish on top of the wood.

The other way is to use a stain or wood dye, which is a liquid (usually water- or solvent-based) that contains a pigment that soaks into the wood. The stain soaks in to the less dense parts of the grain more than the higher density fibres. This means it works with the wood, exaggerating the patterns in the grain. It's the latter that I will be addressing on this page.

Here's what you need:

1. Dust free latex gloves
2. Carbon filter dust mask (suitable for blocking fumes)
3. Stain
4. Paint kettle (or equivalent)
5. Paint brush

6. Decorator/stocking rag

At the moment, I'm not in a position to make a recommendation on which stain to buy. The market is moving towards more water-based stains and away from the solvent-based. These water-based stains are becoming higher and higher quality and are a good option. I personally like the solvent stains, purely because I have been using them for a decade. One thing you must do is check how many square metres of floor the stain covers per litre and make sure you get enough + 10-15%. I'm traumatised by the number of times I thought I had enough, used more than the coverage indicated on the tin and ended up running out! Traumatized! This is not a situation you want to find yourself in, as it may mean you need to re-sand.

I buy rags in large rolls and cut off as much as I need for a particular floor. For a floor of anything up to 20 square metres, I just need 2 rags, 1 for ragging on, and 1 for ragging off. The good old fashioned "wax on, wax off" technique. Usually, these rags are between 18 and 24 inches long, which is rather an abstract measurement, but basically for each rag you want a fistful of rag (my descriptive powers astonish me). Any larger than 20 square metres and you begin to need more rags. I'll explain why below.

Just to expand on that 'ragging on and ragging off'. This means using one rag to dip in the stain and spread over a certain area, laying it on fairly thickly, not letting that rag get too dry. Then you use the other rag to soak up the excess stain. Then you rag on the next section, then rag off.

Let's start.

The first thing you need to do is shake your can of stain thoroughly before pouring it out into your paint kettle. When pouring, make sure you are doing it in a way that won't splash! Everything should be fairly self-explanatory so far.

So here is a hiccup that people often run into. If you had to buy 2 or more cans of stain to cover the area, then mix all of them together. If this is slightly too much for your paint kettle, then

mix it in a bucket and either use that or refill your paint kettle as and when you need to. These stains are produced in batches and one batch can vary to the next, says the disclaimer.

In reality, every single batch varies slightly in colour. I learnt this the hard way a few years ago when the paint kettle wasn't quite big enough to mix all the cans needed for the floor. I stained 70% of the floor then added the final can. This last can contained a hint of blue. Even the slightest difference can stand out like a sore thumb. You can't patch repair this stuff. If you get it wrong, you have to re-sand (though it's a very light sand). Staining hardwood floors is easy, as long as you are aware of these hurdles.

Your gloves and mask are on, you've poured out and stirred your stain. It's time to start staining, but before you start, there's one thing you need to remember: time is of the essence. That doesn't mean I want you to rush and get flustered. It just means that once you start, don't stop until it's done. So no taking calls halfway through.

Start staining at the end of the room furthest from the exit just as you did with the lacquering. You are going to stain a number of boards in one go, moving from one end of the room to the other, again, just like the lacquering. The number of boards you stain should not make you have to stretch out your arm, and maybe even less on the first few boards, as the first run will be slower because you are having to brush against the back wall. The less boards you stain, the faster you can move. Start brushing the stain into the edge of the floor along the back wall about a metre to a metre and a half from the corner out, then down the other wall along the ends of the boards, as pictured below.

Then, swiftly load up (dip it into the stain, allowing a moment for the stain to pour off before moving it out from over the bucket) your 'ragging on rag' and rub the stain into those boards only so far as you have brushed against the back wall. Then, dry off the surface with your 'ragging off rag'. You then want to move along and brush against the wall for another metre to a metre and a half and repeat the rag on, rag off process. Once you reach the end of the room with the 2 or 3 or 4 boards you are staining, go back to the other side of the room and start again with the next few boards.

Before long, you will find yourself with barely enough boards to shuffle down, leading back to the door. At this point, you need to do the same as before, but you are not going to be staining such large areas before ragging off. Again, you just want to **stain no more than your arm can reach**. Rag off the excess, move back, stain, rag off, move back, stain, rag off, all the while brushing against the wall until you're finished.

For some of you, the exit is not going to be in the corner of the room or in the middle of one of the walls that the boards run alongside. This means that you have to work back to the middle from both sides. Ideally, you would get another person to help you with another bucket, brush and rags. But in the case that you don't have someone to help you, here's what I do. Let's say the exit is directly in the middle of the floor. I would stain 2 boards along one side, then 2 along the other side. Then, just keep going back and forth until you are in the middle where you work your way backwards towards the door. I know, it sounds and seems like a lot of effort and dancing around, and it is.

Hopefully, one day there will be a product that is so forgiving that you can stain a bit one day, then stain another bit another day, and it won't cause a problem. Until then, you have to be fairly swift and never leave an edge to dry for too long. This is why you need more rags when the floor gets over 15 to 20 metres long. In fact, you may need a third rag at 10 square metres. The reason is that you need to replace the drying off rag at the point that it gets completely sodden. Ideally, you should replace it before then. If you don't, this can lead to patchiness and longer drying times.

Coloured Finishes

Hopefully, I can convince you not to use coloured finishes unless you are going to use a solid colour such as floor paints. When you are using translucent coloured finishes, that is, a lacquer, oil or wax that has a colour, but you can still see the grain once applied, you can see every imperfection in the application process. Roller and brush marks are difficult to avoid during application and very visible and ugly after the finish has dried.

Coloured finishes are definitely meant for the seasoned professional.

However, should you decide to use a coloured finish, you should either use the method outlined in the Staining chapter or it should be buffed on.

There are many different methods for the many different coloured oils and finishes. Whether buffing on and buffing off or just buffing on, I have found that I have had to adjust my technique for every different product I have used.

The best suggestion I can give you is to read the instructions on your particular product, talk to the supplier, and then search on Google and YouTube for application advice or demonstrations.

Floor Paints

Many of my customers believe that they can paint their floors with the same paint they use on the walls. To be fair to them, they aren't wooden floor geeks like me so they don't think about what kind of wear and tear this paint is going to have to take to last any length of time.

If you want to paint your floor with a solid colour, you need a 'floor paint' which is pretty much a coloured lacquer as it has all the same properties to protect the floor and stay intact.

For this process, I would apply floor paint like a lacquer but with a short pile roller. You will probably need to prime the floor before painting it and, in my opinion, you should put a couple of lacquer coats over the top. In that sense, the paint should just be 1 of a few coats of paint.

Floor Specific Information

Sanding Pine Floorboards



Pine floorboards account for up to 50% of the work I do. In the UK they are everywhere, at least in older properties. It can be tough but it can also be very rewarding for the DIY enthusiast.

I should start off with repairs. Pine floorboards invariably have some damage and it's very rare that there isn't a board that has been chipped, cracked or broken.

Just because a pine board is cracked, doesn't necessarily mean you have to do anything about it. Many boards are cracked right down the centre of the grain and it doesn't affect their strength or even their appearance. A lot of my customers would point at a board like this and suggest that it needs changing.

As I always say to these customers, we want to keep as much of the original flooring as possible because, unfortunately, even if you buy reclaimed pine, a replacement board **will** look different.

Boards that are cracked or are even missing a big splint can be repaired. The best thing to do is to use a PVA-like wood adhesive, clamp it and leave it overnight. Doing it professionally, I can't wait for that, so I use a heat glue gun. If the break in the board even slightly effects its structural strength, I will screw another board against the underside of the cracked board, bearing in mind where it will sit on the joists so it doesn't prevent it from lying back down flat.

I can't tell you how often I find boards with huge sections cracked off and missing, yet when you lift the board, the broken off section is sitting in the void ready to be reunited with its counterpart!

If you do need to replace some boards, you should definitely buy reclaimed pine from a reclamation yard. If you buy new pine, it's going to look utterly horrible, unless your pine floor is 15 years old or younger.

Old holes cut out for radiator pipes can be plugged by cutting out plugs from reclaimed pine. Remember to hammer it in so that the grain is running in the same direction as the rest of the board. If you don't have the tools or skills to cut out plugs, you can scrunch up newspaper and push it into the hole, pushing it as far down as possible so that you can then fill over the top of it with the filler outlined earlier in the book. The reason you can't fill it with the filler-mix is because it will just fall through as the hole is too big. Stuffing the hole with paper will hold the filler in place until it dries solid.

One thing you should really do before you decide to do this job, is to put your foot on a board right between the joists and bounce up and down. This is not for fun, but to see how much the board flexes. Floorboards that are thick enough to allow sanding have little to no flex at all. If your floor flexes quite a lot, you may want to reconsider sanding your floor. Taking a

millimetre or two off the floor isn't going to make it any stronger.

Before you start sanding, it would make your life much easier and make your abrasives go much further if you punched down the nails. A nail punch is only a couple of pounds or dollars, but the process can take some time, so do it before you rent the sanding tools. Ideally, you want to punch the nails 4-6mm below the surface, that way they will be out the way of the sander and should allow some space to be filled, so you don't see the nails at all, that is, if you are filling the floor.

Sometimes floors are covered in tacks and staples that would just be too much to get out, and some nails are nailed into a knot in the joist and won't sink any further. In these cases, don't worry, it doesn't matter.

Many people are shocked to see sparks come flying out of the bottom of their sanders when they run over nails and tacks. It is completely logical to think that when you run over some nails and you see sparks come out like some sort of angle grinder that some of those sparks could get into the dust bag and set on fire. In fact, it is absolutely amazing that the machine doesn't set on fire. I can remember when I first started sanding, almost feeling scared to use the machine because I was **certain** that it would set on fire. After 10 years, it has still not set on fire. Still, I refer to the disclaimer.

OK, so let's start sanding.

If your pine floor has been sanded before, assuming it was sanded fairly well and is mostly flat, you should be able to start on a diagonal 60 grit. If the floor has never been sanded before, but is fairly flat and clean, you still may be able to start with a 60 grit. Remember, we want to remove as little wood as possible through the sanding process.

What I usually find is that with pine floorboards, you need to start on a straight 36 and often even a diagonal 36 grit. Once the 36 grit floor and edge sanding and is done, it starts getting a

lot easier.

Climb through the grits as outlined in the beginning of the book. After moving diagonally with a 36 grit, and then with a straight 36, edge the floor with 36 before moving onto diagonal 60, 60 grit edge, straight 80, fill (if that's what you want to do) and finally 100 grit straight and 80 grit edge.

I do recommend using a finishing sander whenever possible, but if you are just using a clear finish without a stain, it's not that important. However, if you intend to stain the floor, it may leave a picture frame effect around the edge. Blending the whole floor and removing all scratches with a finishing sander is the best way to prepare the floor for staining.

Slowly and thoroughly go around the edges, first with the finishing sander and then up and down the boards with the 80 grit. Slowness is key on the first run with the finishing sander. Once that's done, the 100 grit can be done at a slightly faster but still consistent speed.

When it comes to lacquering pine floorboards, I recommend a full water-based finish, water-based primer and 100% polyurethane water-based lacquer. If the floor has been stained, you shouldn't need a primer.

Sanding Hardwood Floors



Hardwood floors are my favourite floors to sand and refinish because, generally, they are much easier and take less time. Also they tend to look great once they are done, especially if you're using an exotic hardwood (as opposed to plain old oak).

As for repairing hardwood floors, you need to route, drill or cut out the damaged boards from the inside out. By cutting in the middle, you can then work to the edges. Remove and replace. If there is any way you can glue, repair and support a broken board then do so, as it will be a perfect match with the rest of the floor unlike a replacement board, and once it's sanded you won't notice that it was a damaged board.

Finding replacements for broken boards can be very difficult, but if you laid the floor or you know who did, you may be able to track some down.

This method for sanding hardwood floors is also the method for sanding engineered wood floors as they are also hardwood.

The only problem is, I often change my method for sanding hardwood floors depending on several factors such as the condition, flatness or even the type of finish that is currently on the floor. As you probably won't be sanding commercial or school floors, we can rule out very hard thick finishes accumulated over years.

The best thing to do is test to see how easily the floor sands off with higher grits just to see if you can get away with doing less. This way, less wood will be lost in the process and it will take less time. I recently sanded an engineered floor that I knew only had 4mm of real wood. I started with an 80 grit despite its heavy wear, and it sanded off fairly easily, but this isn't always the case.

Try the floor with an 80 grit. If it becomes slow and difficult, drop down to a 60, and again, if it's too difficult, the belts are wearing out too quickly or the floor isn't cleaning off fully, drop down to a 36 grit.

If the floor is excessively uneven and damaged, I will start on a 36 grit, but it is very rare that on a domestic hardwood floor that I have to start with a diagonal 36 grit.

The first edging grit should be the same as the first belt sanding grit, so in most cases, a 60 grit. Then, clean off the corners with 60 grit either by hand, palm sander or even delta sander if you have one.

Remember to empty the dust bag before doing the 80 grit sanding if you do need to [fill the floor](#). If you have a floating floor, I really do not recommend filling the gaps between the boards, just the cracks and knots. Floating floors obviously bounce and move and the filler between the boards will come out almost immediately.

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Once the filler has dried, you can sand it off with 100 grit. Don't rush this as you need to make sure you remove all the filler from the surface. Finally, edge the floor with 80 grit and sand into the corners also with 80 grit, as per the instructions at the beginning of this book.

If you have rented a buffer, trio, flexi sand or any other kind of finishing sander, then great. Smooth it up to 100 grit.

If not, no biggie, although you may want to rub the edges by hand with a 100 grit along the grain to smooth over the edging scratches.

You will especially want to do this if you are going to be staining the floor. Again, a finishing sander is best.

There are many different finishes you can apply, but I recommend polyurethane for durability. Solvent/acid-based primers really bring out the grain and tannins in the wood.

Lacquering is exactly as described in the chapter.

Sanding Parquet Floors



A quick word on repairs: the majority of the time, there are just a few blocks that are loose, usually by doorways and around the edge of the floor. Sometimes there are quite a few more. Whatever the situation with your floor, the loose blocks need to be lifted out, vacuumed (on the sides and underneath, and the gap in the floor from which it came), then glued back in its place, in the same direction it was in before.

The reason they need to go back exactly the same way they came out is that usually blocks have a kind of 'bitumen footprint' (bitumen is the glue that almost all old parquet floors were glued down with). This footprint means that if you take out the block, spin it 180 degrees and put it back down, it doesn't quite fit, instead it rocks or just sticks out of the floor.

You also need 'parquet glue'. Parquet glues are made to melt the bitumen and mix with it to provide great adhesion (check the particular product with the supplier you are using).

Sometimes you may have areas that have had blocks missing and have been filled in with concrete. In these cases, you need to actually break up the concrete, mix and pour in some self-levelling compound and source some reclaimed blocks to match your floor.

A great source for this (at least in the UK) is www.parquet-parquet.co.uk. They have as many as 15,000 square metres of reclaimed parquet in stock, from which they can best match your blocks and send you as many as you need. I use them regularly.

On to the sanding!

I have had people in the floor sanding industry with 15+ years' experience tell me that the correct way to sand a parquet herringbone floor is to go diagonally across the floor, meaning with the grain of some blocks, and against the grain of others. I believe this is incorrect for the most part and here is why:

Wood is essentially long fibres densely packed together. All the strength travels in one direction and not the other. By sanding with the grain, you are sanding with the fibres of the wood and not displacing them. This means there's less abrasive scratching. By sanding against the grain of the wood, you are **tearing these fibres and stripping away the wood much faster**. This makes for a much faster and aggressive sanding process.

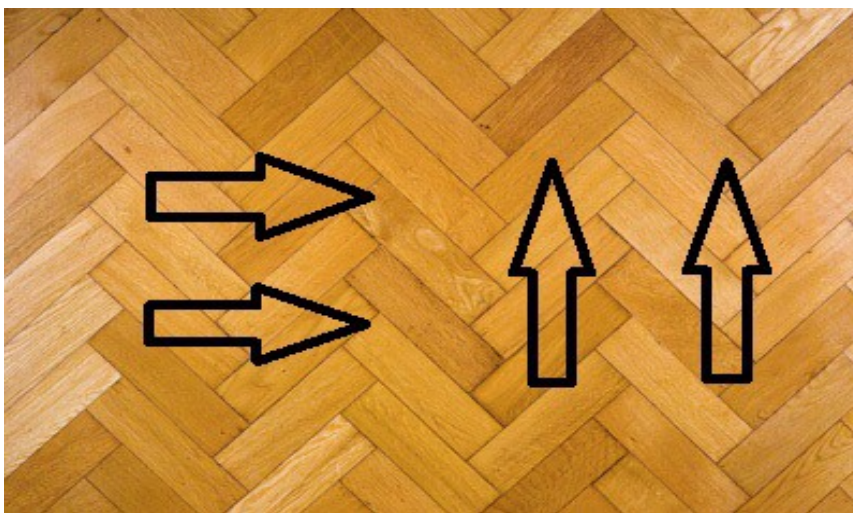
If the grain of the wood is all running in one direction, it would be ideal to sand in the same direction every time (with the grain). Unfortunately, as you will learn, even this presents problems. Sanding with the grain is best because it's less aggressive and you have less scratching, making for a smoother, better looking finish. When sanding herringbone parquet diagonally, you are sanding with the grain on half the blocks and against the grain on the other half. This means that the blocks which are perpendicular to your sanding machine are going to

be sanded down deeper than the blocks on which you are sanding with the grain. This alone can lead to a lumpy, uneven parquet floor.

To add to this, sanding diagonally will inevitably mean that, for small periods of time (milliseconds), the drum will pass over (and have all of its weight on) one parquet block. Each individual block in a parquet floor varies in density from one block to the next and can even vary within the block from one side to the other. When the sander passes over a block that is much less dense than the rest of the floor and the drum is sanding that one block alone, it will sand down much further than the rest of the floor. (When I say much, I'm talking millimetres, but throughout this process it all adds up to a lumpy floor)

Before I carry on I should say that this variation in density means that the floor will never be perfectly flat but getting it as flat and smooth as possible is our goal.

Sanding straight and across a parquet floor deals with both of these problems. First of all, it means that all blocks are being sanded with an equal degree of aggressiveness. But the main benefit of this method is that the drum will never be sitting on one block alone. It uses the varying densities of all the blocks to regulate the pressure on each other block.



Next, you should switch direction from straight to across. This helps to eliminate any imperfections caused by the sander. This is especially true for people using hire tools as they

tend to leave chatter marks across the floor and even cut in on one side leaving a ridge in the wood. Your process should be straight on 36 grit, across on 50, straight on 80, across on 100 and, finally, straight on 120.

There are occasions when the rules need to be broken. Sometimes it is not possible to change the direction by 90 degrees, purely because of space restraints. For example, when sanding parquet in a narrow hallway, you must find another way. There are many different solutions (and in fact you can tailor your floor sanding method to any floor depending on the wood, pattern, size, damage and time restraint). A good general idea is just to do the alternate sanding 22.5 degrees off the straight sanding (you don't need a protractor, just judge it, halfway between diagonal and straight). This way, you are not going directly with or against any grain and you won't be going in the same direction you previously sanded. It's not perfect because sanding at that angle will be less aggressive on the blocks that are almost with the direction of the sanding and more aggressive on the blocks that are almost totally in the opposite direction.

Another time you may want to consider breaking the rules is if you anticipate that the linear sanding scratches from the belt/drum sander will not come out with the finishing sanding process, or (as will probably be the case with a lot of DIYers) that there will be no finishing process. An example of this is sanding pitch pine parquet. The sap (moisture) content of the floor makes it incredibly difficult to get the scratches out because the abrasives get clogged up and become ineffective. If this is the case, you should have noticed it early on. In this case, I would definitely recommend doing the final sand diagonally so that if the scratches don't come out after finish sanding, they'll be relatively unnoticeable.

Parquet floors really should be finished with a finishing sander. Don't scrimp, you have a nice floor, so do it justice.

Sanding Fingerblock Mosaic Parquet



Everything in this chapter would mostly reiterate what has already been said in the previous chapter about sanding parquet floors. The only difference this time is that the blocks are not diagonal, they are straight. This means that the sanding should be done diagonally, changing direction by 90 degrees on each grit until the final one, which should be done straight.

Sourcing reclaimed fingerblock flooring can be very difficult. The best thing to do is search on eBay. Sometimes there is nothing on eBay and sometimes there is quite a lot, you may just have to wait if you need to source some new blocks. Remember to measure the blocks and make sure they at least look similar.

If you are missing massive areas of fingerblock in the living room (for example) but the floor is laid under the stairs, you may want to sacrifice some of the floor under the stairs to reimburse

the floor in the living room.

Again, I really recommend that you use a finishing sander on your fingerblock mosaic floor. It's a nice floor... be nice to it.