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The Woodworker

August 2008

& Woodturner

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welcome



Have you ever finished a project, filed it out, and decided that a few changes here and there will make it even better? Well, that's exactly what we've done here at *The Woodworker*. Ben Plewes has moved over to become Features Editor and will remain Editor on www.getwoodworking.com, our website. This rather shrewd move will give Ben more time to do the two things he really loves – woodworking and photography. He can now spend more of his time designing and building projects for the magazine, as well as visiting woodworkers around the country and reporting back to the rest of us. So thanks Ben, for all your hard work and enthusiasm over the past issues. I'd also like to welcome back Mike Lawrence, our consummate production editor, after his short break.

Let's get woodworking

For me this is a little bit like poacher turned gamekeeper. Having spent several years as an author of woodworking books and a contributor to magazines, I now find myself on the other side of the fence. I have no plans to make any drastic changes, other than to put a much bigger emphasis on the 'hands on' and 'how to' aspects.

That means we'll be showing you a good cross-section of projects, ranging from the high-quality heirloom to the more readily achievable do-it-in-a-weekend projects. Above all we'll concentrate on showing you how things should be done. We will also be bringing in a few new contributors – and reintroducing some of your old favourites.

Remember *The Woodworker* is your magazine. If you have any suggestions or comments, good or bad, please let me know. You can call or e-mail the editorial offices (01289 699200 or thewoodworker@magicalca.com), or post your views on the forum at our website.

In this Issue

To call out a few points of difference. In the Projects section Ben kicks off in his new role in fine style, building a set of shelves that celebrate the art of dovetail joint making. Nicely done, as are his helpful tips on using planer thicknessers. You'll find in our Workshop section an article by Ian Taylor on tools he couldn't live without. Along with Ben's planer thicknesser piece, that's all part of our plan to insert just a few more lively and informative articles into each issue. And we launch a new series this month too, called Saturday Workshop, with Dave Mackerle constructing a strawberry planter. Altogether I hope you find it good reading.

Ralph Loughton



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Ben Plewes applies maximum concentration for his dovetailing



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EDITORIAL

Editor-in-Chief: Jonathan Bentham
Editor: Ralph Laughton
Production Editor: Mike Lawrence
Features Editor: Ben Flew
Technical Editor: Andy Standing

PRODUCTION

Designer: Malcolm Parker
Illustrator: Michael Lindsay
Commercial Designer: Ben Wright
Head of Production & Pre-Press: David Bond
Production: Richard Baldwin
Ad production: Robin Gray, Tel: 01669 699266

MAGAZINE AND
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ADVERTISING

Sales Director: James Burton
Tel: 01669 699237
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A new series in which we look at quick-build projects, ideal for a rainy weekend morning



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720W GST1358CE JIGSAW

- variable speed
- 4 speed gearbox
- 4 speed gearbox
- 4 speed gearbox
- 4 speed gearbox
- 4 speed gearbox
- 4 speed gearbox
- 4 speed gearbox

NEW

CARRY CASE

BOSCH

£139.00 (INC VAT)
£118.30 (EX VAT)

specification:
stroke: 20mm, no-load speed: 1000-2400rpm, capacity: wood 12mm, steel 10mm, aluminium 20mm, max cut: 135mm, weight: 2.5kg

720W 4350FCT JIGSAW

- variable speed
- 4 speed gearbox
- 4 speed gearbox
- 4 speed gearbox
- 4 speed gearbox
- 4 speed gearbox
- 4 speed gearbox
- 4 speed gearbox

NEW

FREE BLADES

Makita

£119.95 (INC VAT)
£102.49 (EX VAT)

specification:
stroke: 20mm, no-load speed: 1000-2400rpm, capacity: wood 12mm, steel 10mm, aluminium 20mm, max cut: 135mm, weight: 2.5kg

701W DW331K JIGSAW

- variable speed
- 4 speed gearbox
- 4 speed gearbox
- 4 speed gearbox
- 4 speed gearbox
- 4 speed gearbox
- 4 speed gearbox
- 4 speed gearbox

NEW

CARRY CASE

DeWALT

£120.95 (INC VAT)
£110.60 (EX VAT)

specification:
stroke: 20mm, no-load speed: 1000-2400rpm, capacity: wood 12mm, steel 10mm, aluminium 20mm, max cut: 135mm, weight: 2.5kg

150MM SXE150 TURBO TEC RANDOM ORBITAL SANDER

- 220V
- 150mm random orbit
- 150mm random orbit
- 150mm random orbit
- 150mm random orbit
- 150mm random orbit
- 150mm random orbit
- 150mm random orbit

NEW

metabo

£169.95 (INC VAT)
£144.94 (EX VAT)

specification:
power: 200W, voltage: 230V, 150mm random orbit, max cut: 150mm, weight: 1.5kg

18V DCB22XV1 IMPACT DRIVER

- 18V Li-Ion
- 22mm hex shank
- 22mm hex shank
- 22mm hex shank
- 22mm hex shank
- 22mm hex shank
- 22mm hex shank
- 22mm hex shank

NEW

DeWALT

£149.95 (INC VAT)
£124.95 (EX VAT)

specification:
max torque: 120Nm, max speed: 2000rpm, max impact: 10000 impacts per minute, max length: 1.5kg

12V B5T2X DRILL/DRIVER

- 12V Li-Ion
- 20mm hex shank
- 20mm hex shank
- 20mm hex shank
- 20mm hex shank
- 20mm hex shank
- 20mm hex shank
- 20mm hex shank

NEW

AEG

£74.95 (INC VAT)
£63.79 (EX VAT)

specification:
max torque: 12Nm, max speed: 2000rpm, max impact: 10000 impacts per minute, max length: 1.5kg

18V BHR45T5E COMBI HAMMER

- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion

NEW

REDUCED PRICE

Makita

£200.95 (INC VAT)
£166.77 (EX VAT)

specification:
max torque: 120Nm, max speed: 2000rpm, max impact: 10000 impacts per minute, max length: 1.5kg

18V G5RTV3 DRILL/DRIVER

- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion

NEW

BOSCH

£189.00 (INC VAT)
£160.65 (EX VAT)

specification:
max torque: 120Nm, max speed: 2000rpm, max impact: 10000 impacts per minute, max length: 1.5kg

2.6MM GH0 XE-E2 POWER PLANER

- 110W
- 2.6mm depth
- 2.6mm depth
- 2.6mm depth
- 2.6mm depth
- 2.6mm depth
- 2.6mm depth
- 2.6mm depth

NEW

BOSCH

£88.00 (INC VAT)
£83.40 (EX VAT)

specification:
max torque: 120Nm, max speed: 2000rpm, max impact: 10000 impacts per minute, max length: 1.5kg

45IN 955JIBX0 ANGLE GRINDER

- 1100W
- 45mm diameter
- 45mm diameter
- 45mm diameter
- 45mm diameter
- 45mm diameter
- 45mm diameter
- 45mm diameter

NEW

Makita

£44.99 (INC VAT)
£38.24 (EX VAT)

specification:
max torque: 120Nm, max speed: 2000rpm, max impact: 10000 impacts per minute, max length: 1.5kg

DCB435V 18V TWIN PACK - DCB27 COMBI + DCB27 IMPACT DRIVER

- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion

NEW

DeWALT

£399.95 (INC VAT)
£340.39 (EX VAT)

specification:
max torque: 120Nm, max speed: 2000rpm, max impact: 10000 impacts per minute, max length: 1.5kg

MULTIMASTER FHM250W KIT

- 110W
- 25mm depth
- 25mm depth
- 25mm depth
- 25mm depth
- 25mm depth
- 25mm depth
- 25mm depth

NEW

Yeni

£79.95 (INC VAT)
£58.15 (EX VAT)

specification:
max torque: 120Nm, max speed: 2000rpm, max impact: 10000 impacts per minute, max length: 1.5kg

AERO 25-21

- 2500W
- 25mm diameter
- 25mm diameter
- 25mm diameter
- 25mm diameter
- 25mm diameter
- 25mm diameter
- 25mm diameter

NEW

Niifisk ALTO

£99.95 (INC VAT)
£85.06 (EX VAT)

specification:
max torque: 120Nm, max speed: 2000rpm, max impact: 10000 impacts per minute, max length: 1.5kg

TIGER 2000S

- 2000W
- 200mm diameter
- 200mm diameter
- 200mm diameter
- 200mm diameter
- 200mm diameter
- 200mm diameter
- 200mm diameter

NEW

Schoppech

£99.95 (INC VAT)
£85.06 (EX VAT)

specification:
max torque: 120Nm, max speed: 2000rpm, max impact: 10000 impacts per minute, max length: 1.5kg

DW5520K PLUNGE SAW + RAIL

- 2000W
- 200mm diameter
- 200mm diameter
- 200mm diameter
- 200mm diameter
- 200mm diameter
- 200mm diameter
- 200mm diameter

NEW

DeWALT

£299.95 (INC VAT)
£250.81 (EX VAT)

specification:
max torque: 120Nm, max speed: 2000rpm, max impact: 10000 impacts per minute, max length: 1.5kg

GCMB5 SLIDING MITRE SAW WITH LASER

- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion

NEW

BOSCH

£208.95 (INC VAT)
£221.23 (EX VAT)

specification:
max torque: 120Nm, max speed: 2000rpm, max impact: 10000 impacts per minute, max length: 1.5kg

D777 CROSSCUT MITRE SAW

- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion

NEW

DeWALT

£229.95 (INC VAT)
£200.81 (EX VAT)

specification:
max torque: 120Nm, max speed: 2000rpm, max impact: 10000 impacts per minute, max length: 1.5kg

- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion
- 18V Li-Ion

NEW

DeWALT

£229.95 (INC VAT)
£200.81 (EX VAT)

specification:
max torque: 120Nm, max speed: 2000rpm, max impact: 10000 impacts per minute, max length: 1.5kg



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- Variable speed control
- Compact and wide load
- Grip: stainless steel
- 1/2" x 1/4" x 1/4" slots
- 1/2" x 1/4" x 1/4" slots

NEW

£149.00
INC VAT

£143.83
INC VAT

specification:
Max depth: 4mm, max edge advance: 4mm, max speed: 1000rpm, max width: 82mm, max depth: 4mm, max width: 82mm, max weight: 2.0kg

CARRY CASE

4MM D26500K POWER PLANER

DEWALT

- 100W
- Max depth: 4mm
- Release 0-1mm
- Variable speed control
- Compact and wide load
- Grip: stainless steel
- 1/2" x 1/4" x 1/4" slots
- 1/2" x 1/4" x 1/4" slots

NEW

£149.95
INC VAT

£127.59
INC VAT

specification:
Max depth: 4mm, max edge advance: 4mm, max speed: 1000rpm, max width: 82mm, max depth: 4mm, max width: 82mm, max weight: 2.0kg

CARRY CASE

G518VEX TURBO TOUGH 18V COMBI • 18V IMPACT DRIVER BODY

BOSCH

- 2 x 18V Li-Ion batteries
- 18V
- Max depth: 13mm
- Release 0-1mm
- Variable speed control
- Compact and wide load
- Grip: stainless steel
- 1/2" x 1/4" x 1/4" slots
- 1/2" x 1/4" x 1/4" slots

NEW

£269.00
INC VAT

£228.54
INC VAT

specification:
Max depth: 13mm, max edge advance: 4mm, max speed: 1000rpm, max width: 82mm, max depth: 13mm, max width: 82mm, max weight: 2.0kg

CARRY CASE

D5927X 18V COMBI HAMMER

DEWALT

- 18V
- Max depth: 13mm
- Release 0-1mm
- Variable speed control
- Compact and wide load
- Grip: stainless steel
- 1/2" x 1/4" x 1/4" slots
- 1/2" x 1/4" x 1/4" slots

NEW

£129.00
INC VAT

£122.51
INC VAT

specification:
Max depth: 13mm, max edge advance: 4mm, max speed: 1000rpm, max width: 82mm, max depth: 13mm, max width: 82mm, max weight: 2.0kg

CARRY CASE

T4V D2755K COMBI HAMMER

DEWALT

- 18V
- Max depth: 13mm
- Release 0-1mm
- Variable speed control
- Compact and wide load
- Grip: stainless steel
- 1/2" x 1/4" x 1/4" slots
- 1/2" x 1/4" x 1/4" slots

NEW

£159.00
INC VAT

£155.33
INC VAT

specification:
Max depth: 13mm, max edge advance: 4mm, max speed: 1000rpm, max width: 82mm, max depth: 13mm, max width: 82mm, max weight: 2.0kg

CARRY CASE

B18A20FX 18V 2 SPEED COMBI

SKIL

- 18V
- Max depth: 13mm
- Release 0-1mm
- Variable speed control
- Compact and wide load
- Grip: stainless steel
- 1/2" x 1/4" x 1/4" slots
- 1/2" x 1/4" x 1/4" slots

NEW

£155.00
INC VAT

£151.51
INC VAT

specification:
Max depth: 13mm, max edge advance: 4mm, max speed: 1000rpm, max width: 82mm, max depth: 13mm, max width: 82mm, max weight: 2.0kg

CARRY CASE

10V BHOYE CORDLESS PLANER

AEG

- 10V
- Max depth: 4mm
- Release 0-1mm
- Variable speed control
- Compact and wide load
- Grip: stainless steel
- 1/2" x 1/4" x 1/4" slots
- 1/2" x 1/4" x 1/4" slots

NEW

£209.00
INC VAT

£177.87
INC VAT

specification:
Max depth: 4mm, max edge advance: 4mm, max speed: 1000rpm, max width: 82mm, max depth: 4mm, max width: 82mm, max weight: 2.0kg

CARRY CASE

24V H050V4C2 COMBI HAMMER

BOSCH

- 24V
- Max depth: 13mm
- Release 0-1mm
- Variable speed control
- Compact and wide load
- Grip: stainless steel
- 1/2" x 1/4" x 1/4" slots
- 1/2" x 1/4" x 1/4" slots

NEW

£399.00
INC VAT

£339.57
INC VAT

specification:
Max depth: 13mm, max edge advance: 4mm, max speed: 1000rpm, max width: 82mm, max depth: 13mm, max width: 82mm, max weight: 2.0kg

CARRY CASE

24V Z00W DWS25K ROUTER

DEWALT

- 24V
- Max depth: 13mm
- Release 0-1mm
- Variable speed control
- Compact and wide load
- Grip: stainless steel
- 1/2" x 1/4" x 1/4" slots
- 1/2" x 1/4" x 1/4" slots

NEW

£209.95
INC VAT

£176.68
INC VAT

specification:
Max depth: 13mm, max edge advance: 4mm, max speed: 1000rpm, max width: 82mm, max depth: 13mm, max width: 82mm, max weight: 2.0kg

CARRY CASE

TREND VARIABLE SPEED ROUTER

TREND

- 18V
- Max depth: 13mm
- Release 0-1mm
- Variable speed control
- Compact and wide load
- Grip: stainless steel
- 1/2" x 1/4" x 1/4" slots
- 1/2" x 1/4" x 1/4" slots

NEW

£149.00
INC VAT

£119.51
INC VAT

specification:
Max depth: 13mm, max edge advance: 4mm, max speed: 1000rpm, max width: 82mm, max depth: 13mm, max width: 82mm, max weight: 2.0kg

CARRY CASE

AIRSHIELD PRO

TREND

- 18V
- Max depth: 13mm
- Release 0-1mm
- Variable speed control
- Compact and wide load
- Grip: stainless steel
- 1/2" x 1/4" x 1/4" slots
- 1/2" x 1/4" x 1/4" slots

NEW

£109.95
INC VAT

£161.64
INC VAT

specification:
Max depth: 13mm, max edge advance: 4mm, max speed: 1000rpm, max width: 82mm, max depth: 13mm, max width: 82mm, max weight: 2.0kg

CARRY CASE

DW718V LASER MITRE SAW

DEWALT

- 18V
- Max depth: 13mm
- Release 0-1mm
- Variable speed control
- Compact and wide load
- Grip: stainless steel
- 1/2" x 1/4" x 1/4" slots
- 1/2" x 1/4" x 1/4" slots

NEW

£449.95
INC VAT

£553.19
INC VAT

specification:
Max depth: 13mm, max edge advance: 4mm, max speed: 1000rpm, max width: 82mm, max depth: 13mm, max width: 82mm, max weight: 2.0kg

CARRY CASE

ML1500 MITRE SAW

Makita

- 18V
- Max depth: 13mm
- Release 0-1mm
- Variable speed control
- Compact and wide load
- Grip: stainless steel
- 1/2" x 1/4" x 1/4" slots
- 1/2" x 1/4" x 1/4" slots

NEW

£389.95
INC VAT

£384.04
INC VAT

specification:
Max depth: 13mm, max edge advance: 4mm, max speed: 1000rpm, max width: 82mm, max depth: 13mm, max width: 82mm, max weight: 2.0kg

CARRY CASE

230V 140A TURBO ARC WELDER

DRAPER

- 230V
- Max depth: 13mm
- Release 0-1mm
- Variable speed control
- Compact and wide load
- Grip: stainless steel
- 1/2" x 1/4" x 1/4" slots
- 1/2" x 1/4" x 1/4" slots

NEW

£89.95
INC VAT

£76.55
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specification:
Max depth: 13mm, max edge advance: 4mm, max speed: 1000rpm, max width: 82mm, max depth: 13mm, max width: 82mm, max weight: 2.0kg

CARRY CASE

18 VOLT MAKITA DXT202 2 PIECE COMBI KIT

Makita

- 18V
- Max depth: 13mm
- Release 0-1mm
- Variable speed control
- Compact and wide load
- Grip: stainless steel
- 1/2" x 1/4" x 1/4" slots
- 1/2" x 1/4" x 1/4" slots

NEW

£325.00
INC VAT

£276.40
INC VAT

specification:
Max depth: 13mm, max edge advance: 4mm, max speed: 1000rpm, max width: 82mm, max depth: 13mm, max width: 82mm, max weight: 2.0kg

CARRY CASE

800W H12770 SDS+ COMBI HAMMER

Makita

- 800W
- Max depth: 13mm
- Release 0-1mm
- Variable speed control
- Compact and wide load
- Grip: stainless steel
- 1/2" x 1/4" x 1/4" slots
- 1/2" x 1/4" x 1/4" slots

NEW

£124.95
INC VAT

£106.34
INC VAT

specification:
Max depth: 13mm, max edge advance: 4mm, max speed: 1000rpm, max width: 82mm, max depth: 13mm, max width: 82mm, max weight: 2.0kg

CARRY CASE

All offers subject to availability. Prices subject to change without prior notice, prices correct at time they went to press. We cannot be held liable for any mistakes. Illustrations are not binding in detail. We offer a full range of tools, these are just a few.

Ref: 060801 **020 8892 3813** www.dm-tools.co.uk



ON THE DESK...

So much stuff lands on our desks here at your favourite magazine's editorial office that we have decided to give you a quick sneak preview of what's around. As soon as we get them. The best of these items will be earmarked for review in future issues. So feast your eyes on this month's offerings and let us know if you have any experiences of the products featured...



AMERICAN PATTERN BEVEL EDGE CHISELS

MANUFACTURER: Ashley Iles

AVAILABLE IN THE UK FROM: Stockists

UK PRICE: Individually or in set of twelve, £199.00

Renowned for quality, the family firm of Ashley Iles are probably best known for their woodcarving and turning tools – all hand-made in the traditional manner, with care and experience, by lifelong-serving craftsmen. We know this for a fact as we collected the chisels you see below direct from the factory. We had a good look around while we were there too. In fact we stood there and watched as Tony Iles put the edge on them (more on this in a future issue). Unfortunately we were only the delivery boys; our Ben Plewes had already claimed the chisels for his own, so more from him soon...



28-PIECE TOOL-SET FOR JUNIOR

MANUFACTURER: Little Nut Tree Toys

AVAILABLE IN THE UK FROM: online only,

www.littlenutreetoys.co.uk

UK PRICE: £19.99

This little item arrived on our desk via our parenting magazine siblings. And we like it. Just when you thought computer games are all that there is for youth today, here comes a wee play kit with real just-like-dad's/granddad's appeal. Of course Junior will have to be pretty realistic about his cabinetmaking projects with kit like this, but it's all about setting them off along the right path isn't it? Little Nut Tree Toys also stock a whole line of quality wooden toys that any parent/woodworker would appreciate.

JOINT-GENIE on the move...

Since we featured the Joint-Genie Starter Kit in last month's issue Joint-Genie have moved to larger premises, where they will be able to operate the entire business under one roof – a luxury they've not had until now. So long as they know where they've packed the kettle it should be business as usual!

Their new contact details are: Ashwell House, Ashwell Business Park, Nr. Ilminster, Somerset, TA19 8DX Telephone: 01460 57202

DIARY

The Woodworker's guide to what's on in the world of woodworking educational courses

AUGUST

John Boddy's Courses & Demos
31 Jul-1 Aug French polishing and finishing: Jim Kison
9 Woodburning: Simon Wishead
16 Woodcarving: Bill Hodgson
01423 322370 ext 257
www.john-boddys-fwts.co.uk

John Lloyd Courses
4-8 Furniture making 2
11-15 Furniture making 3
16-17 Antique furniture restoration
01444 480388
www.johnlloydthefurniture.co.uk

Orchard Woodburners
9 Club speed competition
Village Hall, Millstead, Kent ME9 6SD
01622 726532

Robert Sorby Woodturning Demos
5 Sila & Bates, Dover
01304 366360
8 WL West, Fobworth
01798 861611
7 Yandies, Martock
01035 822207

West Essex College Courses
2-8 Woodburning - Exploring Ideas
Dave Regester
9-15 Sculptural carving in wood
Peter Clothier
22-25 Woodturning for beginners
Peter Clothier
01243 811301

A LOSS FOR WELSH CHAIRMAKING

I'm sad to report that Welsh stick chairmaker John Brown died on the June 1st at his home in Pembrokeshire. John was an inspiration to many of us over the years. I had the pleasure of knowing him when I was younger and relished the opportunity of spending time in his workshop - not that I was allowed to touch anything, of course! John provided me and others with an introduction to the exciting world of furniture making and hand tools, for which I will be forever grateful.

John's inspirational and sometimes controversial column in *Good Woodworking* magazine ran for many years during the 1990s. I use the word controversial because he was often an outspoken ambassador of handtools and traditional craft. He provided a unique view on woodworking.

Note: There is a strong possibility that John Brown's book 'Welsh Stick Chairs' will soon be republished. We will report back with any further news.
Ben Plewes



PROTEC WAX POLISH

MANUFACTURER: Protec Tool
AVAILABLE IN THE UK FROM: Workshop Heaven
UK PRICE: £14.99

Protec Tool Wax is a silicone-free soft wax polish containing a unique blend of microcrystalline waxes and contact corrosion inhibitors. As well as providing unbeatable protection against corrosion and rusty finger marks, it also significantly reduces the coefficient of friction, making your tools slide beautifully. Just what we need in our workshop. We sure will give this a go... we'll let you know what we think next month.



2008 TILGEAR TOOLS CATALOGUE (CD)

MANUFACTURER: Tilgear
AVAILABLE IN THE UK FROM: Tilgear
UK PRICES FROM: Free

The 2008 Tilgear catalogue and secure interactive on-line order system is now available on CD-ROM. 127 pages of products plus a comprehensive index are presented as a pdf file that's easy to navigate and clear to read on screen or to printout as required. This one will keep the computers busy here in *The Woodworker* office for a while.



Contact details of products and services mentioned in this edition of *ON THE DESK*...

Ashley files
☎ 01290 761372
✉ sales@ashleyfiles.co.uk
🌐 www.ashleyfilesturningtools.co.uk

Joint-Genie Limited
☎ 01308 861395
✉ info@joint-genie.co.uk
🌐 www.joint-genie.co.uk

Tilgear
☎ 01707 873434
✉ orders@tilgear.co.uk

Workshop Heaven Ltd
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BY ALAN HOLTHAM

Tormek: Swedish for precision

Tormek's recently launched TNT (touch and turn) sharpening system has brought a new level of speed and accuracy to tool sharpening. What's the story behind the product? Alan Holtham flew to Tormek's home in Sweden to find out

I have always been fascinated by the manufacturing process and by tool factories in particular, so when a visit to one is accompanied by an incredibly enthusiastic host, the trip becomes even more pleasurable. Torgny Jansson, the originator of the Tormek sharpening system, is just such a person. Here is a man who exudes boundless passion for a creator that has become his whole life and it's hard not to get caught up with his enthusiasm.

I have had a Tormek system for years and consider it superb for sharpening standard bench tools and plane irons, but I've always been reluctant to use it when sharpening turning tools. My concerns are not about the quality of the edge you can achieve, but rather about the time involved in setting up the necessary jigs for each different tool and also the rate of wear of the stone.

However, the introduction of the TNT sharpening system based around the TTS-100 setting gauge promises a revolution in the use of the Tormek for the

full variety of turning tool profiles, so I thought it was time to take a really thorough look at the new system to see if my prejudices were justified.

Incidentally, TNT stands for 'Touch and Turn', a clue to the speed with which you can sharpen the tool and return to work. I can only smile to think that it has once again taken a Swede to reinvent TNT!

The Factory

The Tormek factory is situated in the very picturesque town of Lindsberg about one hour's drive north of Örebro in southern Sweden. The factory is situated on a neat

and tidy industrial estate on the edge of the town and Torgny, who is justifiably proud of the achievements of the Tormek brand, gave me a complete guided tour. There are no secrets here, and I was free to wander around and photograph anything at will.

I was particularly interested to learn something of the history of the sharpening system. It all started in the early 1970s when Torgny, with a background as a mechanical engineer, turned his attention to improving the crude hand-powered wet grinders found in nearly every Swedish home.

You have to remember that Sweden has a longstanding tradition of using edge tools and knives, and these were always sharpened on natural stone wet grinders,



It's a cultural thing that perhaps we don't appreciate. Their whole practice of sharpening is different, with virtually every household being equipped with a general sharpening system suitable for domestic tools such as axes, scissors and knives, rather than just for woodworking tools.

With help from his father, Torgny started making drill-powered wet grinders as a hobby, manufacturing them in their spare time in the evenings and at weekends. He still has one of the original machines which were assembled from easily obtainable existing components along with bits of wood and a plastic tray obviously designed for something else!

The best natural stones were mined from the Gotland area of Sweden, as the mineral composition here is totally unique, resulting in stones with a fine, even consistency. However it soon became apparent that natural stone was not the ideal choice for sharpening HSS tools. It was just too soft and developed grooves, so Torgny spent some considerable time and money developing an oven-baked aluminium oxide stone that was more suited for grinding these harder tools.

Meanwhile, sales went from strength to strength, and in 1977 Tormek became a full-time business moving to the existing factory in Undesberg in 1986. By now the machine was available as an independently motorized version rather than just a drill powered attachment. Despite the continuous development of the machine, the original manufactured stone has proved



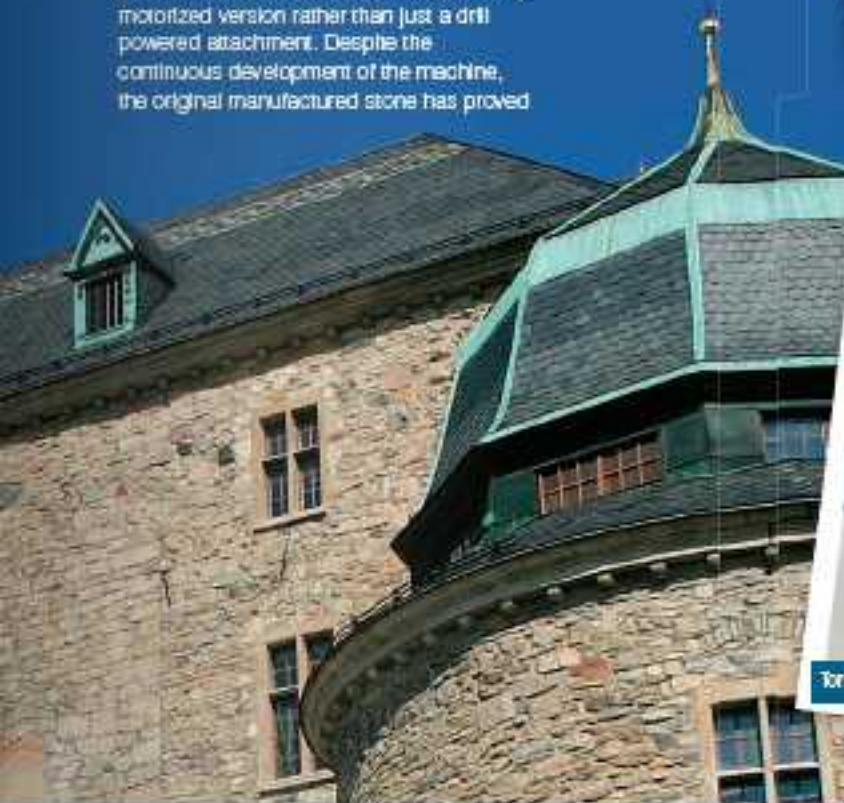
Alan meets Torgny Jansson at the Tormek factory in Undesberg



It all began back in the early 1970s, with a grinder using a drill as an auxiliary power unit



Tormek's new TNT system





Torgny Jansson demonstrates Tormek's new TNT system

The Tormek factory is essentially an assembly plant; manufacture of the parts is done by local contractors



to be perfect for sharpening all types of HSS tools, and its composition has remained unchanged to this day.

The TNT system

The Tormek was originally conceived as a means of sharpening a whole range of different edge tools. This is what started Torgny on his mission to get to grips with the whole process of sharpening, but he readily admits that the more he learns about the science involved the less he actually knows! It is very difficult to define and quantify sharpness.

The first stop of my tour was the demo room where I was able to familiarize myself with the latest model and jigs, and was treated to a full hands-on demonstration of the TNT system before having a go for myself with a variety of different tool types. They had set up a lathe and extractor for me, so I was also able to test the 'before and after' effects of sharpening on the Tormek. I was impressed by the quality of the edge, but more importantly I was amazed what a difference there was in the edge holding properties, a not inconsiderable factor to the woodturner and something which I had not fully appreciated before.

The TNT system certainly overcomes many of my initial concerns with regard to turning tools. Not only do the sharpened tools have an edge that lasts longer, but this gives them an estimated life expectancy eight to 10 times what they would have if sharpened on a dry grinder. More importantly, once you are familiar with the system, it really does only take a few

seconds to fit the tool in the jig using the ingenious tool setter that even cleverly compensates for any decrease in diameter of the stone as it wears.

However, all this comes at a price, and a Tormek grinder is undoubtedly a significant purchase, so I tentatively raised the question about the various cheaper Far Eastern copies that seem to be finding their way onto the market. The patent has now lapsed on the original machine, and Torgny acknowledges that these copies have made some impact on his sales, but he went to

keyword here, and all the sub-contractors are required to put their components through a rigorous checking procedure before supplying them. In addition, Tormek have a meticulous program of their own for quality control. It is this incredible degree of care and accuracy that makes the Tormek so reliable and allows the manufacturer to confidently offer a seven-year guarantee.

Research and development is an ongoing process, having developed highly sophisticated machines for testing the wear and evenness of the stone Tormek certainly maintains a consistency that the cheaper alternatives can't match. And, wherever possible, any new developments are made with the capability of being retrofitted to their earlier machines – a very customer-considerate approach.

Still No 1 in sharpening

I finally took my leave from a business that appears to embody everything that is disappearing from much of today's manufacturing. My abiding memory has to be the incredible commitment that

goes into the production of every Tormek machine. In this age of cheap mass production in the Far East, it's wonderful to see a product still being built to a quality standard rather than a price point. Driven by the boundless energy of Torgny Jansson and his team, I'm convinced that the Tormek will take a lot of beating as the world's number one wet grinding system. I have certainly had my eyes opened to a whole new world of sharpening, and I've ditched 35 years of practice sharpening on dry grinders! Now that's some achievement!



Each Tormek body is hand fitted to ensure perfect fit and finish

great lengths to point out the many quality differences that justify the extra cost of the Tormek, something that became quite clear as I toured the factory.

Surprisingly, nothing is actually made within the Tormek factory itself, manufacture of all of the various components being subcontracted out to local firms. The rationale for this is that it allows access the most modern manufacturing methods and hence the best quality. Quality is the

Chop! Chop!

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BY BEN PLEWES

Project dovetail

Our Ben has gone back to the tools, good man. His first project, to make some shelves as long requested by his fiancée. Being Ben, he saw this as an opportunity to practice his finer skills. After all, who doesn't appreciate hand-cut dovetails?

These shelves are one of a set of three for our dining room. My better half wanted a simple storage solution for our ever increasing collection of books, CDs and DVDs. So I thought it was an ideal opportunity to hone my dovetailing skills.

I've used English ash because I have a stockpile of it in the workshop that I'm working through. I opted for dovetails, not just because I need the practice, but for their strength too. They're one of the few joints that don't need diagonal bracing. In other words, by using dovetails these shelves don't need any kind of back panel for support.

enough with simple rub joints. When the glue was dry I ripped the boards down to width on a table saw, then cleaned up the sawn edges with a fore plane. Next, I cut the sides, top and bottom components to length ready for jointing. I cut these by hand using a bench hook and shooting board combination jig.

Stopped housing

After cutting the components to length, cut the stopped housings on the shelf sides to hold the shelves. I cut these with a router with a 12mm straight two-flute cutter and a guide rail to keep the grooves straight.

Next on the to do list; I used a mitre saw with trenching facility to cut the shoulders on the end of the shelves to fit the 12mm housings.

Dry assemble the shelves and sides to check the fit. If like mine, they're slightly too tight, use a shoulder plane or paring chisel to trim them to a nice snug fit.

ASH SHELVES CUTTING LIST

All dimensions are in millimetres

Part	Qty	L	W	T
Sides	2	1200	21	2
Top/bottom	2	742	184	21
Shelves	3	722	174	21

Preparation

I started by planing the rough sawn timber square, then thickened it down to 21mm. I then glued any boards that weren't wide



1 Shooting boards with a fore plane ready for rub jointing



2 Finishing a cut on the table saw with push sticks

Bench hook shooting board

When cutting dovetails by hand I often crosscut the timber sections by hand too. I use a shooting board to fine tune the cuts with a plane. I do this because I can get more accurate results than cutting with a mitre saw or table saw. This reflects in the quality of the finished dovetail joints because the end grain is used as a reference surface several times



A Marking to length



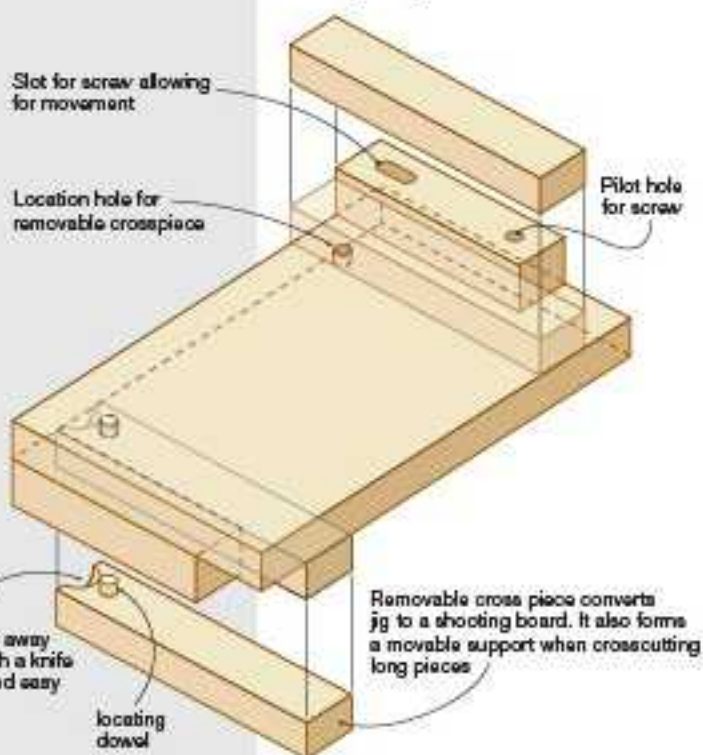
B Bench hook with separate support for long boards



C Board placed on bench hook ready for cutting



D Crosscutting - the board allows perfect results time and time again



during their production.

This little device is so simple to make, yet it yields perfect results time after time. The design is based on a classic bench hook crosscutting aid. It incorporates a full width removable piece of hardwood with locating dowel to convert it from a basic bench hook to a highly effective shooting board.

For the jig to work accurately it needs to be used on a completely flat surface when shooting with a plane. I find a low angle jack plane ideal for shooting end grain, but other planes will work well too. Just ensure you have a good sharp edge to achieve nice results.

Some tips when making the jig

- 1 Fix the two non-removable cross supports with two screws. Drill one hole and one slot with the grain instead of two holes. The slot allows the timber to move over time and will help keep the jig square.
- 2 The shooting attachment should be left slightly over-length on initial assembly then planed flush for maximum accuracy when shooting.
- 3 The shooting attachment can be used as a separate support when crosscutting long pieces.

BENCH HOOK SHOOTING BOARD JIG CUTTING LIST

All dimensions are in millimetres

Part	Qty	L	W	T
Main board	1	390	275	18
Crosscutting supports	2	250	38	18
Removable full width support	1	391*	38	18
Location dowel for removable support	1	20	10	10

* (take back to 390 with shooting plane)

Dovetails

Cutting dovetails by hand is certainly a skill worth practicing. From an aesthetic view point hand cut dovetails look much more attractive than their machine cut counterparts. While, from a personal perspective, I can't think of a more satisfying moment in the workshop than when a good set of dovetails is completed.

There are many ways to cut this humble joint. Some people like to cut the pins first then deal with the tails. I like to do it the other way around because it helps me visualise the tail spacing before doing anything else.

Here's how I cut mine

The first thing to do is work out the order in which your sides will be joined. Mock up the separate components into a rectangle then mark with part triangles on each front edge as a reminder of their finished position. Next, work out how many tails you want and what the width of each should be. Remember to allow for a half pin at either end. I like to follow a couple of general principles at this early stage.

A) For aesthetic reasons I keep the spacing between tails to a minimum because machine cut dovetail jigs can't cut much below a 6mm gap between tails, translating into a fairly wide minimum pin width. We can use this to our advantage! If you see a set of dovetails with very narrow pins you'll know, and others will know, that they must have been cut by hand.

B) Vary the width of your tails. I tend to create my tails wider in the middle and narrower the closer they get to each edge. The theory is that this creates more support where the stress is greatest i.e. those dovetails nearer an edge will have more stresses exerted on them because they're not so supported by the next in line. In practice however, I think this rule makes for a more interesting layout and emphasizes the fact they're cut by hand.

Use a marking gauge to mark the thickness of your material. Leave the marking gauge set because you'll need to do exactly the same thing when marking out your pins, photo 8.

Mark out your tails using either a sliding bevel or a marking template. A Veritas dovetail marker makes life easier, photo 9.

If you're using a sliding bevel it should be set at a ratio of 1:8 for hardwoods and 1:6 for softwoods.

Mark a pencil line across the end grain with a square as a visual guide to keep your saw cut square when cutting, photo 10.



3 Using a router to cut the stopped housings, make sure the guide is clamped firm



4 Squaring off the stopped housings with a bevel edge chisel



5 Checking the fit, aim to have slightly tight fit and pare back with shoulder plane or paring chisel



6 And here we are, tweaking the fit with the shoulder plane

DOVETAILS



7 A finished set of dovetails with stepped width tails



8 Marking out the depth of the tails with a Veritas marking gauge



9 Using a Veritas dovetail marker with preset 1:8 ratio for hardwoods



10 Using a square and pencil to mark tail cutting lines



11 Using a dovetail saw to cut the tails

DOVETAILS



12 Cutting out waste between tails with a coping saw



13 Using a crosscut saw to remove the shoulder waste



14 Chiseling down to the score line, leave a little shaving as the final cut, taking a lot of care



15 Marking the pins from the already cut tails with a craft knife



16 Using a small square to pencil-in the vertical cuts



17 Use a dovetail or a gents saw to cut the pins, again remember to cut on the waste side



18 Using a coping saw cut out the waste, don't worry about getting close to the line ...



19 ... as you'll be cleaning up and cutting down to the line of the pins with a set of sharp chisels



20 Fit the joint together, if it's too tight pare back until you have a snug fit

Cut the tails with a dovetail or gents saw. These saws have fine kerfs with rip set teeth which are ideal for this kind of work, photo 11.

Remove waste with a coping saw, photo 12. Cut away the two external pin areas and pare these back with a sharp chisel, photo 13.

Lay the work face down on a piece of scrap material and chisel down to the line created with the marking gauge. When chiseling remember to cut no more than about half way, then turn your workpiece over and work from the other side so that both external cuts are clean, photo 14. It can help to secure your workpiece with a clamp.

If your initial saw cuts aren't as accurate as you'd like, place the workpiece in the vice and carefully pair them with a sharp chisel.

Now the pins. Hold the timber in the vice with the end grain facing upwards, photo 15, then place the finished tails over the end grain. Pack this up on the workbench to allow downward pressure to be exerted with one hand while your free hand scores a line with a craft knife along the tail sides.

Use a small square to mark vertical lines with a pencil to correspond with the tail outlines on the end grain, photo 16, to serve as vertical guides when cutting the waste later.

Now take your pre-set marking gauge and scribe the areas to be cut to create the pins.

The next stage is crucial for tight fitting dovetails. It's so easy to cut on the wrong side of the line, trust me, I've done it! So here's what to do; with the tail positions

clearly marked, use a pencil to crosshatch these areas as a reminder of which parts are waste and which side of the line to cut.

Cut out the waste as before with a dovetail and a coping saw, photos 17 & 18. Then chisel to the scribe line as accurately as you can, photos 19 & 20.

You now have a tight fitting set of dovetails! If they're too tight use a sharp chisel to pare back the pins until you have a snug fit.

Finishing touches

I like to keep my wall fixings concealed wherever possible so I quite often use a keyhole cutter from CMT, photo 21. It's a great little solution to an age old problem. You simply plunge the cutter to a set depth, move

FINISHING



21 I use a CMT keyhole cutter for creating concealed wall fittings



22 This is the completed keyhole ready for use



23 Using a small router with round-over cutter to soften the shelf fronts



24 Applying glue to the dovetails - I use as little as possible



25 Cramping up the housing joints - the dovetails don't need cramping



26 Cleaning up the edges with a fore plane - cleaner and superior to sanding



27 Clamp a board flush to the dovetails when cleaning up to avoid end grain splitting out



28 Finally cleaning up dovetails with a scraper. Then it's only a matter of applying the finish

it along for a short distance then switch off the router, wait for the cutter to stop spinning, then carefully pull the cutter back to the initial plunge location and remove, photo 22.

I used a small round-over bit in a quarter inch router to soften the shelf fronts. It's surprising how much these subtle touches can add up to a pleasing whole, photo 23.

Prior to gluing the shelves, make sure that all components are clean. When all is done, try partially assembling everything dry just to make sure nothing has been forgotten.

Note: only ever push the dovetails halfway home during a dry assembly; this ensures the best possible fit when gluing up.

The more woodworking I do the less glue I use! You really don't need that much - In

my view it's better to avoid squeeze out by using just the bare minimum. Use a glue brush for best results as these ensure a thin even coat over the gluing surface, photo 24.

Dovetails don't need cramping but housings do, so make sure you have enough clamps ready to go, photo 25.

Give the glue enough time to cure before cleaning up, then spend a bit of time getting the surface right before applying any finish.

Finishing

I've sealed these shelves with a shellac based sanding sealer then waxed with a beeswax and pure turpentine mix. It's an easy finish to apply and looks great on the wall.

So that's one shelf down, only two to go!



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BY JIM ROBINSON

Fumed oak chest

This five-decker oak chest of drawers was designed for the second stage of our bedroom suite renewal programme. The first part, an oak double bed, was featured in the December 2007 edition of *The Woodworker*. European yellow oak was chosen to match the bed and was bought as 25mm (1in) thick boards, sawn through and through

Preparing the components

Carefully select the wood for the sides, making sure each piece has at least one good side that can be used for the visible face. The wood for the base is not so critical as regards appearance, providing the front edge is good. Plane one good face on each board then thickness to 22mm (7/8in). Plane the edges square, ready for joining.

Biscuits are used to aid the alignment. I also prefer to use urea formaldehyde glue (Extramite) when working with hardwood as it does not creep as can happen with PVA glues. Trim the panels over width to allow for trimming of any tearout caused when cutting the rebates.

Out the housings for the drawer dust panel frames with a router guided by a straightedge clamped to the board. Take the housings through to the rear of the panels but stop short of the front edge by 12mm (1/2in). Using the same cutter, cut the rebate along the rear of the panel to take the backing.

Make the bottom the same width and in the same manner as the sides. The only router work necessary is to cut the rebate at the rear. Trim both the sides and base to the required length and square the edges. To complete the sides ready for assembly, square the ends of the routed housings by hand using a chisel.

The bottom needs to be long enough to allow it to seat in the housings so that the unit finishes the correct width. It is necessary to remove a notch at each end of the bottom front so it will finish flush with the sides of the chest.



CHEST OF DRAWERS CUTTING LIST

All dimensions are in millimetres

Part	Qty	L	W	T
Top	1	1020	500	22
Sides	2	1070	470	22
Base	1	965	470	22
Front drawer stretchers	4	965	63	22
Back drawer stretchers	4	965	63	22
Vertical drawer divider	1	180	63	22
Side drawer runner	8	380	50	22
Centre drawer runner	1	380	75	22
Centre drawer guide	1	430	22	22
Top stretchers	2	965	63	22
Top centre kicker	1	380	75	22
Top drawer kickers	2	380	50	22
Base stretcher	2	940	63	22
Front base moulding	1	1020	25	1
Side base moulding	2	12	510	25
Front corner feet	4	180	100	38
Rear corner feet - serpentine	2	150	100	38
Rear corner feet - straight	2	170	78	22
Brace for feet	4	230	100	16
Corner blocks for feet	4	80	32	32
Top drawer fronts	2	470	125	22
2nd drawer front	1	955	150	22
3rd drawer front	1	955	175	22
4th drawer front	1	955	200	22
Bottom drawer front	1	955	225	22
Top drawer sides	4	460	120	10
2nd drawer sides	2	460	150	10
3rd drawer sides	2	460	175	10
4th drawer sides	2	460	200	10
Bottom drawer sides	2	460	225	10
Top drawer backs	2	470	110	10
2nd drawer back	1	995	135	10
3rd drawer back	1	995	160	10
4th drawer back	1	995	185	10
Bottom drawer back	1	995	210	10

You'll also need: Offcuts for glue blocks; 2 sheets of 6mm MDF for drawer bottoms, dust panels and the carcase back; 10 x 80mm cabinet handles



Biscuits are used to maintain the board alignment under cramping pressure



Mark the notch on the front stretcher

The drawer dust panels

The dust panels consist of front and rear stretchers and outside runners. In addition the top panel requires a centre runner and drawer guide. Make and fit the front stretchers first, cut them to a length of 943mm (37 1/4in) and thickness to fit in the housings. Use a 3.35mm (1/8in) straight cutter installed in a hand-held router and guided by a fence to cut a groove along the inner edge of the stretcher to accept the dust boards and runner tenons.

Starting with the bottom front stretcher, slide it along the housing from the rear until it reaches the end. Then, with a flat marking knife resting against the inner face of the sides, mark the position for the front notch to be cut away. Apply glue to the front of the housing and slide the front drawer stretchers in one at a time and clamp until the glue has cured. After grooving and tenoning the side and centre runners they are glued to the front stretcher by only about 75mm (3in) along the housing in the side. This will enable any slight movement caused by changes of humidity in the local environment.

The tenon at the rear of the side runner should not enter the groove in the rear stretcher completely. There should be a gap





2 Rout the housings for the drawer dividers



3 Rebate the side panel to accept the back



4 The side panels are glued and cramped to the bottom



6 The front stretchers are glued and cramped in place flush with the sides



7 The side runners are glued to the front stretchers and to the first 75mm or so of the side panel



8 The rear stretchers are fitted flush with the rebate. They are not glued to the side runners

of at least 3mm ($\frac{1}{8}$ in) to allow for any future movement. The centre runner supporting the top two small drawers is fitted in the same way.

When the dust boards have been slotted in place the rear drawer stretchers can be glued into position – but only to the housings. Position the rear drawer stretchers so they are in line with the rebate, enabling the back to be fixed to both the sides and the stretchers.

The top of the cabinet has a pair of stretchers dovetailed into the top of the side. Cut small grooves in the front and rear stretchers to take a centre kicker and a pair of side kickers before assembly. Before gluing in place, cut a through mortise in the front stretcher to take the small vertical drawer divider. The top stretchers are drilled so that the cabinet top can be screwed from below. To complete the carcass ready for the drawers, fit a drawer guide to the centre runner and kicker.

The bottom stretchers

Fix the stretchers level with the front and back edges of the cabinet by gluing them to the bottom. Build the corners up level with the sides, ready to receive the bracket feet. Strengthen the joint between the sides and

base by gluing a series of short blocks cut from offcuts into the internal angles.

The bottom moulding

Make the moulding by working a round on top and bottom edges, using a 10mm ($\frac{3}{8}$ in) diameter bearing-guided roundover cutter on some 25mm (1in) thick material. Run the front moulding on a long length of board before trimming to a thickness of 11mm ($\frac{7}{16}$ in). Make the side moulding in the same way, but in this case work it along the end of the board so that when applied the grain direction is the same as on the sides.

Mitre the ends and glue the front moulding in position first. The two side mouldings are applied in several short lengths, starting with the corner mitre.

Bracket Feet

To make the serpentine parts of the feet you will need two pieces of the moulding to finish 170mm (6 $\frac{1}{2}$ in) long for each of the front feet and two pieces 145mm (5 $\frac{7}{8}$ in) long for each of the back feet. Make the moulding from 100 x 38mm (4 x 1 $\frac{1}{2}$ in) timber. It is easier to shape the moulding in one length before cutting each piece to the finished length.

The section required for the feet is shown



9 Remove belt sander marks from the sides with a card scraper

In fig 1. Start by squaring the ends of the blanks, then draw the outline of the section required on the ends. Plane a chamfer on the top edge of the moulding to remove most of the waste on the convex section.

Most of the remaining work, lower down on the moulding, can be removed with a small cove cutter. Use a combination of adjusting the depth of cut and the guiding fence. Carry out the final shaping with curved cabinet-makers' scrapers.

The ends of the feet furthest from the corners need to be shaped, but first cut the corner mitres. The blanks are left slightly over long to allow for further trimming of the mitres to ensure a good fit. Cut to the



10 Battens support the base moulding while it is glued and cramped in position



11 Create the moulding for the legs in stages. First form a simple chamfer



12 Next, use a core box cutter to further progress the shape of the moulding



14 Refine the profile using different types of curved cabinet scrapers



15 Cutting the mitres using a mitre saw jig. A G clamp supplements the saw's own clamping system



16 Shaping the foot on the bandsaw; you can use a coping saw as an alternative



outline using a bandsaw or coping saw, followed by filing and sanding. The front feet are glued together where the mitres join. When set, use a bearing guided cutter to make a 18mm ($\frac{3}{4}$ in) deep rebate along the inside edge, starting a short way in from the ends. Trim a piece of 16mm ($\frac{5}{8}$ in) timber to fit into this rebate to form a corner brace. When this has set, strengthen the corner by the addition of a square glue block, screwed and glued in place.

The rear foot side moulding should be trimmed square at the ends instead of mitred. Cut a rebate along the top edge as before but also down the square end to take a rear flat piece of material 16mm ($\frac{5}{8}$ in) thick. Make this rear piece 85mm ($3\frac{3}{4}$ in) high so the corner brace can fit along the top and the complete foot finishes at the required height of 100mm (4in).

The completed feet are fixed to the underside of the cabinet by glue and

screws. Remember when using screws in oak that they should be stainless steel or suitably plated to prevent corrosion due to the tannic acid present.

The top panel

Carefully select the material for the top, and plane and thickness it to 22mm ($\frac{7}{8}$ in). Biscuits are used to maintain alignment under cramping pressure. Keep them well clear of the ends so they do not show after trimming to size.

The top projects at the rear as well as the front to allow for the thickness of room skirting boards. Trim the top to size and then use a roundover cutter to work an ovolo moulding along the front and sides.

Drawers

The basic drawer construction is shown in fig 2. Oak is used for construction with the exception of some of the drawer backs which were ash. The sides and back are thickened to 11mm ($\frac{7}{16}$ in). The drawer fronts are thickened to 22mm ($\frac{7}{8}$ in); up to 10mm ($\frac{3}{8}$ in) will be removed by the fielding.

Cut the tails first, I used the bandsaw rather like a powered rasp for the rear dovetails. The waste in the drawer fronts is removed with a small straight router cutter



The router has removed most of the waste from the blanks, ready for final shaping



Field the top and bottom edges of the drawer fronts on the planer; finish the sides by hand

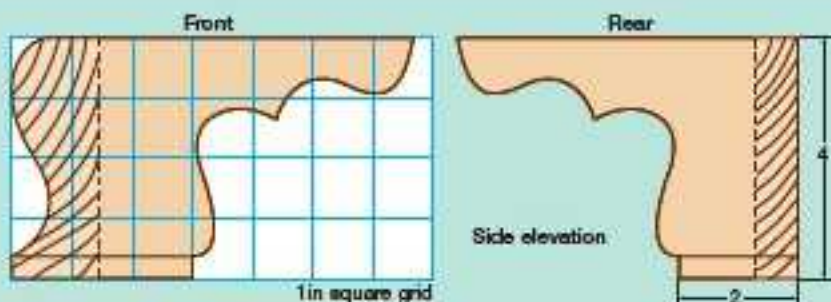
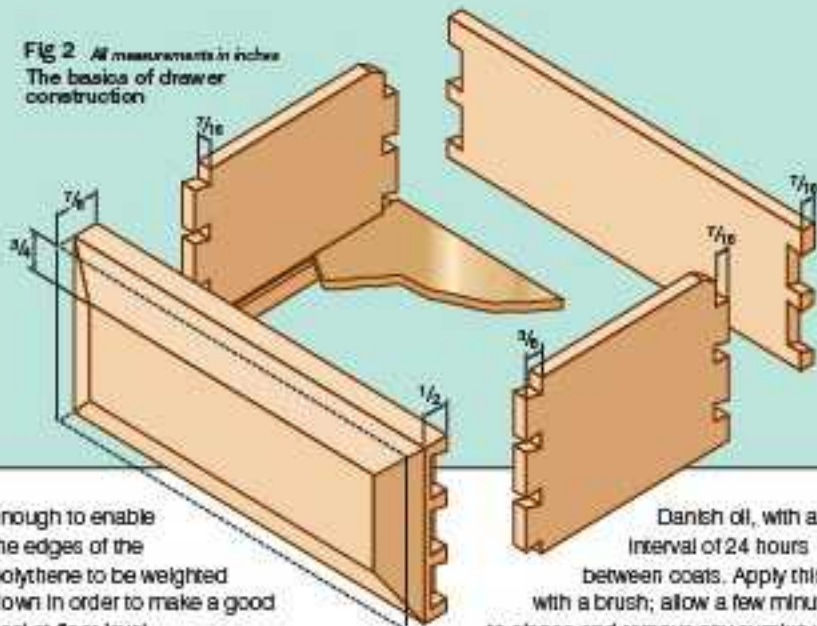


Fig 1. All measurements in inches

Fig 2. All measurements in inches
The basics of drawer construction



Danish oil, with an interval of 24 hours between coats. Apply this with a brush; allow a few minutes to elapse and remove any surplus with a lint free cloth

Remember to dispose of all used Danish oil cloths carefully. They should be left flat to dry before disposal to avoid any risk of spontaneous combustion that can occur if they are bundled up in a confined space, such as the workshop bin. After allowing the Danish oil to harden for a day or two, apply clear wax polish with a Scotchbrite pad (don't use steel wool) to remove any dust nibs and polish up with a soft cloth.

All that remains now is to fit the MDF back panel and the drawer handles to complete the piece.

and paring chisel. Transfer the outline of the tails, to the ends of the front and back, using a marking knife. If the grain is fairly straight then it is easy to trim with a paring chisel. If not, use a dovetail saw and finish with chisels. Bore the holes for the handles before gluing the drawers together.

Cut a 6mm ($\frac{1}{4}$ in) groove in the back of the drawer front and the inside of both sides to receive the drawer bottom. Glue up the drawers, then trim to fit the drawer opening prior to fielding. The fielding is 10mm ($\frac{3}{8}$ in) deep and 19mm ($\frac{3}{4}$ in) wide. After marking up the drawer front, form the top and bottom bevels using the planer, then finish the end bevels by hand planing.

Finishing

A slightly darker finish than natural was required, and tumbling is a good way of achieving this. In this process the ammonia reacts with the tannic acid present in oak.

First of all a 1830 x 1372mm (6ft x 4ft 6in) rectangular frame is built and covered in polythene. This is then fitted with a 'skin' made from 2m wide polythene and suspended (in my case) from the garage ceiling. This is large enough to enclose the chest of drawers. Tape any joints in the polythene. Ensure that the frame is low

enough to enable the edges of the polythene to be weighted down in order to make a good seal at floor level.

When the chest of drawers is placed in the tent include several samples of wood of similar material. These can be removed periodically and inspected for colour. Place saucers containing ammonia around the enclosure. Ammonia fumes are dangerous, so wear a vapour mask and goggles. Use an industrial strength ammonia. Household ammonia will also do the job, but it will take rather a long time.

It is not easy to give a time for the length of tumbling because there are many different factors involved, but mine took 1½ hours.

The next stage is to apply three coats of



FURTHER INFORMATION

Hardware used in this project is available from

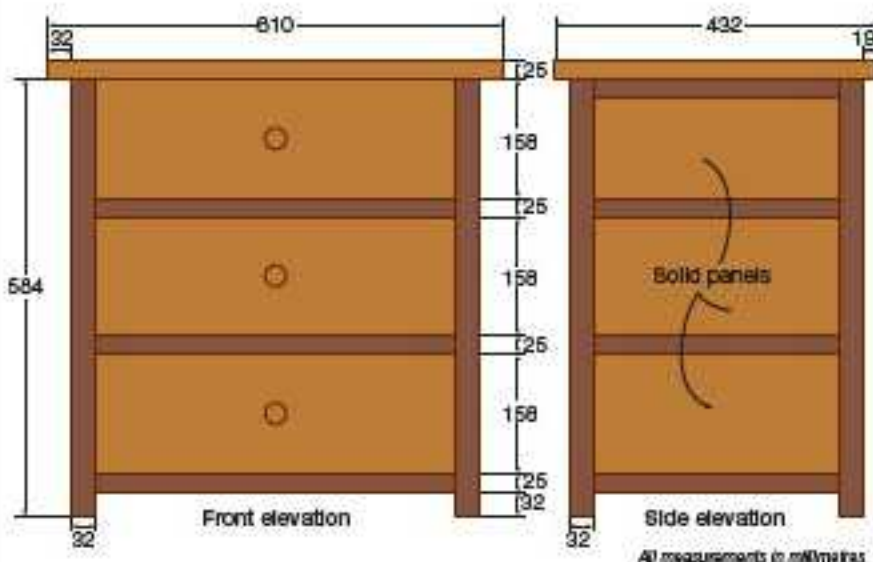
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BY PETER BISHOP

Picture perfect

Televisions have changed shape. Old-style sets with cathode ray tubes were very deep compared to their width, so they were usually relegated to the corner of the room and in consequence TV stands were also of generous proportions. Today's flat-screen technology has changed all this and a new approach can be taken



The project described here is intended to supply storage for video cassettes and DVDs and to house two pieces of equipment – a video recorder and a DVD player. The basic design can be maintained while the dimensions and the shelf/drawer arrangement can be altered to suit your specific requirements.

English oak has been used throughout with the exception of the side panels and drawer bottom. These are cut from 6mm ($\frac{1}{4}$ in) thick plywood.

The drawer size was determined by the size of a DVD case. Allow a minimum of 140mm (5½ in) so they can sit in the drawer on edge for easy reading. This should be deep enough for video cases as well.

The two shelves need to be wide and deep enough for the recording units to be easily accessible. They are also open-backed for ease of cable access. Drop-down fronts match the top drawer to hide the equipment.

Starting the construction

Having worked out a nominal cutting list, each component was rough-cut to size. Although the timber has been kiln-dried, it was stored in the house for a couple of weeks to acclimatise before any further sizing was carried out.



1 Start by planing the various components to their finished size



2 Mark the position of the mortises along the length of the legs



3 Use a marking gauge to indicate the width

Top Tip!

The television is mounted on a round, rotating base on the top of the unit. This enables the screen to be turned easily without marking the top of the cabinet.

Legs were marked out in a batch to ensure they were all the same. The positions of the front and back rails required mortises that are cut across the grain. Although an unorthodox approach, with the aid of a hollow chisel mortising machine this becomes possible. Alternatively these joints can be made as stopped housings. The mortises for the side rails are conventional and can be cut with a machine or by hand in the traditional manner. Cut the side and front rails to length and form tenons on each end. These are then checked for fit into their respective mortises and trimmed as necessary.

Cut a mortise into the top of each leg into which the drawer side runners are fitted. Two further drawer runners are fitted into the top front and back rails. The side runners are positioned to fit flush with the inside of each leg, half way up the drawer side. The two, lower drawer runners are set to support the drawer sides from below. Dry-run this assembly before committing it to glue.

Groove the legs and the side rails to receive the side panels. The panels can now be cut to size and fitted. Run grooves in the back legs and top rail ready to receive the ply back panel to enclose the drawer opening. Two further grooves are run in the side rails into which buttons for fitting



4 The front and back rail mortise holes are unorthodox in that they are cut across the grain



5 Cutting the mortises for the shelf slats is made easy with the mortiser



6 Mark the positions of the biscuit slots on the top panels and cut them with the biscuit joiner



7 Make sure the biscuit slots are well filled with glue before you insert the biscuits.



8 Rub the joining edges of the panels before cramping the top up and leaving it to set.



9 Run a moulder on each edge of the top first, then moulder the front to remove any tear-out.



13 Mark the dovetails on the drawer sides.



14 Remove the bulk of the waste on the bandsaw.



15 Cut the sockets with a rip-tooth tenon saw.

the top to the carcass locate.

Glue and cramp the side frames and loose panels. Check that all is square and set aside until the glue has cured.

Preparing the top

Prepare the three pieces that make up the top panel. I used biscuits to aid alignment. When positioning biscuits, make sure they

will not be cut through during final trimming. Glue and cramp up the top panel, check that it is flat and allow to cure fully.

When the glue has cured, remove the top from the cramps. Clean off any excess glue and trim it to length. Plane the front edge square. Using a table-mounted router with a bearing-guided roundover cutter installed, run a moulder across each end to the top. Run a moulder along the front, cleaning up any tearout caused by the cross-grain routing. Trimming the back of the top square will take care of any remaining tearout caused by the routing. The can now sanded to its finished surface.

Assemble the carcass

Assemble the sides with the rails and shelf slats. This can be a bit fiddly single-handed, but it is possible. A dry run first will confirm the fit prior to the glue-up proper. Cramp the assembly, check that it is square and set aside to allow the glue to cure fully.

Drawers and fronts

Prepare all the components for the drawers and drop-down fronts. Mark and cut out the tails on the sides of the drawers. Remove the bulk of the waste from between the tails using a saw (a bandsaw makes short work of this). Trim to the marks using a sharp

TELEVISION STAND CUTTING LIST

All dimensions are in millimetres: lengths are nominal to allow for jointing etc

Part	Qty	L	W	T
Top*	1	685	432	19
Legs	4	610	32	32
Side panel rails	8	457	32	19
Side panels**	6	380	152	6
Back panel**	1	610	165	6
Front & back Rails	6	610	32	19
Drawer runners	4	380	32	19
Shelf slats	20	380	45	10
Drawer & false fronts	3	530	158	19
Drawer sides	2	380	158	13
Drawer back	1	530	146	10
Drawer bottom**	1	530	430	6

Knobs and buttons from offcuts

* Can be made up by edge-jointing narrower boards

** Plywood: all other parts are English oak



Brush a generous amount of adhesive into all the grooves before assembling the sides



Assemble the sides by fitting the various rails round the panels, and check that each is square



Fit the carcass together by adding the rails and shelf slats. Cramp the assembly up square



Test each joint for fit and trim if necessary



Assemble the drawer box and slide in the base



Mark and cut all the hinge mortises

chisel. Each side is then positioned on the end of the front and used as a template to mark up the sockets.

Use a dovetail or rip-tooth tenon saw to make the side cuts and then a chisels for the cleaning out. Careful trimming and test fitting will result in a clean fit. Run a groove along the inside of the sides and the front to receive the drawer bottom. The back is trimmed to fit over this. Glue and cramp the drawer box and slide the bottom in place. After checking all is square, the bottom can be slid in place and secured with panel pins driven into the bottom of the back.

With the finished carcass on the bench, mark out and cut the hinge mortises for the shelf fronts on the rails. Each front is offered up, to the rails and the hinge mortise positions marked and cut. The fronts are fitted temporarily – one screw per leaf is enough – and marked so that they can be fitted to the opening.

Turning the knobs

Cut two double size blanks. These will form four knobs, producing a spare just in case! The blank is turned between centres first. The centre section is then turned down to 12mm (1/2 in) diameter to make the spigot. Remove the blanks, cut them in half and re-mount the individual pieces in a chuck on

the lathe and turn the knobs to the desired pattern. Sand them and part them off.

Finishing the unit

Apply a spirit stain, avoiding getting too much on the end grain. Leave this to dry for a couple of days before applying a sealer coat. Once the sealer had dried, cut back the top using 0000 grade steel wool and re-coat it to provide added protection. Apply wax, using a pad of steel wool and then buff to a silky smooth finish. Return the knobs to the lathe for waxing and buffing.

Fitting the knobs

Bore 12mm (1/2 in) holes in the drawer front and shelf fronts for the knobs. Cut a slot in the spigot to receive a fixing wedge. Apply a small amount of glue to each socket hole, push the knobs into position and glue the wedge in place. When the glue has cured, the protruding spigot and wedge are carefully trimmed flush. Re-fit the shelf fronts with a full complement of screws in the hinges and add some magnetic catches to hold them closed.

The carcass is upended onto the underside of the top and positioned. Use three buttons at each end to secure the top to the carcass. Give it a final buff up, slide the drawer into place and the job is done.



Turn the individual knobs to whatever profile you prefer



Fit each knob into a pre-drilled hole and secure it with a small wedge



IY GORDON WARR

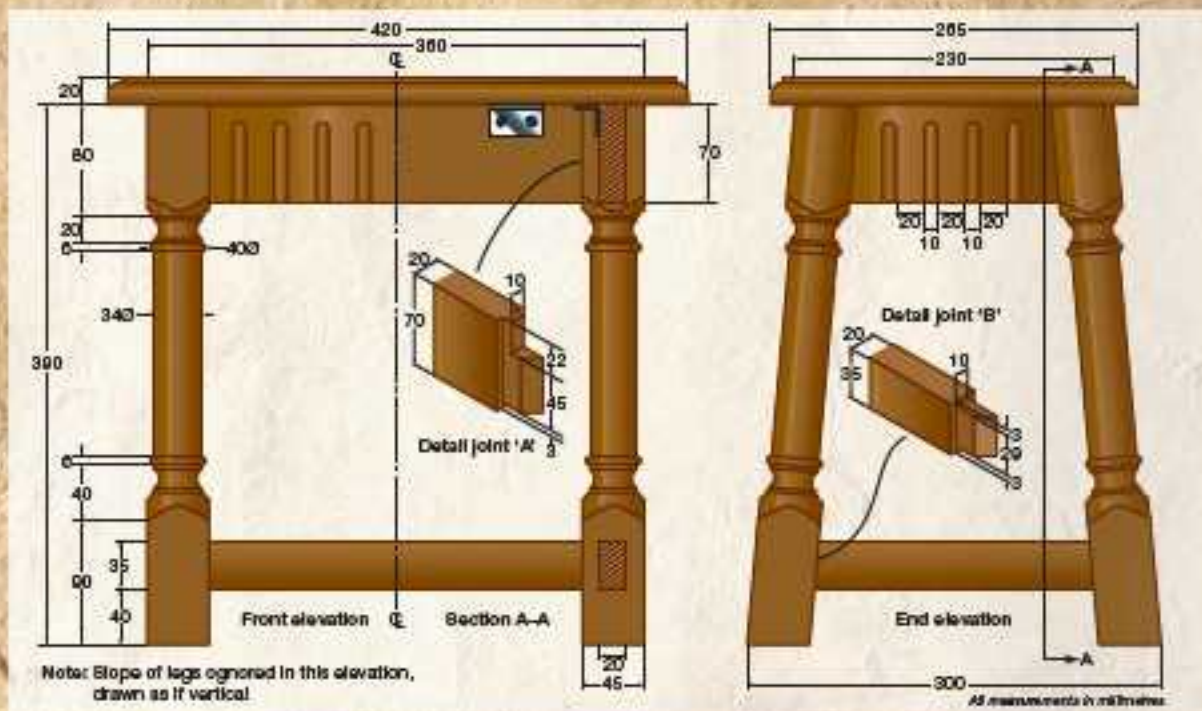
Dark oak 'joynt' stool

This style of stool dates back to Tudor times, and is sometimes referred to as a 'joynt stool'. The spelling of 'joynt' was probably an early form of joint, but why call it a joint stool anyway? Furniture at the time was normally made by the local carpenter or joiner, as the separate craft of the furniture maker had not evolved. A stool that made full use of the mortise and tenon joint was the probable root of its name.

Many buildings of four centuries ago were timber-framed, and made much use of the mortise and tenon joint. It stands to reason that the carpenter-turned-furniture maker was familiar with this method of construction. In principle, the joynt stool is a scaled-down version of a timber-framed building,

with the vertical components being mortised to receive the tenons of the horizontal parts.

All the timber used by early woodworkers was native to these shores, oak being the most common. Thousands of oak trees were consumed by the shipbuilding industry, which flourished as



our navy grew. Oak was also the favoured wood to use for timber buildings. It follows that oak would be widely used for furniture too – indeed, a Tudor joym stool wouldn't be the same if made in any other timber.

The stool featured here embodies many of the features typical of its type. A characteristic that was commonplace at the time was the way the legs are angled outwards, thereby improving stability. Legs were usually turned on primitive lathes. If you don't have a lathe, don't be deterred; the legs would be perfectly acceptable if chamfered instead.

Construction

Start by rough-cutting all the parts to size, as per the cutting list, photo 1. Make a full size drawing of the stool. From this you can determine the correct angles and measurements of the splayed legs, photos 2 and 3.

Prepare and mark out all the material for the stool. Trim the legs to their final length. These do of course slope, and can be cut by hand or power saw. The slope is fairly slight, and will not cause a problem when mounting them in the lathe.

A mortiser will speed up the cutting of the mortises, photo 4, and reduce the amount of marking up required. Form the tenons on the rails by first cutting the sloping shoulders by hand, photo 5. The bulk of the waste can be removed using a router and workshop-made jig, photo 6. Then remove any remaining waste on the cheeks of the tenons using a sharp chisel, photo 7.

The tenons to the front and back of the stools have square shoulders, and



JOYNT STOOL CUTTING LIST

All dimensions are in millimetres: lengths are nominal to allow for joints

Part	Qty	L	W	T
Legs	4	420	45	45
Side top rails	2	370	73*	20
Side lower rails	2	370	35	20
End top rails	2	240	70	20
End lower rails	2	310	35	20
Top	1	450	265	20

* 3mm has been added to this figure to allow for the bevel on the top edge. You will also need six metal expansion brackets to secure the top to the frame.



1
The raw material is rough sawn to length



2
Mark one leg from the full-size drawing



3
Mark the other three legs from the first one



7
Finish them to the shoulder using a sharp chisel



8
Assemble the end frames dry to check the fit



9
Mount the first leg between centres for turning



10
The four legs are completed, ready for assembly



11
Route out the flutes on the upper rails



15
Assemble each end frame and check it's square

can be formed using the jig without having to cut the shoulders by hand.

All the tenons need edge shoulders formed on them, those on the upper edges of the top rails being the haunchings to correspond with the haunched part of the mortises. These are cut on a bandsaw, as are the mitres on the ends of the tenons.

Dry assemble all the mortises and tenons at this stage to check their fit, photo 8.

Turning the legs

Having a straight, plain middle section was a common characteristic in early turned work. The legs are marked with the main features of the turning profile squared around. When mounting the work on the lathe, accurate centring is essential when part of the wood is to be left square. Mount the leg between centres, photo 9, and rough-turn the middle section to a cylinder. Using a parting tool, make cuts on both sides of the beads, photo 10. The straight section can now be completed with a skew

chisel, photo 11. I used a special beading tool to form the beads, photo 12, then switched to a gouge and parting tool to form the features to either side of the beads. Although these are similar, note that the one at the lower end is slightly larger than the one at the top. Blend the square part into the turned section of the leg using a gouge, photo 13.

The right time to sand

It's good practice not to sand a leg immediately after its initial turning, as some slight adjustment might be required to maintain uniformity between all four legs. Not only is such sanding therefore a waste of time; it is unwise, as subsequent turning can lead to rapid dulling of the tools. This happens because some of the particles of the grit detach themselves from the backing and become embedded in the surface of the wood. Although these tiny particles cannot be seen, they will quickly dull the edge of your turning tools.

Back to the rails

Returning to the upper rails, form the stopped fluting in them next, photo 14. A router fitted with a half-round fluting cutter makes light work of this task. The long rails need their upper edges planing at an angle to match the slope of the end frames.

The top of the stool is secured using metal expansion brackets. Four of the six required will need to be modified slightly by bending them in a vice a little beyond a right angle so they correspond with the slope of the legs.

Assembly time

Glue and clamp the end frames, photo 15. After checking for square, remove any excess glue. Bore 6mm holes in the legs and through the tenons, photo 16. Insert the pegs with a little glue to secure the joint, photo 17. Trim the pegs flush.

Before assembling the end frames and the long rails, screw the shrinkage plates in place on the long rails, photo 18. This is



4 If you have one, use a mortiser to mortise the legs



5 Cut the angled tenon shoulders by hand



Use a router and jig to form the angled tenons



10 Mark the bead positions with a parting tool



11 Smooth the centre section with a skew chisel



Form the beads; I used a special beading tool



16 Drill the holes for the pegs in each of the main joints



17 A touch of glue secures each of the pegs in place



18 Fit the expansion brackets to the rails

easier to do before they are fully assembled. Final assembly of the legs and rails can now take place, photo 19.

The top is trimmed to size and the ends are moulded using a router and suitable cutter. Moulding the other two edges, with the grain, will clean up any breakout. After attaching the top to check its alignment, I removed it prior to the finishing stage to make this easier.

Finishing touches

Old oak furniture of this type always looks better when it is stained to a dark colour. Furniture made from oak will darken considerably with age. Staining helps to capture this appearance. A couple of coats of sanding sealer will provide a foundation for the waxing and to further emphasise its aged look. I used an 'antiquing' wax for the final stage and buffed it to give a mellow finish. The last stage is to attach the finished top using the expansion brackets fitted to the rails earlier.

19 Glue and clamp up the complete stool frame





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Tools for all
generations and
their projects



Strawberry planter

Strawberries are the most popular soft fruit grown at home. They can be grown in open ground among the vegetable plot or in containers standing on the patio or even the edge of the lawn. If you plant them now, in August, you will be enjoying your own home-grown fresh fruit in June or July next year

PROJECT IN A MORNING
SATURDAY
WORKSHOP
PROJECT IN A MORNING

There are several advantages to growing your own strawberries in a planter raised above the ground, not least of which is that it will help keep the ripe fruit away from the slugs and snails. The height of the raised planter also makes it easier to cultivate, reducing the amount of bending required to tend the plants – a boon for the less able-bodied.

Exterior grade plywood 18mm (¾in) thick is used throughout the entire project. The corners are joined with a water-resistant glue and zinc-plated 45 x 4mm (1½in No. 8) screws. The cheapest way to buy plywood is in large sheets, typically 2440 x 1220mm (8 x 4 ft), but these can be heavy to handle and a problem to transport without an appropriate vehicle. I decided to pay a little extra and get my supplier to cut the sheet into three smaller pieces.

Some DIY stores may not have a cutting service, but you will find they supply sheet materials in smaller sizes that are easier to handle. Although this is an expensive method of buying sheet material, it can be worth the extra when making a small-scale weekend project such as this.

Cutting the sheet

Using a sharp pencil and steel rule, mark out one side piece and the front on one piece of plywood. Interlace the parts wherever possible to achieve the most economic use of the material. Rough-cut the parts to shape using a jigsaw, photo 1. At this stage, cut well on the waste side of the line. The parts are only being separated at this stage, and it is not easy to get a straight cut with a jigsaw.

Using a conventional up-cut blade in the jigsaw will tear out the edge when cutting across the grain of the surface ply. To prevent this, first score the cutting line with a marking knife. When the parts have been separated, cut them to just outside the line using a bandsaw. Then plane the edges to the line, ensuring a neat, square edge.

The first two parts are used as templates to mark out the remaining side and back, photo 2. Also mark out the base and cut all three parts to size as before, photo 3.

Fix the ends, front and back together using screws and glue. Bore clearance holes through the front and back panels. Apply glue to the joints and screw them together. Before the glue has cured fully, check that the assembly is square by measuring the diagonals. They will be the same if the glued-up planter is square; adjust it if necessary, photo 4.

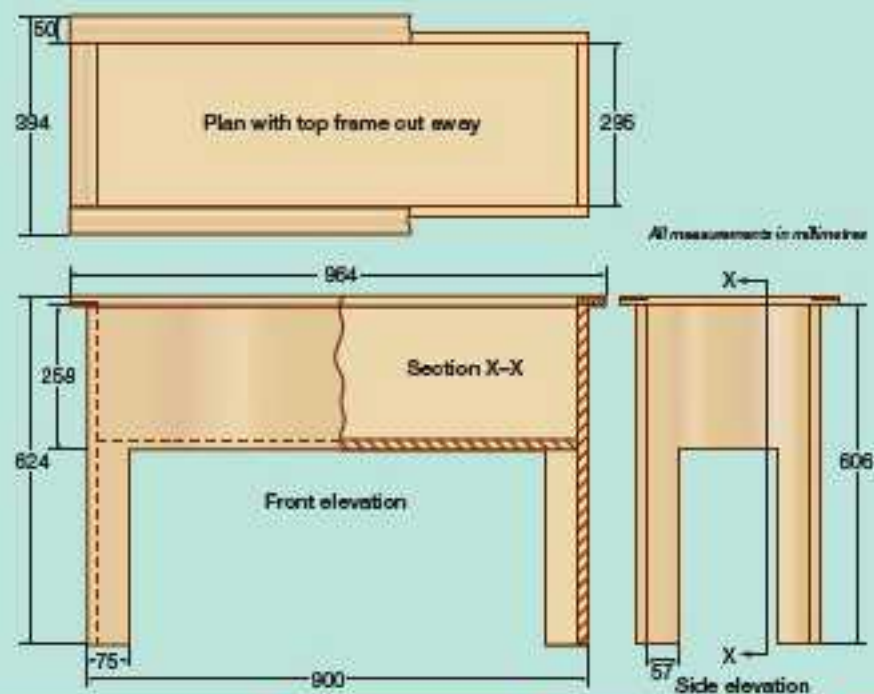


STRAWBERRY PLANTER CUTTING LIST

All parts are made from 18mm exterior plywood

Part	Qty	L	W	T
Front/back	2	900	606	18
Sides	2	606	295	18
Base	1	864	294	18
Top edging long	2	964	50	18
Top edging short	2	394	50	18

Also required some heavy duty polythene





1 Mark out the components and cut them roughly to size with a jigsaw. Note the holes at corners



2 Use the first two parts you cut as templates for marking out their matching counterparts



3 If you have a bandsaw, use it to trim the parts to their final sizes. If you don't, use a hand saw



4 After cutting, plane and sand all the sawn edges so they're smooth and square. Then fix the ends, front and back together using glue and screws, and check that the assembly is square



5 Line the inside of the planter with heavy-duty polythene, folded and stapled into place

Is WBP ply waterproof?

Exterior grade plywood is classed as WBP (water- and boltproof), and is sometimes referred to as marine ply. It's a common misconception that the material is waterproof or weather resistant. WBP refers to the type of glue used; if left untreated, the wood plies will be just as susceptible to decay as any other wood product, although they won't de-laminate as readily as some other grades of plywood. There are different grades of exterior plywood, but these relate to the amount of overlap of the veneers and number of voids permitted within it.

Next, bore the clearance holes for the base and fix it in place. Apply a coat of preservative to the inside of the container.

Line the inside of the planter with heavy-duty polythene. I used some old rubble sacks for this as they are easily obtained from a builder's merchant and are cheaper than buying a large polythene sheet. The plastic lining does not have to be watertight; it is there to prevent the wood from prolonged, direct contact with the



6 Cut and fit a simple half-lapped frame to the top edges to clamp and hide the liner

damp soil. The lining is held in place using staples, photo 5. Turn the container upside down and drill some 12mm (1/2in) holes through the base so water will drain away.

Add a simple top frame made from strips of the plywood to conceal and clamp the edge of the plastic lining. The four parts for the frame are cut to size and halving joints are marked on the ends. These are cut on a bandsaw before the four strips are fitted to the top edge of the container with glue and

screws, photo 6. Fit the ends first.

To finish and protect the planter, apply a couple of coats of preservative to the entire surface, taking extra care to ensure that the edges and especially the parts in contact with the ground are thoroughly covered. The preservative used is water-based and is sold for protecting sheds and fencing. It is available in various shades of brown and green as well as clear...and occasionally in some other dubious colours.



RESAWING STOCK TIMBER is the topic in the second part of our new series that pits man against machine in the workshop. We highlight the pros and cons and come up with some surprising conclusions



RALPH LAUGHTON, newly ensconced in the Editor's chair, presents the fifth part of his series, looking at the biscuit joint, which astonishingly is now over 50 years old



IAN TAYLOR takes a break from his test bench to discuss the eight tools he couldn't live without, and the reasons why. And includes one that isn't really a tool at all



BEN PLEWES invites us down to his basement workshop to show us his top ten tips for using a planer thicknesser safely and successfully



Small is beautiful

Welcome to the world of model planes

It's not just wood that turns woodworkers on. Many dabble in other fields too, and making working miniature tools is one of them. Trevor Winter wrote to us recently about his lifelong passion, and unearthed a bit of Woodworker history into the bargain! Here's his letter...

"In 1979 *The Woodworker* published a series of three articles about my collection of 1/4-scale models of woodworking tools and the methods I used to make them. Due to a combination of family commitments, moving house and a period of self-employment, there followed a 25-year interregnum during which I made no more tools.

In 2008, now retired, I decided to resume making miniatures, beginning with a Norris No 22 panel plane. I chose this because of my admiration for Norris planes, which I consider a high point in English toolmaking.

In the April 1976 edition of *The Woodworker* there was an article by Alan Beardmore about this plane, complete with scale drawings, which I used as my main source of information, together with details gleaned from Jim Kingshot's excellent book "Making & Modifying Tools". I wanted to make my miniature using exactly the same methods as were used in the originals - particularly the dovetail construction of the metal body.

I originally intended just to make the plane and add it to my collection. Subsequently I decided to make two sets of parts, one to be the finished model and the other to demonstrate its construction. On completion, I made a cabinet to house them. This also contains a small illustrated book I wrote, giving details of the construction along with a brief history of the development of the metal-bodied plane and of T Norris & Son.

Please find enclosed a photo of the plane and its cabinet, which I hope may be of interest to you."

Trevor, it certainly is. Craftsmanship of this order is to be greatly admired, and we'd like to hope that your collection becomes a treasured family heirloom - or even the basis for a museum-based display - in the future.



One of Trevor's original features: the coin is a 50p piece



The completed Norris No 22 plane: note the 20p piece

2: Resawing stock timber

This is the second feature in our new Workshop series. In each one we're looking at common woodworking challenges and how hand and power tools create various solutions. We're not looking to find which works best, but comparing and contrasting the techniques and the finished work so we can better understand where and when to use which technique. This month we're tackling resawing stock timber. Here's the hand tool way; turn to page 56 for the machine alternative

HAND RESAWING STOCK TIMBER WITH A HANDSAW



1 You can use a tenon saw with rip-set teeth for smaller resawing jobs, although it's more suitable for cutting joint components such as dovetails or tenons

There you are in the workshop, getting stuck into a good session of sawdust making. The boards you have available are 25mm (1in) thick, and the drawer side for your latest masterpiece requires material of less than half that thickness. You could plane each side down to the correct thickness, but apart from the wasteyou would create, it would take a long time to achieve and in the process you'd develop muscles like Popeye.

A far better solution would be to cut the material to something close to the final dimension required. This involves sawing the board through its thickness, thus producing thinner material that is relatively easy to plane down to its final required thickness. For example, from a 25mm (1in) thick board it's fairly easy to produce two

pieces of 9.5mm (3/8in) thick board. This process is referred to as resawing.

The second cut

After the tree has been felled, sawn into boards, seasoned and then rip-sawn into stock of regular dimensions, hardwood is usually ready for sale. By contrast, softwood is usually dimensioned further by planing, and is then referred to as PAR (planed all round). By the time you want to divide the board, it has already been sawn to dimension once; now you want to saw it again; hence the term resawing.

This process may sound like a daunting task, but in practice it's far easier than it appears, as long as you tackle the job sensibly. The type of saw used is the key to success. For cutting along the grain, you



2 For really small-scale resawing work, you can use a dovetail saw instead of a tenon saw



Japanese rip saws are an acquired taste for resawing, since they cut on the pull stroke



NEW SERIES: HAND VS MACHINE

cut with the grain, they have fine rip teeth of around 14tpi. Some dovetail saws have open handles, making them easier to hold without restricting the hand in what would be the small closed opening of a conventional D-shaped handle. Resawing with a dovetail saw is restricted to very small components such as those used by the box or model maker.

Japanese saws Many woodworkers are big fans of Japanese saws, but some don't like using them for resawing. That may be because they've been programmed to push a saw in the traditional (European) manner, and think it just doesn't feel right to cut on the pull as Japanese saws do. It's purely a matter of taste; if you find that using one works for you, then go with it.

Saws not to use

One of the tools to cross over from the building site to the home workshop is the hard-point saw. This has its uses in the right place. The problem is that it's really a multi-purpose saw, claiming to be capable of most tasks. In fact it is, to some extent. It's just the job when you're working out on site and a bit of rough joinery is required. However, using one for resawing is hard work, and it's difficult to control as it tends to veer off line and follow the grain.

Our recommendation

For workshop use, a good-quality rip-cut hand saw will cope with most resawing situations you're likely to find yourself in. The pictures here show a 650mm (26in) ripsaw with 4½tpi. This particular saw is from the Victor range of handsaws available

need a saw with a chisel profile to the teeth. Such saws are loosely referred to as rip saws. However, this is a simplification of the true meaning of the word rip.

Choosing the right saw

Rip saws The true rip saw is used for cutting with the grain, and originally had very large teeth – often as few as three teeth per inch (3tpi). However, with the advent of powered saws at the turn of the nineteenth century, the traditional ripsaw was virtually redundant and the half-rip took its place.

These saws have teeth that start at a spacing of 4tpi at the tip of the blade, steadily getting larger, progressing to around 2½tpi at the heel (close to the handle). The idea was that the tip would do less work, so reducing the risk of bending

the tip and jamming the saw. Today's rip saws are a little more subtle. The saw being used here is a 26in rip saw with a fairly tame 4½tpi along its entire length.

Backed saws For resawing smaller components, a rigid blade is the order of the day. Adding a back to the blade will achieve this, while still maintaining a relatively thin blade.

The most common backed saw is the tenon saw. As most tenon saws have teeth sharpened to cut across the grain, they aren't suitable for resawing. However, it is possible to buy a tenon saw with rip-set teeth. Alternatively, you could re-profile the teeth of a crosscut tenon saw to a ripsaw profile, but that's another story...

Dovetail saws are similar to tenon saws but are usually smaller and, as dovetails are



Hard-point general-purpose panel saws should be avoided for resawing, since they tend to follow the grain and veer off-line.



Use a marking gauge to mark the required thickness on the edges and ends of the workpiece.



6 Clamp the workpiece securely in the bench vice at an angle of approximately 45° to the bench



7 Start the cut with two or three backward strokes of the blade, using your thumb to guide it



8 Continue sawing down to the halfway point, checking your progress against the marked lines



9 Pack the kerf with veneer slivers to keep it open. Rotate it through 180° and return it to the vice



10 Complete the cut as in steps 7 to 8, then plane the workpiece down to the marked lines



11 The finished product - the workpiece is now precisely the required thickness and is planed flat and true

from Axminster, although similar saws are made by several other manufacturers.

It can also be worth looking out for second-hand rip saws at boot fairs and the like, if you're prepared to clean them up and spend an hour or so in the workshop sharpening and setting the blade. Many woodworkers say that old steel was far better than its modern equivalent!

Getting it done

It's time to get down to business. Now we know what saw to use, let's do the deed. If you're resawing sawn material that is thoroughly dry, prepare one side and mark it as the face. Even if the wood is already prepared, select a face side and check that it has remained smooth and true. Set a marking gauge to slightly wider than the finished thickness required. Mark the two edges and both ends from the face side.

Potential problems

It is possible that the wood will distort after resawing due to tensions within that are released as it's cut. Alternatively, the wood may have a higher moisture content in the centre of the wood, and resawing will create an imbalance from one side to the other. As the 'wet' side dries it will shrink, causing the wood to cup. For this reason, it's advisable to allow a little extra thickness so you can correct such problems if they arise.

Making the cut

Place the wood to be resawn in the bench vice at an angle of approximately 45°. The most difficult part of the whole business is getting the cut started. Position the saw on the wood with the teeth resting on the waste side of the gauged line.

Using your thumb as a guide, pull the saw back two or three times to make a groove in

the wood. With your other hand well away from the wood in case the saw jumps out of the starting groove, make a firm forward cut with the saw. You will make a good amount of progress with this first stroke. Continue sawing through the wood, checking your progress against the marked lines.

When you reach the halfway point, remove the wood from the vice and pack the kerf with a few veneers, laminate offcuts or similar to keep it open. Then rotate the workpiece through 180° and return it to the vice so you can complete the cut.

Once the wood has been resawn, check that the reference face is still flat, and adjust it if necessary. Scribe a line to the finished thickness you require and plane down to the line to complete the job.

For resawing stock timber by machine, - go to page 56

Details are correct at time of going to press but are subject to change without notice.

NEXT ISSUE

The September issue is out on August 8th



South American splendour

When repair falls, Keith Smith makes a pair of Ecuadorian chairs from scratch



BANDSAW BONANZA!

Andy Standing and Gordon Warr take us through an A-Z of the bandsaw, then and now...



CUTTER CARE

Ron Fox returns with a how-to on router cutter care

WORKSHOP TESTS

Gordon Warr's been very busy. He's been checking out a handily-priced Woodstar mitre saw, but it's his tests of Robert Sorby carving and turning tools that caught our eye



ALL GOOD THINGS IN THYME

And about thyme too, a month late (our fault) - Bryn Edwards' spice rack



Tools I couldn't live without

BY IAN TAYLOR

Which of your tools couldn't you live without?" asked the Editor. This isn't an easy question to answer, because there are lots that I really like. I thought the best approach would be to decide which tools I would replace exactly if they broke, wore out, were stolen, lost, or otherwise taken from me – in other words, which items

would I replace with the same model, or the current version of the same model if the manufacturer had upgraded the product since I first got mine. I selected a total of eight items – a sufficient number to avoid having to toss a coin to make impossible choices between favourites.

On that basis it wasn't too difficult to narrow

down the field. Somewhat surprisingly, I found that the first five out of the bag tracked through the early stages of virtually every project I do. They're all items that play a part in turning rough-sawn timber into the stock that eventually becomes a piece of furniture. So here are my eight of the best, and the reasons why I picked them.



Bosch GH031-82 power planer

This is the second biggest planer in the Bosch Power Tools professional range (the blue ones). It's proved to be very solid and robust, with more than adequate power and some excellent design features.

For a start, the extraction performance is very good, and it can vent to either side, which I like. Most planers with a fixed chip outlet seem to vent to the right – away from right-handed users. But if you're working on the top of the bench, this spews chips in high volume all over your benchtop. I vent mine to the left and always connect up my vacuum so that there is very little mess. As you'll see in the picture, there's a white coupling on the planer to take my vacuum hose. This isn't part of the kit – it's simply an offcut of 40mm (1 1/2in) plastic piping, but it's ideal for making the connection to the vacuum hose.

The other features I like with this planer are the solid depth control and the swing-down foot that lets you set the planer safely on the bench before the rotation has stopped. The planer can cope with cutting depths up to 3.1mm, reflecting the motor power (750W input). But I very rarely use it beyond a 1mm cut. I'd rather take a bit longer and keep control of what I'm doing.

The reason why

You might wonder why this is the first tool that comes to hand on most of my projects.



Well, I have very limited floor space in my workshop, and the Bosch also acts as my surface planer.

Rough-sawn timber is often bent, twisted or bowed, and before bringing it to thickness you need to flatten one face. I use the planer for this. Place the board on the bench and check if it rocks; this helps identify the high spots. Then flip it over and plane them away. If the board is bowed, start planing on the convex side. Repeat this process until the board sits completely flat on the bench, and you've then got one flat surface ready for thicknessing.

NEW FOR OLD

The current version is the GH026-82 power planer, with a slightly lower power rating and maximum cutting depth (2.6mm). It comes in a solid carry-case, and will cost you around £100.

FURTHER INFORMATION

- Bosch
- 01895 838743
- www.boschpowertools.co.uk

Engineer's square

This is another tool that I'm afraid has relegated its predecessors to the substitutes' bench. All steel, it's neat and convenient and the one I reach for first. These squares are definitely low-tech, with no complexity, but they are robust and stand up to hard knocks. I have two: the 150mm (6in) version is always to hand, while the shorter 75mm (3in) version gets occasional use.

The reason why

These tools are guaranteed to be square on both outside and inside edges, unlike traditional wooden-stock squares, which are normally only square on the inside angle. I use my engineer's square for checking the flatness of boards and the squareness of corners, for marking up joints and for setting up my bandsaw blade and table.



NEW FOR OLD

You should expect to pay around £8.40 for the 150mm version, and they're available in sizes from 50mm (2in) up to 450mm (18in).

FURTHER INFORMATION

- Axminster
- 0800 371822
- www.axminster.co.uk

Makita 2012NB thicknesser



This is a great tool. Being able to thickness your own timber vastly increases the scope of your work, and over time will significantly reduce the cost of your raw materials. I chose this particular Makita thicknesser because it's lighter than others on the market, and because it's quiet (or at least a good bit quieter than some others), it weighs in at 27kg, while some of the competition is around 8kg heavier. This isn't a trivial difference if you need to move the unit regularly.

It performs very well. The timber comes out with a good finish. The depth of cut control is robust and easy to use, and folds down neatly out of the way for storage. One of the best features is the integral fine adjustment gauge. One full rotation of the handle changes the cutting depth by 2mm, and the calibrated wheel easily allows you to change the thickness by fractions of a millimetre. It takes double- to restore normal



The fine depth setting wheel gives great control

servicesided disposable carbide blades, and changing these is very straightforward. The blades have a machined groove along the back side which mates into the locking clamps, so that the location and positioning is exact. They seem to last a long time, too.

The reason why

Dust extraction is through a 75mm (3in) outlet, which means you will probably need an adaptor of some sort to couple it up to an extractor. I use a 1.8m (6ft) length of 75mm hose, connected to a 100mm length of 100mm (4in) diameter hose at the vacuum end. It works fine.

The only downside I've noticed over a few years of use is that chips can get caught between the blades and the drum on which they're mounted. You can see when this happens because the timber thickness varies very slightly across the width of the timber, due to the blade being slightly lifted by the debris. But it's easily cleaned up to restore normal service.

NEW FOR OLD

Expect to pay around £350 for this machine. A spare pair of blades will set you back around £30.

FURTHER INFORMATION

- Makita
- 01908 211678
- www.makita.co.uk

Clifton No 7 jointer plane



Squaring up the edges of long boards for edge jointing into panels is a regular part of my joinery. This plane is designed just for this job and it does it very well. It's built on the bedrock principle – a design which allows you to adjust the effective width of the mouth without removing the blade. It's widely agreed that this design gives a more solid seating for the blade.

The standard blade and cap iron are a cut above those provided with most other planes on the market. The blade is a solid 3mm thick and the cap iron is Clifton's innovative two-part iron, which clamps tightly to the blade without bowing it in the same way that conventional irons can. This re-inforces the benefits of the bedrock frog and gives a very smooth and satisfying cutting action. I reviewed these alongside other performance blades and irons in the November 2007 issue of *The Woodworker*. In fact, I've retro-fitted these blades and irons to most of my other planes, and they perform superbly. Incidentally, Axminster sell these Clifton blades under their own Victor branding.

The reason why

I haven't got any niggles with this plane. For jointing long boards it's ideal – I barely pick up the No 6 that I used for this job before I bought the Clifton. This is a shame, because it's a perfectly good plane. But that's the way of the world – when you find a new favourite, the old friends quickly get neglected!

NEW FOR OLD

A new Clifton No 7 plane will cost you around £228.

FURTHER INFORMATION

- Classic Hand Tools
- 01449 721327
- www.classichandtools.co.uk

Record Power X600i dust extractor



Record's current equivalent version comes under a different name – the RSDE1 – but the specifications are identical as far as I can see. This is a straightforward drum extractor with no frills. It works reliably and effectively day in and day out. The inlet is 100mm (4in) diameter, allowing me to connect it to larger machinery such as my bandsaw or thicknesser. I also use a reducing coupler connecting to a 32mm hose that links to power tools like my planer and sanders, or can be used to slurp up dry workshop mess



of all sorts. There isn't a single project I do that doesn't make use of this vacuum.

There is an internal corrugated filter with an outer fine filter – simply a porous paper bag that you slide on top of the filter and tuck in, before mounting the pairing to the motor unit. It's a low-tech solution, but very effective nonetheless. Virtually no dust gets through the paper filter, and even when a bag has been in use for a long time, there doesn't seem to be any noticeable drop-off in suction.

Although you can buy trolley supports for

these tools, I knocked one up myself – simply a plywood disk a bit bigger than the diameter of the drum, with four furniture castors screwed to the bottom. Small blocks on the upper surface hold the extractor in position. I can pull the hose and trail the extractor from one end of the workshop to the other with no difficulty.

The reason why

For my small workshop it's great, as it doesn't take up much space. However, the 45 litre drum fills up surprisingly quickly when I'm doing a big thicknessing job, and emptying it can be a bit fiddly. With this design the waste goes straight into the drum, rather than into a waste bag. So you have to decant the waste into a dustbin bag. I always spill some – and sometimes I spill a lot! So it's just as well that when that happens, I have a vacuum right to hand to clean it up!

NEW FOR OLD

The Record RSDE1 extractor will cost you around £130.

FURTHER INFORMATION

- Record
- 0870 770 1777
- www.recordpower.co.uk

Brennenstuhl Energy Cube

Is this a tool? Possibly not, by most definitions, but I use two of them every day in my workshop. The Energy Cube is a six-outlet extension socket, but one you suspend from the ceiling. I guess that most of us just haven't got enough power sockets – I certainly haven't. But if you use conventional extensions, you end up with cables trailing across the floor, and in a workshop that just isn't safe.

The reason why

These outlets avoid trailing cables, so they reduce the risk of nasty accidents. And if you use a bit of ingenuity, you can rig them up so they can be positioned exactly where you want them. I've fitted one at each end of the workshop, and they're rigged up to slide on rails mounted across the ceiling. The mounting chain on the extension is

simply looped over the rail and fixed with a keyring. The mains-in cable is attached to loops – 12mm wide offcuts of plastic waste pipe – that slide along the rail.

I can hang the Energy Cubes at any position along the rail. I don't move them very often, but occasionally it can be very useful to be able to do so. Each cube comes with 3m (10ft) of supporting chain – almost certainly too long for most of us – but the 5m long power-in cable is a useful and generous feature.

NEW FOR OLD

I've only seen these cunning devices in the Axminster catalogue, where they're currently priced at £17.94 each.

FURTHER INFORMATION

- Axminster
- 0800 371822
- www.Axminster.co.uk



Heath Robinson would be proud of this set-up!

Record Power DMS26 drill stand

I have limited workshop space, and that dictates the sort of machinery I can squeeze in. Although I'd have a permanently located pillar drill if I could accommodate it, it just would take up too much space. So I opted for a drill stand. Now these come in all sorts of calibres. My previous one was light and easy to move, but it wasn't very precise. Then I replaced it with the Record DMS26 stand. This is exactly the opposite. It's as rugged as they come, and rock solid.

The reason why

The stand has a spring-loaded vertical movement, operated by a solid steel lever arm. There is an adjustment mechanism so that any rotational slack in the movement can be adjusted out – I haven't had to touch that yet, after five years of use. The depth stop is very simple – just adjust a threaded bar until the head stops exactly where you want it.

The head can be located anywhere up or down the shaft, and anywhere on a 360° rotation about the vertical. It's clamped by a big Bristol ratchet clamp. The base has standard machinist's mounting slots for vices, jigs or fences. Most often I use a simple wooden fence that I can bolt in position where needed.

There's a lot of solid metal in this stand, and unsurprisingly it's on the heavy side (17.4kg without the drill). When not in use, it sits out of the way beside my bench and needs a big heave to put it into action.

The drill is clamped in a standard 43mm collar. I use a heavy-duty 800W mains drill in the stand, and this works fine for me. If I've any big masonry drilling jobs to do, I simply unload the drill and do the job. Otherwise, the drill is permanently stored in the stand, ready to go.

I use this tool mainly for drilling accurate vertical holes and for roughing out mortises with an appropriate diameter Forstner bit. You can buy a separate hollow chisel mortising head for this stand, but I've not found it necessary.

NEW FOR OLD

The DMS26 stand is currently on offer, with the mortising head, for around £70.

FURTHER INFORMATION

- Record
- 0870 770 1777
- www.recordpower.co.uk



A simple wooden fence guides repeat drilling

Lie-Nielsen 103 block plane



Lie-Nielsen planes have a reputation for performance, though they're not cheap. This small block plane is great for all sort of small trimming and cleaning-up jobs and for smaller scale work on end-grain. Since I got this plane, it's the one that is always to hand when this sort of work crops up. The plane has a solid bronze cast and machined body and blade clamp. The blade projection is controlled by a rear screw mechanism. There's no lateral adjustment facility, so you need to be sure that the edge is ground square to the length if you need to re-grind the blade. The blade itself is solid 3.2mm thick A2 tool steel, and holds a good edge.

The reason why

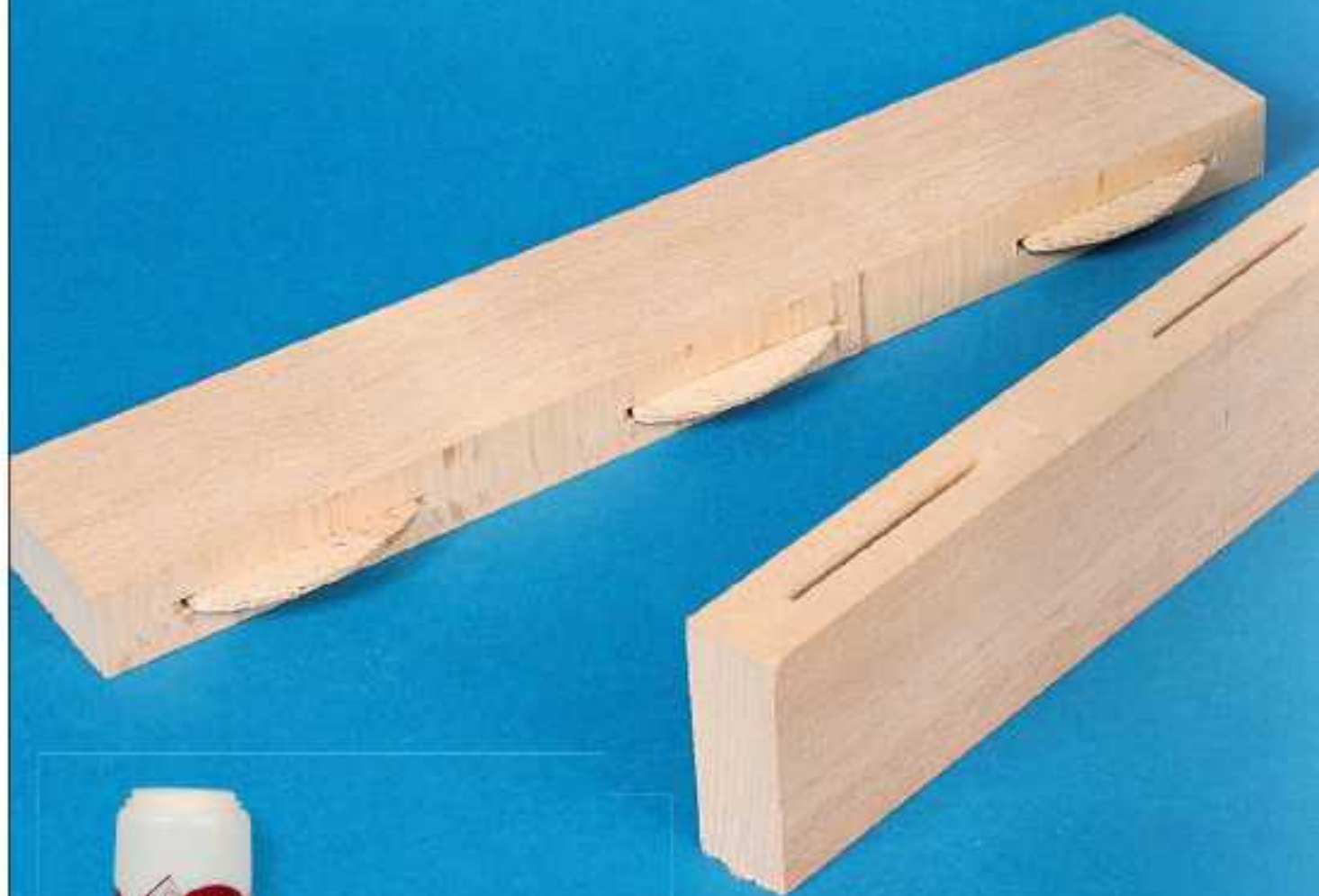
Lie-Nielsen offers excellent customer service! After I had this for about a year, I knocked it off the edge of my bench. The threaded rod that guides the blade-adjusting nut bent, and I couldn't straighten it satisfactorily. But an e-mail cry for help to Lie-Nielsen in the United States produced an instant response from no less than Tom Lie-Nielsen himself, followed pretty quickly with a small package of several replacement rods at no charge. You don't get personal service like that from many companies.

NEW FOR OLD

Lie-Nielsen tools aren't cheap – expect to pay around £71.50 for the No 103 block plane. The company also makes a low-angle version and a wide range of other standard and specialty planes. You could become addicted!

FURTHER INFORMATION

- Rutlands
 - 01629 815518
 - www.rutlands.co.uk
 - www.lie-nielsen.com
- Lie-Nielsen planes are also available from Axminster and Tilgear



1
The three common sizes
of biscuit - 20, 10 and 0



BY RALPH LAUGHTON

5: The biscuit joint

Biscuit jointers have been around since cabinetmaker Hermann Steiner developed the system in 1955. It was patented and sold as the Lamello jointer. Hermann Steiner's company vigorously defended its patent until it expired in the 1980s. Since then the rest of the market has jumped onto the bandwagon...

JOINING
WITHOUT
JOINTS

Indeed, when his well-defended patent ran out, other manufacturers were not slow at cashing in and producing their own versions of the Lamello jointer. There are a few exceptions but most of the machines on the market are similar to Steiner's original design. A 100mm (4 in) diameter blade is mounted so that it can be plunged into the stock. By limiting the amount of plunge, the size of the slot can be regulated for width as well as depth. The thickness of the slot is a constant at 4mm ($\frac{5}{16}$ in), the kerf of the blade.

The biscuit jointer is only half the story, the other half being the biscuits themselves. They are little pieces of engineering in their own right. By design, biscuits are intended to swell as they take up moisture from the glue, resulting in a tight fit within the 4mm ($\frac{5}{16}$ in) slot. Rugby football shaped and manufactured to be 3.78mm (0.148 in) thick before fitting, they are made in three sizes: No.0: 47 x 15 x 4mm, No.10: 53 x 19 x 4mm and No.20: 58 x 23 x 4mm. These quoted

sizes do tend to vary from supplier to supplier and imperial equivalents are often 'rounded' to make neater looking fractions.

Most biscuits are manufactured from compressed beech and dried to a moisture content of 6-10%. They are stamped out with the grain running diagonally. There is at least one manufacturer using birch, which is not compressed but is dried to a moisture content of only 6-8%, relying on the glue alone to swell the biscuit.

How it works

The biscuit jointer cuts opposing curved slots into the parts to be joined. By using a combination of marks and reference faces (the fence or the base plate) the slots can be aligned to each other. An aqueous glue, usually PVA, is applied to the slot and joining faces. Glue is also applied to the biscuit, which is inserted into one of the slots. The two parts are then cramped and left until the glue has cured. The biscuit will swell as it takes up moisture from the glue



The biscuit fits into opposing slots cut by the jointer



Glue is applied to the biscuit just before the parts are joined as the moisture in the glue will start to swell the biscuits immediately



4 When using polyurethane (PU) glue, the biscuits are moistened with water prior to insertion



5 To check the depth of cut of the biscuit jointer, set the depth of cut to No.20 on the selector



6 Make a plunge cut to the full depth in one edge of the component to be joined



10 Setting the fence up to align with the exact centre of the board to be joined



11 Cut the slots, ensuring that the body of the jointer is clear of the bench top



12 Glue up the slot using a flat brush...

locking itself into the slot. If you are using one of the polyurethane glues, immerse the biscuit in water immediately prior to assembly. Apply glue to one of the joint's mating faces and slots but only to the slots of the other face. The water will swell the biscuit and also activate the glue.

Strength and alignment

Does using a biscuit add strength to a joint or purely aid alignment? Well, the answer to this question is not as simple as it sounds; it depends where and how the joint is made. In the case of joining boards together side-by-side, the biscuit is acting as an aid to alignment. Without the biscuit the glue joint is, to quote one manufacturer, "stronger than the wood itself" so how can the biscuit improve that situation? On the other hand, in a cross grain situation, a butt joint of a frame for example, the biscuit will add considerable strength.

You should always use the largest size of biscuit that will fit in the available space. Most of the time this will be a No.20. The smaller sizes are useful when joining narrow framing or mouldings together.

Adjusting the depth of cut

Before any joints are made, the depth of cut must be checked and, if necessary, adjusted. To achieve this, clamp an off cut

of timber to the bench. Set the biscuit jointer to the No.20 setting and plunge the blade into the timber as far as the stop will allow. Push a No.20 biscuit into the slot and scribe a line on it at the point where the biscuit enters the timber. Remove the biscuit, rotate it 180° and slide it back into the slot. The original line should not be visible. If it is, the biscuit jointer is not cutting deep enough; adjust the stop and try again, using a clean biscuit. Once the line is hidden by the timber, draw a second line on the biscuit and remove it. The two lines should be just less than 1mm ($\frac{1}{16}$ in)

apart. If the lines are further apart than this, the biscuit jointer is cutting too deep. Adjust it and try again. Adjustment should not be necessary again unless something changes; a new blade may cut slightly differently, for example.

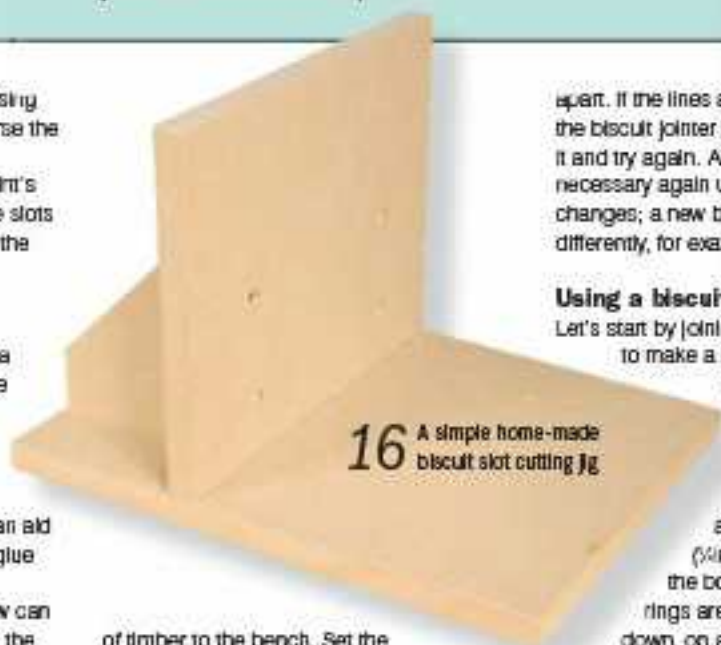
Using a biscuit jointer

Let's start by joining some boards together to make a larger panel. Here we

have some 150 x 25mm (6 x 1in) softwood boards, prepared and planed true, thereby reducing their actual size by about 6mm ($\frac{1}{4}$ in) in both planes. Arrange the boards so that the annular rings are alternating, up and down, on adjacent panels. This will minimise any warping of the panel.

Mark the boards with a triangle in order to identify their relative positions to each other.

A good rule of thumb when it comes to marking out the position of the biscuits is to space them at 200mm (8in) centres, starting 50mm (2in) in from the ends. Set the fence on the jointer to half the depth of the board and the blade stop to No.20. When using 18mm ($\frac{3}{4}$ in) stock the base of the jointer will be almost in line with the bottom of the board. It is therefore advisable to ensure that the base plate is



16 A simple home-made biscuit slot cutting jig



7 Place a No.20 biscuit in the slot and draw a line across it where it emerges from the board



8 Remove the biscuit and replace it the other way round with the line still uppermost. The first line should be hidden inside the slot



9 Draw a second line and remove it from the slot. The lines should be slightly less than 1mm apart



13 ...or use a bespoke dispenser instead



14 Paint glue on the biscuits before inserting them



15 It is usually possible to reference from the base of the machine when working with 18mm board

clear of the bench. This feature is deliberate (more later). Align the mark with the indicator on the biscuit jointer and make the cut by plunging the blade into the timber until the stop is reached. Repeat until all the slots are cut. Clean up any tear-out using a sharp chisel or a utility knife.

Gluing the joint

Apply a white or yellow wood glue to the edge of the first board and spread it out evenly using a brush. Pay particular attention to the slots. Now paint a No.20 biscuit with glue and insert it into the first slot. Continue until all the slots have biscuits inserted and coated with glue.

There are several types of special applicator designed to fill the biscuit slot with glue. Some of these are designed to dispense just the right amount of glue in the

slot with a single pump action. Other simpler adaptors fit soft plastic bottles or can be fitted directly to some glue bottles.

Take the next board and coat the mating edge with glue, again making sure that the slots are properly coated. Align the biscuits in the first board with the slots in the second and slide them together. Coat the next face with glue, insert painted biscuits and continue in the same manner until all the boards are joined. Cramp the boards, ensuring the glue-up is flat. Remove any excess glue using a damp sponge and set the assembly aside to dry.

Carcase construction

The biscuit jointer comes into its own here, and if you build with 18mm (3/4in) sheet material so much the better. The centre of a biscuit jointer's blade is normally set at

approximately 9.5mm (3/8in) above the underside of the base plate. This means that, standing on a flat surface, the biscuit jointer will cut a slot in the centre (or near enough) of the edge of any 18mm (3/4in) sheet, placed on the same flat surface. This will result in an improvement in speed of work and accuracy.

A simple slot cutting jig can be made from MDF and clamped to a bench. The size of the jig will vary depending on the project in hand. It consists of a piece of MDF acting as the reference surface, with a second piece secured at 90° to the first. A pair of strengtheners are added to help support the vertical plane.

A simple carcass can be built using this jig. Start with two sides, a top and a bottom cut from 18mm (3/4in) MDF. Mark the biscuit positions on the inside of the carcass. Also identify the relative positions of each board by marking them with letters – AA, BB etc. Place a side section against the vertical portion of the jig and cut No.20 slots at the marks using the horizontal bed of the jig as a reference plane. Repeat this method of work with both ends of the side pieces. With the bottom of the carcass flat on the jig, cut the slots in each end. Repeat the process for the top. Glue up as before, but give the MDF two coats of glue on the cut faces and in the slots. Check for square and cramp up until the glue has cured.



17 Using the jig to cut the biscuit slots in the sides of a small carcass



18 Cutting the biscuit slots in the top and bottom of the carcass



Using the planer thicknesser

BY BEN FLEWES

A planer thicknesser provides the most cost-effective method of preparing timber for the small to medium-sized workshop. If you're working with softwood, this marvellous machine allows you to buy in rough-sawn timber at a fraction of the price of PAR (planed all round) stock. When working with hardwood, however, the planer thicknesser is arguably the most important machine in the workshop because it allows you to prepare virtually any type of rough-sawn board to a finished thickness in very little time.



1 Set up your planer knives accurately

There's a general perception that this is a tricky job, but it's actually quite easy! All you need is an accurately squared piece of wood, ideally a close grained hardwood like beech, measuring about 25mm square and 250mm long. You'll also need a spare ten minutes and relatively good eyesight, or a good pair of specs!

Assuming you've already isolated your machine, put the new planer knives roughly in position and set your in-feed table to zero depth of cut. Then place the square-section piece of wood on the out-feed table at 90° to the cutter block. The wood needs to protrude over the cutter block by about 50mm. Mark a line on the timber where it meets the edge of the out-feed table.

Now slowly rotate the cutter block with your fingers until the edge of the knife you want to set comes in to contact with the timber. Continue to rotate the cutter block slowly and watch as the knife edge picks up the timber as it comes to the highest point in its rotation, then drops it back down as the knife rotates toward the in-feed table. Look at your original pencil mark above the out-feed table edge and note the distance the block of wood has travelled toward the cutter block. You should aim for about 1.5 mm of travel.

If the knife didn't pick up the timber at all, then it's set too low. Loosen the cutter block fixings, tap the knife into position and retry. You can use the block of wood protruding over the out-feed table as a rough guide to where the knife edge should be, then tweak it into final position with gentle taps from a block of wood. Once you've hit the magic 1.5mm, check that it's the same at both edges and in the middle of the cutter block. Tighten up all the cutter block fixings and the job's done.



2 Keep a sharp edge

There are usually two options when it comes to buying planer knives; solid tungsten carbide (expensive) or high speed steel (cheap). Tungsten carbide has the advantage of keeping an edge for much longer than HSS, but it won't be as sharp. Remember, the sharpness of your blades will, to a large extent, determine the quality of finish.

My preferred option is to have two or three sets of HSS knives that I use in rotation. These can be honed in the cutter block with a diamond stone several times before being removed for regrinding. You can regrind them yourself with a Tormek wet-stone grinder with a planer blade attachment (SVH-320). Or you can do as I do and send them off to a specialist for regrinding when they need it.

3 Always mark your face side and face edge

Understanding the face side / face edge principle is fundamental to achieving good results. Start by planing the widest face of your board; then use the flat face side that you just planed against the fence to achieve a square face edge. Once you've done this, mark the face side and face edge. These two little marks become invaluable later when it comes to thicknessing your boards.



4 Use guarding correctly and keep your hands away from the cutter block

A two-knife cutter block makes approximately 10,000 cuts per minute and if a machinist's fingers are in contact for only a tenth of a second, 16 slices will be removed. That's not a prospect you should take lightly!

So always set up your bridge guard so that gaps are kept to an absolute minimum, and never let your hands drive the timber directly over the cutter block. Instead, keep applying pressure and feeding your timber from the in-feed table until there is enough material on the out-feed table to transfer your left hand safely over the bridge guard to apply pressure on the out-feed table, then follow with your right hand to complete the feeding operation.

When edging, keep to the same stringent logic: Apply horizontal pressure to the workpiece to keep it square to the fence and never allow your hands to pass over the cutter block while in contact with the timber. Then you'll keep all your fingers intact...



1 Start the planing operation with both hands supporting the workpiece on the in-feed table



2 As the wood moves forward, transfer one hand to apply pressure on the outfeed table



3 When enough wood has emerged on the outfeed table, transfer the other hand to this side as well

5 Check the grain direction for a better finish

When cutting timber, you'll get much better results if you follow the direction of the grain. Look at the edge at right angles to the surface you are about to machine and it's usually quite clear which is the best direction to work in. Sometimes the timber won't agree with your decision! So look at the surface after each cut to see how it's bearing up, and don't be afraid to try it the other way round.

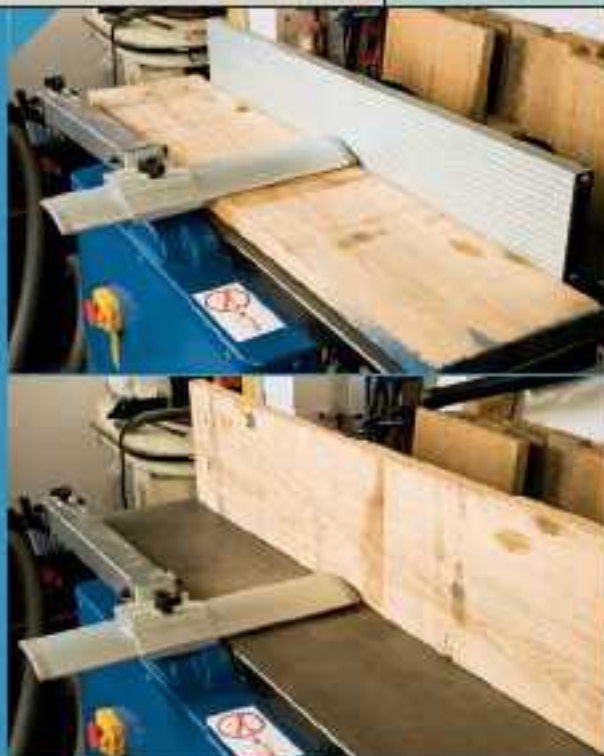
7 Use your face side/face edge references for best thicknessing results

When you convert your planer thicknesser to its thicknessing mode, the face side (the first wide face planed) should be placed face down on the thicknessing bed. Remember that the cutter block will be cutting parallel to the thicknessing bed so by feeding your timber through the thicknesser with your flat face side on the thicknessing bed you are ensuring your timber will be accurately thicknessed.

If your material is thick enough to safely pass through the thicknesser on its edge, the same principle applies. The face edge mark leaves you in no doubt which edge should be face down on the thicknesser table.

9. Minimize snipe with good out-feed support

Good support on the out-feed side of a thicknesser is essential. If snipe (a sizable scallop cut out of the end of the board) is to be avoided. After feeding the material in to the thicknesser, walk around to the out-feed side and support the timber as it comes free of the machine. Don't let your fingers get near any out-feed rollers though; the consequences of a lack of concentration here can be nasty! If you can't easily walk around to the out-feed side, set up a support roller there to do the job for you.



6 Use the right kind of extraction

Planer thicknessers always produce a huge amount of chippings, so you'll need to use a chip extractor with a high volume, low pressure airflow. This type of extractor will have an extraction hose 100mm or more in diameter and so will be capable of shifting a great deal of waste material in a short space of time. The small fine-filter or vacuum-cleaner type extractors aren't suitable for use with planer thicknessers.



8 Make shallow cuts for more accurate results

It stands to reason that shallower cuts are finer cuts. Vary your depth of cut to suit your material width and hardness. A wide oak board will require very shallow cuts somewhere in the region of 0.5mm, whereas a piece of 3 x 2in joinery-grade softwood can be thicknessed in 3mm steps with no trouble. Your thicknesser will give you lots of audible feedback, so listen as your timber goes through the machine and if it sounds as if it's beginning to struggle, ease off the depth of cut. I always keep a couple of very shallow cuts for the end too, just before I reach my final thickness. This maximises the quality of surface on the finished board.

10 Finish by hand or with a sander

Every planer thicknesser will leave marks on the timber because to achieve a flat surface lots of shallow scallops are cut by the rotating cutter block. While many machines will produce a high quality of surface finish, you will achieve an even better finish if you either sand, hand-plane or scrape the planed surface before finishing it.

FURTHER INFORMATION

- The Health and Safety Executive
- www.hsa.gov.uk/woodworking/machines.htm

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2: Resawing stock timber

Resawing by hand is a good skill to acquire. Before the use of machinery in the home workshop became widespread, it was the only way the weekend woodworker could produce thin stock. Today it is far easier to acquire affordable machines and there are plenty of bandsaws available. You can resaw wood on any bandsaw of any size – although obviously, the larger the machine the higher the capacity

MACHINE RESAWING STOCK TIMBER WITH A BANDSAW



1 This 30pt blade is 19mm (3/4in) wide, making it ideal for use on this 350mm (14in) bandsaw

If you visit a timber merchant to buy your stock, the chances are that they'll have a huge dedicated machine referred to in the trade as a 'resaw'. This is no more than an over-sized bandsaw with an extra-wide blade. These machines usually have power feed mechanisms attached and large roller infeed/outfeed tables. They're used to convert larger slabs of wood into more manageable boards. Something a little smaller is the order of the day for the home workshop.

Workshop-size versions of these resaw



2 The tension guide is not usually reliable. This saw has the tension set correctly for a 19mm (3/4in) wide blade



3 When tensioning the blade using the index finger method, it should deflect by no more than 5-6mm



NEW SERIES: HAND VS MACHINE

ours it's 19mm (¾in) wide.

Always buy good-quality blades. Cheaper bench-top bandsaws tend to be supplied with very poor quality blades; just replacing this with a quality item will improve the performance immensely. The blades used here came from Axminster Tower Tools and have proved themselves, over the past couple of years, to be a good choice.

Setting up the saw

There are many schools of thought as to how to set up a bandsaw. The method shown here is the result of many years of trial and error in the workshop. The bandsaw needs to be in good condition, with the top and bottom wheels in line and the tyres in good condition. The blade should run centrally on the tyres.

Blade tension

On most bandsaws, using the recommended settings will result in the blade being too lightly tensioned. In light work this may not cause too many problems. However, if you try to resaw with an under-tensioned blade, you will be in all sorts of trouble. For a start, the under-tensioned blade will cause the cut to be cupped. It will also wander and may even burn the face due to the increased friction.

There are blade tensioning gauges available, but these are a bit of a luxury for the occasional home use. One tried-and-tested method of checking the tension may sound a bit slap-dash, but it works. Lift the

machines do exist from manufacturers such as Hitachi and Makita, although they are not common. For the purpose of this article, a 350mm (14in) bandsaw is being used to demonstrate the methods described. The same principles should be applied regardless of the machine being used to resaw.

Blade choice

It really doesn't matter what size or type of machine you're using; it will only be capable of resawing if an appropriate blade is used.

As the blade passes through the wood, the teeth cut into it and the waste is carried through and thrown out as the tooth emerges. The waste is collected in the space between the teeth. If this space becomes full before the tooth has left the material, it will prevent the tooth from cutting and the friction will create heat, burning the wood and shortening the life of the blade.

For resawing, a blade that has 3 or 4 teeth per inch (tpi) is ideal. It will cut quickly and remove a lot of material. Choose the widest blade available for your machine; on



Setting the table square is essential for accurate cutting. Stand a try square next to the blade and adjust accordingly



The little Wkey digital angle gauge is a great help for checking the accuracy of the setting



6 To allow for drift, cut halfway along a marked line, skewing the wood to keep the cut on track



7 When halfway, clamp the wood to the table and set the face of the fence against its edge



8 With the fence accurately positioned, you can start resawing your workpiece



9 Always use a push stick for the last part of any cut to avoid the risk of damage to your fingers



10 This technique allows you to make accurate cuts, as shown with this oak board...



11 ...and guarantees the same accuracy time after time

blade guard and, with the machine turned off, deflect the blade with a moderate push of the forefinger. The blade should not deflect more than 5 or 6mm (1/4in). This should be just right for resawing.

Squaring up the table

It's important to set the table square to the blade. To do this, raise the blade guard and stand a try square on the bed of the table. Slide the square up to the blade but not quite touching it. There should be an even gap, from top to bottom, between the blade and the square. Adjust the table as necessary if the gap tapers.

Now set the fence square to the table, again using the try square. Recently I have been using technology to help out here. The little Wkey digital angle gauge is a great help for checking the accuracy of the setting.

Correcting the drift

Ninety-nine in a hundred bandsaw blades have a tendency to drift in one direction or the other. You need to set the fence to account for this each time you change the blade. This is one of the misunderstood areas of bandsaw set-up. Drift can be adjusted by running the blade on one edge or other of the tyres, effectively twisting the blade as it is presented to the wood. This may correct the drift, but it will put untold pressure on the blade and will damage the tyres before long.

To set the fence to account for the drift of a particular blade, take a piece of wood about an inch thick and scribe a line along its length and parallel to one good edge. Move the fence back out of the way and cut the wood, following the line and skewing the wood freehand as necessary to keep the cut on track. When you reach the half-way

point, stop the saw and clamp the piece of wood in that position. Adjust the fence so that it aligns with the edge of the wood. The fence is now set to the drift of the blade.

Resawing time

Now the saw is set up properly, it should cut true and straight even through the pieces of oak used here. Take it slowly and let the saw dictate the cutting speed. Don't try to force the wood through the saw, as this will put more force on the blade, causing it to deflect and overheat and resulting in a bad cut.

Always use a push stick for the last part of the cut. As the blade emerges from the cut, it is all too easy to continue pushing the wood through by hand and to lop off a digit!

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ALAN HOLTHAM finishes his series on turning for beginners by showing you how to put into practice everything you've learned over the last five issues about the lathe, its tools and accessories, and the sort of timber to use. To do this, he's chosen a simple project – a two-piece base for a table lamp. It needs just five turning tools and the minimum of timber, but it does incorporate all the basic techniques you need to learn as a beginner.



CHRIS CHILD complements Alan Holtham's feature by presenting a table lamp base with a difference – it has a rounded shape, but with two flat surfaces that require a somewhat different turning technique to create. Just to emphasize the difference, one face of the lamp base is hollowed out to accept a clock, making this the perfect bedside companion for all turners with time on their hands!



WIRING UP TABLE LAMPS

If you decide to make either of the lamp bases featured in this section, you need to know how to wire them up safely. The lamp flex runs from a lampholder mounted on top of the lamp body, down a hole bored through its centre and out through a hole drilled in the side of the base.

Lampholders for table lamps may be plastic or brass. Both are mounted on a small circular brass plate that is screwed to the top of the lamp body, and this must incorporate plastic protection bushes to stop the flex sheath from chafing on it.

In addition, the flex must pass through a plastic cord cleat to prevent a yank on the free flex from straining – or breaking – the connections at the lampholder terminals. You will need to create room for this cleat within the lamp body. The simplest solution is to bore a larger diameter hole up from the bottom of the base to the point where the hole through which the flex passes changes direction. Feed the flex down from the top of the lamp body, through the cleat and then out through the side exit hole.

Wire the lamp with round 0.5 or 0.75mm² flex. You can use two-core flex for lamps fitted with a plastic lampholder. If you prefer a brass lampholder, you must use three-core flex with an earth core which is connected to the earth terminal on the lampholder and plug.



A Tiger for turning tools

Gordon Warr tests the Scheppach TIGER 2500

The turning fraternity is split between two schools when it comes to sharpening turning tools on a grinding wheel. Will it be wet or dry? Each swears by his or her favourite method, yet it seems that wet-stone grinding is gaining the upper hand. We've reviewed the Tormek system this month on page 68 of our ON TEST section, and here we sneak a look at how the Scheppach Tiger grinding system copes with sharpening gouges, skew chisels and parting tools. We'll be testing its other capabilities in more detail in a future issue.

It's all in the jig

The Tiger 2500 grinder (and its smaller cousin the 2000) come with a jig designed particularly with gouges in mind, although it will also hold other turning tools including skew chisels and parting tools.

For sharpening gouges, the jig is used with the collar locked onto the shank of the tool so it is free to be rotated to follow the profile of the gouge. For other tools, the collar is first secured onto a bracket which is then mounted on the arm of the universal support. An angular scale on the bracket allows for the accurate positioning of skew chisels with an angle of up to 40°. For scrapers, the bracket can be used on its own to support the tool.

The machine's leather honing wheel is intended for giving the final touch to an edge for superfine sharpness. Honing paste is included with the kit. There's also a smaller wheel which is mounted on the outside of the larger wheel. This has a profiled edge, and thus caters for gouges that are internally ground.

Both machines are easy to set up, adjust and use, grinding angles are consistently maintained, and steel is not ground away needlessly. All in all, its quality is very high.



The adjustable jig for sharpening woodturning tools



Grinding a turning gouge with the support vertical



You can also grind gouges with the support horizontal



Honing a gouge's outside bevel on the large honing wheel



The small profiled honing wheel fits outside the larger one





BY ALAN HOLTHAM

6: Theory into practice

At last it's time to put into practice everything you've learned over the last five issues about the lathe, its tools and accessories, and the sort of timber to use. The best way of bringing all this together is to make a small project, and I've chosen a two-piece table lamp. It needs just five turning tools and the minimum of timber, but it does incorporate all the basic techniques you need to learn as a beginner

The timber I'm using is some yew – garden prunings from a couple of years ago. The spindle is turned from a branch about 65mm (2½in) in diameter, while the 125mm (5in) base is cut from a larger blank. You really don't have to spend a fortune on expensive, exotic blanks when there is so much colour and figure in home-grown material, particularly when it is otherwise destined to be firewood. Now follow the step-by-step...



1 Find the centre of the spindle blank. Use a pair of dividers to draw out a maximum diameter circle and mark the centre accordingly



2 Use a soft-faced mallet to knock in the drive centre so the indentations on the wings penetrate deep enough to provide a positive drive

THE TOOLS YOU'LL NEED

- ¼in bowl gouge
- Parting tool
- ¼in spindle gouge
- Skew chisel
- Roughing gouge

You'll also need a long hole boring kit to drill the hole for the lamp flex through the spindle



3 Mount the blank between centres, preferably using a revolving centre in the tailstock to minimize burning. Don't over-tighten everything



4 When you bring up the tool rest, spin the work round by hand a few times to check for clearance before switching on the lathe



7 Rough out about half of the blank and then move the tool rest down to allow you to work off the other end of the workpiece



8 Stop occasionally and move the tool rest in closer to the work. The speed can probably be increased now to about 1200rpm



11 Use the parting tool to mark all the main changes of detail. This gives you an idea of the finished proportions of the overall piece



12 Use the $\frac{3}{16}$ in spindle gouge to round over the bottom bead. Roll it fully onto its side to get into the tight corner by the shoulder



15 Form the bigger sections of detail using the roughing gouge. Keep the bevel rubbing so that you're cutting off clean shavings



16 Cut the deepest coves last to maintain the spindle strength. Make the shoulders the same width, although not necessarily the same diameter



5 Select the correct speed. Roughing out of a piece of this size is normally carried out at about 750rpm until it becomes properly balanced



6 Start the roughing out process using the 1/4in gouge with the handle well down and pointing the flute the way you want to travel



9 Use a pair of callipers and the parting tool to form a 1in diameter pin about 3/4in long on the bottom end of the spindle



10 Slightly undercut the shoulder of the spindle to ensure that it sits down tight onto the base when the parts are assembled



13 Use the same tool for cutting the coves, this time rolling it onto its back as you make a cut down the hill from either side



14 Clean up the top end using the skew chisel on its back edge to make a sliding cut down to the tailstock center



17 Don't be afraid to remove plenty of material. You don't want to leave the finished design looking too thick and heavy



18 Use the long hole boring kit to drill the central hole for the fret down the length of the spindle. Clear the flutes regularly



19 Use the counterbore tool (normally supplied as part of the long hole boring kit) to drill a recess for the lampholder fixing plate



20 Give the finished spindle a thorough sanding. Start with 240 grit abrasive and work down the grades to about 400 grit.



21 Take care with the sanding so you don't round over the detail. Fold the abrasive paper into small pieces and work carefully into the recesses



22 Incise a tiny V groove at each change of detail. This has the effect of sharpening up the angles quite dramatically



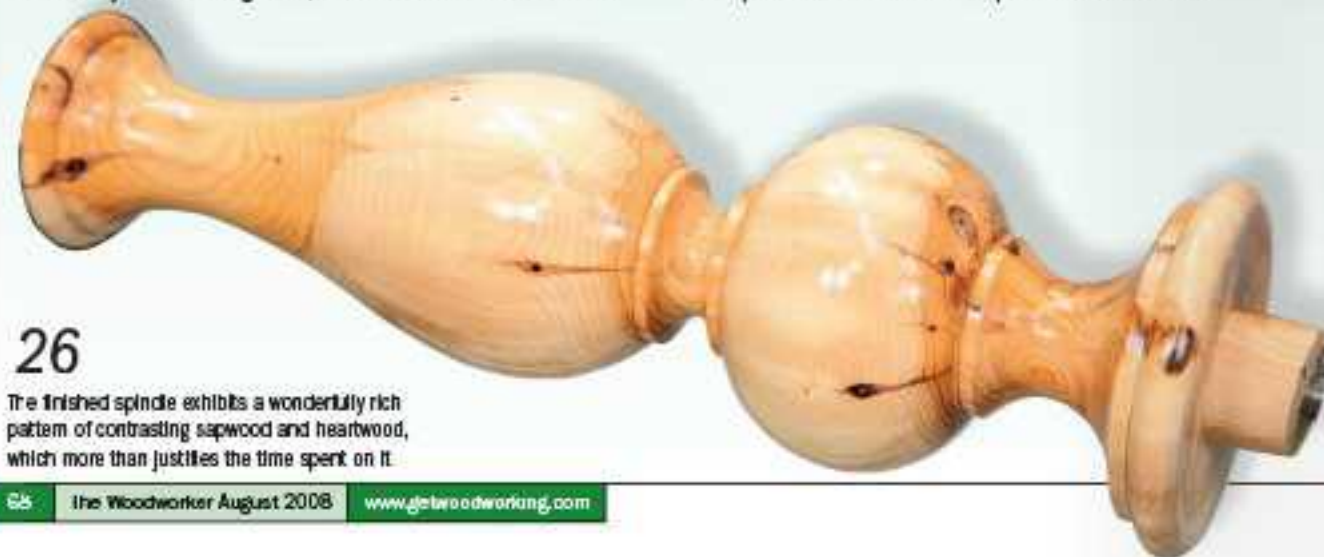
23 Apply a couple of coats of sanding sealer with a cloth with the lathe stationary. Rub it well in, particularly in the end grain areas



24 Apply the polish of your choice. Paste wax applied with a cloth produces a wonderfully natural looking sheen, but will dull down a little over time



25 For a really high gloss, apply a light coat of carnauba wax on top of the paste wax and then buff this quite hard with a soft cloth



26 The finished spindle exhibits a wonderfully rich pattern of contrasting sapwood and heartwood, which more than justifies the time spent on it



27 Hold the base blank for the base on the 2 3/4 in woodscrew chuck screwed into the top of the blank. Start turning at about 1000rpm



28 Use a 3/4 in bowl gouge to trim up the periphery, again keeping the handle down so that the bevel cuts cleanly in a controlled manner



29 Use a parting tool to form the chucking recess and remove the waste. Make the recess slightly hollow, to allow the chuck to seat properly



30 To increase the dovetail grip of the chuck jaws, angle the inside of the recess back slightly using the skew chisel on its side



31 As this is the last time the underside of the base will be accessible, sand and polish it now in the same way as the spindle



32 Reverse the base onto the chuck, expanding the jaws into the recess. Rotate it slightly as you do so to make sure the jaws seat perfectly



33 Drill or turn a hole to take the dowel at the end of the spindle. Fit it and draw around the bottom bead to show how much you can turn away



34 Drill a 6mm hole from the least interesting edge of the blank into the central hole, to form the side entry for the lamp flex



35 Shape the base profile with the 3/4 in bowl gouge. Swing the headstock off a few degrees to give clearance for the tool handle over the lathe bed



36 Sand, seal and polish the finished base as before. Keep the wax well away from the areas that are going to be glued together



Connect the flex to the lampholder terminals and screw it onto the lampholder plate. See page 63 for more wiring details



By CHRIS CHILD

Lighting up time!

Time rules all our lives, but never more so than first thing in the morning and last thing at night. So what could be more useful than a bedside lamp that also keeps track of the passing hours? This bottle-shaped design poses an extra challenge, of being able to manage intermittent cutting as the flattened workplace revolves on the lathe



If you are in the mood to turn something a little different, you might like to try your hand at making this combination clock and lamp stand. The wood I used is seasoned beech, and the clock has a quartz battery movement which you can buy from most woodturning or hobby suppliers.

To make it you'll need a block of wood about 150mm square and 80mm thick. Draw out the approximate shape using a paper template, then mark and punch the centres at each end using the hollow cone centre.

A boring start

After sawing out the shape on the bandsaw, photo 1, mount the workpiece on the lathe between centres, using a hollow cone centre in the tailstock. This centre allows the 5/16in lamp auger to pass through it so you can bore the hole for the electric flex through the centre of the lamp body.

SAFETY FIRST

Because of the nature of the turning work involved in this project, there's always the danger of an unwanted dig-in or the loss of material from the edges of the workpiece. It's therefore essential for safety's sake to wear a face shield while you're shaping, sanding and polishing it.

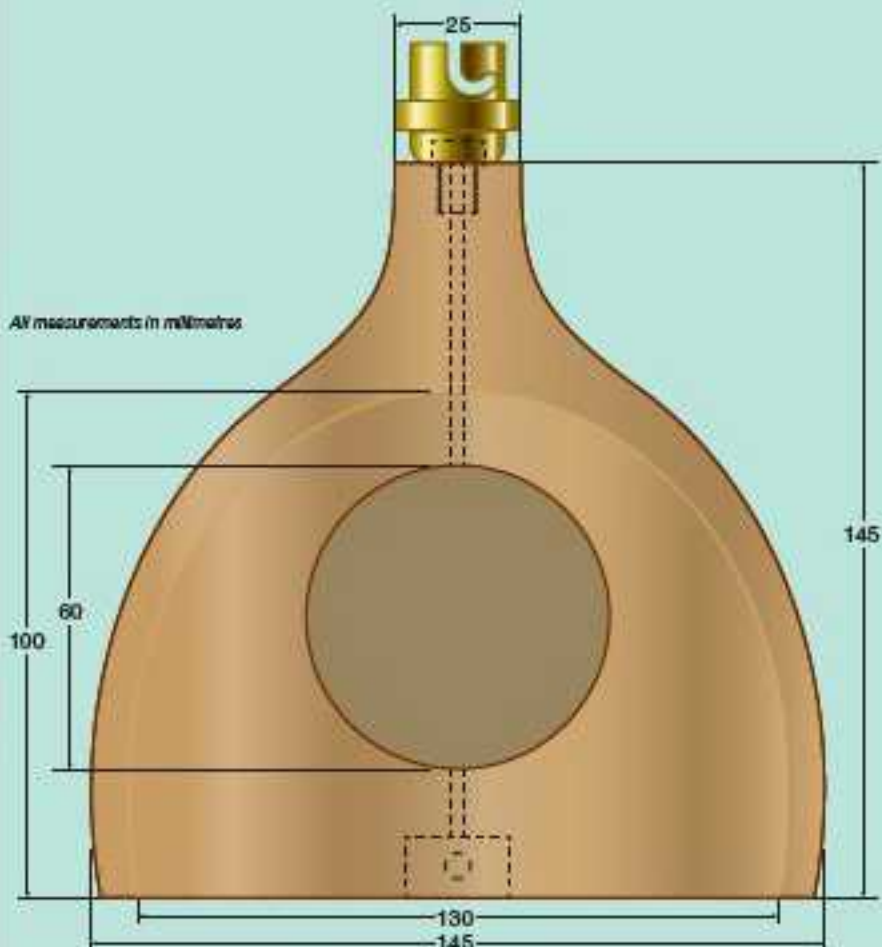
Run the lathe at about 500rpm and feed the auger through the hole in the tailstock about 25mm at a time, photo 2, withdrawing the point each time to clean the flute. You can see in the close-up detail that the hollow centre I use has a large hole running at right angles through the body to allow the waste to escape before it can get drawn into the tailstock barrel where it might clog the auger.

Reverse the drill

Once you have bored half way, turn the work round, remove the drive centre and replace it with a counter-bore. Complete the hole for the flex by holding the work still and winding it into the revolving counter-bore, photo 3. The counter-bore has a central pilot which slides into the hole bored by the auger and centres the workpiece. Bore out the rest of the hole and with luck your holes will meet in the middle. I usually take the workpiece off the lathe at this stage and check that the flex passes all the way through without binding.

Preparing to turn

Before you start shaping the outside of the lamp, remove the hollow centre and replace



1 Use a paper template to mark the lamp shape on the blank, and saw it out on the bandsaw



2 Use a lamp auger and hollow cone centre to bore the hole for the flex through the lamp body.



3 Reverse the workpiece, hold it still by hand and wind it into the revolving counter-bore



4 Start to shape the neck section of the lamp base using a freshly sharpened bowl gouge



5 Slice the top of the lamp base off clean and true using a skew chisel



6 Use a standard parting tool to part off and flatten the lamp base



7 The tricky part! Anchor the tool against the tool rest as you start to shape the curved sections



11 Hollow out the recess with a round-nosed scraper, then clean out the angles with a square scraper



12 Check that the clock fits into the recess, and shave it out a little more if necessary

it with the standard revolving centre. Set the lathe to about 1000rpm and check that the toolrest is not in the way of the corners of the block before switching on.

The first cut

I used a freshly sharpened bowl gouge to shape the sides of the lamp. Its long and strong handle was just what was required to steady the cut while working at a distance from the toolrest support and on an intermittently cutting workpiece.

Hold the gouge slightly on its side, line up the bevel of the gouge with the direction that you wish to cut in, and slice off a thin section with each pass, photo 4. Slowly bring the handle of the tool round in an arc as you make the cut, so that the bevel of

the gouge remains in line with the work surface.

Tapering the neck

Shape the neck of the lamp stand so you trim the top of the lamp clean and true, using a skew chisel, photo 5.

Cut with the longest edge of the chisel held downwards and take three or four thin slices to remove all signs of the drive centre. You can slice all the way down to the revolving centre, as long as you take special care with the final finishing cuts to avoid scoring the side of the revolving centre, or doing damage to the point of the skew.

Use a standard parting tool to part off and flatten the base, photo 6.

Shaping the body

It's a good idea to adopt a left-handed grip on the gouge when you are turning the left-hand half of the lamp body, which means holding the shaft of the gouge in your right hand and the handle in the left, photo 7. This helps to stop you pressing the tool too heavily against the workpiece, which can lead to uneven cutting. Keep the pressure where it's needed, downwards onto the toolrest, anchoring the tool so that it resists any tendency to wobble in and out of the uneven work surface. Finish forming the sides of the lamp base by using finer and finer cuts, photo 8.

Creating the clock recess

To form the recess for the clock mechanism,



Finish forming the sides of the lamp base, working towards the neck using finer and finer cuts



Drill a pilot hole so that the workpiece can be fixed on the lathe using a screw chuck



Flatten off one face of the lamp base with several passes using the bowl gouge



Where the sides are completely round, you can sand them in the usual way with the lathe revolving



Drill the hole at the rear of the lamp stand for the flex to pass through



Stick a small block of wood to a cone chuck using hot glue or two strips of double-sided tape

mark the centre of the face of the lamp and drill a pilot hole so that the work can be held on the lathe using a screw chuck, photo 8.

Turn the lathe speed right down; you'll need to keep your wits about you when you're working on a piece of turned work which has a protruding section flying round ready to rap your knuckles painfully if you lose concentration.

First flatten the face with a series of passes using the bowl gouge, photo 10. To form the recess for the clock mechanism, use a small round-nosed scraper to perform the preliminary hollowing; then change over to a square scraper to clean out the internal angles, photo 11. Check that the clock fits into the recess, photo 12.

Sanding the work

Where the sides are completely round, you can sand them in the usual way with the lathe revolving. Where there is a gap in the rotating surface, you'll need to do some hand sanding with the lathe stationary, photo 13. To polish the sanded surfaces, give the work a coat of soft wax rubbed on with a clean cotton cloth.

Finishing touches

Drill the hole at the rear of the lamp stand for the lamp flex to pass through, photo 14.

Check it meets the central hole you bored in photo 2, and feed the flex into place.

To cover the screw chuck hole, make a circular plate insert by sticking a small block of wood to a cone chuck using a blob of hot glue or two strips of double-sided tape. If using tape, apply strips to both surfaces and squeeze up the assembly in your bench vice to ensure good adhesion, photo 15.

The plate has a dowel formed at the back which locates it in the hole. Sand the plate smooth and then part it off, photo 16. Glue it in place with some two-part epoxy adhesive, photo 17, and the base is finished. All that remains is to screw the lampholder base into the top of the lamp body, connect the flex and plug, and screw the lampholder base to its base.



Shape the block to form the plate insert, sand it smooth and part it off carefully. Inset: Glue the plate insert in place with some two-part epoxy adhesive



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Makita 3601 router

£158



Setting the depth of cut by rotating the collar



Changing the cutter needs two spanners



Fitting the threaded guide bush

When you think of a router, you probably visualise a machine with a motor mounted vertically on a pair of steel columns above a horizontal base plate and supported on springs so it can be plunged into the work and returned to its starting position. However, it wasn't always so, and Makita's latest addition proves the point



TESTED BY ANDY STANDING

The first routers were fixed-base machines where the cutter depth was set before starting work and there was no plunging or return facility. Obviously this meant that the machine was only really suitable for edge moulding, template work and any job that could be done without needing to plunge the router.

These machines are still popular in the USA, and Makita has now decided to add one to their range here. The 3601B is a fairly basic machine. It's not a new design and has been around for some years, though until recently it hasn't been available here.

Design features

The Makita is a squat machine with a large D-shaped handle on one side and a smaller circular handgrip on the other. The motor moves up and down within the base to set the depth of cut. It's adjusted by means of a large plastic collar that engages on a screw thread cut on the motor body. Once the desired setting is reached, the circular handgrip doubles as a locking knob.

The base plate is circular with a thick plastic cover plate and an aperture of 40mm, threaded to take the supplied 25mm guide bush.

A simple side fence is supplied which attaches to the base with a single bar. A roller trimming guide is also included, and this is used either for template work or for edge trimming with a straight cutter.

Changing cutters

A pair of spanners is supplied for changing the cutter as there's no spindle lock. The collet will take 1/2in shanked bits, and two additional sleeves are supplied to suit 1/4in and 3/8in shanks. Access is good and the router will stand upside down, so cutter changes are straightforward.

Dust extraction

Every router these days is fitted with some form of dust extraction. The 3601B is supplied with a length of extraction hose and a small screw. The hose is simply screwed to the baseplate and then points at the cutter. It's simple and reasonably efficient.

In use

This is actually a very pleasant tool to use. Although it's nothing like as versatile as a plunge router, it's extremely good for edge moulding and template work. The large side handle makes it easy to use one-handed, and the low centre of gravity gives it extremely good stability. Its lack of variable speed means that it is only suitable for use with smaller diameter cutters.

SPECIFICATION

POWER	930W
NO-LOAD SPEED	23,000rpm
BASE SIZE	117 x 103mm
COLLET CAPACITY	1/2in
MAX CUTTING DEPTH	30mm
WEIGHT	3.5kg
ACCESSORIES	1/2in cutter ■ Fence ■ Trimming guide ■ Guide bush ■ Extract pipe

VERDICT

I was preparing to hate this router, but actually ended up rather liking it. Although it has somewhat limited applications, it does them very well. It's excellent for edge moulding, being both stable and fast to use. It's also solidly constructed and looks as though it will last a long time, and there are few moving parts to go wrong.

PROS ■ Rugged ■ Simple ■ A good workhorse for long runs of moulding

CONS ■ No soft start ■ Restricted bit size ■ Not as versatile as a plunge router

VALUE FOR MONEY

PERFORMANCE

FURTHER INFORMATION

- Makita
- 01908 211678
- www.makitauk.com



Fitting the bearing-guided edge follower



The basic dust extraction works reasonably well



The ideal tool for long runs of edge moulding

DeWalt DC351 cordless plunge saw

£570



The depth of cut scale



The anti-kickback knob



The 0-47° bevel scale

Portable circular saws used to be fairly crude machines, ideal for building work and rough-cutting sheet materials but no match for either a good table or mitre saw. However, the latest generation of plunge saws has considerably improved in accuracy and versatility. The DeWalt DC351 is a cordless saw powered by a 28V Li-Ion battery, which gives it much the same performance as a mains-powered machine.



TESTED BY ANDY STANDING

A plunge saw is rather more complex than a standard circular saw and the DeWalt has some interesting features. It doesn't use a side fence but is designed to run along a guide rail. These are available separately in a variety of lengths. Before use, the saw must be adjusted to fit the rail exactly to ensure accurate cutting. Two adjusting knobs are fitted to the baseplate to set the correct clearance. Once this is done, the rail is prepared by making a light cut along it; this removes the edge of the rubber side strip so the rail lines up exactly on the edge of the cut line, making it easy to set up and also minimising breakout.

Design

The saw uses a sprung plunging mechanism that allows the blade to drop vertically into the workpiece. The riving knife is also sprung so it's pushed up as the blade makes the initial cut and then moves down into the kerf as the saw is moved forward.

Before starting the cut you need to set the cutting depth, particularly if you're cutting blind – in floorboards, for example. This is done with a sliding stop mounted on the inside edge of the guard.

One particular risk in plunge cutting is the danger of kickback. The DeWalt has a cunning little device fitted that stops it sliding back on the guide rail, so even if the saw does kick it can't move in reverse. The main blade guard completely encloses the blade when it's not actually plunging.

The dust extraction port on the rear is remarkably efficient. When connected to an efficient vacuum you have almost dust-free cutting.

Accessories

Along with the various guide rails there are several other useful accessories to help you get the most from your saw. There's a pair of stops that you can fit to the guide rail; one will hold it at exactly 90° for crosscutting, while the other is adjustable so you can set the angle to suit the job. There's also an adapter to allow you to use your router with the guide rail, and cases are available to protect the guide rails in transit.



The underside showing the anti-kickback device

In use

This is a seriously impressive tool. It's extremely easy and comfortable to use and the performance is first-rate. I used it to cut a square



The plunge release button



The saw on edge for door trimming

SPECIFICATION

BATTERY	28V 2.2Ah Li-Ion	
NO-LOAD SPEED	3500rpm	
BLADE DIAMETER	165mm	
MAX DEPTH OF CUT	at 90°	59mm (55mm with guide rails)
	at 45°	44mm (40mm with guide rails)
WEIGHT	3.5kg	
ACCESSORIES	<ul style="list-style-type: none"> ■ Two batteries ■ 1-hour charger ■ 40-tooth blade ■ Carrying case 	

VERDICT

This is an excellent and extremely well-designed tool. The Li-Ion batteries provide consistent power and all the fittings and controls are faultless. It really is a great performer and a pleasure to use. The guide rail system is also very efficient and stays firmly in position by virtue of its sticky rubber feet, though there are times when it is wise to secure it with clamps.

- PROS**
- Well-designed
 - Excellent battery life
 - Accurate guide rail system
- CONS**
- Only the price

VALUE FOR MONEY

PERFORMANCE

FURTHER INFORMATION

- DeWalt
- 07003 39258
- www.dewalt.co.uk

section out of a kitchen worktop and it did so without hesitation. The saw guard is marked on the outside to show the position of the blade edges so you can cut exactly to a line. But be warned; if you want a neat corner you will have to cut the last couple of inches by hand, or use a jigsaw.

It also has another trick up its sleeve. Turn the saw on its side and it can be used horizontally to trim the bottoms of doors. It uses the floor as a guide and will trim the door leaving a clearance of about 10mm.

Drilling in masonry always makes a terrible mess, with fine dust going everywhere. And isn't it always that you tend to hit an immovable object exactly where you need to drill. The Metabo BHE20 IDR is an SDS-Plus hammer drill with its own integrated dust extraction system and the power to drill through just about anything

TESTED BY ANDY STANDING



Metabo BHE20 IDR impact drill



£203

The drill itself is an SDS-Plus machine with a variable-speed trigger and switchable hammer action. It can also be run in reverse and, with the addition of a suitable chuck, can be used for timber boring and screw driving. Unusually, the motor is mounted vertically in front of the main handle; this gives the machine good balance and a low centre of gravity. A large anti-vibration side handle is supplied which can be fitted on either side of the body. On the top is a large sliding switch to change the rotation and on the left-hand side is the hammer selector.

Dust buster

The dust extraction system is a tiny vacuum with its own powerful motor and fine filtration system. It takes its power via a socket on the base of the drill, and can be removed at the touch of a button when not needed. It has a removable dust box with integrated filter. The nose has a rubber flange which fits neatly around the drill bit and is sprung so it compresses as the bit bores through it.

SPECIFICATION

POWER	450W	
NO-LOAD SPEED	0-1000rpm	
MAX DRILLING CAPACITY	Wood	20mm
	Steel	10mm
	Concrete	20mm
WEIGHT	2.1kg	

VERDICT

This is an attractive and efficient machine. It can drill very neat holes without making any mess, and with the extractor removed it can be used for ordinary drilling and screwdriving. It's extremely well constructed, robust and overall very good value for money.

PROS ■ Well-balanced ■ Excellent dust extraction
CONS ■ Nothing significant

VALUE FOR MONEY
 PERFORMANCE

FURTHER INFORMATION

- Metabo
- 02380 732000
- www.metabo.co.uk

In use

Although the whole assembly looks a little cumbersome, it's actually very comfortable to use. The handles are well designed and the drill is powerful and efficient. The dust extraction is fantastic and you can drill large holes without any dust escaping at all - it's all confined in the removable dust container.



Drilling concrete with the dust extractor in place



The drill with the dust extractor removed



Dismantled extractor showing dust box and filter



TESTED BY BEN PLEWES

The Airshield Pro builds on the success of the original Airshield by combining an effective and lightweight battery-powered respirator with a full-face visor. However, with this latest model is more stringent with the level of fine dust protection. As a result the new Airshield Pro has been approved for use when working with MDF.

Trend Airshield Pro respirator



£233.82

By meeting the new BS EN 12941 standard of protection, Trend's new Airshield Pro, with improved dust protection, is now suitable for a whole host of workshop applications including turning, routing, sawing, machining and sanding of hazardous materials like MDF.

First Impressions

Once you master the technique of putting it on, it's really quite comfortable to wear. The battery pack is placed at the back of the main housing and acts like a counterweight, providing better overall balance than the original Airshield. It's lighter too, which makes a big difference. Vision is another area Trend have improved on. Peripheral vision is excellent – a real boon in workshop situations.

The Airshield in use

Build quality is good, with noise from the integral fan kept to a minimum. The filters inside the helmet housing are replaceable and easy to change.

The optional ear defenders can be attached by clipping them into brackets on the sides of the helmet. Note, you will need to use the set of supplied bracket adapters before the ear defenders can be

SPECIFICATION

AIRFLOW	Fully charged	200 litres/min
	Minimum	160 litres/min
MOTOR SOUND LEVEL		70dB
BATTERY LIFE		8 hours
HEADBAND		520-620mm
WEIGHT		995g

VERDICT

This is a worthy successor to the previous Airshield respirator. With improved performance, reduced weight and a better ergonomic design, it's sure to be a winner because of its ability to protect against hazardous materials such as MDF dust.

- PROS**
- Excellent respiratory protection
 - Long battery life
 - Good peripheral vision
- CONS**
- Ear protection could be better

VALUE FOR MONEY

PERFORMANCE

FURTHER INFORMATION

- Trend Machinery
- 01923 224657
- www.trend-uk.com

attached. Soundproofing is then adequate, but not as good as a set of standard ear defenders. If noise levels are going to be high, I would suggest acquiring a good set of earplugs instead.

Battery life is improved to eight hours – a full day in the workshop, assuming you don't work evenings too! It's straightforward to swap batteries over, so there's no problem if you feel the need to buy a second battery pack for extended use.



Filters clip into the top of the helmet housing at each side of the battery compartment



This tube fits over the air port to show how much airflow is getting through



The optional ear defenders clip to the helmet sides with small brackets

Forge Steel Clamp 'n' Cut

£24.99

This clever clamp is part of the ever-expanding Forge Steel brand from Screwfix. It's an aluminium casting with soft rubber-lined jaws, and clamps across a board to give a straight-edge fence for routing and sawing. There's a fixed clamp at one end and a swivelling one at the other. But the fixed head against one edge of your board and slide the moving head up against the other. When you exert pressure by operating the cam lever on the fixed end,

the moving head locks tight and the board is securely clamped.

These tools are designed to work at angles up to 22.5° off square. If you want an accurate fence at right angles to the edge, you need to set it up carefully using a try square. You could also use it simply as a clamp for edge-gluing boards. Though you might not get as much clamping force as with other types of clamp, I found it pretty effective on my test outing. It's a useful item to have around.

VERDICT

PROS ■ A versatile and effective cutting guide

CONS ■ Care needed to set angles accurately

VALUE FOR MONEY

PERFORMANCE

FURTHER INFORMATION

- Screwfix
- 0500 414141
- www.screwfix.com



£5.29



Practice handling it for control on detailed work

Axminster file grip

Sometimes holding the end of a file or a rasp with your free hand can be awkward when you're shaping a piece of timber or metal, especially if you are using a coarse rasp. The teeth can dig in and abrade your fingers more than the workplace. The Axminster range includes a new aid to fix this problem.

It's an add-on handle that simple screws onto the end of the file blade. There's a hardwood handle mounted on a screw shaft with a rubber coated clamping pad. Slip the tip of the file into the cast stirrup, screw it up tightly, and you're up and running.

It does its job well, and if you do a lot of filing and coarse shaping with a rasp then this a useful addition to the toolbox. Because your contact with the end of the rasp is higher than the rasp blade itself, you might find that you need a bit of practice to get a precise feel on fine trimming, but for rapid stock removal you can get going straight away.

VERDICT

PROS ■ Prevents skin abrasion

CONS ■ Needs a little practice on fine work

VALUE FOR MONEY

PERFORMANCE

FURTHER INFORMATION

- Axminster Power Tool Centre
- 0800 371822
- www.axminster.co.uk



The swivel head allows angled clamping



Use a square for accurate 90° cuts



£4.91

Faithfull self-loading trimming knife

This offering from the Faithfull range holds a magazine of five blades and automatically re-loads when you remove a blunt one. To remove a blade, simply extend it, then depress the front button and pull the blade out. When you retract the slide lever, it picks up a new blade from the spring-loaded magazine. The handle feels a bit chunky in the hand, not quite as comfortable as some, but the slide mechanism works effectively. It comes with five blades in the magazine, and another five spares.

I must have had a rogue sample as the small stub holding the bronze spring pressing on the blades broke off. But, surprisingly, when the cover was closed, the action was completely unaffected. Blade sliding was still smooth and the auto feed operated perfectly. The magazine cover holds the spring firmly in place when it's closed. Despite this flaw in my sample, I have scored it as if it hadn't happened.



The magazine holds five blades

VERDICT

PROS ■ Easy self-loading action
CONS ■ My sample had a defective anchor for the magazine spring

VALUE FOR MONEY 
PERFORMANCE 

FURTHER INFORMATION

■ Toolbank
■ 0800 068 6238
■ www.toolbank.co.uk

Trend M3 3-D

Trend doesn't just do routers. It also offers a range of other interesting tools, of which this is one. It's the world's first three-dimensional try square. Its main theme is to allow you to square round adjacent faces of a workpiece in a single action. The stock has wings set dead in-line with the blade and at right angles to its face. You can square round with a single action of your pencil, without any misalignment at the corner.

The tool includes a short bevel gauge, which is clamped tightly by an inset cam lever. When not in use, this hides away inside the stock, but can be easily swung out when needed because it has an accessible ridged end that you rotate with your thumbnail.

Finally, there's a pencil and scriber holder that can be locked at any position along the blade. The scriber end is a steel rod that takes the tips of a snap-off knife blade, held with an Allen key. The whole assembly is adjustable, so that if it ever goes out of square you can re-set it back to perfection.

The square is well made, and the double-sided marking worked well enough, but there's one downside with this tool. You can't work on thin stock laid flat on the workbench, because the wings won't let the square sit down on the timber. In my mind, this is a significant drawback, because much of my work with a square involves exactly this sort of job – for example, squaring round the shoulders of tenons. So to my mind, sticking to a conventional try square would be the best way forward... at a fraction of the price

£38.77



VERDICT

PROS ■ Well made and versatile
CONS ■ Awkward to use flat on the bench

VALUE FOR MONEY 
PERFORMANCE 

FURTHER INFORMATION

■ Trend Machinery
■ 01923 224657
■ www.trendmachinery.co.uk



The scriber holder takes knife blades



The inset bevel gauge and cam lever

Record PT 300 planer thicknesser



Depth of cut is by a lever with a clear scale - excellent



The fence, while crude in appearance, is rigid and performs well



Not having to remove the fence for thicknessing is a real benefit

Recognizing a distinct gap in their range, and indeed in the market, Record Power has introduced the PT 300 planer thicknesser. This machine is aimed at the more ambitious home user who wants a bit more capacity than the ubiquitous 10 x 6 models, but cannot really justify the expense of moving up to the semi-industrial price range that this normally entails



TESTED BY ALAN HOLTHAM

The PT 300 with its capacity of 12" x 8" has many features normally only found on heavy-duty machines, but its physical size and price make it an easily justifiable purchase for a small workshop. With cast iron tables on both the planer and thicknesser the machine is built around a heavy duty frame that ensures rigidity and stability.

Planing

The maximum depth of cut is 3mm when you are surfacing, and full width cuts at this depth are no problem with the powerful 3hp motor. Depth of cut is achieved using a lever arrangement.

The fence is much more substantial than you usually get at this price level, with an excellent heavy extrusion fitted to a large cast iron mount. Although a bit crude in appearance, the fence is surprisingly rigid and performs very well. It can be tilted up to 45° but the process is a bit fiddly, particularly when you're trying to reset it, although there is an adjustable stop to return it to the 90° position.

Thicknessing

To change to thicknessing hinge up the outfeed table, which comes to rest vertically saving valuable workshop space. Not having to remove the fence to convert to thicknessing saves much time.

The large diameter cutter block has three knives and spins at 5300rpm for increased feed speed and good surface finish.

Power feed on the thicknesser is provided by a steel infeed roller but the outfeed one is rubber coated to protect the newly planed surface. Feed speed is a nifty 8m per minute and you can take up to a 4mm deep cut, the thickness being set with the hand wheel.

The main cost saving has come from incorporating the rise and fall mechanism from the PT 260, using a chain drive around threaded rods in each corner of the thicknessing table. Although this works, the mechanism is stiff and jerky and does not have that silky smooth feel that you get with a central rise and fall column.

In Use

You will need to install a dedicated 16amp supply for this machine, it will not start on a 13amp fuse, but this is the payoff for having a big motor and ample power.

An integral dust hood serves both planing and thicknessing functions, it just pivots over, although you will have to lower the thicknessing table substantially to allow the hood to swing under to the surfacing position. Although rather crude with a couple of nuts on a threaded bar serving as the lock for the hood this actually provided one of the most effective extraction solutions I have used.

SPECIFICATION

MAX DEPTH OF CUT SURFACING	3mm
MAX DEPTH OF CUT THICKENING	4mm
MAX PLANING WIDTH	310mm
MAX THICKENING DEPTH	200mm
CUTTERBLOCK SPEED	5300rpm
3 KNIFE CUTTERBLOCK	
THICKNESSER FEED SPEED	8m min
MOTOR	3hp single phase
SIZE	900 x 1250 x 1020mm
WEIGHT	175kg

VERDICT

For a machine of this capacity and performance, and for where it sits in the market as regards price, the PT300 is hard to fault. It fulfils the ambition of allowing the home user access to a higher capacity machine at a price not too dissimilar to many of the entry-level machines.

- PROS** ■ Lever for rise and fall on the surfacing table ■ Fence can be left in position when resetting for thicknessing
- CONS** ■ Rather crude construction of the fence mounting and the table finish

VALUE FOR MONEY ■■■■■
PERFORMANCE ■■■■■

FURTHER INFORMATION

- Record Power
- 0870 7701777
- www.recordpower.co.uk

In use, the surfacer and fence are faultless although the tables require regular attention with lubricating wax to make the timber slide easily.

The thicknesser function is equally impressive and at 8m per minute the timber fair whistles through, but the three-knife block still leaves an excellent finish.



A three knife cutting block spun at 5300rpm makes for fast and clean cutting.



The table is not the highly polished type we expect from Record - it'll need a wax



The dust extractor unit is one of the most effective we've tested on a planer thicknesser

Tormek TNT 708 Woodturner's Kit



£154.15
(KIT only)



Start by setting the tool projection using the TTS-100



Set the distance of the support from the grindstone



Slide the jig and roll the tool from side to side

For over 35 years I've sharpened my turning tools on a standard dry grinder. I've also got a Tormek wet grinding system and it's superb for sharpening chisels and plane irons. I've never been keen on it for sharpening turning tools, though, because of the time taken to set up the necessary jigs, and also the issue of uneven wear on the stone. But that's all set to change.



TESTED BY ALAN HOLTHAM

Tormek's claims for the TNT708 should see any reservations about time and jigs overcome. The kit provides all the extra jigs and accessories needed, and is supplied in a permanent storage box. The key to the whole process is the TTS-100 tool setter, which allows you to set the correct tool angle in seconds. This is used in conjunction with the SVD-185 jig, and the whole process is explained in great detail on the enclosed DVD.

The challenge

For me, the real test was to sharpen a standard bowl turning gouge with the side wings ground back in the classic fingernail profile. To do this, you first set the SVD-185 with the correct amount of offset, depending how far back you want the wings to be ground. Then you use the TTS-100 to set the tool projection and the distance of the universal support from the grindstone.

The process

Sharpening simply involves sliding the jig onto the universal support and rolling the tool from side to side, moving it across the width of the wheel as you do so to even out any wear. The initial grinding to reform the correct profile is not particularly fast, but a consistent bevel soon starts to develop. It took me eight minutes of gentle grinding to restore a perfectly even fingernail profile with a constant bevel angle all the way round, but this is a one-off operation. Once the tool is shaped, you then re-sharpen it by removing a minimal amount of steel, just touching up the edge as required.

The process of picking up the tool, fitting it in the jig, setting the universal support and making several passes across the stone took precisely 65 seconds – impressive, and far faster than my expectations.

Finishing touches

To perfect the reshaped gouge even further, the next stage is to grade the grindstone, which means reducing its cutting strength from 200 grit to 1000 grit using the stone grader. In normal circumstances a quick wipe over the stone at 1000 grit is all you need to touch up a tired edge, so you can see there is very little actual wear going on.

Final polishing is achieved on the leather honing wheel, again using the TTS-100 to set the universal support position, and then honing the edge with the tool still held in the SVD-185 jig. Finally, the inside flute can be polished on the profiled leather honing wheel supplied with the kit, and you end up with an immaculate polished edge of superb quality.



A dry-ground blade looks ragged



Tormek-ground edge is immaculate

KIT CONTENTS

- SVD-185 gouge and turning cutter jig
- SVS-50 multi jig
- TTS-100 turning tool setter
- SVD-110 tool rest with Torlock
- LA-120 profiled leather turning wheel
- MH-380 machine cover
- TNT-300 instruction box with DVD

VERDICT

I have yet to find anything that cannot be sharpened on the Tormek. The honed edge is incredibly fine, and coupled to this dramatic improvement in edge quality is the not insignificant fact that the tools will last far longer, as the sharpening process is so much less aggressive.

I am now a total convert to the wet grinding system. It really is Touch and Turn, but you touch far less often and turn far more!

- PROS** ■ Quick set-up ■ Accurate repeatable results
 ■ Prolonged tool life
- CONS** ■ The price of perfection!

VALUE FOR MONEY



PERFORMANCE



FURTHER INFORMATION

- Brimarc
- 0845 330 9100
- www.brimarc.com



Polish the edge on the flat leather honing wheel



Finish the inside of the flute on the profiled wheel



The pen and set of labels (included) mean you can label each tool with its sharpening 'recipe'

Belt, bobbin and combination sanders

MAKE & MODEL		FEATURES					
BELT SANDERS							
		Power (watts)	Sanding plate size (mm)	Belt length (mm)	Weight (kg)	Price	
Draper	PT75	850	130 x 75	533	4	£32.75	
Erbauer	ERB907	900	130 x 75	457	3.5	£39.99	
Black & Decker	KA85EK	600	145 x 75	457	3.1	£50	
Bosch	PBS7AE	600	130 x 75	457	2.4	£57	
Draper	BS875K	800	140 x 75	533	3.3	£72.26	
Makita	9911	650	140 x 75	457	2.6	£80	
Ryobi	EB99576V	950	130 x 75	533	5	£89.99	
De Walt	DW433	800	140 x 75	533	5.6	£179.95	
Metabo	BAE1075	1000	130 x 75	533	3.8	£184.95	
Bosch	GBS75AE	750	160 x 75	533	3.4	£199	
BOBBIN SANDERS							
		Power (watts)	Spindle stroke (mm)	Table size (mm)	Bobbins supplied (mm)	Weight (kg)	Price
SIP	01482	370	24	370 x 370	50, 38, 22	33	£159.44
Draper	BB8370	370	24	370 x 370	50, 38, 22	33	£172
Jet	JBO65	370	22	370 x 370	50, 38, 16, 12, 6	35	£299
COMBINATION SANDERS							
		Power (watts)	Disc diameter (mm)	Belt width (mm)	Table size (mm)	Weight (kg)	Price
Record	BDS150	400	152	101	225 x 159	17	£86.67
Draper	BDS368	400	200	100	266 x 159	20	£89.95
Charmwood	W407	375	150	101	225 x 159	17	£89.99
SIP	01362	375	150	101	225 x 159	17	£90.46
Rexon	BD46A	450	152	101	225 x 159	25	£99.99
Arminator	AS 408	400	203	101	225 x 150	18	£119.94

Looking for new kit for your workshop? Our reference section brings together details of all the woodworking machinery we've tested in recent years that's still available today. This month's updated checklist looks at belt, bobbin and combination sanders, with a total of 19 tools featured. It includes: ■ a specification summary ■ the current price ■ manufacturer contact details, including website addresses ■ our verdict on the machine ■ the issue of The Woodworker (or in a few cases, our sister publication Practical Woodworking) in which we originally reviewed it, so you can re-read the full test report if you wish. Next month we'll be updating our checklist on biscuit joiners.

FURTHER INFO		VERDICT	
Contact	In our opinion	Rating (out of 5)	Tested
Draper 02390 266365 www.draper.co.uk	Basic, budget-priced machine aimed at the home user	3%	July 2006
Screwfix Direct 0500 414141 www.screwfix.com	Good quality budget-priced machine supplied with sanding frame. Well made and a good performer	4	July 2006
Black & Decker 01763 511234 www.blackanddecker.co.uk	Basic machine, though supplied with sanding frame. Ideal for home user	3%	July 2006
Bosch 01995 899743 www.boschpowertools.co.uk	Attractive and sleek machine with Micro Filter dust collection. Supplied with inversion stand. Good performer	4%	July 2006
Draper 02390 266365 www.draper.co.uk	Slightly cumbersome sander with adjustable front handle and variable speed. Poor dust extraction, but comfortable to use	4	Aug 2007
Makita 01908 211678 www.makitauk.com	Lightweight, compact machine, ideal for finishing work	4	July 2006
Ryobi 01629 894400 www.ryobipower.co.uk	Substantial and sturdy machine supplied with sanding frame and inversion clamps. Good performer at a realistic price	4	July 2006
DeWalt 0700 339258 www.dewalt.co.uk	Excellent pro machine. Very rugged build and powerful performance. Useful accessories available	4%	July 2006
Metabo 02390 792000 www.metabo.co.uk	Powerful heavyweight machine for pro use. Versatile and capable of handling any job	4	July 2006
Bosch 01995 899743 www.boschpowertools.co.uk	A good quality pro machine that combines performance with versatility. Supplied with inversion stand and fence. Good for benchtop work	4	July 2006
Contact	In our opinion	Rating (out of 5)	Tested
SIP 01509 500369 www.sip-group.com	Rugged machine at a reasonable price. Similar to the Draper. Straightforward design. Good performance	4	Feb 2007
Draper 02390 266365 www.draper.co.uk	Solid machine supplied with steel floorstand. Similar to the SIP. A good reliable machine	4	Feb 2007
Axminster 0900 371922 www.axminster.co.uk	Professional bobbin sander with full range of accessories designed for sustained use. A reliable performer	4%	Feb 2007
Contact	In our opinion	Rating (out of 5)	Tested
Record 0970 7701777 www.recordpower.co.uk	The Record appears similar to the SIP and the Chamwood though has in fact been modified with stronger table brackets for more robust operation. Supplied with a 5-year guarantee	4	Sept 2007
Draper 02390 266365 www.draper.co.uk	Excellent combination machine with large sanding disc and useful vertical fence. Versatile and with effective dust extraction	4%	Sept 2007
Chamwood 01530 516926 www.chamwood.net	Straightforward machine similar to the Record and SIP. Easy to use and a good performer	4	Sept 2007
SIP 01509 500369 www.sip-group.com	Good value machine, similar to both the Chamwood and Record, but with the advantage of a tilting rear fence. Good performer	4%	Sept 2007
Raxon 01709 876611 www.raxon.co.uk	Smooth-running heavyweight machine with good performance. Rather fiddly to adjust and fitted with small sanding disc	3%	Sept 2007
Axminster 0900 371922 www.axminster.co.uk	Smooth-running machine with large disc and ribbed alloy table. Good performer, though some of the fittings are a little flimsy	4	Sept 2007

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The Lie-Nielsen range of tools is truly fascinating, particularly for the craftsman requiring the quality associated with tools manufactured in the late 19th century. Many of the tools are recreations of long discontinued Stanley models – often collectors items today – and combine the benefits of modern technology with good old fashioned hand finishing.

The sheer weight of the planes and the feel of polished bronze denotes the quality of these tools – making them worthy of a place in every craftsman's workshop. All planes are now supplied with the new A-2 cryogenically treated blades – involving a 20-hour soak at -320°F followed by a second temper to produce the ultimate edge.

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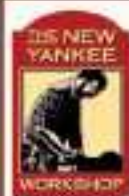
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SEPTEMBER 2007
PROJECTS: Writing slope, TV cabinet, MDF bed base
FEATURES: Planemaking part 6, Getting the best from your scroll saw, Air filter silencer
TURNING: Pearwood scoop, Table lamp, Unusual chunks
TESTS: Giant test: Combination sanders, Rage 3 metre saw, Jet bench thicknesser, Festool circular saw, Woodstar router table, Draper combi drill driver, Dakota mitre square, Built chisel set, Amistar punch set, Forge Steel laser, Pick-up tool set, Full size Router Ease guide, Six of the best: Extension tools



OCTOBER 2007
PROJECTS: Oak display cabinet, Fluted table, Chest of drawers restoration
FEATURES: Router jigs, Planemaking part 7, Screws
TURNING: Off-centre checks, Rokunda moneybox, Thimble
TESTS: Giant test: Wheelstone grinders, Hanner bandsaw, Sidegrinder, Draper jigsaw, Amistar storage, Ryobi One-clip driver, Irwin wood bits, Skill sander, Dakota polishing kit, Festool TSS5 blades, Amistar and SIP dust extractors, Bosch router, SIP bandsaw, Six of the best: Mallets
MACHINERY CHECKLIST



AUTUMN SPECIAL 2007
PROJECTS: Veneered table, Inlaid carving, Mantel shelf, Kids' paint windows
FEATURES: Covering, Planemaking part 8, Thicknesser jig
TURNING: Beech footstool, Burr oak bowl, Sanding on the table, Flutes and grooves
TESTS: Giant test: Joiners, Worn circular saw, Anarit rebate plane, Bosch sander, Ryobi One-clip, Irwin wood bits, Forge Steel planes, Hitachi circular saw, Draper brushes, Scheppach table saw, Makita bench thicknesser, Six of the best: Countertops
MACHINERY CHECKLIST



NOVEMBER 2007
PROJECTS: Mahogany clock, Oak coffee table
FEATURES: Designing a router table, Planemaking part 9
TURNING: Two clocks, Colet chucking techniques
TESTS: Giant test - Circular saws, SIP spindle moulder, Tornek sharpening system, Hitachi laminate trimmer, Skill and Draper saws, Black & Decker drill, Dremel Multibloc, Forge Steel block plane, Inca gouges, Metabo planer thicknesser, Scheppach scroll saw, Erbauer combi NT, Six of the best: G-clamps
MACHINERY CHECKLIST



DECEMBER 2007
PROJECTS: Oak double bed, Model train, Pencil cases
FEATURES: Puzzle heaven, Building a router table, Anatomy of a drawer, Plug cutters, Weekend groover
TURNING: Wine tap and spigot, Sawd, Polishing on the table
TESTS: Giant test - Cordless drills, Faithful wheelstone, Draper heating guide, Hitachi cordless circular saw, Forge Steel tool sets, Draper planer, Amistar Odd-Jobs, Dremel Versip, Leigh dovetailing jig, SIP workbench, Trend router
Six of the best: block planes
MACHINERY CHECKLIST



JANUARY 2008
PROJECTS: Writing slope, Miniature chest
FEATURES: The Harynaker, Router table, Drawer details
TURNING: Rugby ball trophy, Mug tree, Rolling on the lathe
TESTS: Giant test - Bench mortisers, Makita planer, Dekota mallet, Amistar sanding pens, Draper bracket, Irwin rollersaw, Erbauer combi drill, Faithful sash cramps, Worn drill, Woodstar and DeWalt table saws, Black & Decker Autoselect tools, JCB router, Veritas apron plane, Six of the best: Ear defenders
MACHINERY CHECKLIST



FEBRUARY 2008
PROJECTS: Traditional box, Redstar cover, Picture framing, Hall mirror
FEATURES: Garden room, beach makeover, Glass 1, Carving with the router, Woodworkers on the web
TURNING: Hourglass, Textured bowl, Choosing the right chisel
TESTS: Giant test - Budget jigsaws, Site power tools, Faithful spokeshaves, Draper hand drill, Amistar stones, Behlen stains, Railbands magnetiser, Onelda Dust Deputy, Precision belt sander, Record table saw, Trend push block, Veritas jack plate, Six of the best: Toolbox saws
MACHINERY CHECKLIST



MARCH 2008
PROJECTS: Pine dining table, Oak garden seat, Cold frame, Octagonal box
FEATURES: Garden room door, Table restoration, Glass 2, Cromwellian chair
TURNING: New series: Turning Basics, Mitercracker, Mirror
TESTS: Giant test - Router tables, Dekota T-track bolt kit, Hansen pencil sharpener, Crown plane handles, Makita cordless jigsaw, Behlen Master pickling stain, Erbauer drill driver, Veritas shoulder plane, Draper tool bag, Scheppach bandsaw, Woodstar router, Six of the best: Dust masks
MACHINERY CHECKLIST



APRIL 2008
PROJECTS: Pine dining chairs, Weather station, Garden seat
FEATURES: Joints without joints, Preparing stock timber, Cutting boards
TURNING: New series: Turning Basics 2, Gavel, Staircase finials, Competition winners
TESTS: Three orbital sanders, Woodstar dust extractor, Metabo drill, Behlen DVD, Japanese chisels, Draper multi-tool, Faithful callipers, Hermes sanding pad, Weber square, DeWalt belt sander, Einhell bench sander, Record mild lathe, Festool plunge saw, AEG jumbo pack, Joint-bite bracket and track
MACHINERY CHECKLIST



MAY 2008
PROJECTS: Flat-pack shaker-style wardrobe, Piano stool, Music stand
FEATURES: Woodworker of the Year winners, Bathroom built-in, Joining without joints 2, Preparing stock timber, Making finger joints
TURNING: New series: Turning Basics 3, Pesto and mortar, Chessboard and knife
TESTS: Circular and bench planes, Makita jigsaw, Bosch Multi-tool, Draper power planer, Screw with countertop, Amistar roller, SIP table, DeWalt thicknesser, Veritas honing guide, SIP planer thicknesser, Making gauges
MACHINERY CHECKLIST



JUNE 2008
PROJECTS: Ash chest of drawers, Gift box, Ullie coffee table, Chopping board, Picture easel, Bookshelves
WORKSHOP: Joining without joints 3, Carving beads and reeds, Making finger joints
TURNING: Turning Basics 4, Turning fruit, Hors d'oeuvres disc
TESTS: Kreg K1, Makita drill, Faithful magnetic head hammer, Spiberg's GSH hold-fast, Einhell drill, Amistar hobby case, Dekota chisels, Draper multi tool, Woodstar thicknesser, Record bandsaw, Worn router, Scheppach mortiser, ITS cutter sets
MACHINERY CHECKLIST



JULY 2008
PROJECTS: Oak drawers, Oak fireplace surround, child's chair
WORKSHOP: Hand vs Machine - mortising, joining web joints - Miller Dowel
TURNING: Turning basics 5 - wood selection, light pulps, potpourri bowl
TESTS: Festool OF2200 router, Einhell compressor & vacuum, DeWalt cordless drill, Bosch GTM12 combination saw, Chamwood W583 planer thicknesser, Tiza wet & dry grader, Trend cutter and collet case, Amistar rule stop, Veritas surface clamp, Faithful double ended scribe, Forge Steel carpenter's mallet
MACHINERY UPDATE

MARKETPLACE

Our **FREE** classified advertisement service

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or email a
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FOR SALE

Shopenith MkV woodworking machine, with a range of accessories; offers. **01654 702434 (Mid Wales)**

Strotton Foldaway woodcarving bench, tilting vice, 18 chisels, 2 mallets, rotary drill & various burs plus a variety of sharpening tools; £125 ono. **01344 845899 (Surrey)**

Form bandsaw, depth of cut 90mm, throat width 200mm, excellent condition, buyer collects; £45. **01823 860542 (Somerset)**

ELU 551 combination router table, can also be used as a saw bench; £50. **01444 246274 (West Sussex)**

Ten years of The Woodworker magazines, 1996-2005; FREE. **01273 738338 (Sussex)**

Woodworking magazines, about 200 assorted, to be collected; FREE. **0208 898 5258 (Middlesex)**

Record DWL24X, starter lathe and stand for beginners; OFFERS. **01142 499658**

Scrollsaw / fretsaw, Axminster MS24 two-speed, 24" throat; £100. **01462 481319 (N Herts)**



Worktable, height adjustable (indexed), top (34"x50") lifts off, strong metal frame folds flat for storage, excellent condition; £50. **01420 22548 (Hampshire)**

Disc belt sander, Jet JSG-96, as seen in the Axminster catalogue; £50. **01474 833134 (Kent)**

Complete workshop for sale, circular saw with chop saw attachment, Mortiser & chisels, Record multiplane wet & dry grinder, mitre saw, jigsaw, clamps, moulding planes; OFFERS, buyer collects. **0208 881 1243 (London)**

SIP 10" table saw, new sliding carriage, VGC; new £900 w/ll accept £475. **07880 620500 (S Yorkshire)**

Shopenith 6"x48" belt sander, c/w mitre guage and spare belts, storage stand and 1/2hp motor; £100 ono. **01275 842256 (Bristol)**

Myford PR11 planer, cast iron, fence swivels 45-degrees either way, stopped chamfers, rebates; offers. **08127 704481 (Staffs)**

Electra Beckum slide action compound mitre saw (KSG301). Floor stand. Approx 11" cut. DIY use only. Excellent condition; £130. **01635 863171 (Berks)**

Lurem 10"x7" planer thicknesser, on stand, 1-phase, good condition; £375. Table saw, 8" blade, ride/fall rp/mitre fence, 1-phase, good quality; £125. **01684 592968 (Worce)**

Kitty band saw, DeWalt planer thicknesser, Saw King bench. Poor health forces sale; sensible offers. **01239 682821 (Cardigan)**

Tyne Cub 48" lathe, four-speed, plus 12 chisels; £200. **01245 251205 (Essex)**

Wood Rat, little used; £250. **01993 772887 (Oxon)**

Lathe; £250. 2 x multi-chucks; £38 each. Band saw; £125. Pillar drill; £30. **01422 202273 (W Yorks)**

Kitty K5 combination woodworker, space required; £400. Draper fretsaw model FS16A (18"); £30 no offers. **01865 864891 (Oxford)**

Trend router table, stand; £50. **01622 630213 (Kent)**

Drill Doctor Model 750 drill bit sharpener 1/8 to 3/8 in. 110v

unused, unwanted gift; £70 ono. **01480 890210 (Hants)**

Air press, A1 condition in box with 8x4 bag; £375 ono. **01784 251473 or 07886 201038 (Mddx)**

Axminster lathe, variable speed, 1hp, 900mm between centres. 15 assorted chisels. Heap of turning wood; £400 ono. **01367 832505 (Wils)**

Roxon saw, 2-speed 216mm sliding compound mitre saw with laser cutting guide, new in original packaging; £99. **01455 553807 (Leics)**

Floor-standing mortiser with chisels; £350. Planer/thicknesser £150; Circular saw; £65. Other items also available. Can deliver within 20 miles of Harwich. **01255 551158 (Essex)**

WANTED

16" diameter grindstone, for horizontal Viceroy 16" shapedge wetstone tool grinder. **01284 704848 (Suffolk)**

Hardwood, quantities in excess of 5cu ft - ash, mahogany, walnut, oak, etc. No offers. **07773 283787 (Lancs)**

Wadkin bobbin sander, or Axminster Big Bob floor standing. **01978 362755 (Chyvd)**

USE THIS FORM TO BOOK YOUR FREE AD

Woodworker
MARKETPLACE

This space is available only to private individuals wishing to buy or sell woodworking machinery and tools. The maximum value of any item for sale must not exceed £500. For items over £500, please ring 01689 890252. Each coupon is valid for one free insertion in the next available issue. **MAXIMUM NUMBER OF WORDS 20.** The publisher accepts no responsibility for errors or omissions in this section.

PLEASE GIVE GEOGRAPHICAL LOCATION (ie. BEDS, BUCKS ETC.)

Name _____

Address _____

Postcode _____ Daytime tel no. _____

Signature _____

Please publish this advertisement in the next available edition of The Woodworker. I am a private advertiser and have no trade connections.

PLEASE TICK: FOR SALE WANTED

My advertisement reads as follows (max. 20 words):

Please write your advertisement clearly in **BLOCK CAPITALS** then send it to: The Woodworker Marketplace, Magica Publishing Ltd, Berwick House, 8-10 Knoll Rise, Orpington, Kent BR6 0EL. Or email your free ad to: thewoodworker@magicalia.com

Send/email a photograph of your item and we'll include it with your ad for FREE.

A blast from the past...

Our monthly trawl through the old Woodworker tea chests unearths jewels from the 1920s and 1970s – two decades with their own very distinctive characters

AUGUST 1923

Five years after The Great War, The Woodworker was very much back on its feet. Supplies of wood were once again plentiful, and the 32-page August 1923 issue was packed to the gunwales with no fewer than twelve projects to make, plus the usual technical features on subjects as diverse as picture framing and dovetailing drawers.

There was also news of the recent discovery in Hoklanga, New Zealand, of a huge specimen of the kauri pine, with a trunk that measured 75ft high to the first branches and 22ft in diameter. The editor computed that it contained over 195,000ft of timber, noted its estimated age of 2000 years and wished it well for its next millennium. In fact it still stands, 'Tane Mahuta' (Lord of the Forest), the largest of its type in the world, has become a Kiwi icon.

The issue opened with a highly traditional oak hall cupboard, then went on to feature two elegant pieces – a china cabinet in walnut and a circular plant pedestal – that foresaw the Art Deco period in their elegant designs. In complete contrast was a plan for a 'portable garage' – meaning one that could be built in a workshop and then transported to its site for erection. It was notable for its insight into timber prices of the day – 3 x 3in sawn white deal at 2 1/2d (1p) per linear foot, and 6 x 1in T&G boarding at 13/6 (67p) per 100 feet. Oh happy days!

The magazine also featured an early forerunner of today's Mail Order Protection Scheme (MOPS). Readers were advised to order goods from advertisers via the magazine rather than direct, by sending in their remittance (plus a shilling for the handling). The magazine then undertook to place the order, and to forward payment to the advertiser only when the reader advised that the goods had arrived. Someone clearly hadn't been paying bail...



AUGUST 1973

Despite the DIY revolution, the 1970s weren't apparently very kind to The Woodworker. The magazine (oddly subtitled Wood: Plastics) ran to a paltry 28 pages, plus an 8-page wrap-around advertisement section, and retailed at 15p. At least it had a four-colour cover.

Inside there were just four projects – a typically 1970s telephone table and seat, a strangely shaped wall clock case, a knock-down display unit and bookstand, and (wait for it!) part three of a long-drawn-out series on making a single-manual harpsichord! The featured timber of the month was parana pine, and The Story of the Saw had just started with a look at saws in prehistory (yawn!).

Oddest of all in a woodworking magazine was a three-page feature on making a wooden plastering frame, billed as part of a series on basic building practices. What that had to do with woodworking is hard to fathom...

But cheer up! The magazine also included a free pull-out broadsheet from the Finnish Plywood Development Association, and Wolf had just launched their latest two-speed percussion drill, priced at £40.95 plus VAT. Now that was a bargain... or was it?



THE WOODWORKER

HALL OR LOUNGE CUPBOARD



CIRCULAR PLANT PEDISTAL



CHINA CABINET



More from The Woodworker archive next month...



NEW!



2,200W, 3hp Planer Thicknesser
RD 26 f 10" x 6"
NEW Planer Thicknesser with all the features of the HC 260 C, but now with the added benefit of a sturdy cabinet base.

- Cabinet base for improved stability and rigidity
- Maintenance free induction motor, 3 HP
- Depth of cut planing 0 - 3 mm / 3 mm thicknessing
- Cast iron thicknessing table
- Thicknessing height/width 160 mm / 260 mm
- Quality milled tables for optimum results
- Fully tilting planing fence with bevel to 45°
- Built-in micro-switches for machine and operator safety
- With **FREE** wind-up radio worth £24.99

Product No.: UK7000658701400
RRP £468.04 excl. VAT RRP £549.95 incl. VAT

1,500 W Five Function Machine
OPTAL 26

With the Optal 26 (now with cast iron tables) the project possibilities are endless due to its high specification and professional build quality, excellent results can be achieved without the need of separate machines. 3 independent 2HP motors allow for a quick and simple change from function to function via the key selector - no need for belt changing.

- 250 mm blade diameter. Tilting to 45°. Depth of cut 83 mm
- Saw/tenoning carriage - Length of cut behind the blade 1,300 mm
- Surface planer: surface width: 260 mm, maximum cut: 4 mm
- Thicknessing height: 4 - 150 mm, maximum cut: 4 mm
- Spindle moulder: 1 speed (6750 rpm)
- Slot mortiser attachment as standard: 1 speed (6300 rpm)

Product No.: 240V: UKOPTALNEWCAST
RRP £2,552.34 excl. VAT. RRP £2,999.00 incl. VAT



2,200 W Spindle Moulder
T 170 With Sliding Carriage

- New high quality spindle moulder.
- 3 speed machine
 - Cast iron table
 - High build quality, compact design
 - Spindle recess allows 180 mm diameter cutter block with a recess depth of 52 mm
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Machine only 240V: 7000622788010010
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Made in France



370 W Dust Extractor
SPA 1101 With Fine Filter

Ideal companion for all stationary woodworking machines.

- Flow rate 600 m³/h
- Flow volume 842 m³/h
- 60 Litre volume of collection bag
- Filtration level 0.5 micron with fine filter
- Suction hose 100 mm x 2500 mm

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Machine Only - Product No.: 0130011012
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NEW CAST IRON TABLE!

SLOT MORTISER ATTACHMENT INCLUDED AS STANDARD!

TRIP FENCE INCLUDED AS STANDARD!

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3 year warranty when you register online within 3 weeks of purchase. Machines, chucks, batteries and chargers.



900W Band Saw
BAS 317 Precision Package

- Popular, feature packed band saw
- Cast iron table
 - 2 cutting speeds
 - Cutting height: 165 mm
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 - Includes workstand, mitre fence, rip fence and set of 4 blades

With **FREE** wind-up radio worth £24.99
Product No. UK903170386
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NEW FOR 2008

TS315 Cast Iron Table Saw with Scoring



KEY FEATURE



Flipover stop and telescopic cross cut fence included on optional squaring table.



Can be used with a 12" blade

KEY FEATURE



Heavy cast fence with micro-adjustment.

What They Say...

"The experience of cutting on it is a pleasurable one..."

The basic package of the scoring blade, smaller ripping width and the sliding beam is certainly good value and has to be worth considering if you have the space and need for a decent spec'd, well made saw, and there's a five year warranty to boot."



Good Woodworking, June 2008

KEY FEATURE



Heavy construction and industrial style sliding beam.

KEY FEATURE



Scoring blade adjustable through the table.

The TS315 completes the recent upgrading and expansion of our table saw range.

Table saws are at the heart of many workshops and with the TS315 we are offering a real workhorse at a price the keen enthusiast or semi-professional can justify.

SUMMER SPECIAL

SAVE **£200**

TS315 Table Saw RRP £1699.99

DEAL PRICE

£1499.99

INC VAT

BUY SAME TIME* OFFERS

TS315-ST Squaring Table	£149.99 (RRP £199.99)
TS315-RE Right Hand Extension	£99.99 (RRP £139.99)

KEY SPEC

MAX BLADE SIZE: 315mm (with scoring removed and optional board)
BLADE BORE: 50mm
SCROLLING BLADE SIZE: 80mm
SCROLLING BLADE BORE: 20mm
BLADE SPEED: 4000rpm
MAX RIP: 750mm
MAX RIP WITH RIGHT HAND EXTENSION: 1250mm
SLIDING CARRIAGE STROKE: 1250mm
TABLE HEIGHT: 895mm
MAX CUT 90°: 10" Blade - 80mm, 12" Blade - 105mm
MOTOR POWER (OUTPUT): 3kw (240V)
WEIGHT: 315kg

INSIDE THE TS315



The TS315 features heavy cast iron construction on machined trunnions and mounted to a welded steel frame for rigidity and longevity.

- 1 Cast Iron Saw Unit.
- 2 Machined Cast Iron Trunnions.
- 3 Welded Steel Frame.

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