

AUSTRALIAN

Wood

REVIEW

120

LAST CHANCE
TO ENTER!
MAKER OF THE YEAR 2023
PRESENTED BY

CAROL RUSSELL

How to carve
intuitively

THREE EASY GIFTS

Build skills with
these projects

TESTED

- IRONBARK SQUARES
- KREG CORNER TEMPLATES
- SMARTWARE HINGES & LOCK

HOW-TO

- NATURAL EDGE TABLE
- JOINING CURVED COMPONENTS
- LASER CUT MARQUETRY
- FOLDING PHONE STANDS





Carbatec is delighted to unveil our exclusive partnership as the official AU/NZ distributor of the renowned and esteemed **JessEm** brand, a true embodiment of **excellence in router tables, routing, and woodworking accessories**. With an unwavering commitment to quality and precision, JessEm, engineered and crafted in Canada, represents the pinnacle of aspiration for discerning woodworkers.

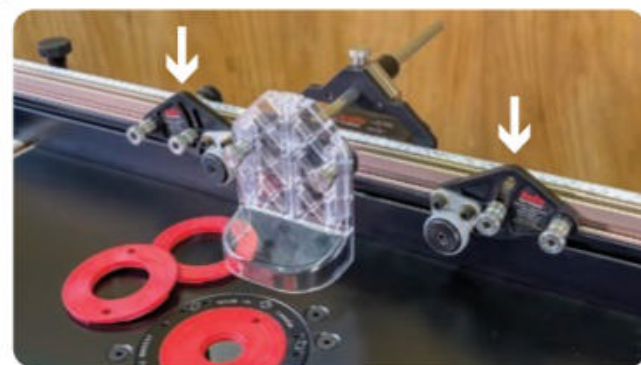
Find out what all the talk is about and indulge in the distinction of becoming a proud owner of JessEm products, as you join the ranks of those who demand nothing less than the finest woodworking tools.



JESSEM MAST-R LIFT II ROUTER TABLE PACKAGE
CODE: JES-KIT-MASTR



JESSEM ULTIMATE EXCEL II ROUTER TABLE PACKAGE
CODE: JES-KIT-ULTIMATE
Featured with optional accessories.



JESSEM CLEAR-CUT STOCK GUIDES FOR ROUTER TABLE (SET OF 2)
CODE: JES-CCUT-04215

A revolutionary alternative to traditional feather boards. Guide rollers are mounted to a strategic 5° angle to effectively steer the stock towards the fence and exert greater force if the wood attempts to move against the feed direction, providing enhanced stability and control. To prevent kickback, the rollers are fitted with one-way roller bearings, ensuring they spin only in the direction of the feed.

Also available: JessEm Clear-Cut Stock Guides for Table Saw. JES-CCUT-04301.

carbatec
THE HOME OF WOODWORKING

Find all the JessEm router table and woodworking solutions at your local Carbatec store. You can choose one of our comprehensive kits or build your own router table with your ideal tailored combination of components. For more information, visit carbatec.com.au or scan the QR code.



ADELAIDE
08 8362 9111

BRISBANE
07 3390 5888

HOBART
03 6272 8881

MELBOURNE
03 8549 9999

PERTH
08 6143 5788

SYDNEY
02 9648 6446

AUCKLAND
09 274 9454

CHRISTCHURCH
03 242 0606

CARBATEC.COM.AU

CARBATEC.CO.NZ

PRO-PRODUCTS PROUDLY MADE IN AUSTRALIA

ProDrillPress Table V3

The ProDrill Press Table V3 is ideally suited to the smaller workshop and suits conventional drill presses as well as the popular Bosch PBD 40 Bench Drill. With a 730mm long fence it has the capacity to handle reasonable sized precision drilling tasks and provides a 600mm x 400mm working surface.

Includes:

- 2 Fence stops
- An INCRA Pivot Hold Down Clamp
- Sacrificial inserts to stop tear-outs



ACCEPTS
MOST
US SIZE PLATES &
LIFTS (235mm x
298.5mm)



ProRouter Tabletops designed to suit all quality fences

- Accepts Incra, Jessem Lifts and plates
- 4 sizes available:
 - 800mm x 600mm suits ProRouter Fence, Incra WonderFENCE and other 800mm long Fences
 - 1100mm x 600mm suits Incra LS Positioners
 - 685mm x 600mm tablesaw wing to suit 27" deep saws
 - 800mm x 600mm tablesaw wing to suit 800mm deep saws
- Tough laminate surface with 2.00mm PVC edging, all include Incra combination Mitre Channel and T Track.



Our ProRouter Fence is the simple answer to a versatile fence at a reasonable price

- 800mm long x 160mm tall it includes T Track for feather board mounting;
- Fence halves open to accept 70+mm diameter bits
- 1.00 mm offset shims allow for edge planning
- 63mm diameter dust extraction port
- Clear acrylic guard for safety.

6kg WEIGHT
ABSORBS
ANY BIT
CHATTER



Contents

ISSUE 120 – SEPTEMBER 2023

FEATURES

28 Telling Stories

Kurnpa Kunpu: Strong Spirit was cross-cultural design project that resulted in a collection of works which reflect environmental concerns.

67 Built in Kind

Through collaborative projects, Hannah Cheetham applies her woodworking skills to building communities.

PROFILES

40 Not Your Average

With a passion for creativity, the team at Lowe Furniture take on the challenge of producing high-end work for a very discerning clientele.

80 Tools to Inspire

A love of hand tool woodworking led Devon Campbell to establish his own marque of fine hand tools.



PROJECTS

22 The Merged Table

Craig Allison shows how to widen natural-edged timber slabs with contrasting species for a decorative and yet subtle effect.

34 Carving with Flat Plane Techniques

Carol Russell carves a small dog and shows how using bold knife cuts can lead to an expressive style of portraiture.

50 Three Easy Gifts

Learn skills and develop small production items with these simple projects.
Story by Raf Nathan.

62 Folding Phone Stands

Charles Mak shows how to streamline the making of a batch of his campaign style phone stands.

TECHNIQUE

46 Laser Cut Marquetry

David Lim discovers a compact laser cutter that makes it easy to add marquetry motifs and inlays to your work.

56 Joining Curves

Once you know how, inseting curved components into an edge can be a relatively simple process, explains David Haig.

76 Hidden Showcase

Richard Vaughan combines hand and power tools to demonstrate the process of blind mitred dovetail joinery.

TIMBER

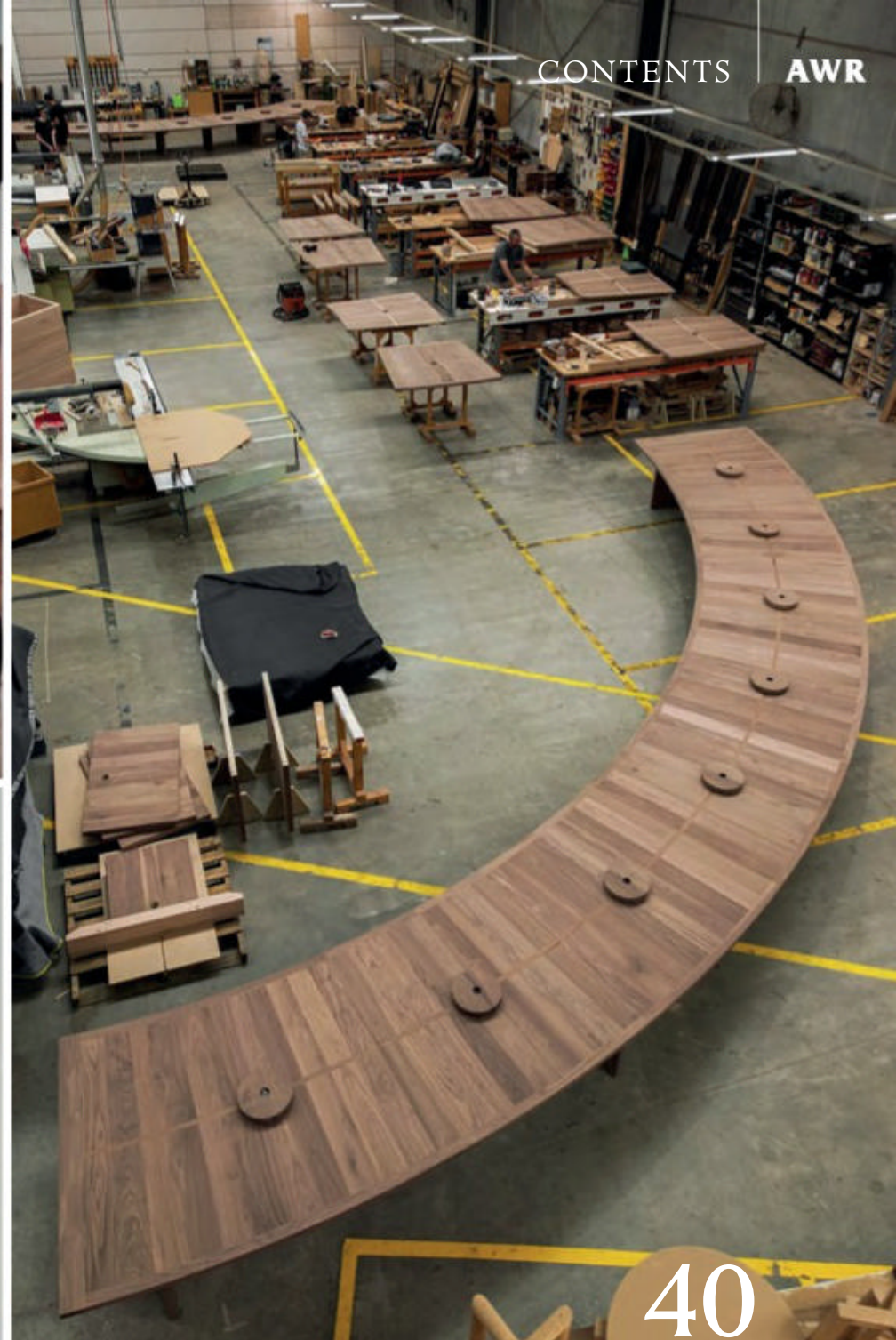
70 Working with Wattles

Ian Wilkie writes about Australia's emblematic native species, and in particular the acacias he has worked with.





28



40



34



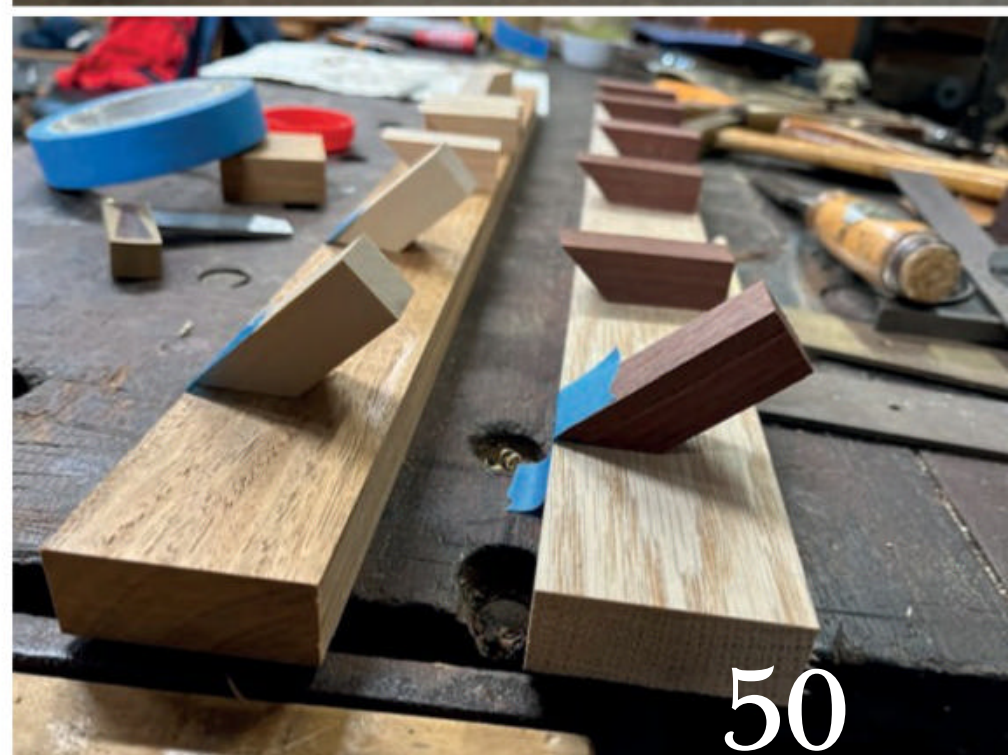
80

REGULARS

- 06 Editor's Letter
- 17 Subscribe to Wood Review
- 14 Maker of the Year
presented by Carbitool
- 39 Wood Diary

TOOLS & EQUIPMENT

- 08 Machinery & Tool Reviews
 - Sound advice: options in hearing protection
 - Kreg corner router guides
 - Melbourne Tool Company spokeshaves
 - Ironbark Toolworks squares
 - smartWare box hinges and lock



50

Editor's Letter

Working with natural edges

When we work with wood, it's not enough to rely on the beauty of the material alone. Working with slabs of natural-edged timber might seem like a design solution in its own right, but it still takes artistry and there often need to be work-arounds.

George Nakashima made live edge joinery famous, in particular with the use of butterfly dovetail joints that stabilised splits and were also a decorative element. Greg Klassen created new landscapes with his inverted slab *River Tables* that use glass within their voids.

This issue, Craig Allison's *Merged Table* offers an effective way to literally extend the use of live-edge slabs. On the one hand his solution is a practical way to add width, and on the other, it can be a subtle way to add a contrast of colour and/or grain pattern. Good joinery needs to be as seamless as possible – here's how Craig did it, see p.22.

Cross-cultural exchange

It's taken three years, but last May saw the unveiling of an extraordinary collection of furniture designed and made by a small team of Indigenous and non-Indigenous designers and makers. It's an example of what can be achieved by thoughtful collaboration and two-way learning, see p.28 to learn about *Kurunpa Kunpu*.

Working intuitively

Sometimes broad knife cuts that create shadows and highlights are more evocative in a carving than hyper-realistic ones. Carol Russell is shown on this issue's cover, and from p.34 describes how to carve a dog with flat-plane techniques. While it can require some confidence and faith to push through what she calls the 'ugly barrier', it's a technique that can be liberating as you learn to trust your intuition.

Gifts to make

Small, simple and attractive items are fun to make and a good way to use up valuable offcuts. You can also think well ahead to the gift giving season with the three ideas presented by Raf Nathan, see p.50. Charles Mak takes it a step further on p.60 by showing how he batch produces another potential gift item.

Curves ahead

David Haig is undoubtedly a master of curvaceous forms as evidenced by his signature *Monogram* rocker chair and other designs. This issue he describes how he achieves seamless edge joins between curved components for this and other constructions. Not for him sculpting back oversized sections – instead, a jig and process that, like many things, is not complicated when you know how. David's story starts on p.56.

Last chance to enter!

If you're reading this before September 5, you still have time to be part of the annual showcase for fine woodworking that is known as Maker of the Year, presented by Carbitool. There's over \$18,000 in cash and prizes to be won in 15 awards. All entries are shown on our website and many are shared on our social pages that now reach well over 500,000 followers. Next issue we'll feature the Top 100 entries – will we see your work there?

Linda Nathan, Editor
linda@woodreview.com.au

AUSTRALIAN
Wood
REVIEW

www.woodreview.com.au

PRINT AND ONLINE EDITOR:

Linda Nathan
linda@woodreview.com.au

CONTRIBUTING EDITORS:

Raf Nathan, Robert Howard
Richard Vaughan, Neil Erasmus

CONTRIBUTORS:

James Brook, Damion Fauser, David Luckensmeyer
Jugo Ilic, Charles Mak, Terry Martin,
Darren Oates, Andrew Potocnik,
Carol Russell, Graham Sands, Peter Young.

PUBLISHER:

James Ostinga

STUDIO MANAGER:

Lauren Esdaile

GRAPHIC DESIGNERS:

Emmily Kalyvas, Bree Edgar

ILLUSTRATIONS:

Graham Sands

MARKETING MANAGER:

Lucy Yaffa

SUBSCRIPTIONS:

WWW.GREATMAGAZINES.COM.AU
CALL: 1800 807760
EMAIL: subscriptons@yaffa.com.au

SUBSCRIPTION RATES:

1 year / 4 issues \$45
1 year PLUS (print + digital) \$50

NATIONAL SALES MANAGER:

Jodie Reid
Tel: (02) 9213 8261
jodiereid@yaffa.com.au

ADVERTISING PRODUCTION:

John Viskovich
Tel: (02) 9213 8215
johnviskovich@yaffa.com.au

PRODUCTION DIRECTOR:

Matthew Gunn

PUBLISHED BY:

Yaffa Media Pty Ltd
ABN 54 002 699 345
17–21 Bellevue Street, Surry Hills 2010
Tel: (02) 9281 2333 Fax: (02) 9281 2750



ALL MAIL TO:
GPO Box 606, Sydney NSW 2001

RECOMMENDED RETAIL PRICE:

\$12.50

ISSN:

1039-9925

COVER:

Carol Russell in her Launceston, Tasmania studio

COVER PHOTOGRAPHY:

Philip Kuruvita

Australian Wood Review is copyright, no part of it can be reproduced in any form by any means without prior written permission of the publisher. All material is printed in good faith, however the publisher will not be held liable for any form of damage whatsoever or liability, claim, or proceeding arising from printing of same. The opinions of writers and advertisers presented in this magazine are not necessarily those of the publishers.

SAFETY: Woodworking can be dangerous. Do not undertake any work, process or action without adequate skill, training, safety equipment and/or awareness.

WE HAVE AN EXPANSIVE RANGE OF WOOD SHAPING MACHINES



PT-305S
Planer & Thicknesser Combination
ORDER CODE: W612

COVERING YOUR
WOODWORKING
NEEDS WITH

HAFCO
WOODMASTER



ST-254
Table Saw
ORDER CODE: W486



T-13S - Bench Mount
Thicknesser
ORDER CODE: W815



L-69A - Belt & Disc
Linisher Sander
ORDER CODE: L107



DS-25 - Twin
Drum Sander
ORDER CODE: L129



B-18V - Variable
Speed Scroll Saw
ORDER CODE: W352



OS-140 - Vertical
Oscillating Bench
Bobbin Sander
ORDER CODE: W792



DS-15S
Pedestal Disc Sander
ORDER CODE: L1352



PJ-6B - Bench Planer Jointer
ORDER CODE: W618



L-80 - Belt
Sander
ORDER CODE: L112



BP-355 - Wood Band Saw
ORDER CODE: W4224



DC-7 - Dust Collector
ORDER CODE: W329



DC-2 - Dust Collector
ORDER CODE: W332



CD-2A
Industrial
Dust & Cyclone
Separator Collector
ORDER CODE: W318



CDS-2/3
Cyclone Dust
Separator
ORDER CODE: W316

www.machineryhouse.com.au

SYDNEY
(02) 9890 9111

BRISBANE
(07) 3715 2200

MELBOURNE
(03) 9212 4422

PERTH
(08) 9373 9999

\$70 FREE
DISCOUNT VOUCHERS

BECOME A
MACHINERYHOUSE
MALE
www.machineryhouse.com.au/signup

Specifications are subject to change without notification.



Sound Advice: Hearing Protection

David Luckensmeyer deciphers the jargon and weighs up factors that influence your choice of hearing protection.

I no longer need a reminder to wear hearing protection thanks to constant tinnitus (ringing in my ears) and diminished hearing. More ringing and less hearing are transactions I'd like to reverse. I've been reasonably careful over the years but obviously not careful enough.

This story explores options commonly available for personal protection equipment (PPE) like earplugs and

earmuffs. It is not about the reduction of sound levels in the workshop.

What is 'sound'?

Sound travels through the shop atmosphere (and objects) as a vibration wave, or sound wave. I've wondered then, why do scientists refer to 'pressure'? Well, a sound wave changes atmospheric pressure, oscillating between areas of low and high pressure. This is described as a sound pressure wave (**fig.1**).

The strength of the wave can be measured as 'sound pressure level' (SPL). The unit of measure is the 'decibel' (dB), which is one tenth of a 'bel' (after Alexander Graham Bell). The decibel is a logarithmic unit, so an

increase of 10dB is a ten-fold increase in SPL. For example, going from 10dB to 20dB is not twice as loud, but ten times as loud.

A very quiet workshop might have a background SPL of 40dB(A), typical conversation might be 60dB(A), and machinery generally produces much higher levels, requiring hearing protection.

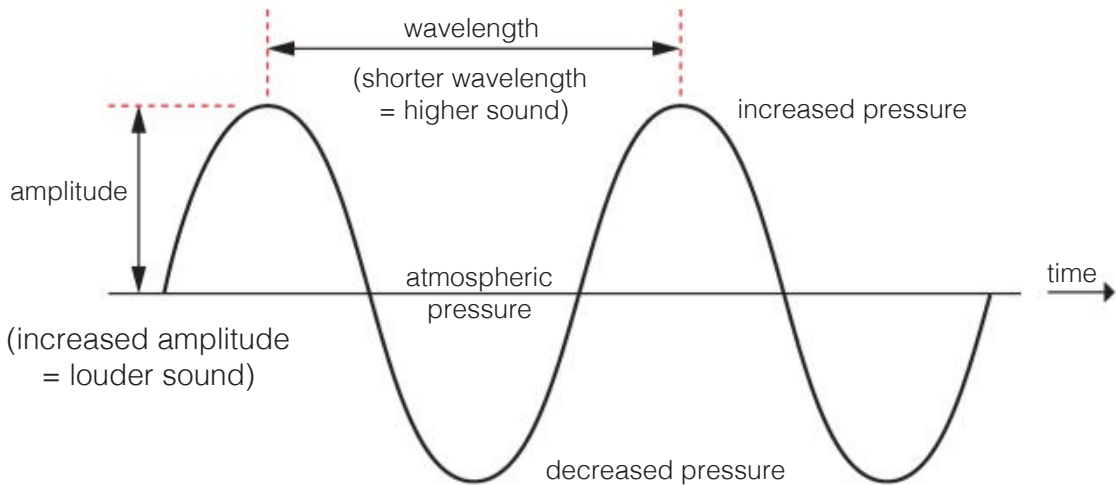
According to Safe Work Australia, the threshold beyond which hearing damage is likely to occur is 85dB(A) or higher for eight or more hours. The time parameter is important. Our ears can be exposed to higher sound levels for shorter periods of time without protection or damage.

How loud is my workshop?

Table 1 shows published and measured data for common machinery. Check user manuals or online for specific sound emissions for your machines. For the 'measured readings', I downloaded and used the SPLnFFT App and took measurements at 1m (the '1m rule').

Above: Earmuffs range from \$10 upwards. Earplugs are inexpensive, one-use or multi-use, and corded or uncorded. There are also variations with headband, neckband or helmet attachments.

Fig.1 Sound pressure wave





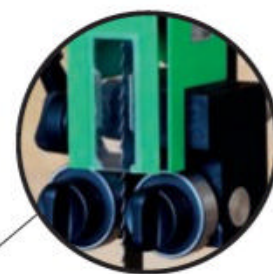
Tool-Less Spring-Loaded
Blade Guides



BS250B 250mm (10") Bandsaw
Benchtop Upgraded Model
Pictured with optional stand
0.5HP 2 Speed 240V



BS350C 350mm (14") Bandsaw
Open Stand Included
1.5HP 240V



Tool-Less Spring-Loaded
Blade Guides



BS350D 350mm (14") Bandsaw
Cabinet Stand Included
2HP 240V

Woodworking Bandsaws

with
outstanding features for their class!



BS400B 400mm (16") Bandsaw
Tilttable
2HP 240V



BS450A 455mm (18") Education Series Bandsaw
Featuring Key Lock System + Industrial Blade Guide System
3HP 240V



Deluxe Series Bandsaws
BS500A 500mm (20") 4HP 415V
BS600A 600mm (24") 5.5HP 415V

Check our
website for a full
list of product
features.

WOODFAST[®]
woodfastmachinery.com.au

AUTHORISED AUSTRALIAN DEALERS

VIC

JC Walsh
03 9335 5033

jcwalsh.com.au

WA | NT | TAS | ACT | SA

Beyond Tools
08 9209 7400

beyondtools.com

NSW

Trend Timbers
02 4577 5277

trendtimbers.com.au

QLD

Woodwork Machinery Plus
07 3705 8558

woodworkmachinery.com.au

Gregory Machinery
07 3375 5100

gregmach.com

Table 1: Published and measured sound levels in dB(A)*		
Machine	Published	Measured (idle/in use)
Drill press	-	61/64
Lathe	-	72/79
Orbital sander	82	74/77
Bandsaw	84	74/81
Dust extractor	78	77
Vacuum	72	79
Router	82	80/84
Wide belt sander	85	81/85
Planer/thicknesser	97	83/94
Air compressor	85	87
Belt sander	87	94/99
Tablesaw	98	96/98

* (A) refers to 'decibel A filter' or 'A-weighted filter' which accounts for the fact that humans are more or less sensitive to different frequencies (low, middle, high).

Earplugs

Before writing this story, I had the mistaken impression that earplugs do not attenuate loud noises well enough. In fact, they perform quite well, and typically fit under Class 3 or 4, although there are some versions that meet Class 5 requirements.

But the class rating is not the whole of it. What about comfort? And fitment? I don't like the feeling of compressed foam putting pressure in my ear canal. While the pre-moulded plastic and silicon earplugs feel better, I can't deal with the constant ringing from tinnitus. But they might be right for your situation; just double-check the class rating you require.

Always make sure the packaging refers to Australian Standards 1270. Hearing protection in Australia should be tested to a trusted standard. The results are given according to SLC80 ratings (sound level conversion, valid for 80% of wearers) and/or Classes 1–5.

By comparing the figures in **Table 2** with the sound levels of machines, we can see the minimum class of hearing protection required to avoid hearing damage.

Earmuffs

Earmuffs are widely used. They are often more comfortable than earplugs, offer a wider range of attenuation, can be whipped on and off quickly, and may offer communication and play-back options.

With earmuffs, there's more to it than just selecting the right level of hearing protection. Some are downright uncomfortable: the foam is too hard, the earcup doesn't fit the ear properly, or the headband is too loose or too stiff. The reality is that some work better with glasses, beards, skinny cheeks and not-so-skinny. Fitment is important!



Left: Simply put, SLC80 ratings represent the 'acceptable range' between workplace SPLs and SPLs inside the hearing protector. Class ratings denote attenuation or reduction of sound levels.

Below: ANC tech has improved significantly over the years and offers a genuine alternative for certain sound emitting processes in the shop. But remember these earplugs and muffs are not tested to Australian Standards 1270. This is one of those 'use at your own risk' scenarios.



An inexpensive pair of muffs may meet the Class 5 attenuation rating but not fit your head/face very well. More expensive pairs generally offer higher comfort levels and last longer.

Look for earmuffs of the right class for your needs as it is possible to over-attenuate sound levels. WorkSafe QLD suggests attenuating below 70dB(A) can increase feelings of isolation and hinder communication. A good working target when selecting hearing protection is between 75–80dB(A).

Active noise control (ANC)

So far we've considered passive noise control, where sound pressure waves are stopped from reaching our

Fig.2 Active noise control (ANC)

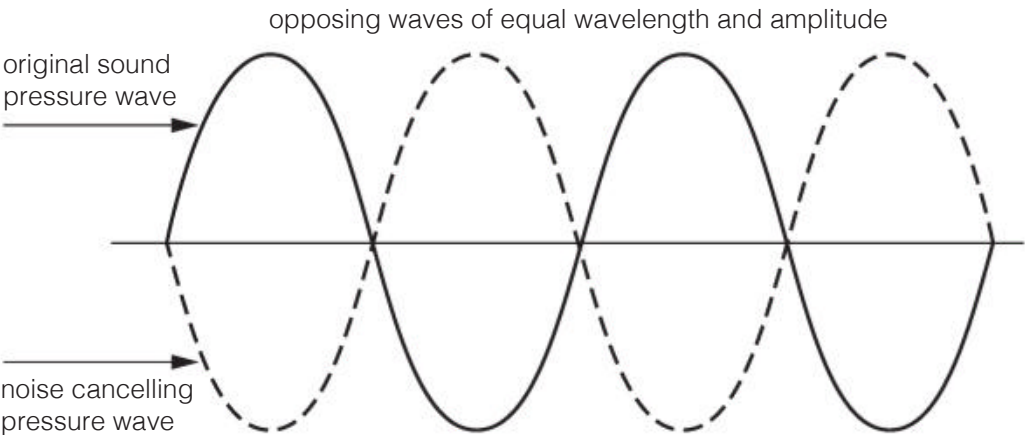


Table 2: SLC80 and class ratings		
Workshop sound levels dB(A)	SLC80 rating	Class
up to 90	10–13	1
90–95	14–17	2
95–100	18–21	3
100–105	22–25	4
105–110dB(A)	26+	5



Sturt School for Wood

Australia's flagship fine furniture school taught by the world's outstanding master makers.

Inviting final applications for our esteemed year-long **MSF40222 Certificate IV in Furniture Design and Manufacturing** 2024.

Weekend workshops, part-time classes, master classes.



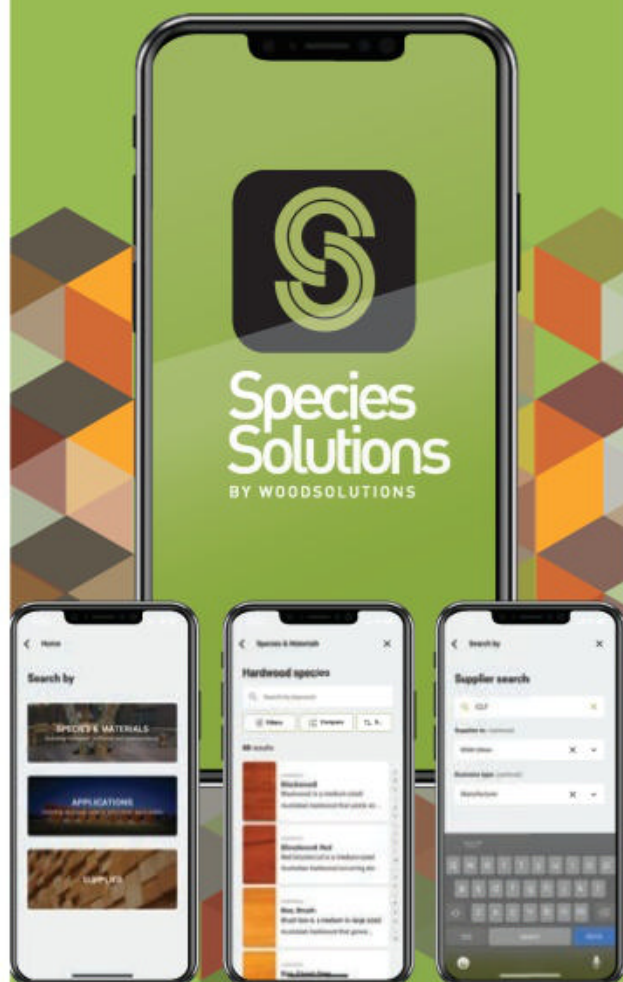
sturt.nsw.edu.au

Honing talented designer/makers of the future

*'Ch-air' by Jess Humpston
Sturt School for Wood graduate 2021
Winner Wood Review Maker of the Year 2022
Stained white ash, monofilament. Image by Greg Piper*

Species Solutions

Search, select
and source,
for free.



The **SpeciesSolutions** app is your guide to timber species, their applications and where you can buy them.

Download now to go where the pros go and discover more about Wood. The Ultimate Renewable.™



Apple Store

Google Play



Above: An older set of WorkTunes muffs (maroon) which broadcasts AM/FM radio. The newer set on the left streams playback through Bluetooth and offers ANC to protect from hearing damage.

ear canals. Such passive methods can be combined with active noise control (ANC) technology (**fig.2**). ANC-equipped hearing protection can emit a sound wave, more or less in real time, that is the inverse or opposite of noise emissions.

Combined low and high pressure areas cancel each other, hence the alternative moniker: active noise cancelling. Small microphones are located on the outside of ANC earplugs or muffs, and small speakers are located on the inside, at the ear canal. It is quite remarkable.

ANC works best with lower frequencies as it is easier for the tech to match sound pressure waves with larger wavelengths. Likewise, ANC works better with continuous sound waves (say from a thicknesser or sander), and does not work well with intermittent sounds (e.g. hammering a nail).

Does ANC have a place in the shop? You'll have to make up your own mind. ANC earplugs and muffs can attenuate at Class 5 levels, or about 30dB(A), but not across all frequencies and only for continuous sounds. I use ANC sets for machinery that emits lower levels of sound, but not for the louder, higher frequency sounds from a tablesaw or router, for example.

Final word

Among other things, I haven't mentioned hearing protection that incorporates in-ear playback. There

is a danger of attenuating damaging sound levels, and then listening to in-ear playback at a level above the recognised 85dB(A) threshold.

Let's say my tablesaw emits an SPL of 100dB(A). I use Class 5 earmuffs which attenuate the sound by 30dB(A). The sound level that reaches my ears is 70dB(A). But while I'm working, I listen to my fav music at 30dB(A), which is not that loud. The real-world sound level that reaches my ears is right back up at 100dB(A). In this scenario, the in-ear music cancels out the 30dB(A) of attenuation and the resulting SPL is of a very damaging level.

Let me reiterate that such math glosses over the complexity of this subject. Hearing protection does not provide flat attenuation across all noises. And a workshop environment often has sounds coming from multiple sources. Plus throwing in the variables of ANC and fitment concerns just adds to the complexity.

Disclaimers aside, I hope this story helps you make 'good ear choices'. I know I'll be reaching for my hearing protection more often when I'm in the workshop.

Photos: David Luckensmeyer

Diagrams: Graham Sands

David Luckensmeyer @luckensmeyer is a designer maker and regular contributor to Australian Wood Review. Learn more at www.luckensmeyer.com.au



NORGLASS

Specialty Finishes

NEW

WEATHERFAST

A1 PENETRATING TIMBER OIL & A2 FINISHING TIMBER OIL

NORGLASS has sourced the best raw materials to produce a new quality system that both nourishes, restores and protects ALL TIMBERS in all weather conditions

MAXIMUM UV INHIBITORS
SUITABLE FOR ALL TIMBERS LOW ODOUR

A1 PENETRATING TIMBER OIL

contains biocides to eradicate organic growth deep inside the timber and will bring timber back to its natural state.

A2 FINISHING TIMBER OIL helps restore natural lustre to timbers and protects against degradation of the substrate.

A1 & A2 can be used separately or together for the ultimate protection and finish.

AVAILABLE AT A NORGLASS STOCKIST NEAR YOU

norglass.com.au



PRESENTED BY



© ADRIAN SIMON





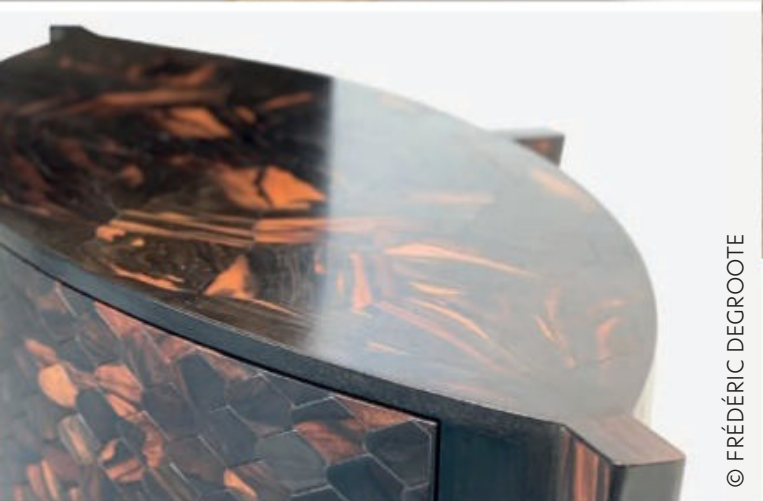
© GEORGE PARKE



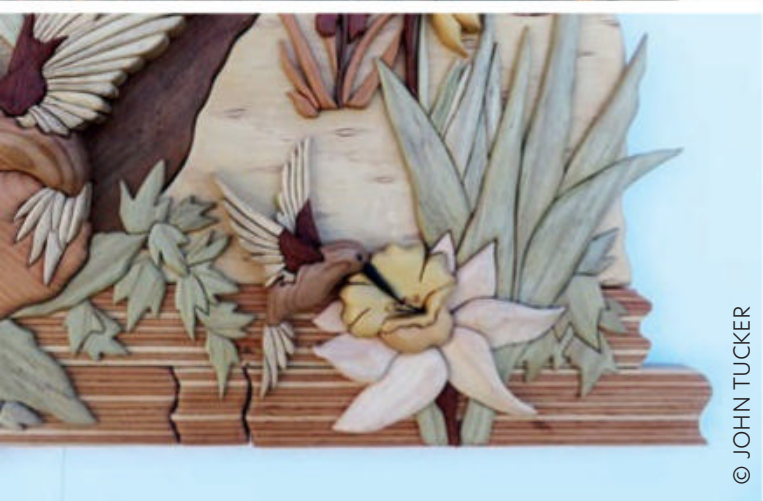
© JESS HUMPHSTON



© LUKE BATTEN



© FRÉDÉRIC DEGROOTE



© JOHN TUCKER

LAST CHANCE TO ENTER!

ENTRIES CLOSE MONDAY, 04 SEPTEMBER 2023

CATEGORIES *(open to amateurs & pros)*

- Tables, Chairs & Desks
- Chests, Cabinets & Boxes
- Art & Objects
- Student
- Recycled & Rescued
- World

Win
\$18,000 IN
CASH AND PRIZES

ENTER NOW

www.woodreview.com.au/moty2023



For terms and conditions visit www.woodreview.com.au/moty2023

SUPPORTING SPONSORS

LAGUNA



Kreg Corner Rounding Guide Set

Reviewed by Raf Nathan

A perfectly formed detail makes a big difference as to how we perceive it compared to one that is 'almost there'. Perfect corners, edges and chamfers add to the usually imperceptible appeal of a piece. You can of course saw and shape a corner to a perfect radius, but to get it just right takes time. A quick and consistent way is to use a jig like this Kreg guide.

The guide consists of a large polymer base, 12.5mm thick with a non-slip sole and large handle. Various profiles are clipped securely into one corner of the base. Under the base are four machined stops that rest on the edges of the workpiece.

A hand-held or bench-mounted router with a profile cutter is used to form the corner shape with the router bearing running against the guide profile. For cutter selection, a bearing mounted to the base is for hand-held use while a bearing at the top is for router-table use. I trialled it with a 1/4" cordless router with good results, but you can use larger routers held held or table mounted.

The guides are easy and simple to use. Select the profile you want and clip it onto the base, then position and push down, or as is my preference, clamp the guide onto the corner to be routed and then bring the router in to make the cut.

There are five radius profiles at 1/4", 1/2", 1", 1-1/2" and 2" which I found to be a pretty good range. There are also three chamfer profiles at 1/2", 1" and 2" although these are not a shape I use a lot.



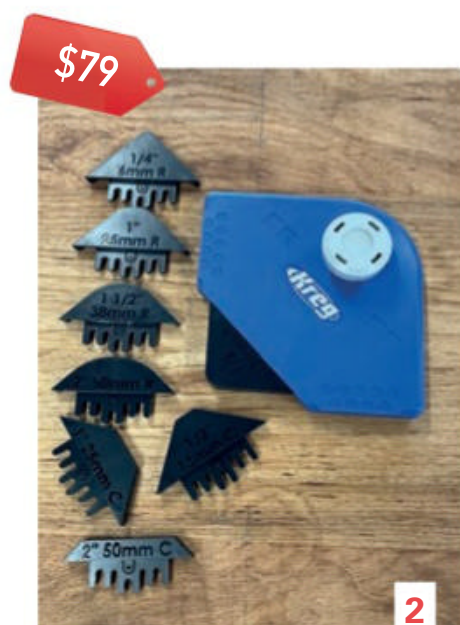
1. Examples of corner shapes achieved with the guide.
2. General view of the base and various included profiles.
3. The individual profiles are securely clipped onto the base.
4. The profiles are cleverly tapered to give a neat transition from the corner to the straight edges.
5. Push guides firmly down onto the base or clamp to a bench.

The corner profiles are very well designed as they have a slight taper that helps blend the profile you are cutting into the straight edge. It's always better to follow the grain when cutting a corner. If you go against the grain there is a risk of tear-out if you remove too much wood too quickly. Alternatively, if possible, flip the workpiece to always follow the grain.

I found this product easy to use and consistently gave a good result, and the price is quite reasonable. It even comes with a wall-mounted holder to store the various profiles.

Available from www.carbatec.com.au

Raf Nathan @treeman777 is a Brisbane based woodworker and frequent contributor to Wood Review magazine.



GREAT
MAGAZINES
.com.au

RENEW OR SUBSCRIBE TO

with auto-renewal for just

\$8.00
PER ISSUE
(print + digital copies)



MAGAZINE

The latest
woodworking news,
reviews and tips
delivered to
your door



DIGITAL

Instant access
to each digital
copy via Zinio

SUBSCRIBE

VISIT **GREATMAGAZINES.COM.AU/AUSTRALIANWOODREVIEW**
OR CALL **1800 807 760** AND **QUOTE AUTO-RENEWAL**

Conditions: This offer is only available to readers with an Australian postal address. By subscribing via auto-renewal you give Yaffa Media authorisation to charge your nominated credit/debit card account or direct debit bank account regular amounts, in regular instalments, as set out in the terms of the subscription you are purchasing, until you request it to be stopped, or your card or account expires. You may voluntarily stop your subscription at any time by providing Yaffa Media's customer service department (subscriptions@yaffa.com.au) with written notice. For full terms & conditions, visit www.greatmagazines.com.au.



Melbourne Tool Company Spokeshaves

Reviewed by Raf Nathan

Spokeshaves are a pleasurable tool to use giving you a hands on way to cut wood. I think they are one of the purest wood tools.

These shaves branded the Melbourne Tool Company are designed locally but made in China. They are beautifully made and the design is pleasing and functional. There are two versions; a flat bottom and curved, both 290mm long overall.

The body and cap are cast steel with brass thumbwheels for adjusters. There is a cork inlay on the handle for comfort although I wondered how the soft cork would wear over time.

The blade shape and mechanism seem copied from Veritas as blades for each are a perfect interchange. There are two thumbwheels to advance or retract the blade that work well.

Ex-factory the tool is set up with a minimum amount of blade projection that was pretty good in use, however I couldn't retract the blade for say, storage. The simple fix is to grind back the blade in length about 0.5–1mm, or just wait as the blade will become shorter as you sharpen of course. In practice, the projection made the shave ready to use.

The blade is a standard 50mm wide and a hefty 3.3mm thick and ground to a perfect 25°, but not honed so you will need to sharpen them first thing yourself.

Over the years I have found new blades need to be bedded in and the tip always honed hard or ground back to expose fresh metal. With machine grinding the tip can suffer from case-hardening and this needs to be removed.

These blades are M2 HSS known to be a tough steel that holds an edge very well. The harder steel does take longer to sharpen but should stand up to difficult or abrasive Aussie woods better than other blade types. You will spend more time at the wetstones sharpening them.

One thing that modern spokeshaves don't have is comfort thumb pads incorporated into the design. In the photo, note my original Stanley shave with thumb pads placed for maximum comfort and force direction.

The tool has been well set up and built, and worked well in my trial.

To compare other spokeshaves brands we can look at price, blade types and adjusters. The Lie-Nielsen with its bronze body and wood handles is a work of art. At \$329 it the most expensive around and has an A2 blade. The Veritas is a reasonable \$229, has twin blade adjusters and their very good all-rounder PM-V11 blade. The MTC tool has twin blade adjusters and the M2 blade. At \$135 it is a great buy given the build quality and good performance in use with the only down being the slightly harder M2 blade.



1. The tools exhibit quality materials and appear hand finished.
2. Available as flat or round bottomed.
3. The original Stanley design has an arguably better ergonomic grip than modern shaves. Note the thumbpads on the old Stanley.
4. The MTC shave is 290mm long overall, cast body and cap and cork handle inserts.

Photos: Raf Nathan

Available from Melbourne Tool Company <https://melbournetool.com/>

Ironbark Try Squares

Reviewed by Damion Fauser



Left: Try squares made by Ironbark Tools are offered with a range of species infill.

Above: Showing the adjustment mechanism which is operated by grub screws on either side of the stock.

It's always good to see a new name emerge in toolmaking, particularly domestically. I've recently spent some time using a set of 3", 5" and 7" adjustable try squares from Ironbark Tools, located in Brisbane.

These are serious tools, made very well from quality materials. The bodies are made from 360 brass with yarran infills. The beam is 304 stainless steel and the body/stock is formed from a single machined billet of brass with a range of species options for the decorative keyhole-shaped timber infill. The quality of these tools is immediately evident upon opening the package, and they look mighty smart as well, with the visual contrasts between the materials used and the elegant laser-etched company logo on the beam.

These squares feature a very clever adjustment mechanism, involving a set of small counter-acting grub screws set inside and on opposite sides of the stock just near where the bottom edge of the beam sits. By alternately loosening and tightening the opposing

screws, the angle of the beam in relation to the stock can be adjusted. All squares are individually tested prior to shipping and I found the three tools I was sent to be perfect, but it's good to know the ability to adjust is there if required. A clear set of written and visual instructions for this adjustment is provided in the box.

The squares have good heft and a substantial feel without being clumsy or clunky, so I'm confident they will suit users with different hand sizes. The stocks are a whisker under 15mm thick so they stand very stable in the vertical plane when checking fences and jigs for squareness.

The beam is nice and solid at just under 3mm thick. The beams vary in width between the differing tool sizes and are sufficiently wide enough to sit well on the surface being marked. Perhaps an improvement could be to make the width of the beams a commonly used workshop dimension, such as 3/4" for example. This could enhance the versatility of the tools by being able to

use the width of the beam as a layout gauge for a common dimension.

A further enhancement I would like to see is the addition of a notch/cut-out where the inside edge of the beam meets the stock, allowing joinery users to mark with their knife all the way through to the far edge of the material, making it easier to subsequently wrap those markings around the edge.

I've very much enjoyed having the opportunity to explore the possibilities of these new tools. They are available at prices starting from \$130. I consider this to be exceptional value for such a quality product – perhaps the best endorsement I can offer is that I have placed an order for 14 tools in various sizes for myself and my students to use.

Review tools supplied by Ironbark Tools, see <https://ironbarktools.com.au>

Damion Fauser is a Brisbane-based furniture designer maker and also teaches woodwork classes. See <http://damionfauser.com>

WHAT IS AVAXHOME?

AVAXHOME-

the biggest Internet portal,
providing you various content:
brand new books, trending movies,
fresh magazines, hot games,
recent software, latest music releases.

Unlimited satisfaction one low price

Cheap constant access to piping hot media

Protect your downloadings from Big brother

Safer, than torrent-trackers

18 years of seamless operation and our users' satisfaction

All languages

Brand new content

One site



AVXLIVE : ICU

AvaxHome - Your End Place

We have everything for all of your needs. Just open <https://avxlive.icu>



Above: The smartlock now locks and unlocks with a 90° turn of the key and performs flawlessly. **Opposite:** interior and outer views of installed smartButt and smartHinge hingeware.

smartWare Hinges and Lock

Reviewed by Neil Erasmus

Sourcing quality hardware has never been easy, least of all, finely crafted, elegant box hinges and locks. Andrew Crawford's smartWare range has filled this void for a number of years now.

The smartWare range consists of a round-ended mortise lock; matching, round-ended side-wall hinges; and more traditional, square-cornered back-wall butt hinges, both types featuring cleverly built-in 93° stops. I was sent the latest lock iteration as well as the newly minted smartButt hinges in addition to a pair of smartHinges. At around AU\$200 for a pair of hinges and a lock, you'd expect the highest quality, and in terms of visual quality alone, smartWare does not disappoint.

Common to the range is exceptional quality, precision and sheer heft. First introduced in 2017, the smartLock fits into the front walls of the box and lid by means of 3mm deep routed slots, and in the case of the lock mechanism itself, a secondary, deeper but thinner narrower mortise, simply made by drilling and chiselling.

Precision manufacturing from billet material ensures minimal vertical slop when locked – there is just enough to avoid binding, and a dead-on accurate fit when jigs are used for routing. Most makers create the stopped grooves for the mating 3mm plates on the router table, as they do to fit the smartHinge – same cutter, same depth. Similarly, the centre of the key pin relative to the top plate is a consistent 16mm, and dead centre from either end, meaning that careful jig-making of all aspects, including the machining of the shaped keyhole, will pay dividends when production is called for.

The big change is that the new lock mechanism now locks/unlocks with a 90° turn of the snug-fitting key thanks to unique, twin-coil torsion springs, and it does so with a reassuring click. According to Andrew Crawford, 50,000 open/close cycles were made to test the new, 'live action' mechanism with no failures. There's nothing tinny about this lock that suits wall thicknesses of 12mm or more. It looks and performs flawlessly.

The SmartHinge is a cunningly clever design that is easy to fit, looks neat and comes with built-in stops. The days of difficult-to-fit, ugly quadrant stay hinges and plain butt hinges are truly behind us. To fit them, make four identical 42mm long, 3mm deep, stopped 8mm (5/16") routed slots in the side walls. The round ends of the hinges fit the radiused slots perfectly, leaving a fine, 0.3mm gap between the leaves when shut. At the back, all that shows is half the knuckle. Screw in, and job done.

The more recent, stopped SmartButt hinge is 36 x 14.5 x 5mm, and with square corners, gives a more conventional and arguably more contemporary one too. The big attraction for me are the beautifully proportioned, rounded knuckles, that when properly oriented reveal only the tiniest hint as to how the 93° stop is engineered. Cunning and beautiful. Each

LNA

Lie-Nielsen
TOOLWORKS®
— AUSTRALIA —

The Finest Woodworking Tools

www.lie-nielsen.com.au

0418 842 974

hinge leaf is recessed 2.4mm deep and when the wall thickness is 12mm, the recess may continue through to the inside of the box – a handy feature for production oriented makers. Cast into history, finally, are the familiar, agricultural square-knuckled stop butts that this hinge now renders obsolete.

All these products feature parallel, recessed 'chimneys' above the screw countersinks to provide a crisp screw-head recess. All are available in polished brass, stainless steel and gold-plate with matching screws. Quality such as this is what you'd expect when one of the world's finest boxmaker's also makes hardware. The cost is soon forgotten while the quality lives on.

Photos: Neil Erasmus

Review box hardware supplied by smartBoxmaker, see www.smartboxmaker.com

Neil Erasmus @neilerasmus is a Perth-based designer maker and longtime contributor to Australian Wood Review.



For beautiful timber, naturally

Suitable for all interior timber, made with natural, sustainable raw materials, Evolution Hardwax Oils are hard-wearing, non-toxic, water resistant, economical and easy to apply.

Evolution Hardwax Oils are available in 4 sheens and can be used with our wide range of colours and stains.



whittle
WAXES
www.whittlewaxes.com.au



GIFKINS DOVETAIL

The only Australian made dovetail jig!
WWW.GIFKINS.COM.AU

KEEN TO DO BOX MAKING?

Watch Col Hosie box maker on YouTube **SUNDAYS** at 10.00am

COL WILL SHARE HIS EXPERTISE AND CLEVER INNOVATIONS IN OUR RELAXED AND INTERACTIVE SESSIONS



SEE OUR WEBSITE FOR DETAILS WWW.GIFKINS.COM.AU 0411 283 802

The Merged Table

Widening a live-edged slab with another piece of timber was a practical solution that resulted in a decorative and yet subtle visual contrast. US maker Craig Allison explains how the two were brought together.

Several years ago, I made a dining table from two bookmatched slabs of big leaf maple, a species native to the Pacific Coast of North America. In addition to the two slabs, I purchased a couple of smaller slabs of the same thickness, thinking they would be used to build the support structure for the table.

One of the smaller slabs was used in various ways, and another, about 2.5 metres long, stayed with me for several years. Recently I was asked to make a coffee table for a couple who were moving to the Pacific Northwest from California. The owners wanted an occasional informal dining table for two in front of their fireplace and television, and the leftover maple slab was the perfect length for a 'waterfall' table of about 1.25 metres.

Unfortunately, the slab was a bit too narrow and too irregular to function well as a single-sided dining table. Splitting the slab and adding a piece in the centre would have been easy, but it felt like ruining the slab,

so I decided to add a straight piece to one side instead. The idea was to marry a piece of straight grained Douglas fir (another species native to the area) to the wild edge and grain pattern of the maple plank, thinking this would not compete with the grain pattern or shape of the maple slab.

The 40mm 'feet' seen in the photos of the finished piece are removable so the height of the table can be changed from a normal coffee table height to one that is easier to sit at with legs underneath.

Problem solving

I've been an amateur woodworker for a long time, with some definitely non-professional level skills. A long career in the construction industry, working with all types of design and construction professionals on new buildings and renovations of historic structures, has given me a background in problem solving and materials which exceeds my woodworking skills. The process of finding a process to fit the tools and skills I have available is always a fascinating part of any furniture design, and this piece was particularly challenging, because it isn't one that I've seen before.

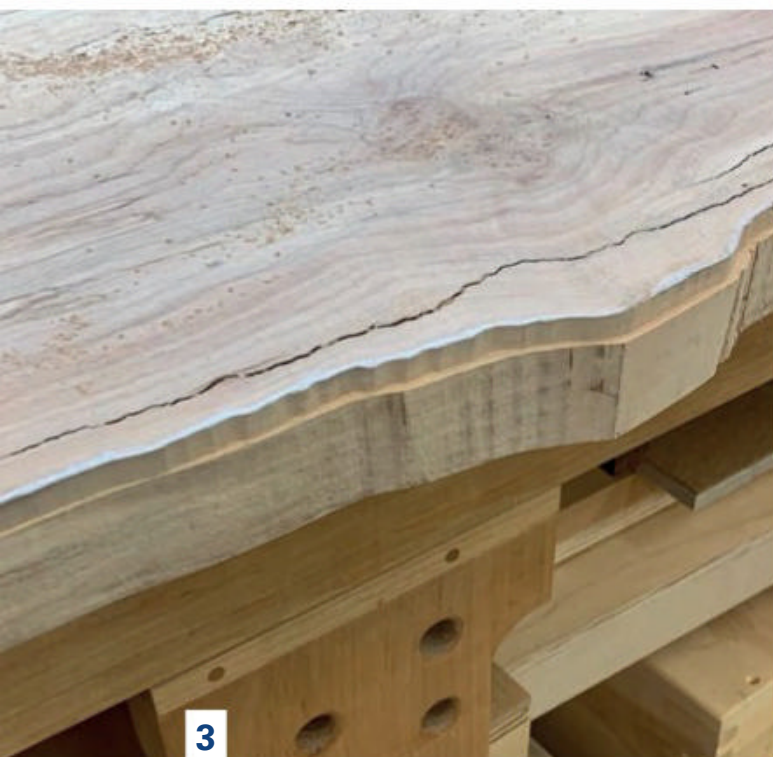
The easiest solution that came to mind was to simply match the leading edge of the slab to the fir plank, but because of the waterfall design both the top and the underside of the piece would be visible. This meant the joint would need to include the full 50mm thickness of the two pieces. After considering a number of options, I decided on the following process.

Beginning the process

The first step was to flatten the maple slab, which was substantially wider than the 300mm capacity of my combination jointer/planer. For this



These pages: Craig Allison's low table in big leaf maple edge-joined with Douglas fir. Both timber species are native to the Pacific Coast of North America where the author lives.



1. The maple slab was flattened with my homemade HMC (human manual control) machine.
2. I freehand routed a 5mm rebate on the live edge of the maple plank. The white pencil line is so that I could see the edge.
3. Cut the live edge as close as possible to the rebate, then pattern rout a vertical edge.
4. The pattern routing was done from the underside using a long spiral bit with end-bearings.
5. A lot could have gone wrong here, but result was fortunately acceptable.
6. The new edge of the slab was traced on to 6mm MDF.
7. After bandsawing, the edges were carefully filed to achieved as close to a seamless fit as possible.
8. Securing the MDF template with double-sided tape, the slab edge was traced onto Douglas fir board.
9. The MDF pattern was used to bandsaw and then pattern rout the Douglas fir.
10. A bearing guided bit riding on the pattern was used to create a vertical mating surface.
11. After a little fettling, a good fit with less than a 0.5mm gap was achieved.

I used a shop-made 'flattening mill' – a router jig made from plywood and hardware store aluminum angles (**photo 1**).

I've looked at the commercial systems available in the market, but decided to go with my homemade version, primarily because I can easily dismantle and store the parts, using minimal storage area in between projects. The biggest drawback to this process is that the lack of effective dust collection requires that you wear a good mask and expect a time-consuming clean-up process afterwards, otherwise it works quite well.

I typically spend a good amount of time making drawings for a new piece, using Sketchup and hand drawings. I find that time spent drawing always reduces the time required to build the piece, and

results in fewer unforeseen issues along the way. In this case, however, a minimal sketch was the only working drawing needed.

Following the edge

The first step after flattening the maple slab to just under 50mm total thickness, was to cut a small, 6mm rebate along the live edge of the plank. I did this with a router and a 6mm bit, cutting freehand as closely as I could to the top surface without cutting into it and changing its shape.

The white pencil shading on the top helped make the exact edge visible (**photo 2**). Then, using a hand-held jigsaw, I made a vertical cut outside of the rebate, removing as much waste as possible in preparation for pattern routing a vertical face (**photo 3**).

The pattern routing was done from the underside of the slab, using a long

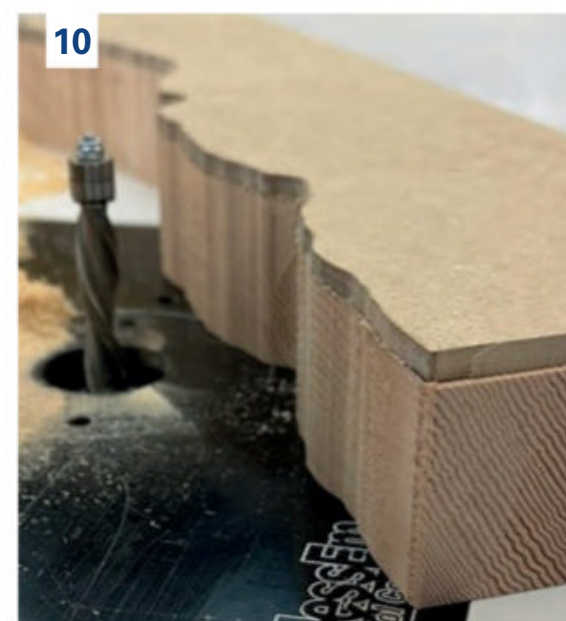


spiral bit with end-bearings (**photo 4**), making several light passes until the bearing contacted the small rebate along the top edge of the slab. The acceptable result was a relief, as this step had lots of potential to go wrong (**photo 5**).

The profile of each of the three maple slab sections (top and two ends) was then traced onto a sheet of 6mm MDF, to be used as a pattern for routing the mating face of the Douglas fir plank (**photo 6**).

I cut this MDF sheet to the pencil line using a narrow bandsaw blade followed by a lot of hand filing. I made sure to get as close to the line as possible, as this step would largely determine the quality of the fit between the two pieces of the table (**photo 7**). I treated the profiled edge of the MDF with cyanoacrylate (CA) glue to keep it from being eroded by the bearing on the router bit.

I then taped the MDF pattern to the Douglas fir board using double-sided tape, traced it (**photo 8**), and then repeated the pattern routing, first sawing close to the line (**photo 9**), then using a bearing-guided bit riding on the pattern to create a vertical mating surface (**photo 10**). The fit was good, needing just a little hand work to produce a

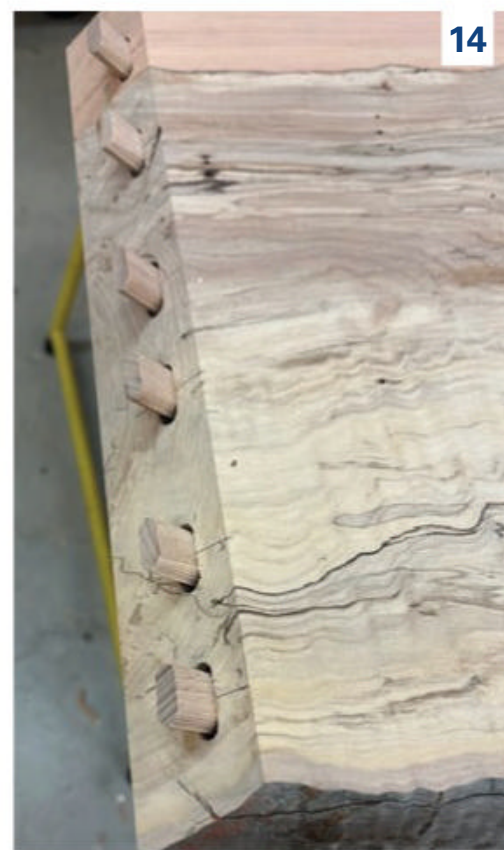


maximum gap of less than 0.5mm (**photo 11**).

Joining edges

A 1.5mm rebate was cut along the top edge of the Douglas fir, to be filled with epoxy at the finish. Even though the fit was good between them, the two pieces touched at some spots and had small gaps at others, so the finished appearance would have been uneven; a thin, consistent black line between them seemed better.

The maple and fir parts of each of the three sections were then glued together using a 6mm MDF spline cut from the template used to shape



12. A 6mm MDF spline cut from the template was used to shape the Douglas fir parts. The 1.5mm rebate on the top edge was later filled with epoxy.

13. The groove for the spline was made with a slot-cutting router bit.

14. Showing the dominos prior to gluing.

15. The mitres were cut with a track saw and dominoed with the help of a 45° jig.

16. After glue-up, the sharp edges of the mitres were eased and tightened using a hard steel burnishing tool.



the Douglas fir parts (**photo 12**). The groove for this spline was made with a slot-cutting router bit (**photo 13**). There is very little stress on this joint in the finished piece, so almost any method of attachment would have been okay, however this ‘over-engineered’ method was actually the easiest for me to do.

Creating the waterfall

The last operation to be completed before final sanding and finishing was to cut the mitres in each section and join them together. I cut the mitres with a large track saw set to 45° and joined them with dominos installed at 90° from the mitre faces

(**photos 14, 15**). This method seemed awkward to me when I first tried it, but I’ve used it on a number of pieces, on material as thin as 25mm and as thick as 75mm, and it has been very reliable. It eliminates the need for manipulating clamps to close the mitres and keep the thin edges in line which was always difficult for me no matter what sort of clamps and jigs I used.

The endgame

Finishing this piece was simple. I filled the 1.5mm rebate between the two species with black epoxy and scraped it flush. I eased and tightened the sharp edges of the mitres using a

hard steel burnisher made for creating a hook on scraper blades. The entire piece was sanded to 320 grit and oil finished. I’m happy with the result, because the piece fits the program for its owner and made use of a gorgeous maple slab, one that I had been saving only with the hope that I could use it one day.

Photos: Craig Allison

Craig Allison @craigal128 is a lifelong woodworker and building contractor with 35 years experience leading construction projects. He lives in Marin County, California. Learn more at craigallisonwoodwork.com





STAY CONNECTED

All the latest woodworking tips, how-to guides, and reviews at your fingertips



FACEBOOK
[@woodreview](#)

INSTAGRAM
[@woodreview](#)

EMAIL NEWSLETTER
[woodreview.com.au](#)

ONLINE
[woodreview.com.au](#)

SUBSCRIBE
[greatmagazines.com.au](#)

DIGITAL
[zinio.com](#)

Telling Stories

How do you create things that reflect the history, relationships, traditions and concerns of their makers? Perhaps the answer is simple: start talking. Words by Linda Nathan



Manta Pilti (Dry Sand) credenza, American walnut, designers Tanya Singer and Trent Jansen, maker Chris Nicholson. Photo: Fiona Susanto

Three years ago, three people with very different backgrounds got together and made the collection of work now known as *Kurunpa Kunpu: Strong Spirit*.

The people

Tanya Singer, a Minyma Anangu woman and Errol Evans, a Djabugay and Western Yalanji man, live in Railway Bore, South Australia around 700k north of Adelaide. Out on Country 'there's just wide open spaces, no traffic and it's nice and quiet – we can do whatever we want out here', said Errol.

Errol makes a range of artefacts which Tanya burns and paints, in addition to creating her own *punu* (woodcarvings). Both sell their work through Maruku Arts Gallery in Uluru. 'I normally use mulga and iron woods, and a bit of dead finish, which is another shrub that grows around here,' said Errol. Collecting and working wood is a lifestyle he enjoys:

'When I'm out looking for a certain type of tree or branch, I feel at peace with myself because there's no noise around me, no hassle, no bustle...it's peaceful.'



Clockwise from right:

Tanya and Trent out on Country getting to know each other’s practice and the influences on their work. *Photo: Liane Wendt*

Early design workings and samples. *Photo: Trent Jansen*

Showing the ‘shield handle’ backrest support on a *Kutitji* chair made from walnut. *Photo: Fiona Susanto*

Errol Evans at Melbourne Design Fair, May 2023 seated on the American cherry *Kutitji* chair he designed with Trent Jansen. *Photo: Raf Nathan*

Trent Jansen (left), Tanya Singer and Errol Evans on the way out to Railway Bore, SA.



The suggestion to collaborate with another artist came from Maruku Arts and led to the invitation extended to Trent Jansen. Trent is a furniture and object designer from Thirroul (Dharawal Country) on the NSW south coast who works with a process called ‘design anthropology’.

Asked to explain the latter, Trent said: ‘Design anthropology comes from Jules Prown’s material culture theory that says the things we make are the physical embodiment of our values, ideas, attitudes and assumptions. My idea is that if we can automatically design something and have it embody our culture, then surely we can do this in a purposeful way by identifying the cultural values that we want to embody and then set about trying to incorporate them.’

The design process

The long timeframe of the project was due in part to Covid travel restrictions, but eventually the three were able to spend time together. ‘Tanya and Errol invited me out to their homelands’, said Trent. ‘On our first trip, I went to Railway Bore and spent two weeks with Tanya and Errol getting to know each other, understanding the way we usually practice and the influences that shape our work. Tanya and Errol took me out on Country; we felled wood and Tanya taught me about this remote region of South Australia, where she has lived most of her life.’

With that knowledge, the research and design process could develop.



‘We couldn’t really travel freely at that time, that’s why we ended up doing a sketch exchange and catching up over the phone and emails – at least we had the technology to communicate’, said Tanya.

‘There were long periods spent apart, communicating regularly via email, text and phone to send ideas back and forth in the form of sketches, 3D models and material samples’, said Trent. ‘Eventually, when we did spend time in Sydney with Trent, that made it easier and enabled us to complete sketches and get things done face-to-face,’ said Tanya.

Inspiration for the designs came literally from the ground up as samples of wood were carved with the cracked earth motif they witnessed – this was then translated into the textured and faceted surfaces of the chairs and cabinets that eventuated. The designs were a joint effort; first the chair, and then came the idea for a cabinet with a ‘kind of monolith look’ that opens to reveal a surprise, explained Tanya.

The wood

While Errol and Tanya normally use local woods, the species used for the *Kurunpa Kunpu* collection were American hardwoods, the supply of which was readily available in the sizes and sections required for the chairs and cabinets produced. ‘The fact that it was carbon negative was even more of a plus – and every tree tells a story’, said Errol.

The *Kutitji chair* design is based on the *kutitji* or shield artefacts that Errol carves, and was developed together with Trent into a coopered lounge chair form. The backrest is supported by a ‘shield handle’ that serves

to strengthen the construction. The design also carries an environmental message, explained Errol: ‘The shield represents the earth’s ozone layer – without that we’re all vulnerable – it’s our defence.’

Making the work

The fourth and indispensable partner to the project was Chris Nicholson at Mast Furniture in Brisbane. ‘Chris was heavily involved in the design development of the work, establishing new methods of production in order to realise these complex pieces’, said Trent.

‘When I first saw the pencil sketch of that (*Manta Pilti*) cabinet, I thought, “oh god, what have I got myself into!”’, said Chris. ‘The good thing was that we had time. They already had a clear idea for what they wanted to achieve, so we were just back and forth about the finer details until we were happy and the making could start, but it was still very challenging.’

The *Manta Pilti (Dry Sand)* cabinet carcass is made of around 50 facets, individually cut and joined. ‘The facets are in essence sections of a cylindrical form and no two facets are the same. The facets are curved laminations because with all the alternating grain directions, it just wouldn’t have worked in solid timber – it wouldn’t have been stable enough,’ explained Chris.

The cabinet was made over a three-month period, and according to Chris it took weeks of CNC programming just to produce the components. ‘There are hundreds of individual joints and if you think about it, even a 0.1mm inaccuracy in each of these joints would have compounded to a huge gap.’



Once all the facets for the carcass had been cut, it was also time-consuming gluing them together. ‘For the carcass we started at the bottom, working up and adding one facet at a time. It took a few days to glue the whole carcass.’

Project take-aways

What can we learn through cultural exchange and collaboration? ‘It’s broadened my mind’, said Tanya. ‘This has made me realise I’m capable of coming up with ideas and telling stories through other mediums.’

‘I’ve really enjoyed this whole project’, said Errol. ‘I make artefacts all the time and sometimes get sick of making the same thing over and over – it’s been good doing something different and new. I’ve gotten heaps out of this project. It’s given a new perspective on what’s going on in the world, and it’s given me a way of showing what’s going here in Country, right in my own backyard. It’s been a good challenge and I’ve enjoyed every moment.’

‘It’s been a way of coming together...’, said Tanya, ‘...and building new friendships and collaborating with other designers’, continued Errol. ‘It’s been telling our story, about what’s going on here in Country, right here and now.’





Clockwise from far left:

In the Mast Furniture workshop, nearing the completion of the project, left to right, Errol Evans, Tanya Singer, Trent Jansen. *Photo: Fiona Susanto*

Another view of the *Manta Pilti (Dry Sand) credenza*, designed by Tanya Singer and Trent Jansen, maker Chris Nicholson. *Photo: Fiona Susanto*

Manta Pilti (Dry Sand) cabinet, American hard maple, designers Tanya Singer and Trent Jansen, maker Chris Nicholson. *Photo: Fiona Susanto*

Manta Pilti low chair, solid American walnut, designers Tanya Singer and Trent Jansen, maker Chris Nicholson. *Photo: Fiona Susanto*



‘I have learned so much from the cross and inter-cultural collaborations I have worked on over the years’, said Trent. ‘They have fundamentally changed me as a person. With the influence of my collaborators, I am beginning to see the world differently, understanding the relational links between all aspects of ecosystem and my place within these ecologies, not hierarchically above them.’

‘I have learned new methods of creativity, new ways of seeing creative influence and new approaches to embodying these influences. I have learned new methods for shaping material, producing texture, and making artefacts. I have learned to shut up and listen. Most importantly, we have used design and the making of things as practical acts of reconciliation, to begin to break down our differences and painful histories and meet as friends and allies with a shared purpose.’

‘In the end I just saw (the project) as a group of friends making something beautiful’, said Chris. ‘It was a very rewarding process to work alongside Tanya, Errol and Trent to help them realise their designs. Together we produced a collection we are all immensely proud of.’

Cross-cultural exchange can be a way for people to tell stories through the objects they design and make, but for that to work we need to let others speak, and then listen to them.

Kurunpa Kunpu was exhibited at Melbourne Design Fair, Artbank Melbourne and Fremantle Arts Centre from May – July 2023. The project was funded by American Hardwood Export Council and supported by The Australian Government through the Australia Council, its arts funding and advisory body, Arts South Australia, the Department of the Premier and Cabinet, the University of New South Wales Art & Design, Maruku Arts, The National Gallery of Victoria’s Melbourne Design Week and Fremantle Arts Centre.

Tanya Singer and Errol Evans’s work is represented by Maruku Arts, see <https://maruku.com.au/>

Learn more about Trent Jansen at <https://trentjansen.com/>

Chris Nicholson is a partner at Mast Furniture, see <https://mastfurniture.com.au/>

Carving with Flat Plane Techniques

'This highly intuitive carving technique can be very revealing and freeing,' explains Carol Russell, as she shows how to carve a small dog portrait.



On a trip to Japan a few years ago, we were making our way through some side streets somewhere in the vastness of Tokyo. I passed by a window that had a couple of tiny carved animals, a dog and a bear, sitting on a ledge in front of a curtain. They were carved from a plain light timber with no figure to speak of. There was no detail, such as eyes or a mouth and they were finished off with flat facets that produced shadows in the afternoon light. The shadows filled in the detail. I stood for a while and looked at how they seemed to come to life and be so full of character and movement

It's funny how sometimes in your life as a maker, the big moments are almost incidental. They can be powerfully cathartic, or an image or conversation that trickles into your subconscious and starts to inform your work going forward. These little animals were a turning point for me.

I have since discovered that this faceted style of carving is very much a recognised technique called flat-plane carving. There are many Japanese carvers who work in this way. Some of my favourites being Hideo Sawada, Seiji Kawasaki and Fumiya Watanabe. Minimal in style, straight off the tool, usually a knife, no sanding and simple finishes, sometimes milk paint. There are usually bold flat facets with as few cuts as possible designed to catch the light and shadows.

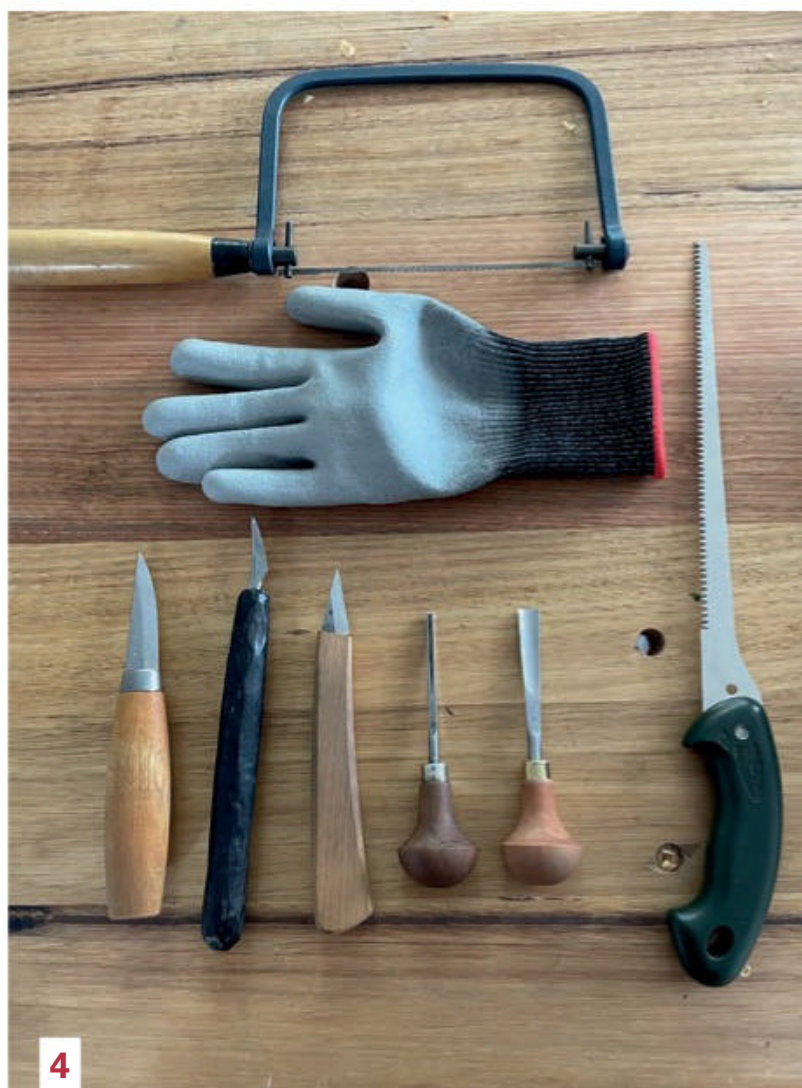
This style is also associated with Scandinavian carvers, there are many famous carvers who produce little caricatures in this style. Swedish carvers Axel Petersson Döderhultarn and Carl Oloff Trygg are two of the most famous. Harley Refsal from Minnesota has written several books on the subject. Australian Jeff Donne is a beautiful carver in this style and brings humour and pathos to his gorgeous creations. All these carvers are a great inspiration to me.

In order to find my own voice with my carving, I focus a lot on simple,



Main: Carol Russell in her Launceston, Tas studio. Photo: Philip Kuruvita

1. Labrador retriever carved with flat-plane techniques by Carol Russell.
2. Dog portraits brought to life with bold knife strokes.
3. A heavily textured dog in white beech. The 'fur' was created with a V-tool, followed by layers of umber acrylic paint and shellac.



4. A tool kit for carving small animal portraits – bottom row, left to right: Mora sloyd knife, Peter Trott detail knife, Woodlands CC chip carving knife, Pfeil palm gouges and Japanese keyhole saw with a carving glove and coping saw above.
5. To get started, trace a dog, transfer the markings to a piece of wood and bandsaw the shape out.
6. Draw a centre line on the blank for reference.
7. The material between the legs can be cut out with a saw.
8. Use a knife to thin down the tail and between the legs.
9. Viewed from the end, these lines define the ears in 'cross-section'.
10. Start by making some stop cuts to mark out the ears and then carve away the material around them.
11. Even just a few cuts around the ears and neck will get the portrait started.
12. A series of contour lines can help you to reduce material evenly over curves.
13. Work progressively to get the curves you're looking for.
14. Work down around the corners so you can lose the squareness of the blank.

abstract animal forms, dogs in particular. I sometimes like to heavily texture the surface to create fur, other times I keep the pieces completely minimal and almost unfinished – there is a point when they reach their peak character and it takes some restraint to leave it alone at that point.

Getting started

I have outlined here my process for a simple dog sculpture. I've chosen a labrador retriever (**photo 1**). I'm not the best at drawing so I start with a very basic profile, preferring to find the form through carving. I don't stress too much about anatomical correctness any more, I'm looking for a feeling or a mood. I have noticed however that with practice I am improving with my drawing and now often freehand my design rather than tracing.

I watch animals all the time to try and understand their moods and how they relate to people – I find children's books a great reference. Dogs, in particular, are always conspiratorial and always happy to join in. They are usually drawn loosely, with lots of movement that really captures the essence of their nature (**photos 2, 3**).

The wood

I use stock around 45mm thick. I like to have a lot more material width than I need to create plenty of shadow and contours.

I love to carve in white beech, that's what I've used here. It's a bit waxy and holds the facets well, it doesn't chip out too much and you can burnish it to a shine. It's plain in figure but not completely characterless.

Other woods I enjoy are silky oak, red cedar, Huon pine, tiger myrtle, blackheart sassafras and Tasmanian blackwood. The harder timbers are more difficult, but I love the weight of them and the way the knife cuts cleanly.

The tools

The most important tool is a knife you feel comfortable with. A double bevel is best and allows for changes in cut direction. No matter what knife you choose, keeping it beautifully sharp will give you nice clean cuts.

I also like a small V-tool and a small flat gouge. The Pfeil palm gouges, pictured in **photo 4** are great for handheld projects. I often use a #120



Mora sloyd knife. The picture also shows a Peter Trott detail knife and a Woodlands CC chip carving knife. A carving glove worn on your non-dominant hand and a piece of thumb wrap on your knife hand can save you some serious injury.

Start with an outline

Trace or draw your profile onto the wood or transfer it using carbon paper if you have any. Cut it out with a bandsaw, or if you don't have access to one, a Japanese keyhole saw combined with a coping saw is effective (**photo 5**). Machinery is great and a real time saver. I have found though, that most things are possible without it if you're prepared to take more time and practise your technique.

I always cut wider than the line, especially on the face. For this dog I'll carve the mouth closed. Make sure the grain runs the length of the legs, you want to avoid short grain sections that may be fragile. Tail straight down or up will be strong as the grain will run lengthways to it. Having the tail at an

angle makes it vulnerable as the grain will be short and it may break off.

Cut out the legs

Once you have your profile, draw a centre line on the blank for reference (**photo 6**). Cut out the material between the legs with a saw (**photo 7**). Thin down the tail using your knife; it can get a bit in the way of cutting the legs (**photo 8**).

Define the ears and face

Mark the widest point and sketch in the ears (**photo 9**). I start by making stop cuts to mark out the ears, then remove the material around them (**photo 10**). Cut in the width of the face and mark where the tip of the nose is.

Here I want the ears to be very prominent and triangular from the front, in keeping with a labrador retriever. The extra width in the blank helps with this. Just these few cuts make the blank start to feel like a dog (**photo 11**).

Round off corners

Now move down the body and

remove all the sharp edges, being mindful of grain direction. You want to lay the fibres down smoothly and avoid tear-out. When rounding corners it can be helpful to draw a series of lines on the adjacent surfaces to guide you (**photos 12, 13**). If you don't remove enough from the corners, it'll be hard to lose the squareness of the blank (**photo 14**).

Stay sharp

Hone your knife often, your cuts won't be clean unless you maintain that lovely edge. A flat strop with honing compound should be all you need. Focus on making contact with the bevel and draw away from the cutting edge. If you use a white board marker to colour the bevel when you strop, you can check that you're making full contact all the way along the bevel. If there's any marker left you can see where you've missed and make another pass.

Keep refining

Keep carving away the waste material (**photo 15**). You'll need to reduce the thickness, creating a bit of contour



15



16



17

15. As you work down, keeping checking your progress from all angles.

16. Another in-progress view – it's a gradual process.

17. Come in at the nose and create some cuts that catch the light around the eye area.

18, 19. Two views of the almost completed golden retriever.



18



19

around the middle. Round off the legs and define the tail (**photo 16**).

You're looking for nice flat cuts with no tear-out. Come in at the nose and create some cuts that catch the light around the eye area (**photo 17**). I carve by a window and often turn off the overhead light so I can see where the shadows fall from the raking light.

If you have any tricky grain that can't be settled using the knife, a small gouge can be useful. I like the number #7/10mm wide Pfeil palm gouge. You can cut straight across the grain to take out any difficult sections.

Finishing

I usually finish the little dogs with a wax polish, and it's a good idea to burnish them as well to get rid of any stray fibres. You can use a wooden peg or even stiff brown paper works well, but you don't want to round over any facets as they are the main feature. I buff the wax in with a stiff brush and

then polish with a soft cloth to pull up a bit of a shine (**photos 18, 19**).

The heavily textured dog has been finished with a V-tool to create the fur, I've used burnt umber acrylic paint and shellac over the top to bring out some shine. Milk paint can also be quite effective.

This style of carving is a very intuitive process, follow your instinct as to where the cuts should be, refer to photos only occasionally and make the little dog from your mind's eye. You're more likely to capture the canine essence that way.

Don't be afraid to mess up and don't judge your work too harshly during the process, keep going right through to the end. The dog will start to emerge. I call this the 'ugly barrier' and you just work through it. I've seen many people lose heart halfway through a project, only to be delighted as the character of the piece emerges as they keep carving.

There isn't a right or wrong with this work, it's about self-expression and a coming together of you, the tool and the material. It's also incredibly fun.

Hopefully you'll carve many pieces in this style and you'll get better the more you do. I really believe we don't know what's in us until we give things a go. This highly intuitive carving technique can be very revealing and freeing. Happy Carving.

Photos: Carol Russell

Author's note: Please be aware that this style of carving isn't suitable as toys for small children. They can have sharp edges and a possibility that sections may break off and create a choking hazard.

Carol Russell is a woodcarver and woodwork teacher. She teaches from her Launceston, Tasmania studio and often at woodworking events around Australia. She is a regular contributor to Australian Wood Review.

Wood Diary

For more events and news sign up to AWR fortnightly newsletters at:



www.woodreview.com.au

Diary listings are free. **Email to:** linda@woodreview.com.au

Note: Listings are correct at time of publication but may be subject to change. It is advisable to check details with the organiser before visiting.

21 JULY–17 SEPTEMBER

GOLD: 50 Years 50 JamFactory Alumni

Celebrating JamFactory's Associate program with the work of 50 of its most outstanding alumni; includes 'Materials with Meaning' – works on the theme of 'gift giving'
JamFactory Gallery One, Adelaide
www.jamfactory.com.au

29–30 AUGUST

TFE2023: Australian Timber Supply Crisis Summit

Timber and Forestry eNews conference
Timber industry experts
Crown Promenade, Melbourne
www.timberandforestryenews.com/

4 SEPTEMBER

Maker of the Year 2023

Entries close 11:59pm AEST for Wood Review's awards for woodworkers and wood artists, presented by Carbitool.
www.woodreview.com.au/moty2023

9 SEPTEMBER 2023–20 JANUARY 2024

SPECTRA – Contemporary Queensland Furniture Design

Curated by C J Anderson
Main Gallery and Small Object Space, Artisan
45 King Street, Bowen Hills, Qld
artisan.org.au

15–24 SEPTEMBER

Sydney Design Week

Sixty events including tours, workshops and public architecture presented across the city. Programmed by Keinton Butler, senior curator design and architecture at Powerhouse.
<https://powerhouse.com.au/program/sydney-design-week>

15–17 SEPTEMBER

Brisbane Timber, Tools & Artisan Show

Brisbane Showgrounds
www.timberandworkingwithwoodshow.com.au

15 SEPTEMBER–15 OCTOBER

Clarence Prize exhibition

A biennial celebration of innovative Australian furniture design
Prize winning and shortlisted work
Rosny Barn, Tasmania
www.clarenceartsandevents.net

23–24 SEPTEMBER

Out of the Woods Exhibition & Competition

Fine Woodwork Association of WA
In-conjunction with 'Whittle and What Knot'
At the ECU Joondalup Sports Centre, WA
www.fwwa.org.au
Email Shawn Ritchie: ootw.organizer@gmail.com

23–24 SEPTEMBER

Carve-In Open Day with Woodcraft Manningham Woodwork Club

Templestowe Leisure Centre
Cnr Anderson & Parker Streets,
Templestowe, Victoria
Saturday 9am–4pm, Sunday 9am–2pm
Event coordinator: John 0484 278 737
www.woodcraft-manningham.org.au

28 SEPTEMBER–22 NOVEMBER

MAKE award finalist exhibition

Australian Design Centre
101–115 William Street
Darlinghurst, Sydney
makeaward.au/

5–22 OCTOBER

Melbourne Fringe Festival

Celebrating all things independent art. 450+ events presented by Melbourne's emerging and established independent artists. Includes Design Fringe
melbournefringe.com.au/

6–15 OCTOBER

Sydney Craft Week Festival 2023

Annual city-wide festival of making, presenting contemporary craft and skills workshops. In 2023 the festival theme is 'Time' with a focus on materiality.
sydneycraftweek.com/

13–14 OCTOBER

Cooroora Woodcraft Show 2023

Memorial Hall, Maple St, Cooroy, Qld
Steve Chapman: 0419 611 565
www.cooroorawoodworkersclub.com

14–15 OCTOBER

Hand Tool Event

Melbourne Guild of Fine Woodworking
14 Cottage St, Blackburn, Victoria
A weekend of tools and all-day technique demonstrations, free entry
www.mgfw.com.au

21 OCTOBER–19 NOVEMBER

HIDDEN Rookwood Sculptures 2023

Annual sculpture exhibition featuring 44 finalists
Rookwood General Cemetery
1 Hawthorne Ave, Rookwood NSW
www.hiddeninrookwood.com.au

28–29 OCTOBER

Goulburn Valley Woodworkers Wood Show

Shepparton Showgrounds, Multipurpose Pavillion
Trade stands, demonstrations, milled timber, kids games, food trucks
Len Taylor: 0458 777 901
Emily Slaughter: 0488 242 699
www.gvwoodworkers.com.au

29 OCTOBER

Antique & Collectable Hand Tool Market

Hand Tool Preservation Assoc Australia Inc
164 Neerim Rd, Corner Neerim & Grange Rds, Caulfield East, Vic, 9am–12:30pm
www.htpaa.org.au/

11–12 NOVEMBER

Eltham & District Woodworkers Club Annual Exhibition

Demonstrations include scrollsawing, woodturning, guitar/mandolin making, woodcarving, boxmaking, bush carpentry and hands-on 'Wes's workshop' for children.
Eltham Community & Reception Centre
801 Main Road Eltham, Victoria
www.elthamwoodworkers.org.au/

11–12 NOVEMBER

Wollongong Wood Workshops & Market Weekend,

A weekend of workshops and everything wood
Bulli Showgrounds, NSW
www.illawarrafestivalofwood.com

19 NOVEMBER–10 DECEMBER

2023 Graduating Exhibition Sturt School for Wood

Cnr Range Road & Waverley Parade, Mittagong, NSW
www.sturt.nsw.edu.au

26–27 NOVEMBER

2023 Exhibition and sales Woodturners Society of Queensland

Mt Coot-tha, Brisbane
wsqld.org.au

3 DECEMBER–

NGV Triennial

100 artists and designers bring contemporary art, design and architecture into dialogue. Featuring 75 projects anchored by three thematic 'pillars': Magic, Matter and Memory
National Gallery of Victoria, St Kilda Rd, Melbourne, Victoria
www.ngv.vic.gov.au/exhibition/triennial/

15 DECEMBER–28 APRIL 2024

MAKE Award and ADC on tour

JamFactory, South Australia
www.makeaward.au

AUSTRALIAN
Wood
REVIEW

Anywhere. Anytime

DIGITAL | PRINT | ONLINE | MOBILE

woodreview.com.au





Not Your Average

Andrew Lowe leads a team that specialise in creating furniture for high-end designers, architects and corporate clients. Story by Linda Nathan.

It all goes back to knowing the material, and knowing your own worth. That's the big message from Andrew Lowe, owner and director of a bespoke furniture making business that is relatively unique in terms of its size, and the scale of work it undertakes. 'There are a lot of bespoke manufacturers with one, two or three people. There's probably not a lot with eight or nine', said Andrew.

'When the big interior design companies want a manufacturer that's not a joiner and not a cabinetmaker, they have a tendency to come to us', explains Andrew. 'Lowe Furniture is not like an office furniture company, or out in the marketplace with furniture produced at low price points. Our price points are our price points, and there's not much we can do about that. If you were to compare us to cars, we'd be Bentleys or Aston Martins.'

Andrew's formal training in furniture design took place at Box Hill TAFE where many of his other team members have also trained, while others studied at RMIT. Despite the handcrafted ethic, Andrew Lowe has a 'no handplanes!' policy in the workshop. 'We use a mixture of solid, thick

and standard veneers', said Andrew. 'Thick veneers are forgiving, but if you're not really well trained with a handplane you can slip when you're edging and just tear it out. There's an expertise in setting up handplanes and not everyone is trained to do it.'

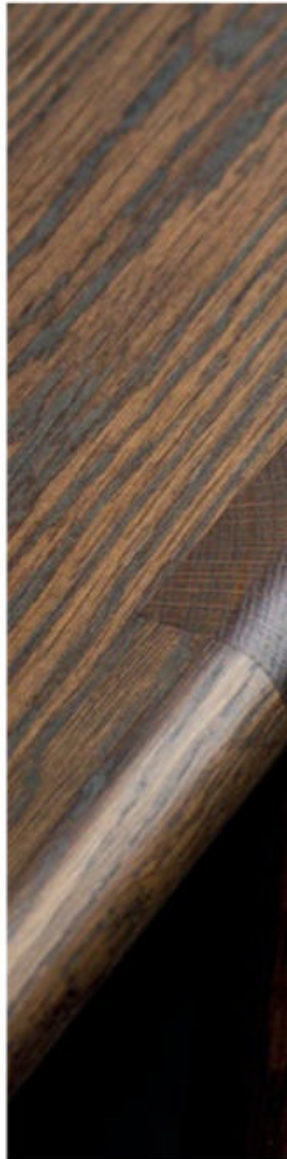
'There's still a hand aspect to (our work) but there's also an industrialised aspect to it because we live in a modern world and we adopt technology and use modern machinery. It's still handmade furniture but we're not doing dovetails

Opposite: The largest of 22 tables made for a large corporate HQ in Sydney. A collaboration with global architecture firm Hassell, the project spanned a year from initiation to handover, with construction in the workshop taking approximately five months. This example has a radius of 6600mm and a length exceeding 12 metres. The table was constructed using solid and veneer walnut. Each table is equipped with round solid walnut workstations fitted with hardware that enables laptop connectivity and phone charging.

Below: The Lowe Furniture team (left to right), Neale Grimes, Fraser Matheson, Chris Shaw, Zane Hermens, Oli Cave, Andrew Lowe, Tom Davies, Erik Erdmanis, Cameron Ferstl, Ignacio Dias.

Photos: Ignacio Dias





in drawers. In a modern society with drawer runners and modern glues there's probably no need to do that. What we do has a craft feel to it, but we're not "crafties".

Does it take guts to run a high-end business? 'Mmm... yeah...and blind naivety as well', laughed Andrew. 'It's just the nature of being creative – other aspects take second place. Enjoyment is part of it. I love coming to work, and most of the guys here are similar characters. We're all passionate about our work, and we care about what we do.'

Working in a timber yard was a seminal experience, and not just because watching other makers come in and buy timber to go off and make things strengthened his own desire to also do that. Impetus for starting the business came directly from his partner-in-life Jaci Foti-Lowe, an architect, town planner and furniture retailer.

'It all started 26 years when a young woman studying architecture at Melbourne Uni (my wife) came in and wanted to buy timber for a box she was making. I looked at her and thought – I've been waiting for you all my life! I sold her some wood...and the rest is history. Three kids, some horses, bees, a pet snake and some chickens, and we're still together.

'But we had nowhere to sell our products. I was on my own, making tables, designing them. Our business came about because of a trip that my wife took to



Across the pages, all about details, clockwise from bottom left:

Shown in 2022 at *Relatively Useful*, at the Heide Museum of Modern Art, designed by architect John Wardle and made from Hydrowood Tas oak.

Inspired by the American Prairie School aesthetic, the *Springfield* table features brass inlays in a stained American oak top.

Custom table in American burl walnut veneer for Tali Roth Designs.

Developed in collaboration with Hecker Guthrie for a West Australian winery, the *Felix* table has found a place in the Lowe Furniture collection.

The *Belford* table join shows a frequent element of Lowe's house style, where endgrain presents itself in the tabletop surface.

Yencken table in stained American oak.

Below: This 3.2 metre square board room table was commissioned through fjstudio. It is made from American walnut in veneer and solid form. The table breaks down into components sized to fit into a goods lift, a common requirement that Lowe Furniture designs into large tables.

Photos: Ignacio Dias

Europe over 20 years ago. She returned from Milan in 2000 with distribution rights for a number of high-end European furniture companies. We sold our house in North Melbourne and financed the business set-up. Now we work directly with designers and architects and high-end companies.'

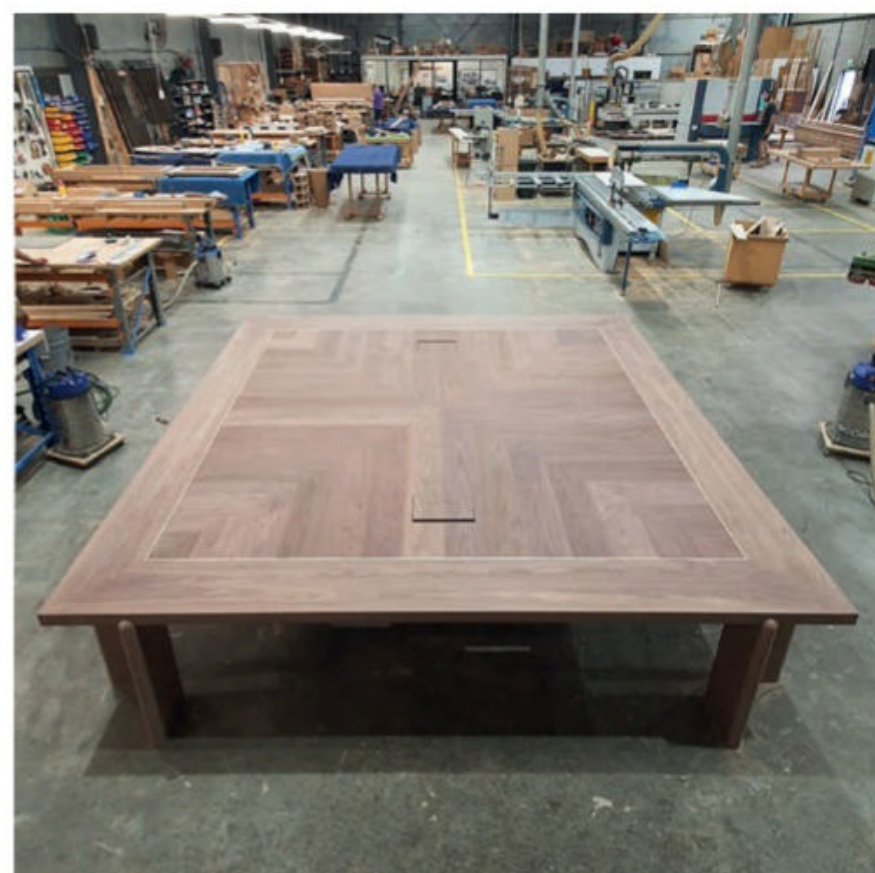
The growth of the business was organic and not part of a grand plan. 'When we opened the shop I was able to put a table on the floor. We sold two, we sold three – all of a sudden I couldn't make all the tables, so I employed Erik (who's still with me). All of a sudden Erik and I couldn't make everything...the workshop's too small...we went from a 180sqm to 350sqm. Four or five years later from West Heidelberg to Knoxfield and we've gone to 500sqm because the workshop is too small.'

Taking on staff wasn't initially part of Andrew's plan either. 'I didn't think I would ever employ people. I didn't think I would ever get people that were as particular and picky as me. But I'm not your average boss – I try to be more of a friend – I don't want to be mean-spirited or micro-manage.'

At the same time Hub Furniture also grew in terms of sales and staff. 'By this stage Jaci had five or six sales staff working between Melbourne and Sydney and orders were coming in for boardroom tables for Westpac and furniture for the magistrates court of NSW, and more. And all of

a sudden we haven't got enough space again.' For Lowe Furniture, it's been word of mouth all the way, people seeing work completed and wanting to commission well made furniture.

Once again, it all comes down to the wood, knowing the material. 'You may have to pay a little bit more', said Andrew, 'because instead of five pieces for a tabletop we're



Right: Lowe Furniture's *Butterworth* table with fluted pedestal in American walnut.

Photo: Bachli Furniture

Far right: *Cabinet room table*, 10 x 3 metre, stained Vic ash. Made in collaboration with architecture firm Batesmart for a government building, the table has built-in data, power boxes and microphones. Once again, components had to be designed to fit into a goods lift.

Photo: Zane Hermens



willing to buy ten, pick the best five and keep the other five for another use.'

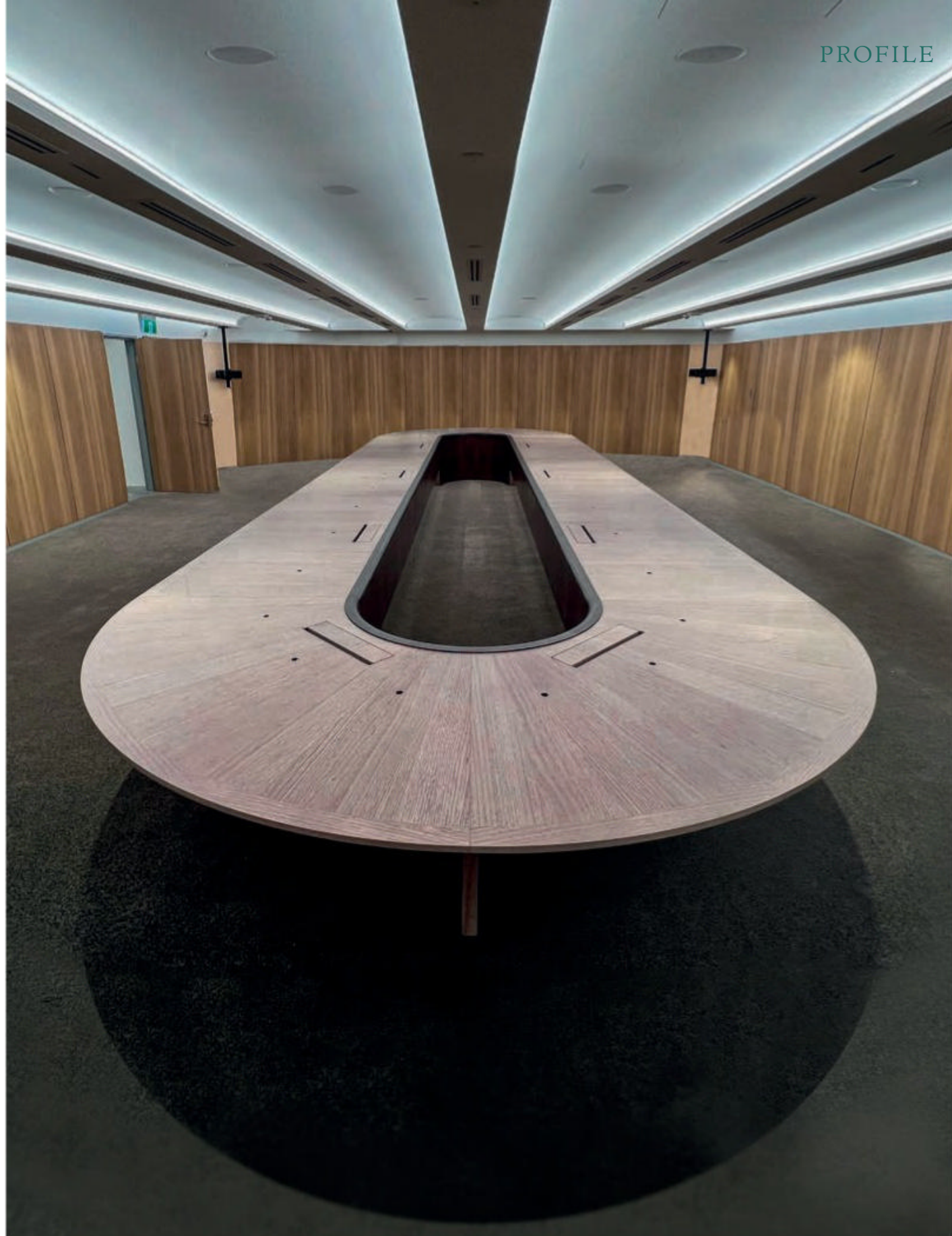
So, selecting wood is what it's all about? '100 per cent. I'm still doing it now', said Andrew. 'I still go out to Brittons and Matthews and sort wood for colour, for grain, and to avoid knots and defects.' Knowing wood with all its variations in grain and colour has been learned literally pack by pack, board by board while Andrew moved, sorted and sold it for over ten years at Matthews Timber in Vermont.

What's the secret of running a scaled-up woodworking business? 'You need to be resilient because things always crop up', said Andrew. 'You have to be a problem solver. Not just woodworking, but designing to a brief or a need.' Why do some woodworking businesses fail? 'Because they've probably undersold their value, and because there are also cheaper imports you just can't compete with.'

How do you convince clients of the worth of your work, in other words, charge amounts that cover costs and include a profit? 'Tell them the truth. It's a hard one', said Andrew after a long pause. 'You say: "We live in the first world and we're paying first-world wages". We can't be compared to European manufacturers.'

What about the Lowe furniture style – how would he define that? 'There's a classical aspect to what we do, although there's nothing traditional about it,' said Andrew citing instead 'timeless' designs such as Lowe Furniture's *Atticus* table which was designed 20 years ago, but sells well.

Trends are an influence, but Andrew likes to put his own spin on things. 'We try to be involved in what's happening. For example, pedestal tables with round straight barrels – we started making tapered barrels with fluting running right around the barrel.' The *Butterworth* was named as a playful homage to his lecturer at Box Hill TAFE:



‘Andrew (Butterworth) didn’t like superfluous decoration so I decided to name a table after him with as much superfluous decoration as possible!’

Professional by day, Andrew’s hobby is also woodworking – he likes making knives. ‘I enjoy making something that’s quick and compact. I can get a kick out of them in a couple of hours.’ And as for most other woodworkers there’s joy in those special ‘finds’. ‘I will drive past hard rubbish, and think oh my god, that chair, and jump out of the car. I’ll see some myrtle from a bedhead that someone was throwing out, and I’m thinking – that’s old growth myrtle, quartersawn with a beautiful fleck in it and that tree was probably 400 years or more old when they cut it down. The other day I took the front legs of a rosewood chair that I found in an old building site – they’ll go into a knife handle.’

As far as machinery and equipment goes, Andrew is pragmatic. ‘Good secondhand is fine. Woodworkers get drawn into brand names. I look at what we’ve been able to

produce in the last 20 years with the tools that we’ve got, and we’ve done probably better stuff than a lot of other people out there that have all the whiz-bang brand-new machines.

‘We have an SCM saw, thicknesser and buzzer, Stenner resaw bandsaw, Meber bandsaw, mostly Italian and English machines. The exception would be a new Taiwanese wide belt sander which is “robust” and works for the thick veneers and solid work. The Italian-made equivalents work better for veneered work. And we do make sure that they’re all kept in pretty good order.’

Upscaling to a team that’s relatively large for a bespoke design and make business, has also meant moving up to the higher end of running a business. It’s been a challenging journey that Andrew continues to enjoy, however once again, his message is pragmatic, ‘If you’re still spending time on the tools after 22 years in the business, you’ve not moved on.’

Learn more about Lowe Furniture at www.lowefurniture.com.au



Laser Cut Marquetry

David Lim finds a low cost and compact laser cutter that makes it easy to add marquetry motifs and inlays to your work.

Marquetry is the art of creating intricate designs by cutting and fitting pieces of wood or other materials together. It's a technique that has been used for centuries to create decorative and functional objects such as furniture, boxes, and musical instruments. While traditionally done by hand, modern technology has made marquetry easier to accomplish than ever before, thanks in part to the use of CNC laser cutters.

A CNC (Computer Numerical Control) laser cutter is a machine

that uses a laser to cut and engrave materials with precision and speed. These machines can be used to create a wide range of designs, including intricate marquetry patterns.

My first machine

In 2015, I started using an 80 watt CO2 laser cutter. It was a versatile machine with a cutting bed of 900 x 600mm which I used to create intricate designs and some production pieces. This machine allowed me to vastly extend the range of artefacts that I could produce. It also allowed me to

make small scale production items that I sold on the internet.

At that stage I was in commercial premises with plenty of space but in a domestic situation the negatives of this type of machine were that: 1. It takes up a lot of space (about 4m²); 2. It needs to be water cooled; 3. The fumes need to be expelled outside the workshop; 4. Most importantly, the laser tube is fragile and has an expiry date. CO2 laser tubes degrade over time whether in use or not. The glass laser tube holds a vacuum and

is water cooled to preventing it from overheating. The vacuum within the laser tube is slowly lost, which reduces the effectiveness of the laser.

Lighter and cheaper

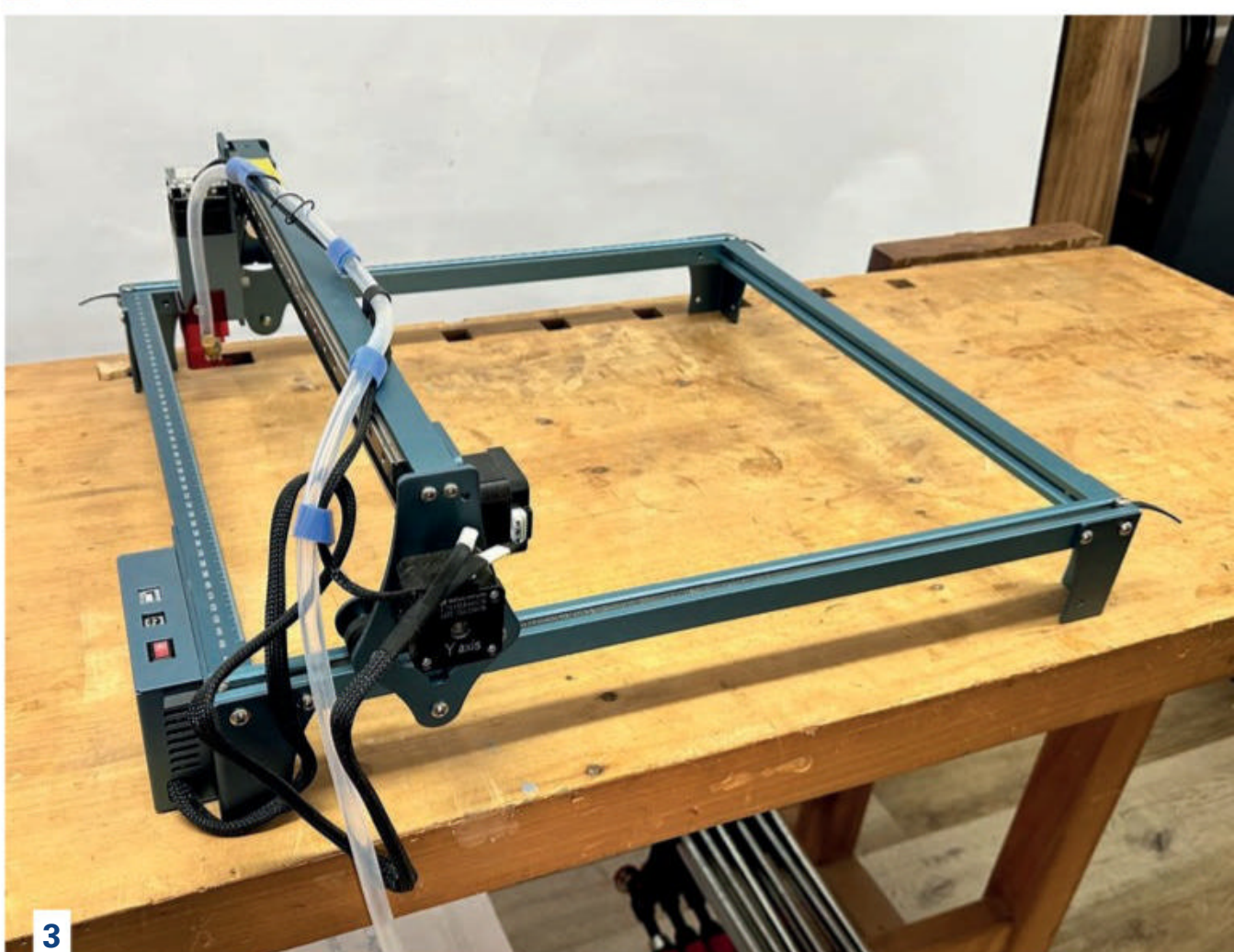
In 2022 my laser tube failed and I needed to replace it. After some research, I found a new commercially viable option – a diode laser. It needs less space and costs significantly less than a CO2 laser. Examples of diode lasers that are popular for marquetry are the Sculpfun S9 and S10, and currently for around \$400 the S9 is highly affordable. It has a laser diode that outputs 5.5 watts of optical power, while the S10 outputs 10 watts, making it twice as powerful.

One advantage of the Sculpfun S9 and S10 is that they can be upgraded to a larger bed of 935 x 905mm. This is a cost-effective solution for those who want to expand their capabilities without having to purchase a new CNC laser cutter. (I should also note that I don't have any commercial connection with the manufacturers or distributors.)

I started experimenting with the Sculpfun S9 and quickly upgraded to the S10. With the S10, I can cut through 12mm ply and MDF, which the S9 couldn't do. Both machines have an ultra-thin laser beam which is only 0.08mm when focused.

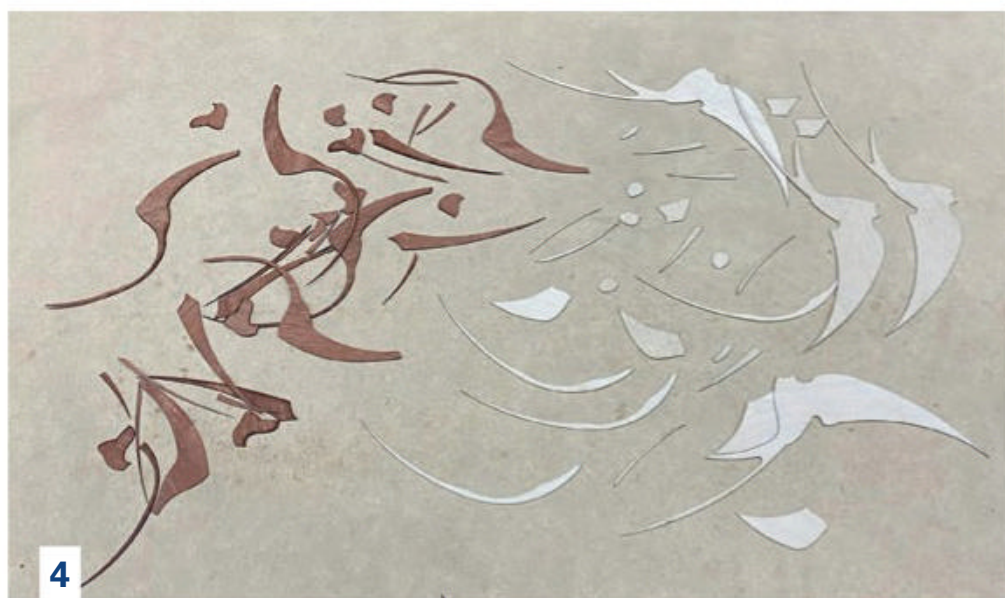
The laser cutter is light and hangs on the wall when not in use. It can be set up in a carport or balcony, avoiding the need for an exhaust fan. Used inside a room or garage however, it is advisable to have an exhaust fan.

Both are available online and prices and delivery times vary. It took me approximately half an hour to set up the machine when it came in the mail. And within 45 minutes I was doing my first cuts with the machine.



Main: 'The laser cutter I now use is small and lightweight, and hangs on the wall when not in use.'

1. My first floor standing laser cutter had a large cutting bed and took up a large amount of room. The laser tube is large and fragile. Replacing the laser tube every year or two is a common practice.
2. The S10 comes in a small box delivered through the postal service.
3. The S10 sitting on my workbench ready to cut.



4. Cut multiples of the same piece as spares in case of breakage.
5. This pair of swallows took less than two minutes to cut on the laser cutter.
- 6,7. Cut two sets of marquetry pieces from light and dark toned veneer to create a mirrored positive and negative effect.
8. The laser can be used to cut out an inlay as well as the void that it will fill. In this case I have used mother of pearl.



Software

The software that I used to control the CNC was Lightburn. This is a feature-rich software that offers a range of tools for both beginners and advanced users. It cost me US\$91 to purchase the licence, but it has a free 30-day trial, allowing users to test the software before making a commitment.

You can draw your own designs on the computer using your preferred choice of CAD software, such as AutoCAD or Sketchup (any 2D

CAD software will suffice). Once you have drawn up what you want to cut, you can import the vector file into Lightburn to output the design.

If you're not well versed in drawing with CAD, you can download vector files from the internet. There are many websites which have free vector drawings to download. Or for a small fee you can get someone to convert your image to a vector file. You can find this service on websites such as [fiverr.com](https://www.fiverr.com) or [upwork.com](https://www.upwork.com).

Using the laser cutter

Cutting veneer marquetry pieces is quick and straightforward. You will need to experiment with the settings on your machine to work out the cut rates and the length of focus of your laser. There are numerous videos on YouTube which will walk you through all the different settings on your laser.

When you first start it is advisable to cut multiples of the same part – especially if they are very small and intricate. This is because they have a



9



11



10

9. The mirrored pattern on this backgammon board was easily created using the laser cutter.
10. Showing a knife block with a scaled up version of the swallow pattern shown in photo 5.
11. The swallow pattern came out again for this tray, but at a larger scale.

habit of snapping into pieces during the lay-up, or breaking up if there are faults in the veneer.

Cutting multiples of the same part is very quick and easy to do. For an intricate part, I will cut often six to eight spares because I know I will destroy some during the lay-up process, and it is easier to do them all at the same time rather than going back to the laser cutter to recut pieces.

For production items that have only two tones, I cut two sets from both light and dark coloured veneers. Swap the pieces and you then end up with two sets of marquetry! This method has been used for hundreds of years (by hand), and you can still see cabinets that are identical to each other, except for the mirrored positive and negative effects.

Another advantage of using a laser cutter is that once you have the drawing done, you can use the same drawing to make many different items or change the scale of the drawings. For example, I used larger versions of the same swallow drawing on a tray and on a knife block.

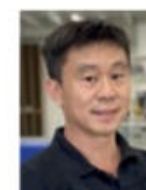
I lay out the pieces as in traditional marquetry, using either veneer tape or blue painters tape. Once the pieces are glued together I normally press my designs onto either MDF or ply using my antique book press (if the board fits into it), or in a vacuum press if it does not. Once pressed, I give it a light sand and apply the marquetry to the piece I am making.

You can also use the laser to cut out the voids for the inlay, and of course

you can cut and inlay other materials such as mother of pearl.

Because of the cost and the ease of use of this machine, I believe this piece of equipment has the potential to become an essential for every wood workshop.

Photos: David Lim



Architecturally trained and a builder by trade, David Lim @turnandplane is a designer maker and teacher of woodworking. Since 2000, David has made more than 26,000 pens and over a thousand boxes from Australian timbers, predominantly sourced directly from Tasmania. His work is influenced by his Oriental heritage and includes small cabinets, boxes and turned pieces. David's work can be found for sale in galleries around Australia and East Asia.



Three Easy Gifts to Make

Simple items to make to give, sell or to learn basic woodworking skills with. Story by Raf Nathan.

A part from needing regular stock for a store I supply from time to time I need student projects that can be completed in short time frames. These projects will suit beginners or those who have a basic selection of tools and offers some easy build ideas for gifts using small section wood.

Coat hooks

There is a massive number of designs on the internet by many makers to inspire (and sometimes worry you), but I went on to develop a few ideas that appealed to me which I combined in my coat hook project.

A graphic designer friend said to me years ago that what I didn't realise was there are three basic shapes that we use: circle, square and triangle. With these three combined in various measures you have a better chance

of a successful design. He said I was incorporating this in my furniture but just not aware of it. This has been my 'design' approach ever since. So, as I worked on the coat hook design I thought about this, noting that hooks were 'the triangle', the rail 'the square' and the small plugs were important as 'the circle'.

Five hooks is a good practical number for this fitting. The rail is 55mm wide x 22mm thick, but in this case 18–19mm thick would also be perfect. The 19mm square hooks are made from a contrasting timber, and after a few variations, I set the angle at a simple 45°. The length of the hook is set so that it sits level with the top of the rail.

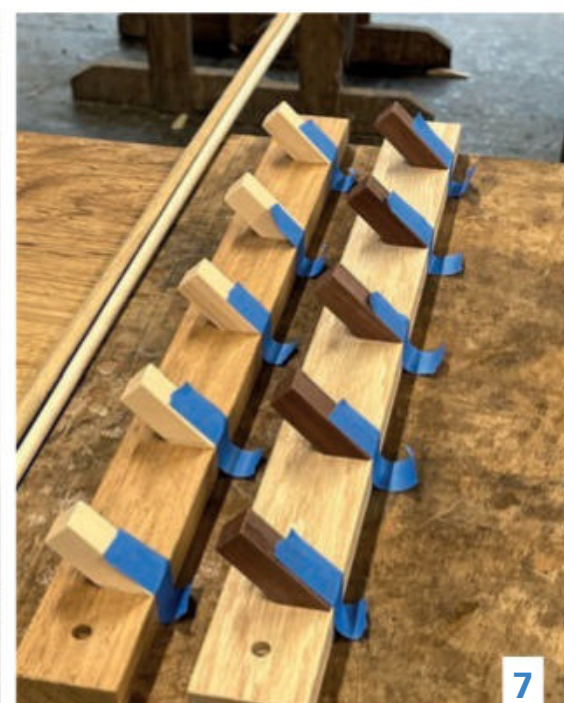
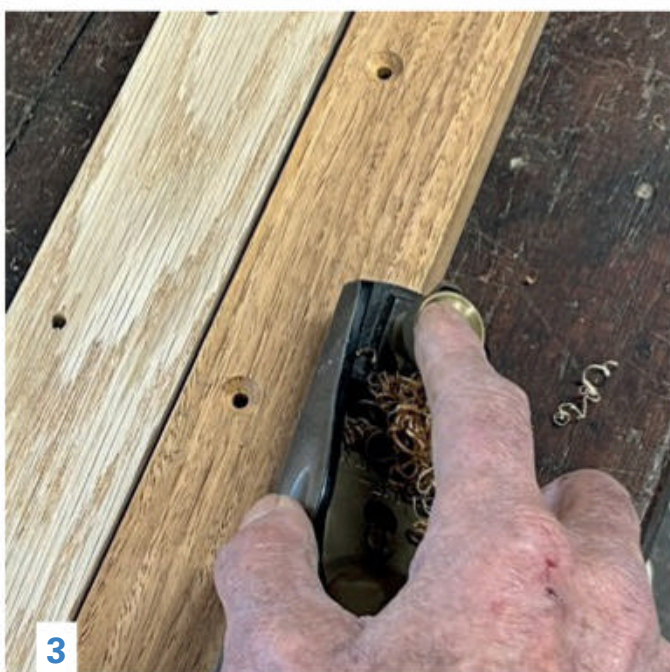
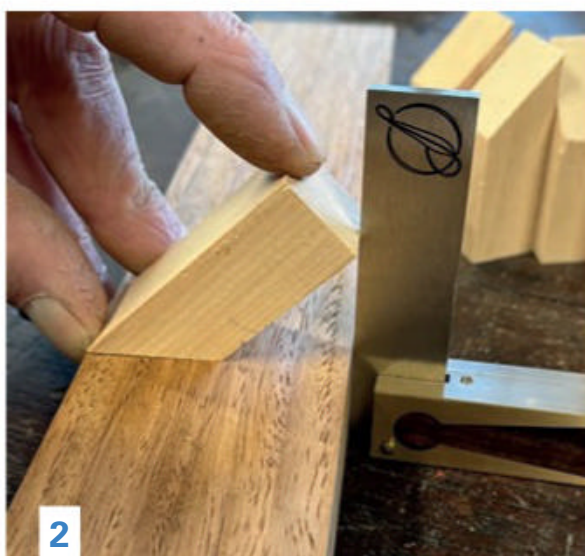
The trick here is to cut the hooks accurately and because they are so

short, safely. A jig for the mitre saw gives plenty of support when sawing short pieces of wood. I use a stop-block to fix the length and a push-stick to hold the wood.

People will place quite heavy things like school bags for example, and these can really load the hook. For this reason, there is a countersunk screw from the back of the rail to secure the hook.

Establish the position of the hooks, mark and drill the holes, and then countersink the screwheads.

Sorting the wall mounting is a fundamental part of this project. Ideally we like wall fixings to be hidden, and there are keyhole fittings that could be used however they are more difficult to locate on the wall.



The strongest fixing is to screw the rails to a wall, however exposed screwheads are always a problem. You can buy coloured plastic kitchen style screw caps or turned pine caps from hardware store. In this case I drilled a 9.5mm (3/8") plug hole and used matching diameter dowel for the plug.

The dowel is stained as needed to match the hooks. Be aware that store-bought dowel can vary from its stated diameter.

Sand the rail and chamfer all edges neatly, then fit the hooks. I used Quick and Thick glue to secure the hooks. Position them carefully and rub them in place till the glue grabs, adding on tape to hold them in position for an overnight dry. The screws can be fitted from behind into the hooks, and then everything is given a final clean-up prior to polishing.

1. Stock for the hooks was cut at 45° on the mitre saw.
2. The length of the hooks was set to the top of the rail.
3. Machine the rails, drill and countersink holes and chamfer the edges.
4. The hooks were chamfered with a bench plane held in a vice.
5. Breaking the hook edges on 120 grit sandpaper that was followed up with 180 grit.
6. Line up the hooks square prior to gluing in.
7. The hooks were glued in and taped in place to let the glue set.
8. Drill a pilot hole and screw into the hooks from behind to strengthen them.



The kitchen tidy

It was interesting writing this project up as it made me think hard about the way we apply various details to increase the power of a piece.

Given the kitchen tidy is nothing more than a small box, what can we as aspiring designer/makers do to take it from nothing to something that is desirable for a buyer, and satisfying for us to make? After all, in K-mart you can find many 'nice' kitchen tidies for around \$15–20...

These kitchen tidies are 90 x 90mm and 140mm high. They are 90mm for two reasons; being that is an effective size in use, and it's the maximum height my mitre saw can accommodate. My mitre saw is a

workshop favourite for accuracy and ease of use.

Lengths of wood are machined to 90 x 10mm and 70 x 10mm. It's easier to finish the inside face at this stage, because it will be difficult to do this inside the box later. Apply polish across the 70mm pieces fully, however the 90mm pieces need unpolished wood along the edge for the glue to adhere to. Next, saw into short lengths being around 160mm long.

Glue the four pieces together using blue tape to clamp it. Once again I'm using a thick, quick-setting glue and take care not to apply it towards the inside of the edge. I want to minimise any glue squeeze-out on the inside as this will be very hard to get to. It's

taken me 40 years to be able to apply glue cleanly. If the inside is already polished however, excess glue can be peeled off when dry.

Make sure that the outside faces align as flush as possible, and that the assembly is square. Check this from the outside, and then leave these aside to dry. When ready, plane the edges flush and then saw the boxes to the final length of 140mm.

Mitre key slots house the contrasting coloured keys. The slots are made on the tablesaw using a jig to support the box. The thickness of the keys will depend on your saw kerf which in this case is 3mm.

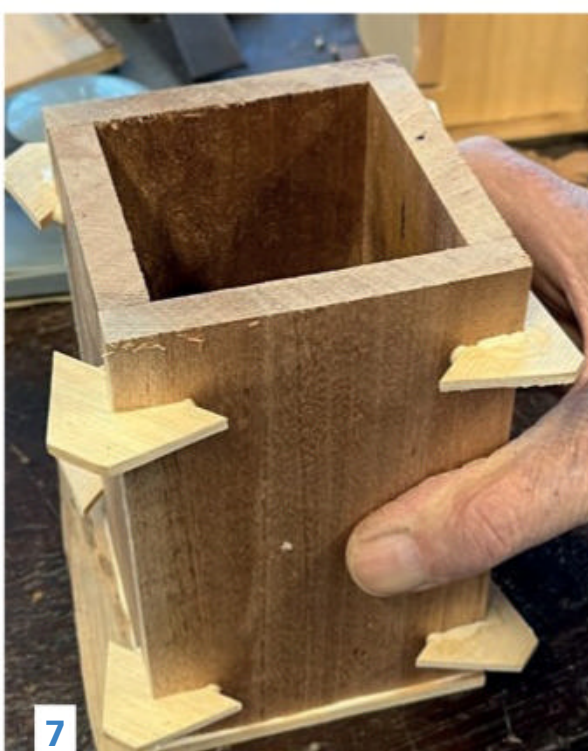
It can be tricky to machine thin pieces of wood. My thicknesser goes



down to 4mm cleanly so I hand planed down the extra millimetre. The keys fit in the slot neatly and are glued in place. The base is about 94mm square and 5mm thick and is glued in place.

The glue I'm using is Titebond Quick and Thick and grabs quite quickly. If you bring the two parts together and give them a rub the glue will grab and you can put it aside with a weight on top and leave it to cure.

The keys are next sawn flush to the sides as is the base. Now all it needs is a final sanding and the sharp edges removed with a chamfer applied. The block plane is good for this taking an even number of passes along each edge. An oil finish was applied.



1. Select your wood and lay the pieces out.
2. The sides are simply glued.
3. 'Clamping' up with tape is easy and effective.
4. Saw to final length on the mitre saw.
5. Cutting slots for corner splines on the tablesaw with the aid of cradle jig.
6. Small contrasting pieces of wood are glued into the slots.
7. Leave the glued-in splines to dry before sawing off with a handsaw.
8. Chamfering the sharp edges off with a block plane will make the tidies more user friendly.



Cutting boards

Possibly the simplest kitchen accessory known to man. A piece of wood. This is all about contrast and makes the most of some celery top pine and wattle.

The wattle board has a celery top pine strip in the middle. The added hole breaks up the surface and allows the board to be hung up on a hook. There is a small chamfer on the inside of the hole which is one of my favourite details. The celery top boards are different widths reducing towards the middle. Between these, wattle strips were glued in.

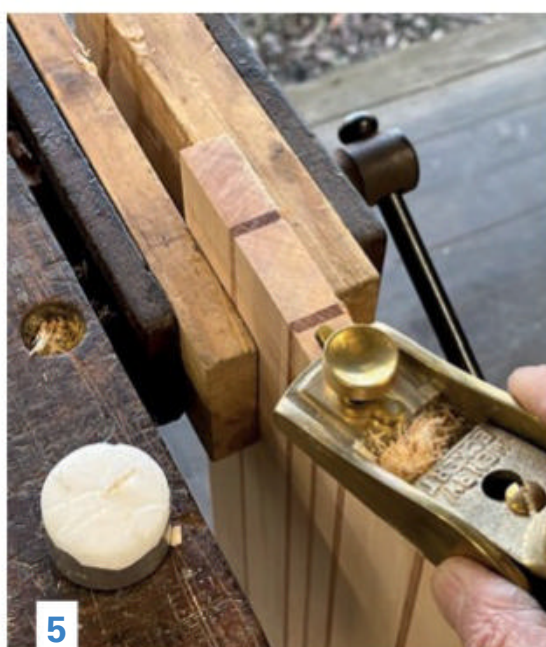
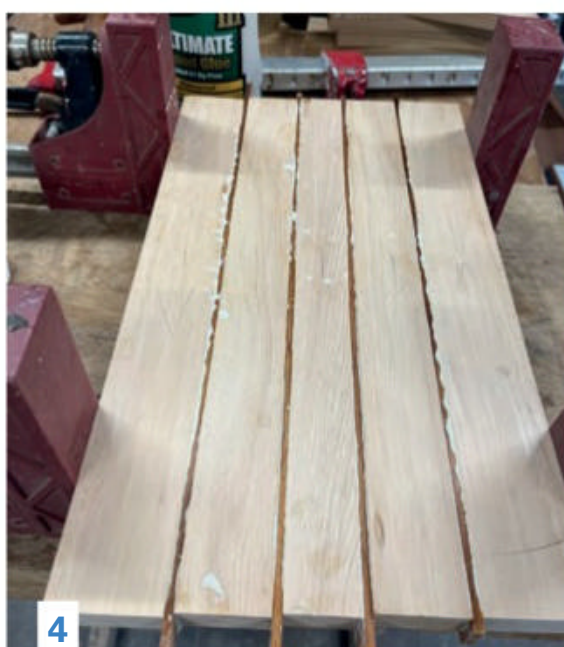
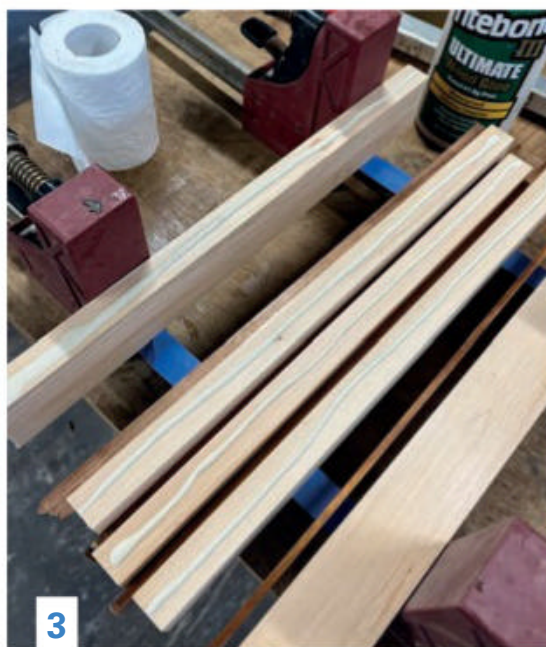
Simply glue the various sections together and when dry plane them flat on the thicknesser, then saw to final length.

All the corners were rounded using a jig and trim router for consistency. All the edges were chamfered with the trim router and 45° cutter. As these are for food preparation I used only olive oil as a polish and suggest to customers they re-oil their boards occasionally – and never place them in a dishwasher!

Photos: Raf Nathan



Raf Nathan is a Brisbane-based woodworker who makes furniture and other objects to order. Contact him via Instagram @treeman777



1. Arrange the wood and contrasting strips. Pencil marks show the grain direction for later planing.
2. Get ready for glue-up – tape on the clamps will prevent staining from tannins in the wood.
3. Apply glue and clamp up.
4. There should be some squeeze-out to ensure adequate glue coating.
5. Thickness plane to final thickness, saw to length and use a block plane to clean up the endgrain and chamfer the edges.



WOODWORK CLASSES WITH ROY SCHACK

- weekends, short and long term courses available
- catering to beginners and experienced
- four students maximum
- workshop located in beautiful Samford Valley
- tools supplied
- one-on-one tuition available

FOR MORE INFORMATION:
www.royschack.com
P 0415 328 166  bluecheak

CWS

Your One Stop Woodcraft Supply Shop

CARROLL'S WOODCRAFT SUPPLIES

Phone - 03 5243 0522
Email - jim@cwsonline.com.au
Web - www.cwsonline.com.au

Piece CONTEMPORARY FINE FURNITURE

FINE WOODWORKING CLASSES

With John Gallagher in Marrickville, Sydney.

- Suitable for beginners to experienced
- Classes follow school terms
- Tools supplied
- Hand skills and machine processes
- Fully equipped professional workshop
- 4 Students only in a class

*For further info contact John Gallagher
john@piecefurniture.com.au*

ROBERT HOWARD
CLASSES IN WOODCARVING

- Discover the joys of using your hands
- Tools and wood supplied
- Beginners welcome
- Inner City Brisbane location

Full details on my website:
www.roberthoward.com.au

Or
ph: 0403 161 111
e: howardrobert@mac.com

Instagram:
roberthoward
woodworker



RICHARD CROSLAND
SCHOOL OF FINE WOODWORK
(accredited member Studio Woodworkers Australia)

Weekday/nights & Saturdays
Phone: (02) 9313 4142

Short Course on Sundays
with Adam Crosland
Mobile: 0409 444 760

Enquire by phone or via email
richard@crosland.com.au
www.crosland.com.au

No.43/566 Gardeners Rd Alexandria, Sydney


TIMBERBITS
HELPING YOU CREATE WITH WOOD

WOODWORKING SUPPLIES

Same day dispatch
Quality brands
Low prices
365 day returns

Unit 6/8 Wilmette Place, Mona Vale NSW 2103
timberbits.com
02 8104 9080



EASY ONLINE SHOPPING

plus help & info from the makers
ubeaut.com.au



- HEGNER** – German made precision machines
- STUBAI** – Austrian bench & carving chisels
- GYOKUCHO** – Japanese saws
- MARPLES** – British layout tools
- RENAISSANCE** – British Museum quality wax
- VERITAS** – Legendary tools & accessories
- BRUSSO** – US brass box & cabinet hardware
- WHITE CROCODILE** – German finishing brushes
- LIOGIER** – French hand cut rasps
- Pure tung oil & thinners
- Hundreds of quality tools, equipment, books & videos.

Info@thewoodworks.com.au
www.thewoodworks.com.au
PO Box 1229 Mona Vale NSW 1660 Ph: (02) 9979 7797
Mention code AWR2013 to claim a discount.

Tasmanian Turning Supplies

6 Tanina Mews Kingston Beach Tasmania 7050
Phone: (03)6229 1345 Mobile: 0407 274 294

- Tasmanian timber blanks.
- Pen kits. • Cutlery fitments.
- Fit-up clocks and weather instruments.
- Lazy susan bearings. • Brass accessories.
- Bottle stoppers. • Pewter potpourri lids.
- Salt and pepper grinders and more ...

Email: info@tasmanianturningsupplies.com.au
Web site: tasmanianturningsupplies.com.au

FOR ADVERTISING ENQUIRIES

**CALL JODIE REID ON
02 9213 8261**

IRONCORE

WOODBURNING INC 1952

- A.C.A – EMC Approved
- Highly recommended by:
Government departments,
artists, small business
owners, beginners
- Cool light handles
- Single & double handle
machines available
- Online & Phone Orders Welcome



Ironcore Transformers P/L 20-22 Quinn St, Preston, Vic 3072
Tel 03 9480 6044
Email info@ironcore.com.au Web www.ironcore.com.au

100% AUSTRALIAN MADE - OUR PYROGRAPHY MACHINE IS SIMPLY THE BEST



Joining Curves

David Haig takes us through his technique for inseting curved parts into any given edge.

When I designed my first *Monogram* rocking chair back in 1990, the point of greatest difficulty for me was how to attach the curved steam-bent back-leg/arm to the side of the seat. I wanted it to slice cleanly through without a break, so that the curve would look as far as possible uninterrupted, as well as ending up in exactly the right configuration to meet the back end of the rocker part below the seat as well as the underside of the arm above it.

I'd studied Sam Maloof's jointing system, and realised that, strong and sculptural as it was, it couldn't work starting with a single steam-bent curved element, hitting the seat edge at a compound angle. Maloof joints need to have at least one 90° angle and also a large chunk of wood to start

with, to allow for shaping above and below the joint. There was far too much curve involved in my case to even think about using a solid wood block, and the wastage would have been hideous.

So I went for the most direct if unsophisticated method; I just cut a curved slot in the edge of the seat to match the squared up profile of the curved steam-bent arm/b-leg. I thought that with a snug fit, with fine V-chisel slots cross hatched on the faces, epoxied, and reinforced with a wood plugged No.12 dome head screw the piece should hold in place. I carved and blended in the curved cross-sectional shape just above and below the slot and voila! None of those joints have ever come apart and it's neat and clean looking.

Matching curves

But the key here was this 'snug' fit. How exactly does one go about creating a curved slot on the edge of a seat (or any other edge) that will perfectly match the curve of the piece you want to fit into it?

Well, the first ones were nothing more or less than trial and error. I knew that a router using a ring guide should be able to produce a curved slot using a template made so it could be attached to the seat edge at the right spot and angle. So I measured the offsets carefully and then just shaped and filed the profile of the plywood template until it would produce an acceptable fit. It was good enough, and there I left it for many years.

Then, in 2007, I wanted to design a project for a 'curvature' course at the newly established Centre for Fine Woodworking here in Nelson, and after a bit of thought came up with my *Hoop stool* project. It was a good way to introduce steam-bending, laminating and also kerf-bending to students all in one project that would also end up an attractive and useful piece of furniture.

Again though, at the heart of the design was the cutting of very accurate curved slots into the ends of the kerf-bent and laminated seat to exactly fit the hoop-shaped legs into. In other words, a similar problem to the one I had encountered years earlier in my rocking chair.

The pivot jig solution

My first thought was how to avoid the rather hit and miss trial and error business again, and what I came up with initially worked quite well, but imposed a design limitation that was awkward to get around. I conceived the hoop shape at the top of the legs as a true radius, and so was able to use a router on an adjustable pivot to set up exactly matching slots for use with a ring-guide that would attach to the end of the seat. I just needed to dial in the exact dimension to allow for the cutter diameter offsets, and alter the pivot length (or radius) accordingly. I even made up a quite elaborate adjusting pivot jig for my router which enabled tenth of a millimetre adjustments to be made with ease.

The design difficulty was making the top portion of the hoop-shaped legs as an exact radius, as the matching slots could only be cut as an exact radius too, as they pivoted from a single point. On the hoop shaped legs, it meant that the radii had to fade out to a different gentler curve below where they joined the seat, and anyone who has tried blending exact geometric circles into basically parabolic curves will know that the transition point is a little awkward, and more so where a change of thickness is involved too.

The ring guide router technique

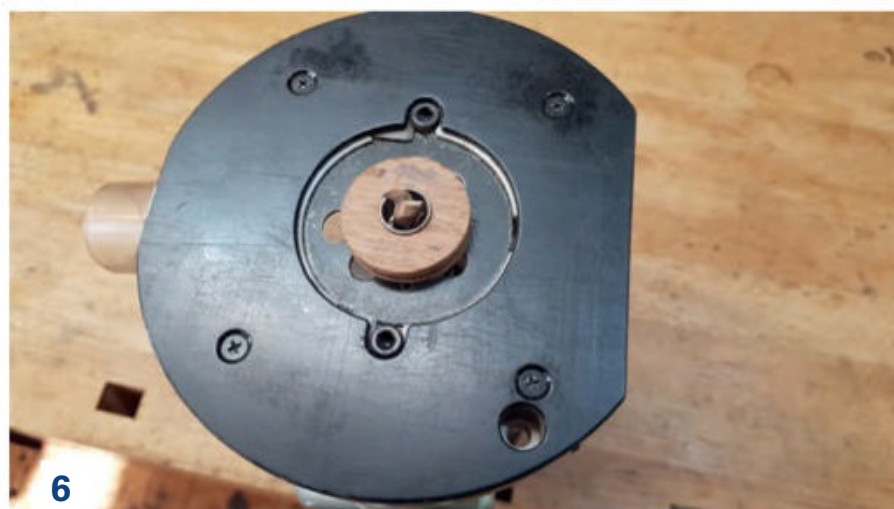
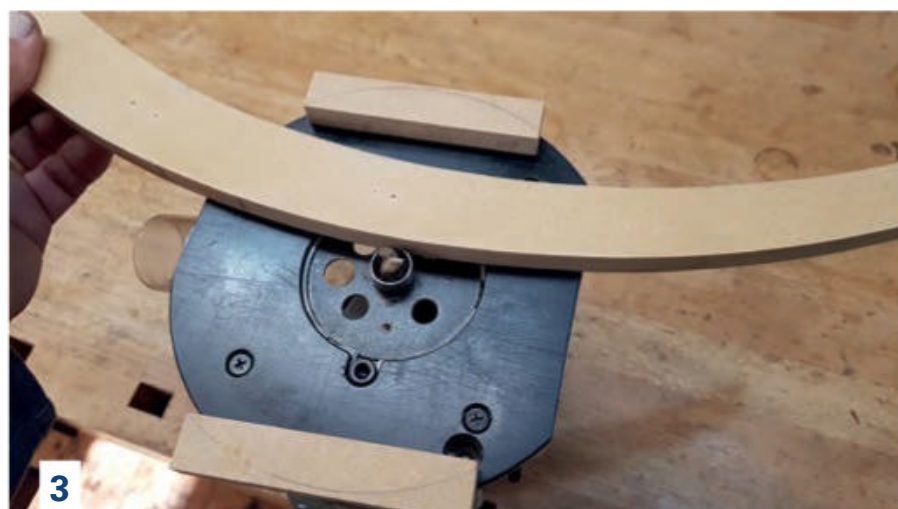
In 2010 I co-taught a course at the Centre for Furniture Craftsmanship in Maine with Peter Fleming, head of the furniture department at Sheridan College in Toronto, Canada.

He showed a technique that produced perfect negative/positive shapes, such that any shape could have its negative (a slot or a housing) produced. This was a big step up from relying on my radius-cutting jig, as it allowed complete freedom to make whatever shape you needed. (Inlay sets use exactly this technique, but on a miniature scale, with very small diameter cutters, unsuitable for furniture-scale parts.)

Firstly, you need to make a thin (10mm or less) template to the curved shape that you want the eventual leg, or whatever to be. This will both shape your final piece and provide the template shape for making the slot cutting jig (**photo 1**).



These pages show David Haig's *Hoop stool* and *rocker* that illustrate how curved components can be integrated with the technique described here. Photos: Daniel Allen



1. For the slot cutting jig a thin curved template is first made.
2. Screw the template to ply and mark out the outline of the edge you are going to cut the slot into.
3. Use a 10 or 12mm plunge-cutting straight sided bit with a ring guide collar close to the bit diameter. Block up the router base sides to the thickness of the curved top template so the router will stay flat as it cuts.
4. Rout against both edges through the ply base template to produce two slots.
5. Cut out the section between the slots with a jigsaw.
6. To achieve the correct diameter, a second ring guide was made to slip over the first one.

You then attach it by screws on top of a piece of ply (or MDF) which is marked out with the outline of the edge you are going to cut the slot into. You set it at whatever place and angle you have decided it needs to join at (**photo 2**). The bottom piece for the template doesn't need to be thicker than 10mm.

You then use a sharp 10 or 12mm plunge-cutting straight sided bit, with a ring guide collar, close to the diameter of the bit (so a 12mm bit could use a 16mm collar). Block up (use double-sided tape) each side of the router base to the same thickness as the curved top template so the router will stay flat as it cuts (**photo 3**).

Run the cutter against both curved edges right through the ply base template, to produce two slots each side, which should also run about 20mm above and below the outlined profile of the edge (**photo 4**).

You can then cut out the whole piece in between the two slots with a jigsaw, so you are left with a hole with two curved edges facing each other (**photo 5**). Those curved edges are the critical bit. The hole you've made will be wider than the original curved shape you have copied by the width of the cutter plus the gap between the cutter and the template, on each side...plus extra top and bottom too as the second ring-guide's diameter is much bigger than the first and must be able to cut clear all around the edge you are cutting into, so allow enough clear space top and bottom too.

It'll probably look far too big but fear not, this is how it should be at this stage, which is where the clever stuff happens. Firstly, keep the same cutter in the router bit (this is why you need a reasonably hefty cutter as it is now also going to cut the slot in your edge) and check to see exactly what size slot that bit actually cuts...they are not that accurately

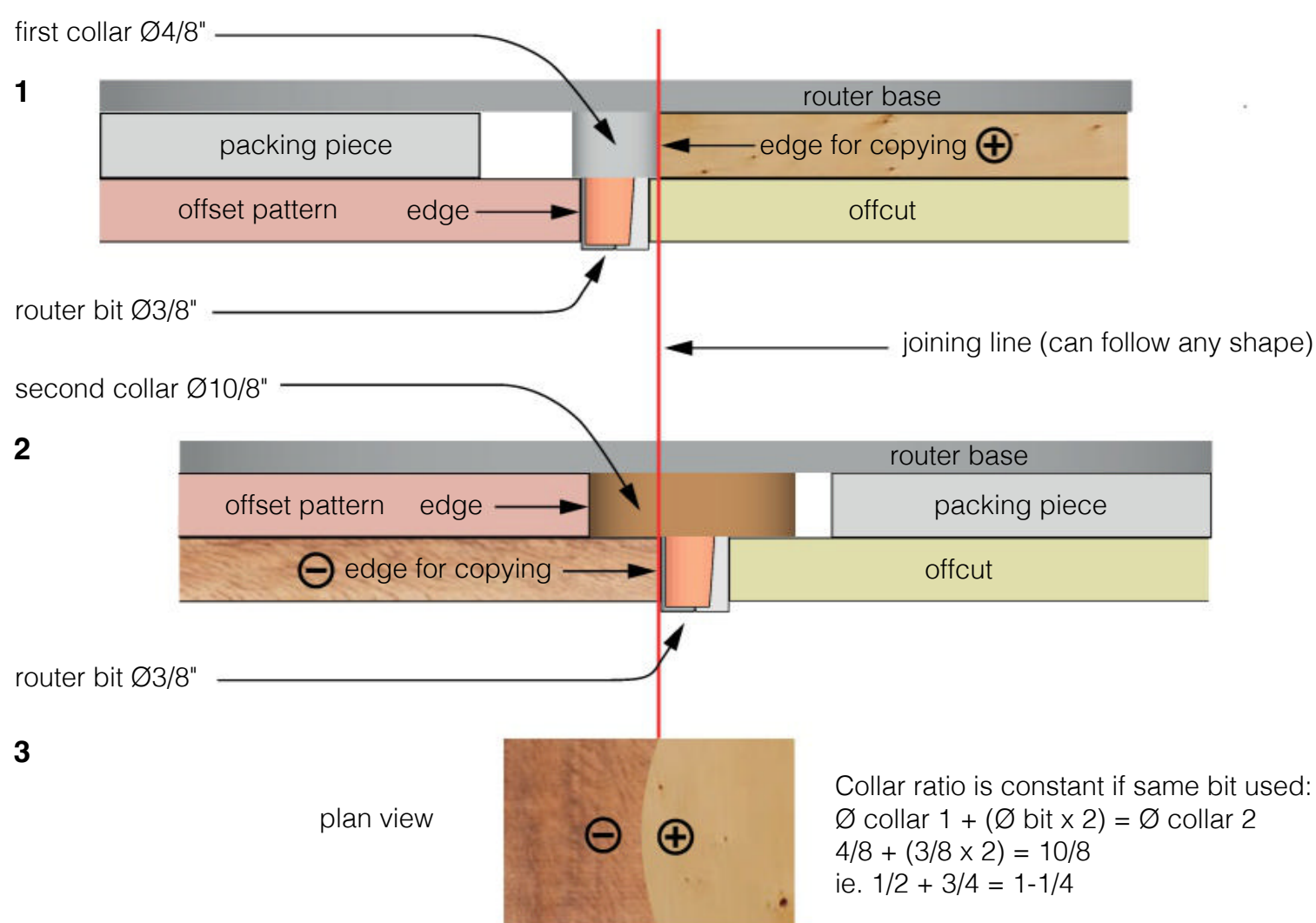


Fig. 1 How to rout mating edges of any given profile not to scale

made at times, especially the ones milled from a solid block of carbide steel...ostensibly the same diameter as the collet, but in practice nearly always made a fraction smaller.

So the new ring guide you will now need to fit to actually cut the slot, using the curved template, must be twice the diameter of the original bit plus the diameter of your first ring-guide. This was my little eureka moment (though I'm sure its well enough known in some circles) as it removed the need for measuring offsets etc, and it's a formula that works whatever sized bit or ring collar you use, as long as you stick with the original cutter bit.

The problem was finding or making the second ring-guide of the correct diameter for the actual slot-cutting, which tend to be relatively large. Unfortunately most routers have a lousy selection of ring guide sizes, but you can buy quite comprehensive sets that are generally made to go with auxiliary router base-plates, and these are a bit tedious to take on and off and not always easy to centre. So if you don't want to go that way, you will have to find or make up a new ring guide out of ply or similar material, that you can slip over the first ring guide, to increase the diameter to what is required (**photo 6**).

This means cutting out circles slightly oversize and then minutely adjusting their diameter, (you can use a circle cutter in a drill press, or make it on a lathe if you have one) making test-cuts using your slot cutting jig in scrap wood until you can produce a perfectly snug fit. A strip of carefully placed double-sided tape can hold the new collar in place on the underside of the first ring collar's base plate.

Sadly, going off theoretically correct measurements alone does not in practice necessarily produce that perfect fit, but it gives you a very close starting point. With a technique that requires several machining operations and new jigs coming between the two pieces you actually want to join, it does not take much for tiny inconsistencies to add up to a poor fit. So, as in so much fine woodworking, a degree of fettling is often required to finally achieve that elusive perfect fit. Having paired up a cutter with the two ring guides that will produce a perfectly tight slot, make a careful note of the combination. It is now a valuable resource, because if they work for fitting one shape into an edge, they should work for any shape.

If you use a 12.7mm cutter and 15.9mm ring guide, (or 1/2" and 5/8"), it requires a 1" and 5/8" diameter second ring guide collar (41.3mm)... e.g. twice the cutter's plus the first ring guide's diameter. However, in practice my carbide fluted 12.7mm cutter is only cutting 12.4, so it actually requires a 40.7mm second ring collar guide. Imperial measurements are in some respects easier with this technique, as you can break increments into 1/8" bites and have more chance of finding off the shelf collars that are the correct diameter, which saves a lot of time and energy.

Attaching the slot-cutting template to an edge also requires some care and thought, and its best to make the whole template piece a lot bigger than you think you'll need. I usually use a substantial pine block firmly screwed to the underside of the template and aligned exactly with either the top or bottom face of the edge you are going to cut into (**photo 7**).



7. Showing the jig with a scrap wood block attached for rigidity and for clamping in use.
8. Pencil lines show how to align the under-block, while the oversized hole allows initial adjustment.
9. The under-block has an angled face so the curved slot can be cut in varying angles.
10. This example shows how tapered and curved pieces can have housings accurately cut.

This enables the template to be clamped in place wherever needed and the block helps keep it rigid. The pencilled outlines on your template should be used to align the under-block correctly. The block also helps stiffen the template so there's no bend or give in it. If the oversized slot means you cut into the under-block a little for the first cut, no harm is done and it can actually help having those cuts to assist with precise alignment of the template onto the edge you are cutting into (**photo 8**). Just make sure your clamps are not in the line of the cut...it is surprising how cleanly sharp router bits will cut into malleable iron or steel...but only once!

Also note that the under-block can have an angled face which allows the curved slot to be cut in at angles other than 90° to an edge (**photo 9**).

If you are cutting the slot into endgrain, it will pay to have the edge profile already done, as it is hard to shape it afterwards without damaging around the edges of the slot. Depth of cut depends on what you want, but this method will produce a nice flat bottom to the slot in end grain. Take the last cut carefully so as to avoid

tear-out. I generally remove waste in about 6mm increments, taking the router cut in a clockwise direction, but just 2 or 3mm on the final pass.

The example illustrated here is just to show that a tapered and curved piece can have a housing cut into an edge to fit very accurately, in a way that would be very difficult to replicate with chisels or handwork (**photo 10**).

The technique can be applied in myriad ways, but the two-stage copying process is the same. The selection of finished works shown here illustrates some of the ways I've used it in the past. I'm sure you'll come up with many more.

Process photos: David Haig
Diagram: Graham Sands



David Haig is a furniture designer maker who lives in Cable Bay, New Zealand. He teaches at the Centre for Fine Woodworking in Nelson, NZ and also at the Centre for Furniture Craftsmanship in Maine, USA. He has written several articles for Wood Review magazine. Learn more at <http://davidhaig.co.nz/>

Tasmanian Timbers and Veneers

Blackwood

figured, birds eye, fancy, plain

Myrtle

figured and plain

Celery Top Pine

crown cut, plain

Sassafras

blackheart and clear

Leatherwood

redheart

Huon Pine

birds eye and plain

Musk/Eucalypt/Myrtle Burl

when available



Contact: Robert Keogh

3 Brittons Rd, Smithton TAS 7330

Tel 03 6452 2522 Fax 03 6452 2566

email: tassales@brittontimbers.com.au

www.brittontimbers.com.au

Qld: 07 3888 3351 NSW: 02 8783 9900

Vic: 03 8769 7111



contact: **Chris Emmett**
phone: **03 6295 7161**
mobile: **0419 998 452**
Mon - Fri 8am - 4pm

Tasmania's specialty timbers - Sassafras, blackwood, myrtle, celery-top pine, Huon pine, and more, as logs, slabs, timber and turning blanks. Milling to order and seasoning services.

43 Cemetery Road, Geeveston, Tasmania

chris.emmett@sttas.com.au

islandspecialtytimbers.com.au



InterwoodShop.com.au

Workshop tested tools for woodworkers.



Join our e-club at www.interwoodshop.com.au for special offers and new tool info.

Email: info@woodmeasure.com.au Mobile: 0483 849 299

The VACU PRESS SYSTEM
is used by woodworkers
worldwide. Used for
veneering, laminating and
curved panel production.

Uses are limited only by your imagination.



Mobile: 0417 020 976

Email: ray@yareus.com.au

www.yareus.com.au



156 Moss Vale Rd Kangaroo Valley NSW 2577
02 4465 1002

Full range of rocking horse accessories including stirrups, bowler hats, swing irons and brackets in brass, stainless steel and rainbow. All leather work, stirrup leathers, bridles, reins and a wide range of saddles and saddle cloths. Mane and tail kits also available.



www.kangaroovallewoodcrafts.com.au

LNA
Lie-Nielsen
TOOLWORKS®
AUSTRALIA

**Woodworking
Classes**

Tel: 0418 842 974

www.lie-nielsen.com.au

SQUARE DRIVE SCREWS

Heard They're Good? Try Them!



- High Quality
- Easier Driving
- Better Control
- Longer Life
- Heat Treated Steel
- Sharp Point
- Small Body Diameter

Wide range of sizes
**INTRODUCTORY
PACK**
500, #8 and 10 Gauge
screws with driver
included
\$49.00 inc post



Tel: 1300 551 810



BUY ONLINE AND SAVE! WWW.SCREWIT.COM.AU



kumiko

www.artpack.com.au/kumiko

- handmade jigs
- all-in-one kits
- huon pine strips





Folding Phone Stands

Charles Mak shows how to streamline the making of a batch of his campaign style phone stands.

I have an affinity for all things foldable, such as the folding ladder (AWR#74), the Roubo bookstands, and the folding step stools (AWR#101) that I have previously covered or made. Projects involving folding components and large quantities often mean added challenges, requiring, for example, a higher degree of precision and/or efficiency in execution. The folding phone stands featured here – 31 of them made in total – are an example where careful planning with a production run in mind can lead to greater efficiency and success.

The folding stand consists of two key components: the frame and the body (a ledge, a kickstand and a foot) as shown in **fig.1**. I made a prototype to test the folding details as well as the technical procedures of clamping and drilling. This can be an ideal project for using some of the nicer wood in the scrap bin to make a batch of functional gifts.

Prepare the stock

Start by following the cutting list and preparing enough parts for the desired number of stands that you want to make. It is important to cut all the parts to their exact

dimensions, because in a production run, you will use the same single set-up for every piece with little allowance for discrepancy. After ripping the stock on the tablesaw, I used stop blocks for cross cutting all the pieces to length on the mitre saw to ensure accuracy (**photo 1**). I also tried to match the grain to give each stand the most pleasing appearance (**photo 2**).

Glue up the frames

If you have a lot of frames to glue up, and with drying time for PVA glue measured in hours, you will need a lot of clamps (60 in my case). I probably

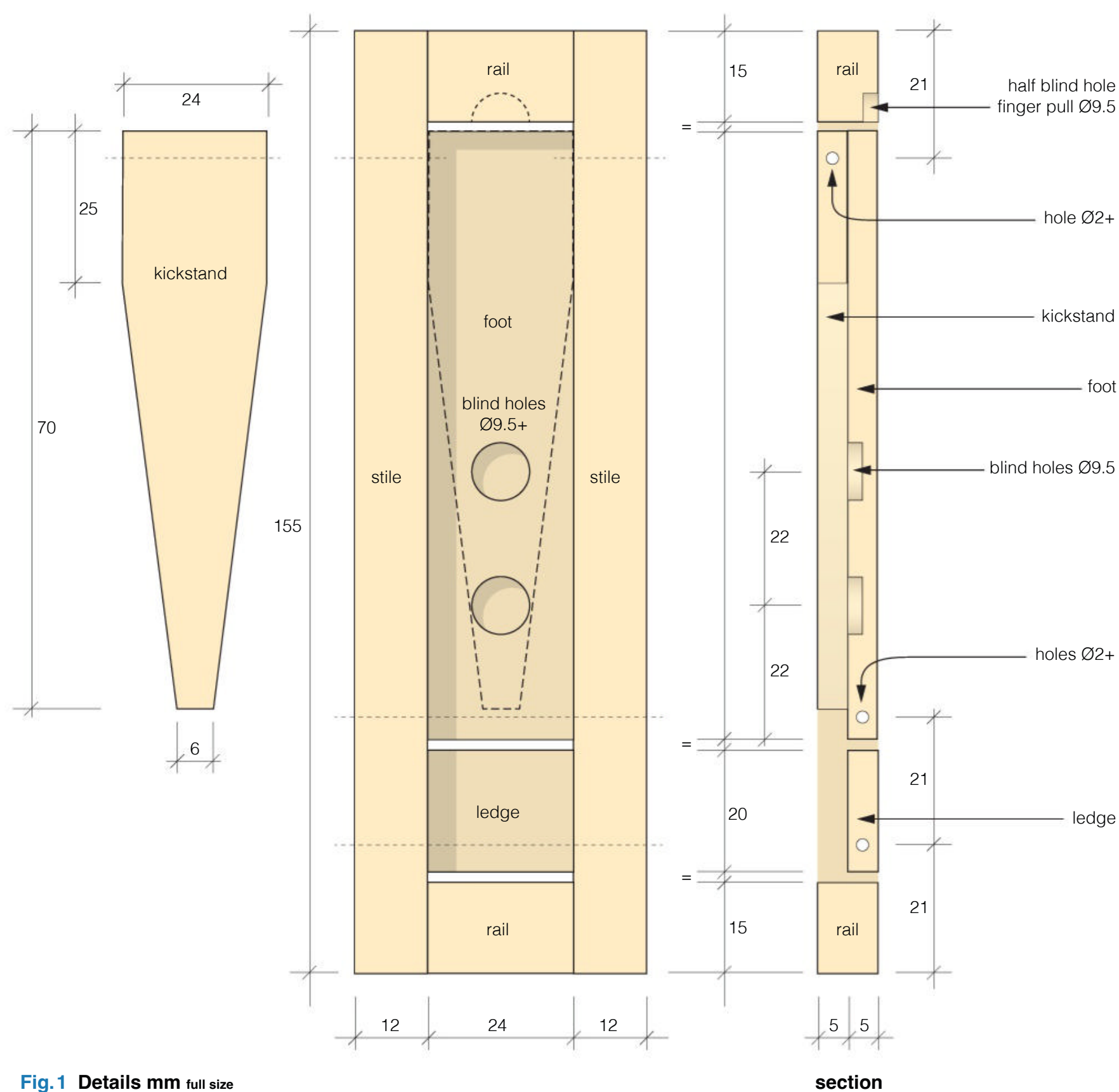


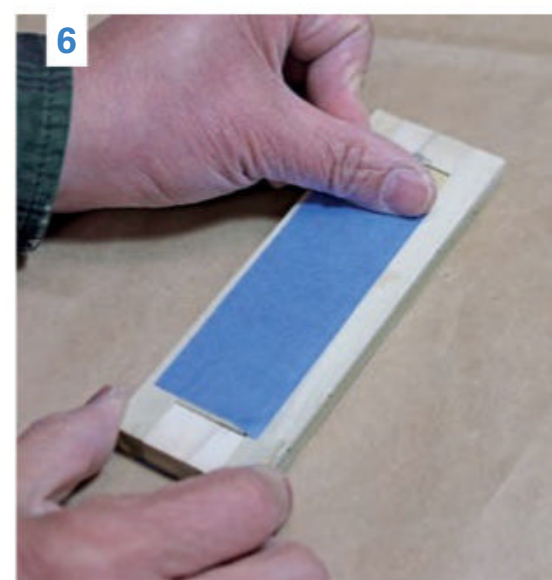
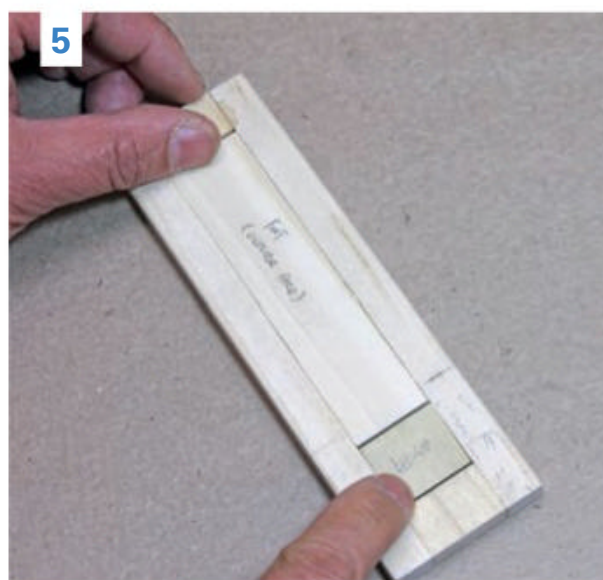
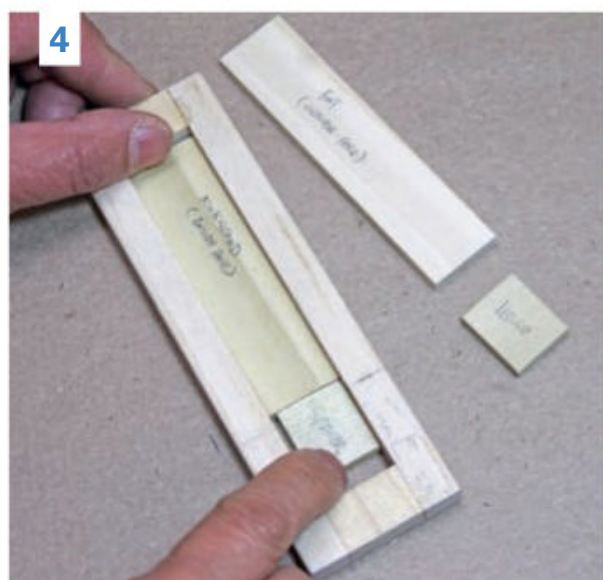
Fig.1 Details mm full size

could summon enough clamps for the job, but I did not like the long waiting time. My solution was to use CA glue and an accelerator to cut the clamping time to minutes, which also allowed me to reuse the same small number of clamps.

Furthermore, CA glue does not have the problem of mating parts sliding around on PVA glue when clamping pressure is applied. Keeping the small frame flush and square as you clamp can still be challenging though, even with the CA glue. To overcome that, I made a simple L-clamping fixture so I could hold the stiles and rails

CUTTING LIST mm (per stand)				
PART	QTY	LENGTH	WIDTH	THICKNESS
Rails	2	24	15	10
Stiles	2	155	12	10
Kickstand	1	95	24	5
Ledge	1	20	24	5
Foot	1	100	24	5
Spacer	1	20	24	5
Pins (6d nails)	3	45		

Main: Innovation and efficiency went hand in hand in the making of these campaign style phone stands, a popular gift item.



1. Use a spring-loaded stop block to safely trim the small ledges without the risk of kickback.
2. Group the grain-matched components together for each stand one by one.
3. A simple L-platform, protected from glue with a wax paper, simplifies the squaring, gluing and clamping of the frames.
4. With the back of the frame facing up, orient the kickstand and place it inside the frame with a spacer.
5. Stack the foot and ledge, with their faces properly oriented, on top of the kickstand and spacer.
6. Position the foot and ledge in the frame and secure with tape.

flush and square at the same time while applying clamps (**photo 3**). The gluing process, though rather labour-intensive, went very smoothly, thanks to the choice of glue and use of an L-platform.

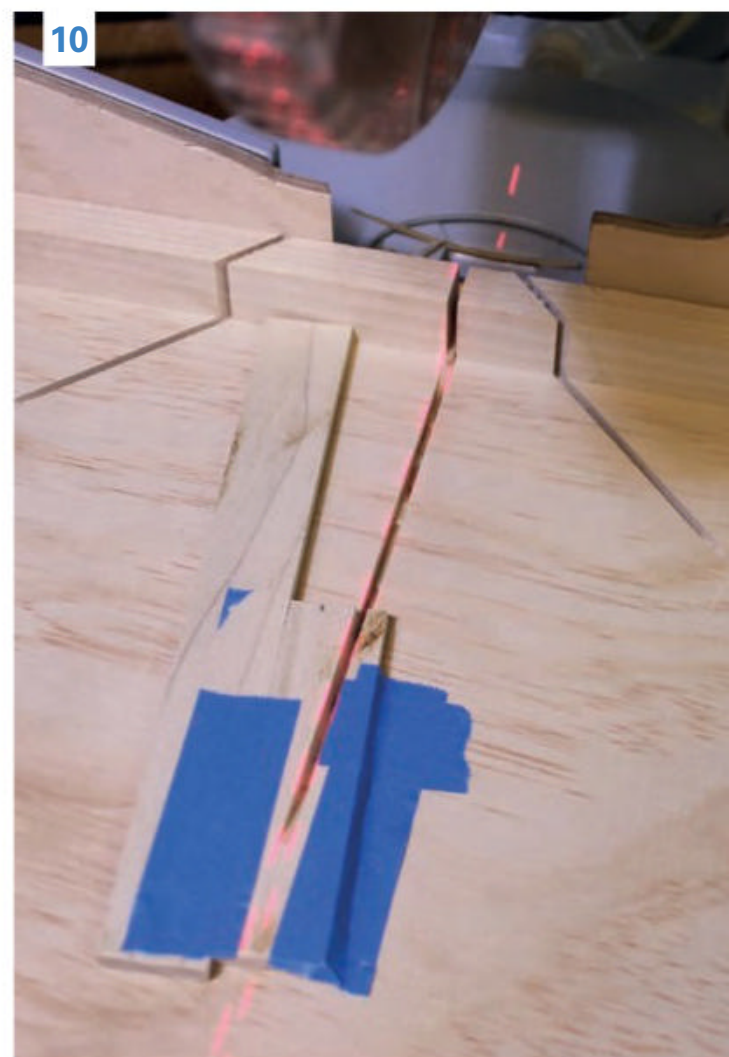
Assemble before drilling

Drilling the hinge holes is the most critical step in the construction phase of the project, after stock preparation. All the holes must be drilled precisely for the folding to be faultless as the ledges, kickstands and feet are

relatively thin. Typically, one would mark the centre points and set up a stop block on the drill press fence to drill each part.

My drilling approach was different to ensure that the mating holes bored on the frames and on the body parts would line up perfectly.

Instead of drilling the parts as individual components, I bored all the holes with everything assembled first. Here is how: Place the kickstand



and spacer inside the frame (**photo 4**). Place both the foot and ledge on top of the kickstand and spacer (**photo 5**). Position the foot and ledge properly, and hold them in place with tape (**photo 6**). Flip the assembly over, position the kickstand, and tape over it as well as the spacer to finish the temporary assembly.

Drill the hinge holes

The most efficient way to drill all the pin holes (180 of them for 30 stands) is to set up a stop block and finish the one hole on all the assemblies, before resetting and boring the next hole (**photo 7**). After boring all the holes, install the nails, remove the tape, and test all the folding.

Drill the blind holes

On each stand, one half blind hole and two blind holes are drilled. Refer to the diagram for the drilling details and mark the centre points for the half blind holes. Next, drill a half blind hole on the backside of the top

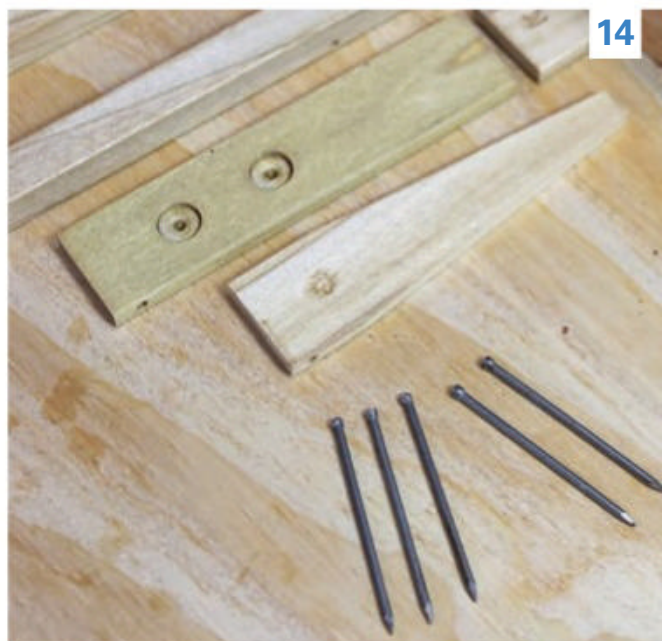
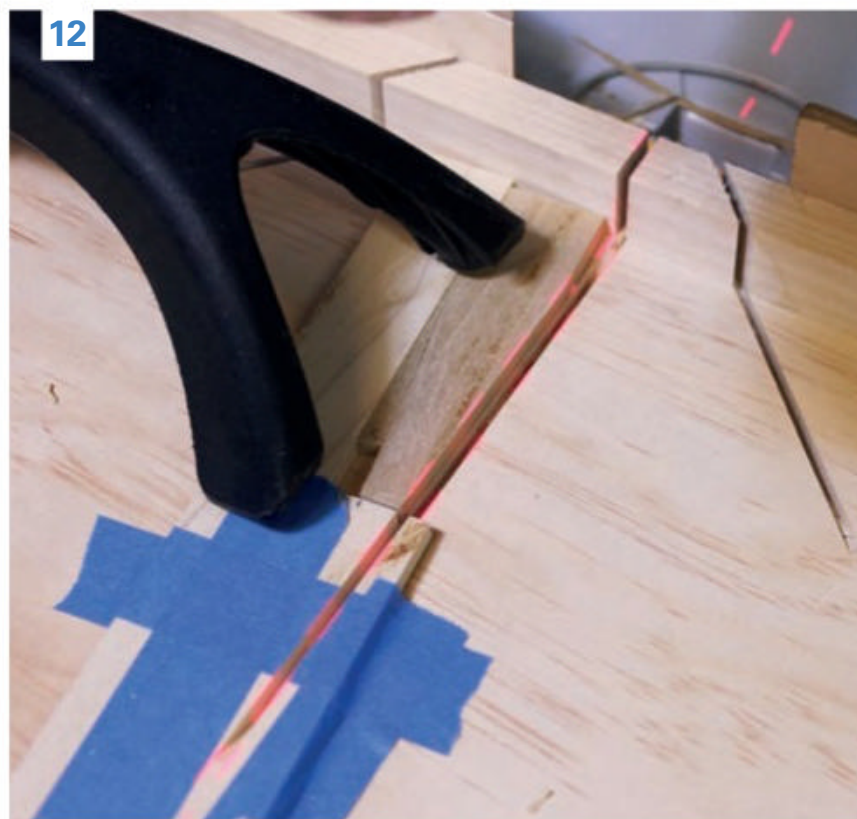
rail to make a finger pull for all the frames (**photo 8**). Then reset the fence and stop blocks, and drill the blind holes on the foot to receive the kickstand (**photo 9**).

Cut the kickstands to shape

It would be a lot of work to taper the kickstands on the bandsaw, and sand them to the taper lines on the sander. I came up with a better method to mass produce the tapered feet – using a zero-clearance cutting jig (*see AWR #111*). The jig essentially is a strip of wood glued at right angle to a board.

The jig takes the place of the saw table and allows you to set up a cradle to position the kickstand at the right taper angle to the blade (**photo 10**). In use, clamp the jig in place, hold down the kickstand in the cradle, and cut a taper on one side (**photo 11**). Then flip the kickstand in the cradle, and repeat the cut to finish the tapering (**photo**

7. Use a long drill bit, or bore the holes from both sides of the stand.
8. To avoid blunders, mark the finger pull on all the frames, and use one depth stop and stop block setting to drill the half blind holes.
9. Engage the depth stop and set up two stop blocks to bore the shallow holes on the feet.
10. Double-side tape the tapering cradle on the cutting jig, and set the depth of trench cut to just below the jig's surface.



11. Keep the kickstand on the jig with a hold-down stick and cut the first taper.
12. Support the kickstand with an off-cut, and cut the taper on the opposite side of the kickstand.
13. Use sandpaper or a plane to break the sharp edges and remove any machine marks.
14. Grind the nail heads smaller to make them closer to hinge holes in diameter.
15. Drive the nail into the hole just below the surface with a nail set.

12). You can taper with consistent results like that all day long – safely and efficiently.

Apply the finish

Given the hinged design and parts, it is best to apply finish before the final assembly. But, first ease all the sharp edges including the rims of the holes on the feet (**photo 13**). If desired, mark your work, and apply a couple coats of boiled linseed oil or any finish of your choice.

Prepare the pins and assemble

The head of the nail is slightly larger than the shaft. To prevent splitting, grind the head smaller for a friction fit into the 2mm (5/64") dia hinge holes (**photo 14**). Finally, assemble everything, and set the nails in place (**photo 15**).

Thirty may sound like a lot, but as I checked off the names on the recipient list for the small gift, I realised that they would disappear fast as, in this digital device age, everyone can use a stand or carry one in their bag. If you are planning your own production run and wonder how many you should make, you have been warned!

Photos: Charles Mak

Diagram: Graham Sands

Charles Mak enjoys writing articles, authoring tricks of the trade, and teaching workshops. He published Woodworking Tips and Tricks (Algrove Publishing) in 2022, a collection of some of his unorthodox shop wisdom.



Built in Kind

There is a how and why of woodworking, but it's also about who we are, and who we make for. Through collaborative projects, Hannah Cheetham applies her skills to building communities.

'Sometimes woodworking can serve a greater purpose and be an expression of making that can be accessible to all', says Hannah Cheetham, furniture maker, educator and Masters of Architecture student.

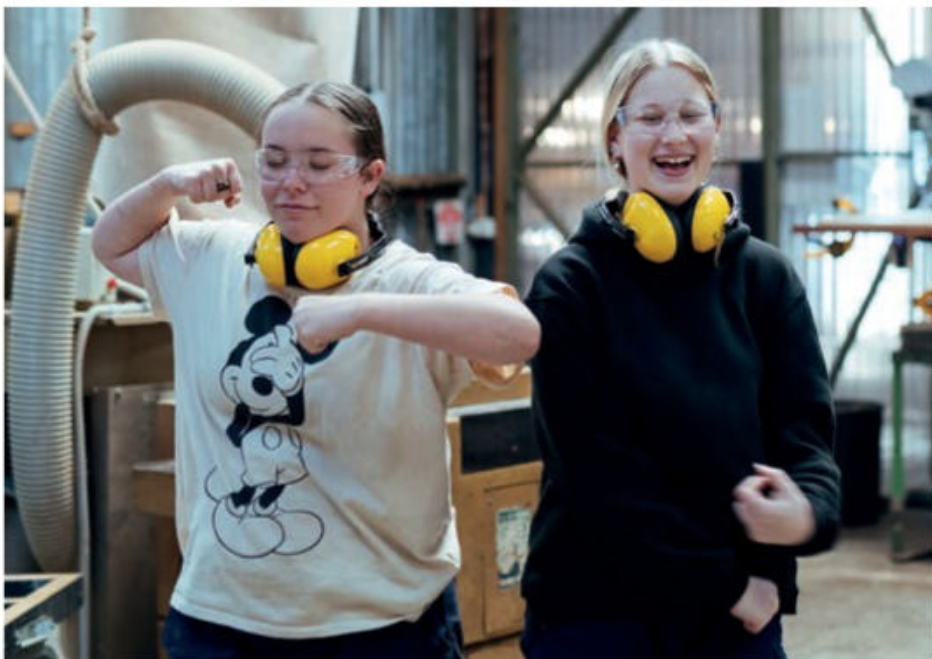
The Wallsend Free Pantry was designed and built as a unique community resource – a focal point for caring for and sharing with others in times of need. Located in the foyer of a public library, across from a large supermarket and close to public transport, the pantry was commissioned by the Newcastle Library. It was made to hold donated clothes, sanitary items, food, toys and homewares, for members of the community to give what they can and take what they need.

'The pantry build was an amazing project initiated by Newcastle Libraries staff', explained Hannah. 'Local youth had expressed the need to build a free pantry in the city's west, and the library team saw it as a fantastic chance

to address a social need in a multi-faceted way – from providing the physical space for the pantry, to initiating the build and recruiting two young people to learn with me in the workshop.

'The pantry design was driven by an understanding of trauma informed space design, which is a framework for creating physical spaces and objects which cater for the diverse needs of community who have experienced trauma. Design responses such as visibility, sight-lines and ease-of access were taken into consideration. For community-owned projects it's also important that those who use it feel a sense of ownership over its configuration and appearance – so shelves can be moved to cater to the stock donated.'

Above, left to right: Hannah Cheetham with workshop scholars Gemma Brown and Anna Greaves, gluing up the first of the modular shelves for the free pantry.



The pantry was also built to take others on ‘the journey’, said Hannah who designed a structure that could be built by ‘young people with very little woodworking experience’ over two weeks as part of a scholarship program.

‘Two young high school students spent their entire winter school holidays in my freezing workshop, working eight hour days. Anna Greaves and Gemma Brown were a pretty special duo to sacrifice their holidays like that! It was inspiring getting to know these young women, to share a craft which I am deeply passionate about, and to observe them flourish and grow in their confidence and skills in the workshop.

‘It’s always daunting exposing young people with emerging skills to tools that can ultimately be quite dangerous, but I think that it’s important to take that risk in order for people to overcome the fear associated with some tools and know how to use them confidently and safely.’

Hannah’s own skills developed from an early age. ‘I grew up on a busy productive farm, always working with my hands and my body, and creatively solving problems as they arose, while feeling deeply the spectacular beauty of the landscape around me. I have worked in the community development, design and education fields, and love how I can synthesise these skills with woodworking.

‘My studies in architecture have fostered a belief that as a maker and creative I can apply my skills and knowledge of complex social and environmental stressors and create solutions which respond with dignity, practicality and beauty. Woodworking became a huge part of my life because I grew up in a home where my family didn’t typically conform with traditional gender roles. We all drove machinery and worked hard on the farm regardless of our gender. I think this was pivotal in overcoming a few foundational ideas about who I was in the world and what I could do.



Clockwise from below:

Hannah Cheetham shows Gemma (right) and Anna how to measure up.

Using a simple French-cleat system, the *Wallsend Free Pantry* is designed to be flexible in configuration. Recycled blackwood and birch ply shelving units locate themselves horizontally across the wall by spaced magnets.

By the end of the project, the workshop felt like home to Anna and Gemma, and the team felt like family.

Gemma, 16, learns about timber recycling by dressing blackwood at Round 2 Timber's recycling workshop.



'I always took the vocational classes through school in woodwork, and did work experience at a local timber joinery. Studying architecture allowed me to apply a level of social and theoretical thinking to my practice as a maker, and to act inside of my privilege to effect change in society. I have had the privilege to learn and work under some wonderful teachers, from set and theatre design to architectural builders, fine furniture makers and architects.'

Currently Hannah works from a collective workspace in Newcastle called The Soap Factory. 'Built-In-Kind is a one-woman-band at the moment, while I hire other passionate makers to assist on large projects, such as co-facilitating educational workshops and community projects. 'From dining tables which are being donated to social services and women's refuges, to working with local government on public social projects – this is the work that drives my practice and I am excited to explore ways of delivering projects of this nature full time', she said.

'Fine woodworking is an incredibly specialist set of skills, which is increasingly accessible to more women and diverse communities across society. I believe in teaching foundational everyday tool use while building together with groups of people. I get to witness people experience paradigm-shifting learning. Participants enter the workshop with a tentativeness and apprehension at using certain tools, but quickly develop a strong belief in their own abilities and their right to be in the workshop.' And proving her point, Hannah noted, 'Anna went on to complete a carpentry traineeship, and is now looking to start a carpentry apprenticeship'.

Hannah Cheetham is keen to hear from others who are interested local community partnerships in the Newcastle or Hunter area, get in touch via Instagram @built_in_kind

Photos: Lee Illfield



Working with Wattles

Commonly known as wattles, Acacias are one of Australia's most common groups of tree species. Ian Wilkie writes about some of species he has sampled for his woodwork.

In Australia, our mainland forests (excluding the relatively small areas of rainforest), are dominated by two genera of trees, *Eucalyptus* and *Acacia*. Many of the latter are commonly known as 'wattles' and very few people in Australia would not be familiar with the sight of a wattle in flower, they can be very eye-catching (and grace our national coat-of-arms). The flowers are mostly yellow, either single 'pom-poms' of fluffy stamens, or smaller individual flowers that form short racemes like mini sheep's tails.

The name 'black wattle' was given by

early colonists to an unrelated shrubby tree (*Callicoma serratifolia*), the long, supple branches of which they used to make their wattle and daub shelters. The name wattle subsequently migrated to the acacias, presumably due to the vaguely similar flowers, and is now the universal common name for the majority of acacias that haven't retained indigenous or other descriptive common names.

Acacias have adapted to an even wider range of habitats than the eucalypts. This is in part due to the majority of species having dispensed

with true leaves; instead they have evolved modified, leaf-like stems (called phyllodes) which better control water loss. The most obvious difference from 'normal' leaves is that the veins run parallel to the edges instead of branching off a central rib.

Seedlings start out with true compound leaves but by the time they are about 150mm high, they have begun to abandon these for the flattened stems which become the new 'leaves'. And by the time it is a few hundred millimetres high, there is no trace of the original leaves.



These pages: The familiar flowers and foliage of *Acacia*, a genus that includes, according to some sources, 1200–1300 species, 1000 of which grow in Australia.

The veins in their leaves run parallel to the edges instead of branching off a central rib, and most species produce yellow flowers. Seedlings start out with compound leaves but later their leaf-like stems or phyllodes develop.

Anatomical changes plus the symbiotic microbes associated with their roots that ‘fix’ atmospheric nitrogen allow acacias to survive in a very wide range of habitats. There are acacias in tropical rainforests (*A. aulacocarpa* known as salwood), in temperate rainforest (*A. melanoxylon* or ‘blackwood’), as an understorey tree in eucalypt dominated forests, as a dominant species in semi-closed forests such as brigalow (*A. harpophylla*) and mulga (*A. aneura*), and as scruffy shrubs in some of the most arid areas of the continent where eucalypts cannot survive. Many species can act as pioneer plants, repopulating cleared and degraded land due to their prolific seed production and ability to grow in degraded soils.

Of the many hundreds of species of *Acacia*, few grow to millable logs, however many species produce useful and highly attractive wood appropriate for crafts and projects

that don’t require large dimensions. Given the range of growing conditions it is unsurprising that the woods show a wide range of working properties. As a general rule, those from arid areas tend to be denser and harder, while those growing under more favourable conditions tend to be softer and easier to work.

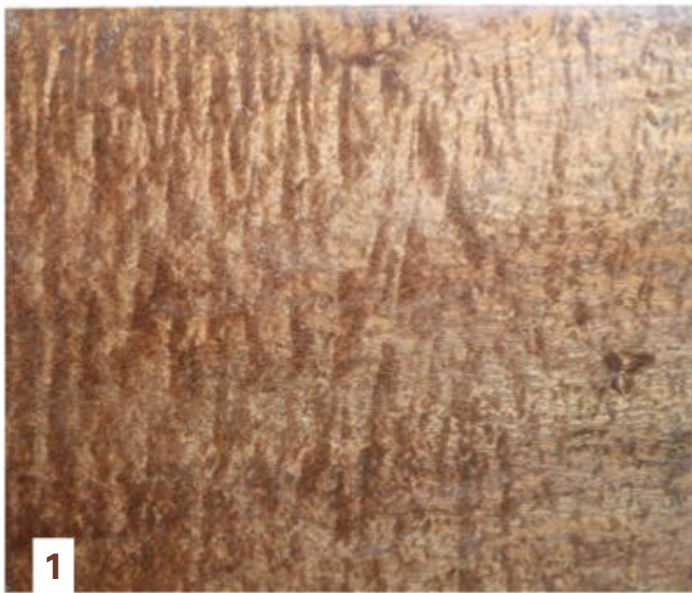
The heartwood of most species ranges from mid to dark or very dark brown, and the texture from very fine to coarse. Species such as gidgee, (*A. cambagei*) produce highly figured heartwood with some frequency whilst others like brigalow (*A. harpophylla*) tend to be almost universally straight grained. A feature of many acacia woods is the presence of small golden highlights that give a subtle chattoyance to the polished surface. This can be very obvious in some samples whilst others require strong light to demonstrate this feature.

The following is a very brief list of species with which I am familiar, along with my personal opinions of their properties and uses.

1. Blackwood

Acacia melanoxylon would be the best-known of the acacias, being widely available and in relatively good supply. Tasmania is the source of much prime material, but the species occurs all along the east coast of the mainland, from the Otways in Victoria to north Queensland. Paradoxically, the trees tend to become smaller the further north they grow, and rarely reach more than small log size outside the two southern states.

Blackwood was once referred to as ‘Australian walnut’, which is a fair comparison as the two can be very similar in appearance and workability, though blackwood has quite a wide range of colour and density. On average, it is not difficult to work with



hand or powered tools, it polishes easily and accepts a variety of finishes. The colour mellows on exposure to light to a soft mid-brown very similar to black walnut (*Juglans nigra*).

In general, it is a tough, durable wood that planes, turns and carves relatively easily, accepts a variety of finishes and is well-suited to a range of cabinetmaking requirements. My biggest complaint with blackwood is that its variability of colour can make it hard to match parts for larger pieces of furniture.

Like its cousin koa (*A. koa*), native to Hawaii, blackwood can be spectacularly figured ranging from regular fiddleback to highly complex patterns resembling crushed velvet.

I have only worked with a limited amount of highly figured material from five or six different batches, but what I had was relatively easy to plane without tear-out, though it did need care when chiselling or paring to avoid splitting along the irregular grain and spoiling crisp edges or flat surfaces (a feature common to all highly figured woods, of course).

2. Black wattle

In the southern states, black wattle is the common name for *A. mearnsii*, a small tree with pale brown heartwood, but the name black wattle is also applied indiscriminately to a very large number of different *Acacia* species that grow along the east coast.

All along the east coast it is very common to find several species of wattle occurring together as understory shrubs or small trees, or as dense stands of several different acacias on previously cleared land that has been left to regenerate naturally. I have at least three species in my one hectare backyard (which was once eucalypt forest cleared for agriculture).

All these species tend to be short-lived and seldom attain trunk diameters more than about 350mm before succumbing to disease and borers. I have collected wood from many dead and dying specimens from several different localities that are impossible to identify accurately without phyllodes, flowers and seed pods.



1. Blackwood (*Acacia melanoxylon*) can vary widely in colour and density, and be spectacularly figured, ranging from fiddleback to complex patterns resembling crushed velvet.
2. *Acacia mearnsii* (black wattle) polishes well and small, figured pieces like the infill of this small plane can be very attractive.
3. *Acacia implexa* or hickory wattle from my backyard wattles makes excellent chisel handles.
4. Straight sections of black wattle usually turn well, as in the spindles for chairs made by the author.
5. Highly figured gidgee is not the easiest wood to work with hand tools but can deliver stunning colour and figure.
6. This handsaw made by Ian Wilkie has a red lancewood handle.
7. Mulga has a fine grain and finishes well. Figured mulga like the piece shown here is hard to come by.

However, their woods all seem to cover the same range of colours (pale to very deep brown, with the darker wood probably more related to age of the tree than different genetic factors). They all seem to have a similarly wide range of working properties, from moderately easy to very hard and tough, depending more on the individual tree than the actual species.

Main trunks are seldom more than a metre before major branching and the very pale sapwood can be up to 30mm thick in young trees (thinner in old, less vigorous specimens) so the yield of useful wood per tree is not high. Grain tends to be somewhat irregular, with some figure around branches and root bases and a very occasional tree may display extensive figure throughout. Although the texture is usually medium-coarse, it polishes well and small, figured pieces like the infill of the small plane can be very attractive.

The species I've collected tend to be tough and impact resistant making them suitable for handles. *Acacia*

implexa or hickory wattle was much favoured for hoe and brush-hook handles on the farm where I grew up, and my backyard wattles make excellent chisel handles.

As a wood for turning, it can be excellent or excrescent due to the irregular growth habit of the trees. Straight sections usually turn well and make excellent spindles for chairs, for example. Sections with wild, twisted grain can be very difficult to cut cleanly, requiring an intolerable amount of sanding and the short-grain areas make them unsuitable for load-bearing components.

3. Gidgee

There are a few species lumped under this indigenous name but *A. cambagei* is the one you are most likely to meet. Gidgee grows under quite arid conditions so it does not make large trees, but its density makes it unsuitable for large objects like furniture. It is difficult to dry in large sections and is mostly available in smaller dimensions suitable for

knife-handles and the like, but at least one supplier I deal with will find larger pieces if asked.

Straight grained gidgee is less interesting visually, but a very stable wood suited to making plane bodies. Ringed gidgee has a fine fiddleback figure and I have had pieces with a complex, swirling figure that resembles crushed fabric.

Highly figured gidgee is not the easiest wood to work with hand tools, but it will yield to sharp edges and a patient approach. Some pieces plane well but sometimes you get fine tear-out no matter how well your plane is working and scraping is the more efficient route to clean surfaces. It also has a tendency to pick out on

8. *Acacia pendula* aka weeping myall grows widely in inland Queensland.
9. When first cut, *A. pendula* exudes a large amount of kino or gum vein.
10. *Acacia pendula* – even when dry, freshly cut surfaces may ‘bleed’.

the lathe, or chip when you are trying to chisel sharp edges, but if you are patient and careful, it will reward you with some stunning effects.

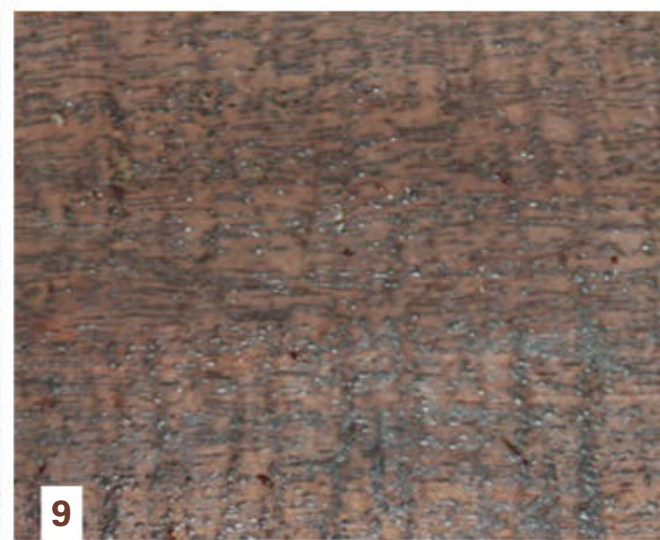
It has one final act of defiance – tiny droplets of dark gum will often bleed through a finished surface making it dull and rough to the touch. Fortunately, that is usually easily fixed. Fine steel wool will remove the gum with minimal damage and depending on the actual finish and what the item is, a quick wax and polish usually restores the surface. You may need to refinish more than once with some pieces, but eventually the wood gives up and decides to cooperate.

4. Red lancewood

Several species go by the common name lancewood so it is best to specify ‘red’ lancewood or use its botanical name (*A. shirleyi*) when searching for any. It is widespread and locally common across much of northern Australia and can grow to a moderately sized tree. Unfortunately, it’s another wood I’ve found difficult to dry without deep end-checking, but worth the effort. It is medium difficult to work with hand tools, but the fine-grained wood turns well and takes a very high polish. It is available (erratically) in larger sized pieces more often than most of the other dry country acacias described here. It is too dense for other than very small items of furniture or boxes, but I have successfully made objects like full-sized saw handles from it.



8



9



10

5. Mulga

Mulga (*A. aneura*) is another species that preserves an indigenous name. Mulga is also used as a name for woodland dominated by that species and in some parts of the country, as an expression of remoteness as in ‘way out in the mulga’. Mulga occurs in all mainland states except Victoria, either as isolated shrubby trees in the more arid areas or as a continuous forest of small trees in the more favourable parts of its range.

Mulga is very dense and fine-grained, with a mid to dark brown heartwood. It is very slow to dry but quite stable once equilibrated. The small size of the tree yields only small-section pieces which are usually straight grained. For such a hard dense wood it is not too difficult to work with hand tools.

Figured mulga seems to be much rarer than figured gidgee, I have only had a single small piece with a fine fiddleback figure, but what mulga lacks in figure it makes up for by

being one of the finest grained of the acacias and takes a superb polish and yields ultra-smooth, highly tactile surfaces. The mulga handles of my paring chisels are a delight to hold.

6. Weeping myall

Weeping myall (*A. pendula*) grows as a small tree either scattered amongst other species or occasionally in small clumps over a wide area of inland Qld, NSW and Victoria, mostly on alluvial soils that receive between 400 and 600mm of rain annually. It has been introduced to other states because of the appeal of its attractive weeping foliage from which the pendula part of its botanical name is derived.

When first cut, the wood exudes a large amount of kino (gum), and even when well dried it will still exude from any freshly cut surface. Some pieces I’ve had required re-finishing several times before they ceased exuding gum. When green, the wood is a deep brown with purple overtones but this fades on exposure to a medium brown. I have had a couple of samples



11. As well as by seeds, leaves and flower, tree species may be identified by their bark. Western rosewood (*A. rhodoxylon*) with its finely scaled bark is shown here.

12. *Acacia rhodoxylon* can plane and finish well, but it can be difficult to dry.

13. Handplane made by Ian Wilkie with western rosewood infill.

with a fine fiddleback figure, but most has been straight grained.

Of all the acacias I've worked with, *A. pendula* was the most difficult to work with hand tools. It is not only tough, but highly abrasive, quickly dulling edge tools – I destroyed an expensive rasp on one batch! The grain is medium-coarse but finishes well whether plain or figured.

7. Western rosewood

There are several unrelated genera of trees in Australia that are called rosewood. *Acacia rhodoxylon* earns the title by its deep rose-coloured heartwood (from the Greek *rhodos* for rose). It is not related to the 'true' rosewoods (*Dalbergia spp.*), none of which occur in Australia. It is limited to Queensland, growing in sub-coastal sites from west of Maryborough to Mt Garnet. The tree is recognisable by its finely scaled bark. It grows up to 20 metres tall in favourable localities, but

often has a deeply fluted trunk which restricts the size of boards that can be cut from it.

The timber is considered very durable and was used for cattle yard posts and rails in its area of occurrence. Most pieces I've had were straight grained, but a couple have had a fine fiddleback. I have found it to be a very difficult wood to dry in reasonably sized pieces, even with the most careful end sealing and slow drying it tends to develop deep end checks.

While *A. rhodoxylon* is a very dense wood, it is not particularly hard; I've found its workability to be very similar to true ebony. It is extremely fine-grained and generally planes well, but often contains soft streaks that tend to tear out unexpectedly. Fortunately, it scrapes easily, so if you strike this problem, just switch to a scraper and you will soon be rewarded with a glass-smooth surface. Whether plain or

figured, it takes a superb, highly tactile finish with deep, fine, golden highlights that shimmer in strong light. This is another wood that is highly suited to handles and infill for small planes.

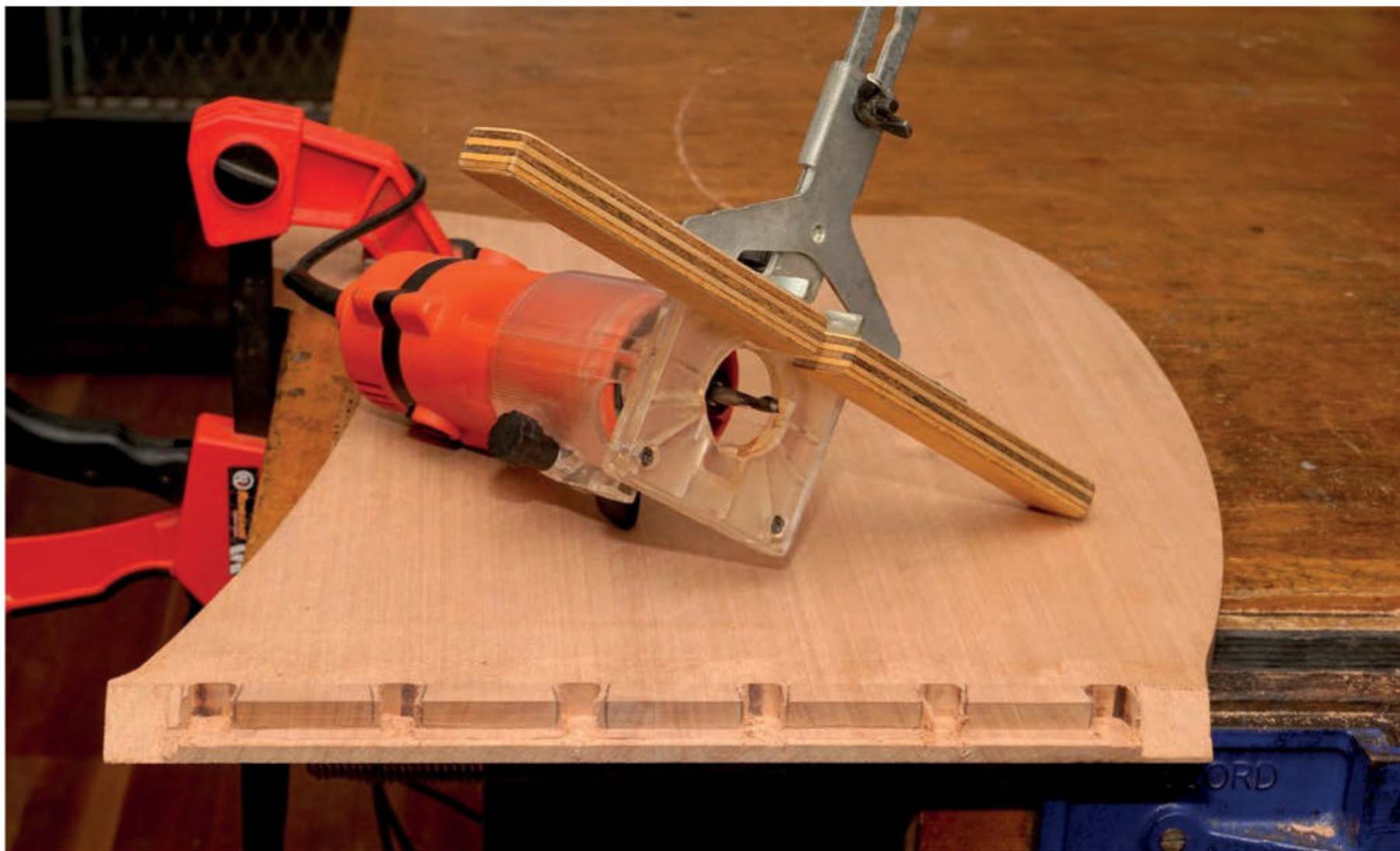
That concludes this very brief survey of some of the acacias I've used and found not only very useful, but very attractive woods for (mostly smaller) projects. There are many, many more acacias and no doubt many woodworkers will already have their own favourites, but if you have never worked with these woods before, they have a lot to offer.

Photos: Ian Wilkie



Ian Wilkie is a retired veterinary pathologist and academic who makes furniture and hand tools. His interest in

wood and tools goes back to growing up on a farm where fixing and making things was part of everyday life. He has written several articles for Wood Review magazine.



Hidden Showcase

Richard Vaughan shows how to cut blind mitred dovetails with a combination of hand and power tools.

There was a time when joinery was what held wood together for buildings, boats, furniture and much more. And the point was the complete piece was the focus, the goal, rather than the hard won skills and processes entailed in making it. Those who created then and create now generally have no need to showcase techniques passed on over centuries.

The industrial revolution and its huge capacity for machine mass produced items sparked a reaction expressed in the celebration of the handmade, of human skills. Ever since then, visible joinery has remained for many as a mark of 'real old fashioned woodwork skill', even though it now routinely includes the use of machines.

There is an admittedly irrational satisfaction in employing woodworking hand skills that will not be seen when shortcuts, such as table sawn mitres with loose tenons are employed. But for many people there is real pride in being able to do something well just for the sake of doing it. Skilful use of powered tools is certainly not 'cheating' in my opinion.

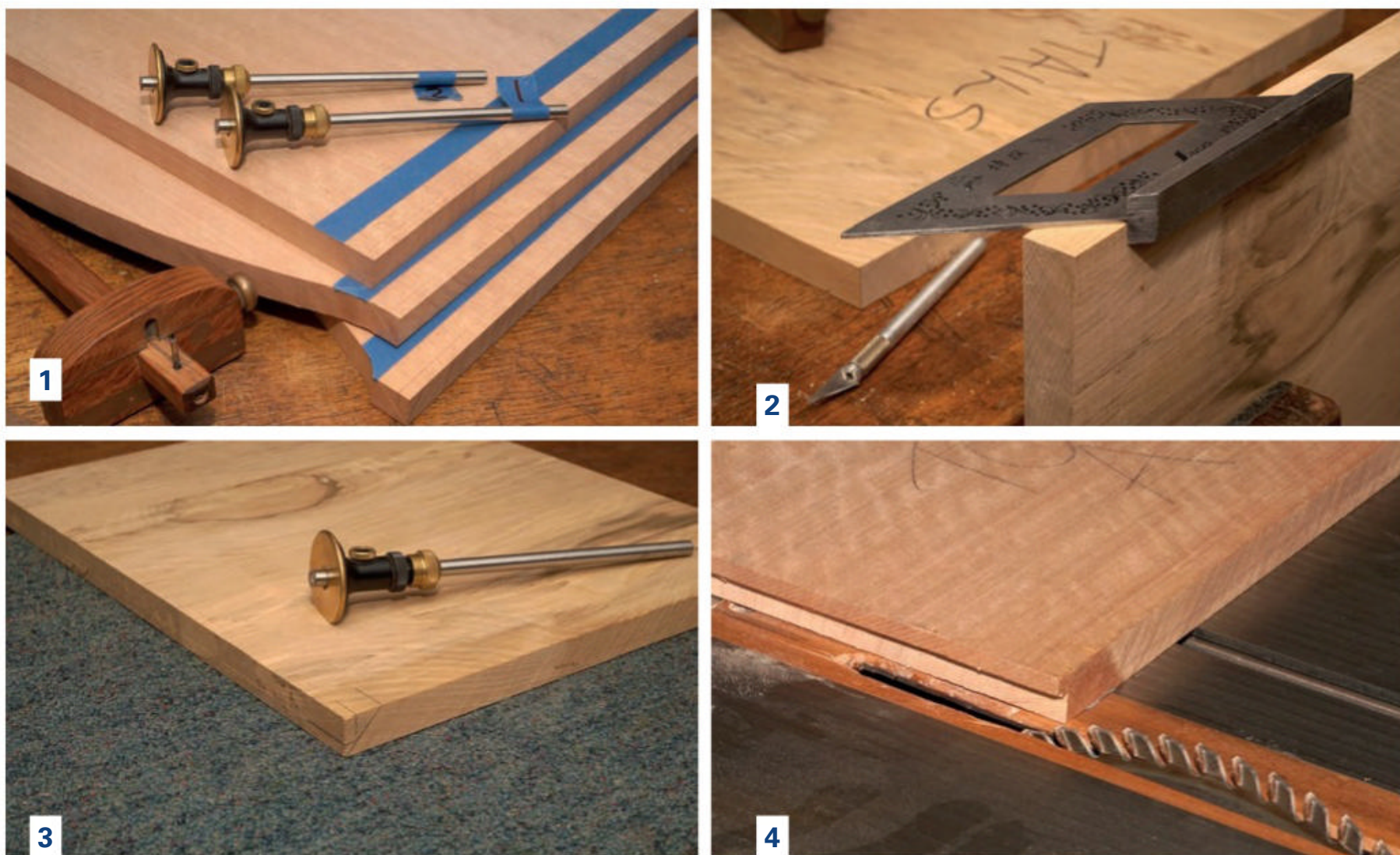
I doubt many clients would pay for the time it takes to make fully blind mitred dovetail joints rather than use more efficient machine methods. But it gives pleasure, and for me this was a love job anyway. Hopefully you'll be inspired to do this joint simply for the pleasure of extending your skills and enjoying the process. It also happens

to be an extraordinarily strong joint, and like any other, you just need to mark it right and cut it right.

Mark it right, and get good habits

The pencil is your forever friend. On the outside of the components mark Tails and Pins, and position in the piece (such as right/left, top/base) in large clear letters with a B or 2B pencil – it needs to be dark and not bruise the wood.

Always and only mark on the outside as you'll be sanding the inside before assembly, and if you have the habit of only identifying components on the outside you'll always know which is the outside, or the upward, face. Mark



in the orientation of the piece when complete so you know which way is up as you work on each part without the need for arrows.

Set up three cutting gauges (or systematically use what you have) but use cutting gauges with sharp blades rather than the grain tearing pin of a marking gauge. I use blue tape to make the cut lines more distinct (**photo 1**). First capture the thickness of the boards and mark on the insides across the tape. Peel off the waste tape.

Knife the mitre to this line. Next, set a gauge to an adequate distance from the outside face (6 or 7mm is good) and mark across the ends and the inside faces (**photo 2**). Mark this line to the mitre line on the edges (**photo 3**).

Now set a cutting gauge to be a bare millimetre larger and mark edges so you have lines parallel to those described above. This is so the pins and tails are a little shorter than the depth of the sockets, ensuring clearance for a snug fit. Photo 1 shows these marks, including an inept mitre mark which happily was on the safe side.

First cuts

Set up your tablesaw to cut to the first line – this sets the depth of the sockets. A chisel top sawblade is best here. It is worth having a blade ground this way for other uses. Then make a second cut to set the length of tails and pins (**photo 4**). You could also perform this step on the router table or using a hand held router.

Set up the Very Fast Chisel, aka laminate trimmer with fence to accurately clean the surfaces if necessary (**photo 5**). Use an offcut of the same material to test the depth and width of cut.

Mark it right, next step

Lay out the pins using the template you've made for this very purpose. I have off-cuts of acrylic and polycarbonate from a local plastics manufacturer stashed for such uses but you can use ply, brass or whatever. There is no need for the pins to be show-off skinny as that will make it harder to take out the waste, as will become obvious (**photo 6**).

Square these lines to the tape and clearly mark the waste – pencil or even ink will make it obvious.

Main: 'Skilful use of powered tools is certainly not cheating in my opinion,' says Richard Vaughan.

1. Set up marking gauges. Blue tape makes the cut lines more distinct.
2. Marking out the mitred corner with a 45° gauge.
3. Next, mark to the mitre line on the edges.
4. Make a second cut on the tablesaw to set the length of tails and pins.



5



6



7



8

5. Set up the laminate trimmer to cut the rebates.
6. Laying out the pins using a shopmade acrylic template.
7. Avoid mistakes, by making sure the waste is clearly marked.
8. Using the trimmer for hogging out the waste.
9. Transfer the outline of the pins to mark the tails.
10. The tails have been sawn and are ready to be cleaned up.
11. The sockets for pins are next marked.
12. Routing out the mitre.
13. Mitred dovetails complete and ready for assembly.
14. The completed Wave Cabinet.

Saw on the lines

Sharp eyes may notice a correction in photo 5 that I had to make in the first gauge mark. Note also that I was cautious with marking the all-important mitre. Use a square and knife to highlight the bottom of the waste between the pins. Then chisel a slight V into that line on the waste side to ensure a clean cut line when chiselling to it.

Cut it right

Now set up the VFC fence to cut exactly to the taped cutting gauge mark and set the depth to the deeper of the two saw cuts as this is what gives the socket depth for clearance for the tails (**photos 7, 8**).

Hog out the waste with the VFC then chisel out the remainder. Note the full depth of cut compared to the shallower saw cut to avoid cutting past the mitre. Saw the mitres at each end.

Pins to tails

Clamp components into position and then mark the pins onto the tails. It helps if you can extend the lead of the pencil to

reach inside, and the sandpaper is there to maintain a fine point (**photo 9**).

Saw tails and mitres just on the waste side of the line to ensure a tight fit, with room to pare if essential. Sneaking up on the mitre is the way to go unless practice has made you very confident (**photo 10**). If the pins are thick enough the VFC makes quick and accurate work of hogging out waste (**photo 11**).

Power tools have a place

Hand chiseling or hand planing the mitre is easier if you've made a jig for that, however I made a practical compromise and used the router table with a 45° chamfer bit. The sacrificial MDF on the fence gives zero clearance and minimises the chance of an unwelcome dip (**photo 12**).

Next comes careful fine tuning with sharp chisels, and finally the satisfaction of ready for assembly (**photo 13**).

Glue-up, the real test

It's essential to do at least one complete dry clamp up of the piece. You need to

9

10

be sure it will come together, and be clear on what clamps and spacers you need. This is the time to be very critical of every aspect, as it is the last chance before you have to offer excuses. Maybe even wait till tomorrow for one more look...

Once you have that sorted, now is the time to carefully press tape tightly along both sides of each joint to catch glue squeeze-out. Taping is easier when it is apart. After gluing and clamping, check for square – you can reposition clamps to pull it into exactly square. Scrape off the squeeze-out (and be concerned if there is none) and peel off the tape before the glue sets.

Here I used epoxy tinted to match the wood. Epoxy gives more working time, and it lubricates tight fitting joints. It is also gap filling, just in case.

As well as the blind mitred dovetail, this piece required a lovely amount of hand tooling to get the subtle surface curves that I wanted to express the concept of 'waves of sleep' that is the heart of this bedside cabinet design (photo 14).

Being engaged by how you spend your time is the best way of being alive. Well, it still is for me after some 40 years of woodworking, and I wish you the same for whenever you can fit it into your life.

Photos: Richard Vaughan



Richard Vaughan is a furniture designer maker who also teaches woodwork from his Brisbane 'shedudio'. Learn more at www.richardvaughan.com.au

11

12

13

14



Tools to Inspire

Devon Campbell is creating a new marque of fine Australian hand tools. Story by Linda Nathan.

At age 25, US-born Devon Campbell is following his own road as a maker of fine hand tools for woodworking. It hasn't been a straight path however. While completing a degree in maths he also studied musical composition, guitar and piano. The latter led to an interest in making musical instruments and finding work with Michael Anthony, a notable luthier.

'Building musical instruments is rewarding', explains Devon. 'It involves using specific tools and fixtures, and even modifying tools from the ground up.' In fact it was instrument making that fuelled

Devon's 'tool obsession' and the realisation that he really liked 'the hand tool way of doing things'. 'I was aware of the making-your-own-tools side of things, but I also wanted to make tools that will inspire you to do work you're proud of.'

Aside from guitar building techniques, one of the most valuable things Devon learned from Michael Anthony was how to deal with mistakes. 'The most important thing he helped me with, was when things aren't going well – how to recover. If you've made a mistake, how you can fix it.'

'In the other room I've got boxes and boxes of handplanes which never got finished', explained Devon. 'Each was a few weeks of work, and then something went wrong', he said. 'It can be demoralising, but it's all about working through the developmental process.'

There have already been at least 26 prototypes for the travisher design that Devon is currently developing and it's taken a year to get to the point where he now has one that is working the way he wants. 'The tricky part is that it has a flat blade (most travishers have a curved sole) and it also had to be adjustable. I had to



Opposite: Devon Campbell in his Brisbane workshop.

Left: Handplanes by Ironbark Tools in a range of native Australian species.

Photos: Raf Nathan

figure out how to get these two pins to give lateral and depth adjustment.'

The hub of Devon's compact workshop is his milling machine, a 1930s Hercus lathe and a 'mid-century' MacPherson surface grinder. 'The milling machine can remove lots of material quickly, and since it's been converted to CNC, I can do products like the squares reasonably quickly in batches. From there, since everything (with the squares) is Cartesian, I'll go to the surface grinder which is a higher precision tool, although not necessarily as versatile.'

Currently the Ironbark Tools range includes adjustable squares, infill block planes and soon the aforementioned adjustable angle travisher.

Ironbark squares have Devon's distinctive aesthetic, brass with an Australian native wood infill in an elongated keyhole shape. The body is C360 brass, while the beam is 304 stainless steel and 3mm thick, a feature which lends substance and stability in use. 'As well as the thicker beam, brass is slightly denser than steel, so that also gives it a little bit more heft.'

The infill also permits the installation of the adjustment mechanism that Devon has developed. 'Infill block planes are not the most common to find', said Devon. 'Usually block planes are cast, with infill planes commonly seen in larger types such as coffin, jack and jointer planes.'

Using local timbers is a no-brainer for Devon. If you want the tool to live longer than the tree it came from, native species such as gidgee, yarran, beefwood and needlewood are incredibly hard wearing, dense, attractive, and stable when properly dried, he says. 'They outperform practically everything I could import. They don't involve outrageous fees and paperwork and I know the people who supply them, rather than risking unethical forestry practices – and they



are easily some of the most visually striking and beautiful timbers in the world.'

Which species does he like best? 'Right now my favourite is probably yarran, but I get very excited to try new species all the time. I recently got some purple dead finish that I'm very excited about, and I'm about to start some tools in ivory needlewood, so there's a chance that my favourite may change soon!'

Made from brass and steel as opposed to cast iron, infill planes are more durable, explains Devon. 'If you happen to drop and dent them, for example, you can lap that out, whereas with a cast iron plane there's a good chance it will crack, especially right at the mouth. Infill planes also lend themselves to making a very fine mouth which is great for chip control, and if you have problems with tear-out. And the low angle (Ironbark block planes are bedded at 12°) is good for endgrain.'

Higher angle planes, with say 50–55° bedding angles, will 'lock the line of scraping rather than cutting, but when you take that to endgrain, can chatter', says Devon. 'In a way, the design for these planes is inspired by (centuries-old) mitre planes which were designed for preparing surfaces for marquetry, where highly figured knotty woods and burl endgrain is randomly mixed with face grain, and the low angle helps to give stability and manage the chip better.

Above: Close-up view of Ironbark block plane with yarran infill. Photo: Devon Campbell

Combining an infill with a mouth that manages chip, along with a low angle that manages grain direction is difficult, but once you have made it, it performs really well.'

Devon also makes his planes somewhat smaller than most, because he feels this works better for both one- and two-handed use.

Running any small business, let alone a 'start-up' reliant on the long hours spent on design and development, on top of production, is going to be a tough gig. 'I started Ironbark Tools because of my passion for hand tool woodworking, but Ironbark's purpose is quickly changing to serve the appetite of other woodworkers as hand tool woodworking gains popularity. A common complaint from many woodworkers is that most of the better hand tools on the market are prohibitively expensive.

'I hope that the tools I make end up in the hands of people who use them regularly, so I intend to keep improving their quality and accessibility. Australian toolmakers have an incredible reputation across the world, and I hope to add to that by putting Aussie tools in the hands of woodworkers everywhere.'

Learn more about Devon Campbell at <https://ironbarktools.com.au>

THE CYCLING EVENT OF THE YEAR

21-22 OCTOBER 2023



REGISTER NOW

150
KM

120
KM

85
KM

THE
CRIT

INCLUDED IN YOUR REGISTRATION:

- Event timing
- On course support
- Nutrition at rest stops
- Bag drop service
- Rider medal
- Free beer or wine in village
- Free massage in village
- + More!

bowralclassic.com.au

DESTINATION PARTNER



AUTOMOTIVE PARTNER

VOLVO

MAJOR BIKE PARTNER

cervélo

MAJOR CRIT SPONSOR

DUNCAN HILL
PROPERTY

SUPPORTING PARTNERS



ASSOCIATE PARTNER



LOCAL PARTNERS



CHARITY PARTNERS





From hanging to hardware,
and everything in-between, we're here with
COMPLETE CABINET SOLUTIONS.

**Get the extra helping hand you need
for installing cabinet furniture.**

Kreg Concealed Hinge Jig

KR-KHI-HINGE

The easy way to install concealed cabinet door hinges.



Kreg Cabinet Door Mounting Jig

KR-KHI-CDIJ

Helps you hold a cabinet door while your other hand is free to mount the hinges.



Kreg Cabinet Hardware Jig

KR-KHI-PULL

Install knobs and pulls with easy, repeatable accuracy.



Kreg Shelf Pin Jig

KR-KMA3232

Add perfectly spaced shelf-pin holes to your furniture.



Kreg Cabinet Installation System

KR-KCS-100

The simple, adjustable system for one-person installation.



Kreg Drawer Slide Jig

KR-KHI-SLIDE

Fast and easy drawer installation for perfect fit and smooth operation.



carbatec
THE HOME OF WOODWORKING

Find all the KREG cabinet solutions at your local Carbatec store.
Or scan the QR code for more information. →



ADELAIDE
08 8362 9111

BRISBANE
07 3390 5888

HOBART
03 6272 8881

MELBOURNE
03 8549 9999

PERTH
08 6143 5788

SYDNEY
02 9648 6446

AUCKLAND
09 274 9454

CHRISTCHURCH
03 242 0606

CARBATEC.COM.AU

CARBATEC.CO.NZ