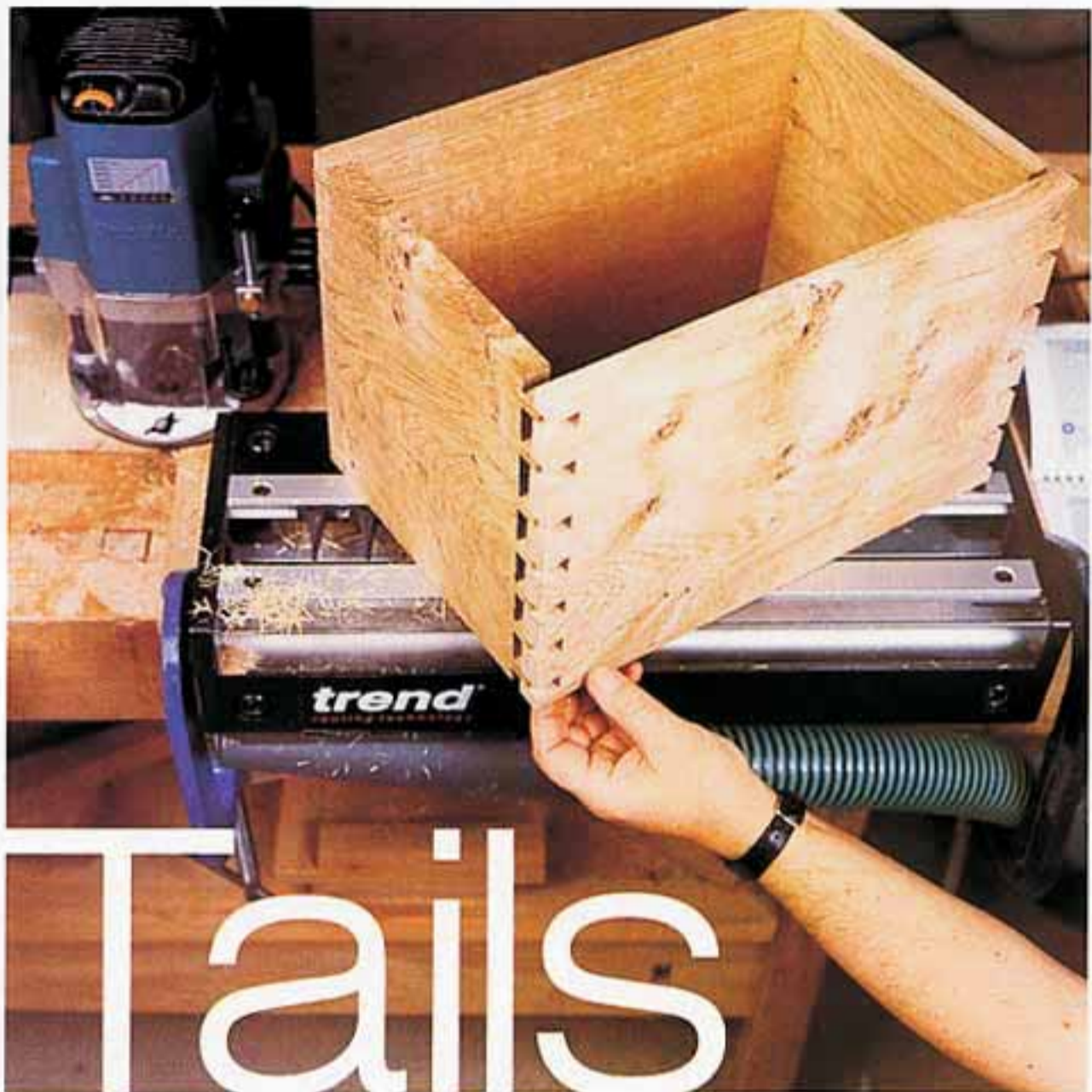




John Bullar has a degree in engineering, which he believes influences his approach to woodwork. He lives in the town of Sandbach in Cheshire



John Bullar
heads for a time-saver with the latest 'Trend' for dovetails – the DC400 Dovetail Centre

Tails

...you win!

PHOTOGRAPHS BY THE AUTHOR



The DC400 complete with guides, cutters, and optional waste extraction

The set-up

To start with the instruction manual is excellent (and I certainly needed it to be!) being clearly written, well illustrated and coming in a spiral-bound handbook. After the initial set-up it gives a simple overview of each joint and then takes you step by step through the procedure to make it. You can, if you want to, hop between sections.

The DC400 is manufactured to tight tolerances in imperial dimensions. The preliminary manual I was given used fractions of inches. I presume it will be metricated for the European market, which may lead to some odd sizes of decimal point millimetres being quoted.

Trend calls its new DC400 a multi-functional dovetail centre and it certainly seems to have more functions up its sleeve than your average jig. As well as through and lapped dovetails, both with variable spacing, you can cut skewed joints, shadow joints, rebates and according to the suppliers, even more. It also costs a fair bit extra compared with previous Trend offerings, so what exactly do you get for your money?

Hardware

The body of the jig is a chunky, box-shaped vice. Made from steel and alloy, it is reassuringly heavy in a smart black and silver. It contains horizontal and vertical clamps with left and right-hand drives, geared together for an impressively smooth parallel action. The clamp faces have gritty surfaces to give a firm grip with moderate pressure.

A single twist-knob fits each drive and removes for unobstructed working. It is, however, slow and I can't help feeling that a crank handle would have been better.

With the optional waste collector fitted, the body acts as an efficient dust collection chamber with a removable clear front window. Fittings are provided for a dust extractor or vacuum cleaner hose.

Above the clamps is a metal guide rail to which you clip individual pin and tail guides. The guide rail has a series of fine indexing holes along its length to locate the guides in incremental positions. These let you choose the spacing for a dovetail pattern. The guides themselves are neatly made from hard plastic with tiny little integral clips moulded into them. These clips are used to secure the guides on the rail. The guides were initially quite stiff to fit and I accidentally managed to snap one of the clips in my fumbling about. It is necessary to swap guides each time you go from pins to tails and vice-versa, so these clips will see a lot of action in a busy workshop. I could see the guides becoming a bit of a consumable item and think it would be necessary to keep some spare guides in case of breakages. Once locked in place the guides were very secure (even including the one I managed to break).

A steel cable support post comes as standard and it needed a bit of bending to secure the router cable.

I was keen to get stuck in with the DC400 so it was a little frustrating to find that before doing anything else you need to find yourself a sheet of plywood or MDF, cut and drill it as a baseboard, screw it to the jig body, get some G-clamps and fix it to your bench. I would have thought the jig's end castings could easily have been supplied with lugs for the purpose – or better still the jig could have come complete with its own clamps.

Having said that, once the body was clamped down it made a rock-solid support for a heavy router. Trend recommends using a medium to heavy-duty router with the DC400 so I used the Makita 3612C – a 1.8kW beast weighing in at 6kg.

The jig was supplied with an 11.1mm ($\frac{7}{16}$ in) template-following collar of the Trend mount variety, which didn't fit the Makita. The Trend Unibase is an optional extra to get you around this – a perforated shoe to fit Trend accessories on the base of most other routers, but it is a bit awkward. If I were using the DC400 much I would obtain the right collar to fit the router.



Above: Clamping down the baseboard
Right: Fitting the guides



Left: Marking the guide position on a recessed ledge
Below: Cutting lapped tails



Above: The first tails look okay
Below: Until it comes to fitting them! A few adjustments puts them right



On test

Working through the instructions you start by making lapped dovetail joints and then move on to making through-dovetails.

As with any jointing technique you have to prepare good, straight, square ends on the timber. To avoid splintering you have to push the router very slowly through the wood because a dovetail cutter has to work at full depth.

Despite my care the first joint I attempted was a spectacular failure! After moments of panic and despair I realised that you can only cut lapped dovetails if the thickness of the pin piece is more than the length of the dovetail cutter. If, like me, you do not insert the full length of the cutter in the wood you will end up with a really sloppy joint. However, it was all there in the manual if only I had taken the trouble to read it properly! What this means though is that the standard 7° cutter supplied with the jig is only suitable for cutting pins in thick timber. For thinner stock you need to get the optional cutters. These produce shorter pins of the same width (11.3mm) and a choice of greater angles.

After playing around with the depth setting and slowing down the feed rate to avoid tear-out, some decent lapped joints emerged.

I moved on to try through-dovetails. This time I used a straight cutter (8mm) for the pins – the guides supply the angle. My first joint in pine went straight together with a tight fit – tight enough to split its sides! Variable spacing came to the rescue and I moved the guides inwards to a pitch that better suited the timber. All went well the second time with the aid of a mallet to close the joint.

The oak test

By now I was growing to like the DC400 so I offered it some knotty English oak (*Quercus robur*) to cut through-dovetails in. With the jig being such a solid construction there is no noticeable vibration, even on hardwood, so it cuts very sharp precise edges. It made the joints in this wild-grained oak very clear cut and business-like.

But would these pretty oak joints fit together? Would they heck! While the soft pine (*Pinus* spp.) had squeezed itself into compliance, this oak joint wasn't having any of it. Unlike lapped dovetails where you simply alter the depth to adjust the fit, according to the manual the only way to deal with tight through joints like this is to obtain the optional 8.1mm 'oversize' cutter to make the tails slimmer. Unfortunately I didn't have one, so instead I decided to cast off the Unibase with its 11.1mm collar and then fit a standard 11mm Makita collar directly onto my router. This did the trick. It allowed me to repeat the pin-cutting and shave that all-important 0.1mm off each side. The resulting joints in oak were a treat as I knocked them together.

I was so taken with the way the DC400 cut through-dovetails in oak that I just kept going with it and found myself making a jewellery case in oak.

The verdict

So, the DC400 can help you to cut some pretty fine and varied joints – by the end of the test I was really enjoying using it.

If you are thinking of buying one you will probably soon want some of the optional extras to deal with a range of timber thickness and types. The dust extraction option works well, which is of great importance from a health and safety point of view. The brittle clips on the guides worried me – perhaps in time the designers will have another look at these components. Clear instructions are essential for using a novel design of tool and the manual that accompanied the machine will propel you up the learning curve. If all tools came with a manual of this quality the world would definitely be a better place!

If you want the functionality and are prepared to pay for it, the DC400 multi-functional dovetail centre is a solid platform on which to build. ■



Above: Measure and record the successful lapped tail depth
Top right: Through-tails are very tight
Right: Cutting through-tails in knotty oak
Below: A change of guide collar makes the tails fit



Facts & figures

Dimensions of jig body	7° Pin guide fingers.....x 9
.....500 x 200 x 100mm	Dovetail cutter
Width of jawsx 1
.....400mm	Straight cutter.....x 1
Weight of jig body	11.1mm guide bush.....x 1
.....11Kg	Price (rrp) ..£352.44 (inc. VAT)
Tail guide fingers.....x 9	Contact Trend...0800 487363
Lapped guide fingers.....x 9	