

Stub Mandrel's Short End Other Improvements to a Bandsaw



Stub Mandrel adds a few creature comforts to a workshop companion.

Ask which piece of shop equipment saves the most effort, and many will reply 'my bandsaw'. In a survey of *MEW* readers over 50% had bandsaws and 29% had power hacksaws. Does this mean the rest have over-developed biceps? The best thing about a bandsaw, is it stops you putting off bigger jobs, just because you can't face sawing through a big chunk of bar by hand.

With so many bandsaws out there, and the cheaper ones having the sort of limitations that come from being built to a price, several people have found ways to modify them for better performance.

Although every owner has their own favourite 'tweaks', here are a few of my own ideas, most aimed at increasing usability. As supplied my bandsaw made a pretty accurate cut out of the box; keeping a chunk of metal in the right place to cut it was the biggest problem!

The first, and simplest modification has been done by others – but perhaps that's because it works and surely as good a reason as any to repeat it? The moving jaw pivots, and this means you can't hold short work without something to balance the force on the jaw. Tap an M10 or M12 hole towards the far side of the moving jaw, but clear of the reinforcing web. Pop in a lengthy bolt (**photo 2**). No more hunting for an exact



The modified bandsaw.



A large bolt used to help balance jaw forces on short workpieces.

sized spacer when you want to hold a short end to one side of the jaw.

Second, get an offcut of hefty 2 inch angle iron and use it to make a proper work support (**photo 3**). Cut one side of the 'L' down to about 1¼ inches. Using a plate on top of the vice to align the angle, spot a 5mm through the short leg to set a hole just up and to the left of the hole in the vice for the length stop that you never use. Thread the hole M6 and open the hole in the angle enough so you can fix it accurately (**photo 4**). Perhaps it sounds a bit hit and miss? Maybe, but its better than a pile of packing to support that offcut that just keeps slipping half way through a cut. But, you may ask, what happens when the blade finishes cutting through the work?

Well, it cuts itself a groove in the angle, so next time it has somewhere to go. I adjusted the depth stop so the first cut was a bit deep, making a 1mm deep groove in the support. I then raised the depth stop so now the saw blade doesn't bottom out. The best bit of this is the unexpected side-effect that the saw groove now provides an excellent way to 'eyeball' where the cut will fall, rather than bouncing the blade on top of the work.

Third – widen the moving jaw by screwing a long, thick plate in front; ¾ inch or 5mm will do it, ¼ inch would be better. Rather than waiting for a suitable offcut to appear, what on earth is that thick chunk of metal doing screwed to the fixed jaw? A big chunk of cast iron jaw liner with a crude diamond pattern on it. All it does is make the fixed jaw thicker than it needs to be. Off it comes and – look it's just what we need to fix to the moving jaw (**photo 5**) to make it wide enough to match the fixed jaw and support work really close to the saw blade! Perhaps the factory fit the plates to the wrong jaw by mistake?

Fourth, look at the wasted space under the frame! I popped a rectangle of MDF underneath (**photo 6**). For some reason this has turned into a sort of elephant's graveyard for all my large imperial spanners. I have no idea why.

Fifth, check the gearbox (**photo 7**). This is a 'just in case' task, when I looked in mine it was full of a strange fluid like liquid gold. The worm and wheel weren't properly engaged and a lot of bronze had



The simple work supporting extension.



Held in place by a single M6 bolt.



Now why don't they fit the jaws together like this as standard?



The 7/8 Whitworth Spanner Graveyard.



If you are brave, remove this cover, but be prepared for oil spill!



Reinforced wheel mount.

been worn off the wheel. It's possible to remove the driving pulley and realign it. Doing this helped reduce blade throw-offs as well as, hopefully, extending the life of my pulley.

Sixth, the biggest problem with my bandsaw is where to put it. It demands a certain amount of space around it, is an awkward shape but is too heavy to lug around easily. I found some decent castors, two of them braked, from a big old computer desk – from the days when a computer, printer and CRT monitor

weighed about as much as a washing machine. One thought, most people fit both locking castors at one end – I fitted them at diagonal corners, so there's always one easily accessible.

These were rubber tyred ones, not cheap all-plastic ones, with hefty M8 mounting bolts. After opening the holes for the stand's feet to 8mm they fitted straight on, but as the frame is only 18-gauge steel the fixing points rapidly collapsed under the weight. Half an hour with the stick welder and a flat bar of black mild steel put a

hefty reinforcement across each corner (**photo 8**) and provided useful practice in sticking metal back on to thin air, where I blew holes in the thinner metal!

I was so impressed with the result I had to treat the finished stand to a coat of sage green Hammerite. Well, it had been looking a bit shabby since I spilt ferric chloride over it...

Final task – was to buy a really decent bi-metal blade, I get mine from tuff-saws, they hugely outlast plain carbon steel ones. ■