

The Home HANDYMAN

January/February 2019 • Vol 29 No 1



SA'S
ORIGINAL
DIY
MAGAZINE

Bonding with adhesives

- Types of adhesives
- Success tips
- Adhesive application



ICE BUCKET STAND



POOL PAVING

+plus

Summer pool maintenance
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- Make a Lazy Susan
- Handmade wallpaper
- Young DIY'er projects



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The Home HANDYMAN



www.homehandyman.co.za

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FROM THE WORKBENCH

For the love of trees



Wood is a material close to the heart of the avid DIY'er. Many of us have a favourite wood for furniture, a go-to wood for small projects and even a favourite wood for the braai fire. Wood trends in home décor have seen a resurgence over the last couple of years, from wood-look tiles and wallpaper to weathered wood furniture and panelling.

Those of us who love the look and feel of wood, also appreciate the role trees play in our gardens, cities and the greater environment. Trees provide shelter for birds and animals, filtering the air, absorbing carbon and releasing oxygen.

Growing trees are the lifeblood of a number of industries across the country and some of these industries, including forestry and fruit and nut producers, like avocado, pecan and macadamia, are under threat. Researchers currently don't yet know the far-reaching consequences - but one thing they do know is that the polyphagous shot hole borer or PSHB (*Euwallacea fornicatus*) and its symbiont, a pathogenic fungus (*Fusarium euwallaceae*), are here to stay!

This tiny insect and its fungal passenger are wreaking havoc on the country's trees. In the greater Johannesburg area alone, around six million street trees and those in parks are considered to be at risk, with a further four million at risk in the wider area.

The PSHB is a beetle native to Southeast Asia. It was discovered in 2017 on London plane trees in the KwaZulu-Natal National Botanical Gardens in Pietermaritzburg by researcher Dr Trudy Paap. Since, infestations have been found in trees in a number of cities around the country.

The female PSHB carries *Fusarium* with her. She burrows into trees to establish brood galleries and the fungus colonises the gallery walls to provide a food source for larvae and adult beetles. Water conducting tissues of the tree are killed and this leads to branch dieback and eventually tree death. PSHB attacks both exotic and indigenous trees species, but only breeds in reproductive trees. These include maples, oaks, coastal corals, plane and avocado trees.

Treatment to save the tree is expensive, without a guarantee of success. Dead and dying trees pose a serious threat to people and property and numerous trees have already been felled in Gauteng alone. The spread is believed to be fuelled by the transport of diseased wood after trees have been felled. A tree with a heavy infestation could contain as many as 100,000 beetles, so proper disposal - notably chipping (for compost), or burning is preferred.

What should you look for in your own trees? Wilted leaves and dead or dying branches must be checked. Look for holes in bark, with a fine borer sawdust. Some trees have a black ring, a shot-gun like legion, around the hole. Other trees also ooze resin (drops of a gelatinous substance) at entrance holes. Different trees species respond to PSHB in different ways, so if you are unsure, rather have your tree checked by an arborist or horticulturist. Keep an eye on trees in your neighbourhood and local parks too.

Merry Christmas and a wonderful 2019 to you and your family.

Till next time,

Gina

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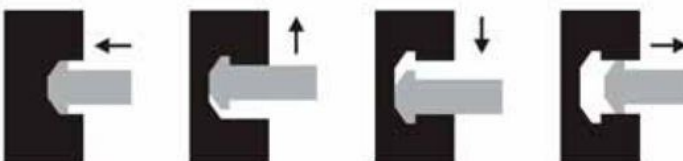


4. Connect – finished!



Advantages and properties

- Zeta P2, the power tool for fast, form-locking anchorage of all P-System connecting fittings for wood joints
- The automatic vertical movement creates a profile groove enabling manual insertion of the connecting fittings
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Divario P-18



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Clamex P-14

OFF THE SHELF

Your guide to the latest products in the world of DIY

Circular saw

For a wide variety of tasks on site or in the workshop

The Makita MT M5802B circular saw is set up to accurately rip, crosscut or bevel into both hard and soft wood. A sturdy rear angular guide ensures smooth and precise adjustment of the bevel angle. The flat motor housing design provides increased stability when changing blades.

Operator comfort and safety during operation has not been overlooked. An ergonomically designed handle reduces the magnitude of vibration, hand fatigue and pain while the non-skid elastomer provides a sturdy grip. The saw is double insulated to reduce noise levels and protects the operator from electric shock during use.

In accordance with the safety regulations sawdust is expelled via the rear exhaust port and provides a cleaner working environment. Superior dust collection can be obtained by attaching an optional dust nozzle that is then connected to a dust extraction system.

Measuring 297mm in length and weighing 4kg, the M5802B allows for quick storage and easy transportation. A guide rule, hex wrench and TCT saw blade are included with the saw.

Makita's range of Standard Duty Industrial Power Tools provides the quality you expect from Makita at an affordable price.

For more information: Visit www.makita.co.za or Tel: 011-878-2600



Adhesive for cornices

A quality acrylic water-based sealant for installing cornices and filling cracks

Acryl-W is used for adhering of polystyrene cornices, ceiling tiles and interior finishes. Acryl-W is also a high grade plastic elastic sealant, used to fill small cracks in walls. It is paintable with emulsion paints and has good movement capabilities. Acryl-W has excellent weather resistance once over painted. Available in 280ml cartridges and 4kg buckets - white only. Other colours: Beech and Grey – Cartridges only.

For more information: Visit www.denbraven.co.za or

Tel: Johannesburg: 011-792-3830, Cape Town: 021-552-9675 or Durban: 031-579-2375



Restore tile grout

After Tile Grout Reviver is a high quality grout reviver formulated to restore tired grout to its original colour

With SteriTouch®, one of the world's leading anti-bacterial solutions integrated into the manufacturing process, After Tile Grout Reviver is guaranteed to stop mould, mildew and bacterial growth. SteriTouch® actively prevents the growth of bacteria, mildew and black mould that are commonly found in areas of high humidity. After Tile Grout Reviver can be used on kitchen and bathroom walls, shower areas and wet rooms. It has an excellent water resistance and is ready to use, no mixing and no mess. After Tile Grout Reviver dries to an extra brilliant white finish. No mould guaranteed.

For more information: Visit www.sika.co.za or Tel: 031-792-6500



Bonding agent

TileLoc is a copolymer latex bonding and waterproofing aid

TileLoc has been designed specifically for use in the building industry as a water resistant additive and to assist bonding of tiles to smooth surfaces such as off shutter concrete, existing ceramic tiles and vinyls.

Features and advantages:

- Improves non-structural bond of tiles to smooth concrete.
- Improves non-structural bond of floor screeds to smooth concrete.
- Waterproofing additive.
- Easy to use.

Surface preparation:

Surfaces should be free of loose particles, crumbling or flaking material, grease, dust or polish. Wire brush the area if necessary and dampen prior to priming.

Application:

Tiling with cement based powder adhesives: Apply a slurry coat - two parts cement and one part TileLoc (by volume) - to the prepared area and while the slurry coat is still wet continue to tile in the usual manner. TileLoc can be added to the adhesive mix to obtain a stronger bond. (10% of water content)

Tiling with ready-mix adhesive: Apply TileLoc with a brush to the prepared surface. This allows the TileLoc to become tacky then continue tiling in the usual manner.

For more information: Visit www.ashak.co.za or Tel: 0861-127425 (ASHAK)



Pool care products for the homeowner

A wide variety of accessories to clean and maintain your pool

Speck Pumps supplies:

- **Pool brushes.** Necessary to clean algae and sediment off the walls and bottom of a pool. Nylon and stainless steel brushes available.
- **Pool leaf rakes and skimmers.** Essential for removing fallen leaves and other debris from the surface of a pool. It is vital to remove surface debris before it sinks to the bottom of a pool, where it may place extra strain on automatic pool cleaners.
- **Test kits and strips.** Using a swimming pool test kit to maintain the chemical balance of a pool is essential in order to keep the pool's water safe and clean for swimmers. A pool's water should be tested once a week in order to check its pH, total dissolved solids, alkalinity and total hardness.



For more information: Visit www.speck-pumps.co.za or Tel: 011-455-4300 (Jhb) or 021-704-1143 (CT)

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VOICE YOUR VIEWS

Do you have any thoughts or comments on DIY issues?



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The Home HANDYMAN

www.homehandyman.co.za

Send us your views, ideas and opinions and you could win a Makita MT Random Orbital Sander M9204B.



Send your queries to:
editorial@homehandyman.co.za or
P.O. Box 24938, Gezina, 0031

Please include your name, physical address and contact number (office hours)

Helmut Fritz

wins a Makita MT M9203B
Finishing Sander.

Prizes are not exchangeable

Geyser repair and maintenance

WINNER

We had a problem with our geyser this week. The outlet pipe was dripping water, which is normal, until the drip became a running stream of water. This is when I knew I had a big problem.

Coming from an electrical background and with some knowledge of geysers, my first thought was that the pressure release valve had malfunctioned or the thermostat had blown. So the first thing to do is to switch off the power supply to the geyser at the main switch board and at the isolator switch, which should be installed within one meter from the geyser element and then turn off the water supply to the geyser (which is next to the geyser water inlet).

Then I remembered seeing an article in the May/June 2018 issue of *The Home Handyman* magazine, on this very subject. "Geysers: Myths, Maintenance and Safety". I read this article intently to familiarise myself with the finer details and what I soon realised was that my geyser was about eight years old and according to the article, a geyser should be assessed by a plumber every two years.

Having neglected to do this, not only did we have the inconvenience of cold water showers etc. for a day or two, but several parts, such as the self-sacrificing anode, plus the element needed replacing. I have included photos of these parts indicating the build-up on the element and rubber gasket, as well as a photo of the new and the old anode/rod showing just how little metal was left.

What could have been far worse is the geyser unit bursting, causing further inconvenience and expense in replacing the geyser as well as the water damage caused to ceilings, cupboards and flooring. Thank you for this most informative article. I seriously suggest that all homeowners read this article thoroughly and maintain their geysers as advised.

Helmut Fritz, by e-mail

Thank you for sharing your experience. We are glad you were able to make these important repairs on time. – Ed.



Both anodes



Note the element showing the build-up on the rubber gasket

Clever invention

I came across this DIY engineered bicycle on a walk in Stilbaai. The power supply is from a Ryobi cordless drill, but I unfortunately did not get to see or speak to the owner. Thanks for a great magazine.

Rodney Meier, by e-mail



Santa paintbrushes bring Christmas cheer

I really must take a moment or two to let you know how much I enjoy sitting on my couch with a coffee in one hand and *The Home Handyman* in the other. After a few flips through your November/December 2018 issue I came across the young DIY'er Santa paintbrushes and just about leapt off the couch as both my husband and two daughters stared on in confusion! It didn't take long before both my girls were very determined and

excited to make these adorable festive decorations. I now have an army of Santas hanging from my mantel by the Christmas tree. Thank you so much for helping create a wonderful memory for me and my family.

Haily Sanson, by e-mail

I'm glad your family enjoyed the project, Haily. I've put mine up too and I must say they really are a talking point! – Ed

Reader's projects



The Home HANDYMAN

www.homehandyman.co.za

Willing to share your latest project with our readers? Send a step-by-step write up of how to make the project, along with step-by-step photographs (at least 300kb) and a picture of the finished product.

Email projects and photographs to:

editorial@homehandyman.co.za

Our competitions – the fine print

Prizes may not be exchanged for cash. The closing date is stipulated by the competition box. If not stipulated, it closes on the last day of the issue. For example: Jan/Feb 2019. All competitions close on 28 February 2019. To enter simply e-mail your answer to: editorial@homehandyman.co.za and include your name, surname, address and a day time contact telephone number with your entry. Unless otherwise stipulated, competitions are lucky draws and the correct entry drawn on the closing date will be the winner. The prize may differ from the picture shown. By entering this competition you agree to all rules and accept that the decision of the publisher is final and that no correspondence thereto will be entertained. This competition is open to all readers of *The Home Handyman* except employees of THH, BB Print and employees who work for the company that sponsors the prizes and their immediate families.

Find the answer **in this issue** and win a pair of dynamic clamps, sponsored by Toolcraft.co.za

Question: What is the jaw depth of the Micro Jig MatchFit Dovetail Clamp?

Send your answer to:

editorial@homehandyman.co.za or
P.O. Box 24938, Gezina, 0031

Please put TOOLCRAFT COMP in the subject line. Please include your name, surname, physical address and a contact telephone number (office hours) in the body of the email.



Easy-to-read icons

We've streamlined our fact boxes throughout the magazine. Here's a handy guide on what to look out for.



Woodworkers give back

The Witwatersrand Woodworkers Association held its 28th Annual Toys for Charity fundraiser at the Gereformeerde Kerk in Randburg at the end of November. The members donated just under 1,200 toys to three charities - Baby Moses, Kids Haven and Little Eden.

Cash generated from items auctioned and donations received were used to purchase crayons and colouring-in books for the charities. The event was attended by approximately 90 members and guests enjoyed a spit braai as part of the festivities. The Association thanked

the suppliers for the generous donations and for supporting the charities.

For more information on the Wits Woodworkers Association, log on to www.wwa.org.za



The Witwatersrand Woodworkers Association would like to thank the following companies for their generous support of their 28th Annual TOYS FOR CHARITY Fundraiser

Afmit Tools	Mistry's Pine Furniture
Asax Agencies	Mr Woodturner
Austro Engineering	Pepper Mills for Africa
Benray - DeWalt	Permoséal
Blackline Tool Company	PowerDek
Blacksmith	Power Tool Repairs
BMG Technologies (Gorilla)	Prosono International
Bulldog Abrasives	REM (Lamelo)
CCL	Richem CC
CGR Agencies	Robert Bosch
Creative Turning	Rutherford
Eco Timbers	Shield Chemicals
FEW	Somta Tools
First Cut	Spear & Jackson UK
Gedore Tools	Spectra Spray
Genkem	Sprayon
Gratus & Gratus	Stevens & Co
Hardware Centre	Strand Hardware
Harris Brushware	The Home Handyman
Hitachi	Toolcraft
HP Will	tools4wood
Ignite	Topline
iNGCO Tools	Triton Leo
Klingspor Abrasives	Unique Welding Supplies
Lasher Tools	Vermont Sales
Matus	Woodoc
Metabo Power Tools	

Building for the future

Sibusiso Kekana of LFM Projects established the Black Carpenters Association (BCA) with the vision of developing his industry and the communities that he operates in. Kekana established LFM Projects in 2014 after more than a decade of corporate life.

His uncle was a carpenter and while Sibusiso initially pursued tertiary education and a more conventional career, his entrepreneurial spirit soon needed an outlet. Sibusiso had been dabbling in carpentry in his spare time, as well as other business ventures. "I started by making small cupboards that I could sell on the street," he says.

Eventually, he decided to go on his own and together with his wife, launched LFM Projects. Always proactive and positive, in 2017 he established the Black Carpenters Association (BCA) with a number of colleagues, where he now serves as chairman, to address some of the issues that affect his ability (and other businesses like his) to gain access to this important market.

There's another aspect of Sibusiso's vision for the BCA: "Carpentry is an area that can create jobs," he says. "It's a skill that can be taught, that is ripe for entrepreneurs such as myself, and which can make a real difference to communities. It's also an avenue for employed people to add to their income, as I first did selling cabinets informally."

At the moment, Sibusiso runs the BCA in his spare time. He estimates that the association has 200 members across Gauteng. But there is significant scope for growth and development, so not just for the future of LFM Projects, but the industry and the communities it works in.

For more information, log on to www.lfmprojects.co.za



Sibusiso Kekana



(From the left) Justice Nelukalo (centre manager), Chane Venter (cashier), Frans Phelembe (assistant manager) and Robert Singo (yard supervisor)

Corobrik opens in Springs

Growing demand for quality bricks and pavers in eastern Gauteng prompted the opening of the Corobrik Springs Centre, the 25th Corobrik sales centre to be opened countrywide. Customers and their families were welcomed to the site at 2 Tonk Meter Road for the opening in October.

"This was an extremely successful opening and we are really pleased with the warm reception the Springs community has afforded our new sales' centre," said Musa Shangase, Corobrik's Commercial Director.

Dates to diarise

Homemakers Expo

The Johannesburg Homemakers Expo celebrates the authenticity behind real homes and their beauty. The show will present the very latest in home renovation, interiors, soft furnishings, lighting, kitchens, furniture and more. Meet leaders in the home lifestyle industry with exclusive insider tips and professional advice. The Expo features a significant amount of attractions to keep you informed and entertained, including demonstrations by DIY celebrities.

The 2019 theme of *Raw Comfort*, embraces perfect imperfections and through various talks and demonstrations exhibitors will show patrons how to get in touch with a more organic world.

Date: 28 February to 3 March 2019

Venue: Ticketpro Dome, Northumberland Rd and Olievenhout Ave, North Riding, Johannesburg

Times: Thursday/Friday: 10am to 7pm; Saturday/Sunday: 9am to 6pm

Entrance: R100 Adults; R60 Pensioners; R20 Scholars; Free for U/12s

For more Information:
0861-114-663 or log on to
www.homemakersonline.co.za

Hobby X

Don't miss Hobby-X at the Ticketpro Dome. It's a visual, interactive, creative and entertaining feast with lots of creative goodies for the girls and new and entertaining options for the boys. Chat to the experts and find out what products are best for your application, be inspired by the demos and ideas and hone your skills at the hands-on workshops.

Date: 7-10 March 2019

Venue: Ticketpro Dome, Northumberland Rd and Olievenhout Ave, North Riding, Johannesburg

Times: Thursday/Friday: 10am to 6pm; Saturday: 9am to 6pm; Sunday: 9am to 5pm

Entrance: R100 Adults; R20 for U/12s

For more Information:
0861 HOBBY X (0861-462299)
or log on to www.hobby-x.co.za

Easy summer pool care



A good understanding of your pool's pump and filtration system and how to test the water can prevent it from becoming a source of stress this summer



Q: When does my pool need a shock treatment?

Lundie Askes of BLSA Industries (Pty) answers: "Routine weekly shock treatments can often be overlooked as a part of pool maintenance. Many times, pool owners begin shock treat after a problem exists. However, a much better practice is to look at shock treating as a preventive rather than a cure. This will not only save time and money but will prevent frustration.

Shock treatments restore water sparkle and comfort by destroying harmful swimmer wastes – the non-filterable wastes such as perspiration, cosmetics, hair spray and urine which can accumulate in the pool, resulting in dull, flat water. It also destroys nitrogen (N). Swimmer wastes contain nitrogen which ties up chlorine, forming unpleasant chloramines. Chloramines cause 'red eye' and have an unpleasant pungent odour.

Weekly shock treatments are required to control chloramines. If a water test reveals zero Free Available Chlorine residual in the water and any level of combined chlorine, that is a sign that there could be excess nitrogen in the water.

Testing your pool water

Free Available Chlorine	1 - 3 ppm (parts per million)	Weekly
pH	7.4 - 7.6 - All pool surfaces	Weekly
Cyanuric acid or Stabiliser	30 - 70 ppm	Monthly
Total Alkalinity (TA)	80 - 125 ppm - Concrete & tiled pool surfaces 125 - 150 ppm - Fibreglass, painted & other pool surfaces	Monthly
Calcium Hardness (CH)	200 - 275 ppm - Concrete & tiled pool surfaces 175 - 225 ppm - Fibreglass, painted & other pool surfaces	Every 3 months
Total Dissolved Solids (TDS)	Below: 1500 ppm	Every 3 Months
Copper / Iron	Below: 0.2 ppm	Every 3 Months

Source: BLSA Industries (Pty) Ltd

Nothing beats the feeling of diving into a crystal clear swimming pool on a hot summer's day. A pool at home can be the source of endless hours of family fun – or it can be a constant bugbear.

Let's take a closer look at swimming pools and how you can keep yours looking fabulous this summer.

Circulation and filtration

Lize Westwood, marketing manager at Speck Pumps SA, says that the swimming pool pump and filter are the two most essential pieces of equipment to maintain a clean and healthy pool. You can't have one without the other. It's like your body's liver and kidneys. To be healthy – you need both.

"The swimming pool pump is the heart of a pool's circulation system that keeps a pool in working order by circulating water through the pool and the filter," she explains "It pulls water from a suction point (the skimmer/weir built in on the side of your pool) or the automatic pool cleaner in the pool and pushes it through the pool's filter and then back into the pool through its return aim flows/jets. This creates a continuous cleaning cycle, keeping a pool clean and functioning properly."

Lize says that bigger is not always better when it comes to pool pumps and using a pool pump alone will not clean the pool. It is essential to have a pool pump working in conjunction with a perfectly sized pool filter.

Why a perfectly sized filter? "A pool pump that is too large for the filter can hinder filtration and can even damage a pool's filter because the flow rate is higher than what the filter can handle," she explains. "It is very important to know the size of your pool before purchasing a pool pump and filter combination. If there is additional equipment, like water features or solar panels installed to heat the pool, it will have to be taken into account when deciding what size pump is to be purchased."

Lize explains how it works: "Water gets pushed from the pool pump into the pool filter and the filter media (sand, glass or filter cartridge) to remove dirt, debris and other contaminants and then clean water returns to the pool via the return ports. From time to time the filter will need to be cleaned because filtering water builds up pressure in the unit and the collected dirt and debris needs to be disposed of. A sand filter would need a backwash and a cartridge filter requires the cartridge to be taken out and cleaned."

Rules for summer pool care

- Keep the filtration system clean and in good condition. Backwash the filter at least once per week.
- Run the filter long enough to cope with the size of the pool and other factors like how often people are swimming and weather like rain, wind and heat.
- Follow the instructions for the addition of chemicals to the pool. This may be daily, weekly or monthly, depending on the product.
- Check and correct pH, if necessary.
- Check and correct total alkalinity once per month or after heavy rain.
- Check and correct the calcium hardness in fibreglass, painted or vinyl pools every six months.



Both pieces of equipment need to be at optimal functioning condition together with perfect pH levels to ensure a good, clean and healthy pool environment.

Testing the water

A low maintenance pool starts with regular testing – it's a simple task and it will help you to pick up small problems before they develop into serious ones. Even if your water looks clear, keep up with your testing regime. If you have an old test kit and chemicals, dispose of it and purchase a new kit for the summer.

If you don't know what size pool you have, now is a good time to do a calculation to determine this. See the box 'Calculating capacity' to work this out.



Regularly check hoses for breaks or holes



Keep your pool healthy by regularly conducting water tests

Lundie Askes of BLSA Industries (Pty) says that testing the pool water and correcting the water balance is important to prevent disease, protect equipment and provide the expected environment. "Sanitisers work best in water that is properly balanced," explains Lundie. "Balanced water is more comfortable for swimmers because it reduces unpleasant odour, burning eyes and itchy skin. Balanced water will also help prevent equipment corrosion and/or scale build up. Improperly balanced water can become cloudy and unappealing for swimmers."

See the table 'Testing your pool water' on page 13 for the correct testing programme to follow.

Calculating capacity

To determine the right quantities of chemicals for your pool, it is important to know its capacity. All measurements must be in metres.

Step 1: Determine average pool depth

(Depth of deep end) + (Depth of shallow end) = __ metres.
Divide your answer by two.

Step 2: Capacity

Square or rectangular pool

Length x Width x Average Water Depth (from step 1) x 1,000
= Volume in Litres

Round pools

Diameter x Diameter x Average Water Depth (from step 1) x 785 = Volume in Litres

Oval pools

Long Diameter x Short Diameter x Average Water Depth (from step 1) x 785 = Volume in Litres

Source: Lundie Askes

Whats new?

Introducing the newly launched

BADU® **Solar System** from **SPECK X** **pumps**



Turn free sunlight into power!

Speck Pumps has now on offer a complete system providing sun power direct to your Speck Pumps swimming pool or Koi pond pump with the new BADU Solar System.

South Africa is renowned for its sunny days and its ideal for solar power - Photovoltaic (PV) systems. With an average of almost 9 hours a day of sunlight means it's perfect to run your swimming pool pump sufficiently and offers tremendous savings on running a Koi pond pump.

Most solar systems on the market are functioning on expensive, DC powered pumps. These pumps typically cannot provide the output performance of a normal AC pump, which our system does. You can simply connect it to your existing Speck pump up to 1.1kW, saving you thousands of Rands and the hassle of having to change your pool pump.

What makes our PV system so special? The BADU Solar System can run on solar only or in conjunction with electricity supplied from the grid, which is fantastic news for Koi enthusiasts. The BADU Solar System is designed to use solar power first and then top up with what is needed from the grid. Now you too can convert your existing Speck pump to the BADU Solar System and save on your electricity bill.

Another feature of the BADU Solar System is you can link to the controller software anywhere via the internet on your computer or smart phone. That way you monitor the performance stats and tweak the settings which makes running the pump remotely, especially for Koi pond owners, easy.

Features of this system include: compatibility with any Speck pump up to 1.1kW size; the output performance of a normal AC pump; dual power usage capabilities and remote controlled via a smart phone or computer.

Here's to pulling the plug on load-shedding and electricity bills for your swimming pool!

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Common summer issues

Troubleshooter #1: Water loss

"A common problem in summer is water loss due to heat, wind, splashing and regular backwashes needed for a healthy pool," explains Lize. "Water losses from evaporation are immense. A single square metre of water surface can easily lose up to eight litres to evaporation every day in summer."

Solution A: Water evaporation can be tackled by using a plastic pool cover when the pool is not in use, but it is much easier to use a liquid pool cover. A liquid pool cover spreads over the surface of the pool to create a layer that helps to reduce evaporation. "With a liquid pool cover you don't have to keep taking it off and putting it back and it's only a few drops to top up after a big or regular bather load," says Lize.

Solution B: The solution for regular summer backwashes is using a backwash tank instead of letting the water out into the drainage system or street. "Backwashed water can then be treated in the tank with a flocculent to remove debris and sludge from the water and then clean water can be returned to the pool," explains Lize. "Chemically saturated water needs to be drained and the pool topped up with clean clean municipal water."

Troubleshooter #2: Burning eyes and skin

Both high and low pH levels can irritate skin and eyes. The ideal range is 7.5 to 7.6. The problem is often caused by too little chlorine in the pool. Ammonia compounds and nitrogen

in the water combine with chlorine. Low chlorine levels allow these chloramines to build up in the water. Chloramines have a sharp smell and can irritate the eyes and skin of swimmers. The smell is noticeable, so most people think there is too much chlorine in the pool.

Solution: Add a shock treatment as per the manufacturer's specifications.

Troubleshooter #3: Green water

An awful sight when you get back from holiday! A pool that looks greener than your grass. This is caused by a large build-up of green algae in the water. It could also mean that your filter

Problem pool cleaner

Does it look like the automatic pool cleaner is sluggish or slow and are there air bubbles visible at the lid of the pool pump?

Solution A: Check the skimmer/weir basket as well as the pump basket for leaves and debris and clean it out as often as possible. Clogged baskets put unnecessary strain on the pool equipment and can shorten the lifespan.

Solution B: The problem could be the automatic pool cleaner hoses so check for breaks or holes. The damage to pool cleaner hoses is due to sun, wear and tear and improper use of pool chemicals.

Source: Lize Westwood, Marketing Manager, Speck Pumps SA





medium is dirty and needs replacing. If you haven't replaced your filter sand in the past three years, you should consider this. Also make sure that your pump is working properly.

Solution: First up, turn on the pump and keep it running until your pool clears. Test chorine and pH. If both are low, algae will thrive. Aim for a reading of reading between 7.2 and 7.6. Soda ash raises pH and pool acid lowers it. Add the necessary product, according to your reading. Allow the water to circulate for 40 minutes, and then check the pH again. When the pH level reaches the right range, add a shock treatment product.

Always follow the recommend dosage for your size pool. Brush the sides of the pool to remove stubborn algae build up. Keep the pump running for another 12 hours. If the green colour still remains, add more shock treatment and run for another 12 hours. Backwash the filter and run your pool cleaner. Test the water again and make sure that chorine levels are safe before swimming.

Resource

Speck Pumps – www.speck-pumps.co.za; BioGuard H2Know Chemical Training Manual by BLSA Industries (Pty) Ltd (www.bioguardchem.co.za)



COMPETITION!

WIN a #MakeSummerSparkle Zodiac hamper

One lucky *The Home Handyman* reader stands a chance to win a Zodiac Pool Hamper comprising of a Pacer Rhino pool cleaner, two free hoses, one 4kg chlorine and a Cyclonic leaf catcher.

Send your entries to: editorial@homehandyman.co.za

Please put "ZODIAC COMPETITION" in the subject line. Include your name, surname, physical address and a contact telephone number (office hours) in the body of the email. Competition ends 15 January 2019.



valued at R2000



PAVING

Careful planning and research will produce a desired outcome when paving around your pool

PERFECTION

When it comes to paving for the swimming pool area there are endless possibilities. Paving around the pool is like dressing the swimming pool up for the mid-summer ball. However, there are many technical and design aspects to consider. We look at a range of ideas as well as paving options for this important outdoor area.

Design considerations

Firstly, are you paving for a brand-new swimming pool or are you upgrading that 1980s weed-filled brick paving that's cracking all around? It's not simply a matter of laying down new brick pavers. There are many things to consider. As with most DIY jobs, careful planning and research will produce a desired outcome and save you a lot of money in the end.

If you are replacing old paving, then the first challenge will be to remove the old bricks without damaging the integrity of

>> Warren Schmidt

the pool itself. The last thing you need is a cracked pool, so ensure you or your assistants work carefully. Measure up the area, as you will need to know the square meterage to order your new pavers. Draw a sketch as accurately as possible. Today's computer programmes like Word or PowerPoint have many nifty drawing features that will allow you to reproduce an accurate graphic of your pool and outdoor area. You can also do some Internet research on paving options, as most retailers will showcase their products on their websites. There are thousands of images online to give you some great pool paving ideas.

Once you have measured the area you intend paving, you will need to consider technicalities such as steps, slope, layers for varying heights (split levels) and corners and angles. These will all be important for trimmings and borders to finish off your paving and play an important role in the overall design and aesthetics.

Selecting pavers

The range of paving materials has increased substantially over the decades. Gone are the days of cement bricks and flaking slate rock. The most important question to ask is: How will the finished look compliment the rest of your home and garden? Will it blend in neatly or stand out in stark contrast to the pool and house? This is where your earlier research on design ideas will pay off.



When making your selection, consider the following:

- Safety is of paramount concern, so your selection must be non-slip. This is especially pertinent if you are using tiles or smooth pavers. There should be no sharp edges or corners where pool users can cut or injure themselves.
- Make sure the material is resistant to everyday pool chemicals like chlorine, acid or salt so that they will not bleach or stain.
- The summer season can get really hot, so consider pavers that won't burn anyone when walking on them or sunbathing.



Cement and clay brick pavers

Cement paving bricks are probably the most commonly considered option and often the most economical in terms of pricing. They come in a range of colours ranging from greys to reds and various mid-tones in between. You can create numerous unique patterns from paving bricks and mix in various colour tones to create interesting contrast.

Outdoor tiles

Outdoor tiles come in many designs and sizes and can be an attractive option as a pool surround. The most important consideration is that they are not in the least bit slippery when they are wet. Tiles are also slightly more difficult to install compared to brick paving, as the correct base-layer and tile cement must be used to avoid movement and cracking of the tiles.

Paving blocks

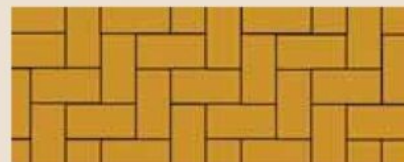
With today's manufacturing processes, there are many paving block profiles on the market. A popular concept which looks extremely smart is the use of interlocking blocks which can be used for unique patterns. Edging is often profiled to create a very neat and attractive finish, such as using what is known as 'bull nose' coping. Generally, these types of paving are more expensive than normal brick pavers.

Flagstone

Flagstone is usually a generic flat stone which can sometimes be used around the swimming pool, especially if you are trying to create a natural type rock pool.



Running bond pattern



Herring bone pattern



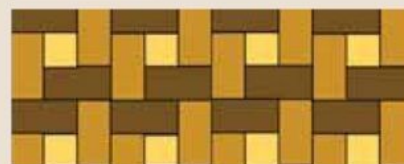
Basket-weave pattern



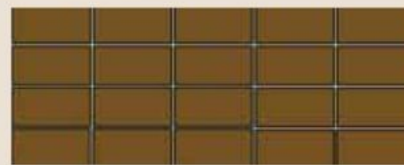
Mix cobblestone variegated pattern



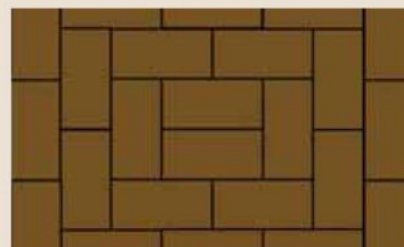
Large paver option



Pinwheel pattern



Stack bond or jack-on-jack pattern



Pinwheel running bond pattern

Measuring up

Using the graphic as an example of a pool area measuring 15 metres by 7 metres, here is how to measure up and make sure you order the correct quantity of bricks. In this example we will use standard-size brick pavers as well as smaller edging strips. Standard brick size is 222mm x 106mm, therefore you will need approximately 40 bricks per square metre.

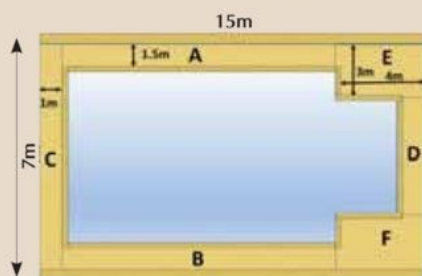
Note: This will vary according to paver design and size, as well as the interspace between adjoining brick, so confirm with your supplier.

Divide the sides into portions and label them A, B, C, D, E and F. Then measure the length and width of each portion:

- A = 1,5m x 10m = 15m (600 bricks)
- B = 1,5m x 10m = 15m (600 bricks)
- C = 1m x 4m = 4m (160 bricks)
- D = 1m x 1m = 1m (40 bricks)
- E = 3m x 4m = 12m (480 bricks)
- F = 3m x 4m = 12m (480 bricks)

Therefore, in total you will need 2,360 bricks. However, it is always a good idea to order extra to cater for breakages or a miscalculation. You could round off the figure to 2,500 bricks, as perhaps the supplier packages them in batches of 500 per pallet.

The same concept above will be used to measure up your edging strips.



Measure up and calculate your paving area



Before laying your pavers, prepare a base layer, using intermediate grain river sand

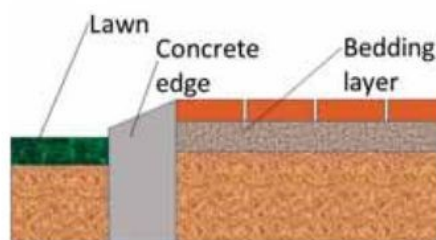
Important paving considerations

Depending on the material used, there are many ways in which paving is laid. The most important consideration is that on ground level, slope or pitch, steps and edging. Surface preparation is critical in ensuring that you get a neat, attractive and long-lasting finish. Base layers that are not levelled off correctly or if it is not compacted properly will lead to subsidence, whereby parts of the paving will buckle creating an uneven surface. The cement in between will crack and allow weeds to grow. An uneven surface is also not pleasant to walk on and could even cause foot injury.

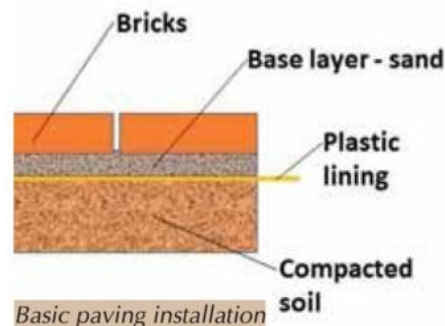
Drainage is another important consideration. During heavy rainfall, where will the water run? Will it lead into the pool bringing with it dirt and mud? Or will it wash away the base layer

of your paving leading to subsidence? In some situations, drainage channels or the use of grid-top drainage furrows may be needed. There are some well-designed modular drainage systems available which blend in well with paving designs, but make sure this important factor is considered.

Generally, paving is laid down as level as possible, but in some situations, a very slight tilt away from the pool will let rainwater drain away, keeping silt out of the pool. However, in a drought-prone country like South Africa, perhaps you would like to save water by having it run back into the pool when children are splashing water all over? But, consider the pool maintenance as silt builds up or dirt runs into the pool. Perhaps a better alternative is to link your gutter system into a large storage tank such as a JoJo tank and use that water to top up the pool instead. 🏠



Edging is very important to ensure that it holds the paving bricks firmly in place



Basic paving installation

Basic paving installation

Step 1: Ensure that the ground is level and compacted.

Step 2: As an option, you can layer the ground with thick, durable plastic lining to prevent moisture ingress infiltrating from the bottom into the brickwork as well as to prevent weed growth.

Step 3: Prepare a base layer (or bedding layer) using intermediate grain river sand. Fine sand like plaster sand

may not compact firmly enough, you need the base layer to be sturdy. The bricks should sit firmly on the base layer without shifting. The base layer can be between 30 to 60mm thick.

Step 4: Carefully determine your layout pattern and starting point. You can run a trial on some open ground to ensure you are happy with the design. The advantage of laying brick paving on the bedding layer rather than wet cement is that you can always remove

the bricks and start again. (See graphics on page 19 for various design patterns.)

Step 5: Once the bricks are in place, the interspace can be filled using a fine sand and cement mix.

Step 6: The edging and trimming is very important as this will ensure that the paving bricks don't shift or move once in place. Depending on the paving design, this step may be the first step to undertake.



When it comes to paving for the swimming pool area there are endless possibilities. Paving around the pool is like dressing the swimming pool up for the mid-summer ball



A vehicle for
fetching and
carrying in the city

The Changan workhorse

This is a vehicle for the average DIY'er or business owner to consider. Changan vehicles are now available in South Africa and offer commercial Minivans, Single Cab and Double Cab light trucks that can handle payloads of up to one ton

>> Hannes Lindeque*

Single Cab - technical specifications

Displacement:	1243cc
Output:	72kw@r/min
Torque:	119nm@r/min
Tyre size:	175/70R14LT
GVM:	2400kg
Payload:	1 ton
Overall length:	4560mm
Overall width:	1645mm
Overall height:	1890mm
Ground clearance:	155mm

I recently had the privilege to review the Single Cab truck. It was a small but comfortable vehicle for making deliveries in and around the city. The 1243cc petrol engine vehicle was very quiet and fitted with a five-speed gearbox. Without a load and at 100km/h, the fuel consumption was 12.8km/l (7.8liter/100km).

On the open road and even on a rough gravel road, the vehicle behaved well.

With a very heavy load and at 100km/h on a level road it felt as if the vehicle's tail end wanted to swing, but it was easily brought under control. The vehicle is fitted with front disc pads and drum rear brakes. The loading bin was at a convenient height and very large; 1500mm wide x 2750mm long and 370mm deep, with side panels that can be removed.

Getting in and out of the vehicle was very easy. The two seats were upright and supported my lower back. The seats sit high and this made it possible for me to notice any traffic problems at a distance – making driving in traffic a pleasure. All three mirrors had wide visibility with few blind spots. The cabin was spacious with plenty of leg room and enough space above my head. All the instruments are within easy reach.

The vehicle comes standard with luxuries such as a built-in AM/FM radio with AUX port and clock, electric windows, air conditioning, plenty of space in the door side panels and cup holders.

One irritation noted was that the speedo needle was not clearly visible behind the steering wheel. Unfortunately, the steering wheel could not be adjusted up or down, so I had to bend down to check my speed. This was not a problem as the vehicle's top speed is only 120km/h. The engine is located under the seats, but it was noticeably quiet inside the cabin and we could easily have a conversation without raising our voices.

What impressed me was the short turning radius of six metres and how conveniently the vehicle could be parked while reserving.

The vehicle has a three year or 100,000km warranty. Changan offers 24-hour road assistance. 📞

**Hannes Lindeque is the publisher of The Home Handyman magazine*

Resources

For more information, or to book a test drive, call 011-668-0300, or log on to www.changansa.co.za



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T's and C's apply



Turn table

Tired of passing the salt? Keep condiments neat and impress your guests with this dynamic Lazy Susan

Tools and materials

- Jig saw
- Belt sander
- Orbital sander
- Router and bits
- Drill with bits
- Screwdriver
- Straight edge
- Square
- Swivel plate
- Screws
- Varnish
- Material of your choice (16mm)
- Paintbrushes



Tools required

Project guide

Project difficulty: Skills required

Estimated cost: R50 plus wood (if you need)

Estimated time: a couple of hours

>> Dave Reimers

About 45 years ago I built a 1600mm circular table from two yellowwood beams from an old farmhouse. Ever since then it has been an intention to make a Lazy Susan as the table, which often seats up to ten people, is too big to pass items across. At last it has now been done and to my surprise only took a few hours.

It also only cost the price of the swivel plate (R50) as it was possible to use

a couple of pieces of somewhat weathered but originally good quality marine ply. It is often surprising how old material when cleaned up is even more attractive than new. It also has the advantage of having stabilised so that it's unlikely to bend or warp.

Of course you might want to produce a more sophisticated item and many options are available. High quality laminated saligna is imported from America by Silverton Houthandelaar, and of course you might want to laminate your own oak, blackwood or another of the many exquisite materials available. But that would be another story.

In writing an article like this it is inevitable that there will be a fair amount of "teaching grandmother to suck eggs". There are many very good and experienced hobbyists who will be well acquainted with suggestions made as I go along. I trust that some may be useful.

Preparing the material

It's a matter of luck if you find when you take off the top 1/2 mm that you have indeed struck gold. This I did using a small belt sander and a 60 grit belt. Even the small machine has to be handled carefully as it is easy to gouge a groove too deep to remove later, if not held level! The ply that I had found was about 18mm with seven layers of 2 to 3mm each. Some plies come with an outer veneer only about 1/2 mm thick which would not be ideal. Having a bit more than 2mm available here made the prospect of finding sound wood under the weathering quite good. Fortunately this was so for the top piece and by the time it had been finished with the orbital sander it was quite acceptable. The piece used for the base wasn't quite as good but as it would be completely hidden, so I reckoned that was okay. The layered edges are what make ply interesting.

Marking the circles

Because of the size of the table a 600mm diameter seemed a good idea and we just happened to have an old road

sign (we did not "borrow" it from the municipality), which had been on the plot in a heap of rubble and which was exactly 600mm across. This worked perfectly for the larger circle. The base should not be less than about 3/4 the diameter of the top, so it had to be about 450mm. Not having a large compass to hand, a 300mm off-cut with a drywall screw driven through at about 20mm from one end and an 8mm hole to hold a pencil 225mm further along, served the purpose perfectly to mark out the base circle.

When you use a circular stencil or lid to mark a circle you have the problem of finding the centre! That's when you have to remember what you learned in geometry - the perpendicular bisector of a chord passes through the centre. Do this three times at about 120° around the circle and if your circle was perfect, the perpendiculars will cross each other at the centre. In marking the chord mark say 400mm (for the 600mm diameter) on a straight edge and place it on the board so that the marks coincide with the circumference.

You can then use a set square at the 200mm point to draw the perpendicular up towards the centre. If you end up with a small triangle in the centre that's not a train smash. It's unlikely your circle will be perfect and you're not building a gas turbine! Just make a mark at the centre of the triangle and that will be quite good enough. I'm referring to the top piece and you need the centre to place the swivel plate correctly.

Routing the edges

You may want to leave the edge plain but we decided to do a moulding similar to the one on the table. This would also enhance the effect of the ply edge. You will need a router and a suitable router bit. It's important to have the edge as smooth as possible which I did with the belt sander - another reason to have a small one. Running a finger round the edge will quickly tell you where it needs attention. You may have a mounted sanding disc but outside of an industrial



Weathered marine ply



Strike gold – using a small belt sander



A circle template



Cut the circle



Find the centre



Mark the centre



Use a 'blokkie' to protect the surface!



Sand edges smooth



Router edges



Centre hole

machine they seem to have only a small and flimsily mounted table so I prefer the belt sander. In either case it's a good idea to cut the circle a millimetre or so outside the line so that you can carefully sand down to the line. Clamp the work to the table using a *blokkie* to protect the surface!

When it comes to routing there's some debate as to whether to move the machine away from or towards you.

Placing the swivel plate

The trick here is that you will have to drill four holes through the base of at least 10mm diameter so that you can screw the plate to the top piece. Having improvised a compass to make the 450mm circle I had the centre of the base. So placing the swivel centrally over that mark (on the upper surface of the base) and fastening the four screws was quick and easy. Now, with the unfastened piece of the plate turned through 45° use a small drill bit to drill right through the base for each screw hole. Use at least a 10mm bit to open these holes. You will also need a 10mm hole through the centre of the base.



Four holes done

Then, with the top piece face down and the centre worked out, I screwed a longish screw about half way in (don't go through). The base piece with swivel plate attached can now be turned over and positioned centrally over this screw, the holes lined up and screws inserted. Voila, you are done!

Finishing

Ideally the finishing should be done before the assembly as it is always the part that takes longest. First apply a coat of sanding sealer which dries quickly. Then sand down with 180 or 220 grit paper. Then I like to use two coats of clear polyurethane varnish, sanding down lightly between coats. It's best to wait overnight for the first coat to dry. It's a matter of personal taste whether you prefer gloss, suede or matt.

Conclusion

As you'll see from the tools and materials list, you do need to be quite well-equipped, but it's a worthwhile project, though, and I think ours is going to be well used. Should have done it long ago! 📌



Attach the swivel plate



Finish with varnish

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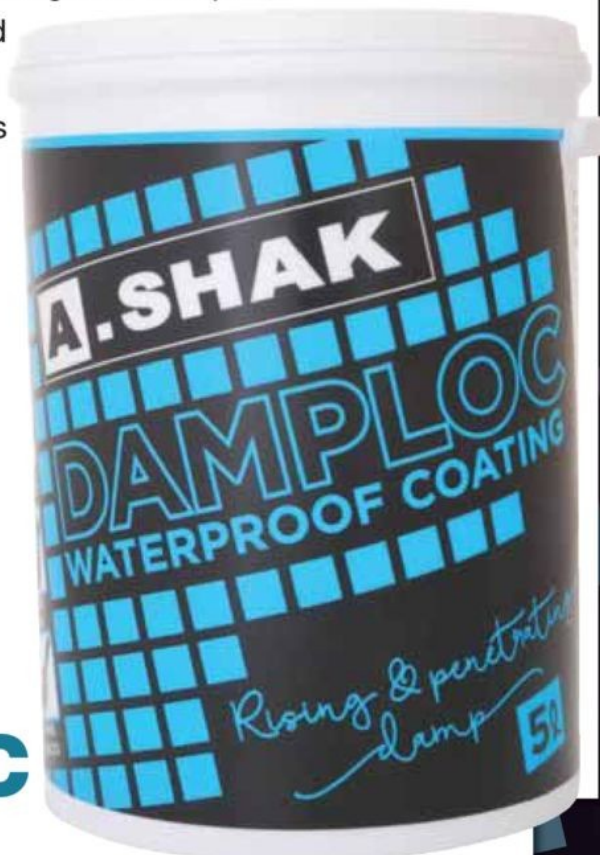


Preparation

- Treat damp walls - not wet ones!
- Repair cracks before covering with DampLoc
- Ensure substrate is sound
- Replaster if necessary
- Proper preparation results in a professional finish

Application

- Stir well
- Apply two coats
- Paint from bottom to top
- Each coat in criss-cross to the previous
- Allow 24 hours for first coat to dry
- Clean brush with water after use



Available at leading
Hardware Retailers

DAMPLOC

Available in 1 Litre & 5 Litres



COOL AS ICE

Beat the summer heat with a stand designed to keep your ice bucket right at your finger tips

Project guide

Difficulty: Easy

Estimated cost: R300

Estimated time: Half a day

Tools

- Square
- Welding machine
- Tape measure
- Flexi tape
- Mallet
- Hacksaw/grinder
- Chalk

Materials

- One medium-sized Galvanised bucket
- Four x 1,350mm of 10mm round bar
- Two x 205mm of 10mm round bar
- Two x 380mm of 10mm round bar
- One x 1,350mm of 10mm round bar

>> André Gous

It's that time of the year again... time to let your hair down and relax with family and friends. This project is the perfect opportunity to splash out and impress or it can be used as an excuse to hide from unforeseen house guests.



Step-by-step guide

Step 1: Start by cutting four pieces of the 10mm round bar. I used a guillotine, but a hacksaw or angle grinder will also work. Before bending the four pieces of 1,350mm lengths, make sure the ends are round by using an angle grinder. (Photo 1)

Step 2: Bend all four lengths with a scroll finish for legs. Leave a height of one metre. (Photo 2)

Step 3: Turn the Galvanised bucket upside down and measure the diameter of the bucket with a flexi tape for simplicity. This step can have a lot of frustrating moments! (Photo 3)

Step 4: Measure the desired length and cut the 10mm round bar. My galvanised bucket measurement was 1,350mm. Once again, grind the ends of the round bar with a grinder. Start bending the oval so the bucket will fit. A circle may also be used and tapped with a mallet to get the desired shape. (Photos 4a to 6)

Don't stress if the oval ring appears too big. Keep bending and measuring until desired measurement has been reached. Take time to get the desired shape as this is the most important step for this project. (Photo 7)

TOP TIP!

Tap slightly with a mallet to get the desired oval shape once circle status has been reached. Line the two ends up, mark unwanted round bar and cut off.

Weld the two ends together. Grind the inside of your welding before fitting to bucket, as the welding will scratch the galvanised bucket. (Photo 8 to 10)

Step 5: Determine where the legs must go by measuring 100mm on each side of the bucket handle. Use a square

to trace line up and weld the legs in place. (Photo 12 and 13)

Step 6: Cut two x 205mm of 10mm round bar as leg supports as well as two x 380mm of 10mm round bar. Measure 350mm from the bottom of the legs. Make a mark with chalk and weld in place. Do the same for the rest of the leg supports. (Photo 14 to 16)

Step 7: Grind all welding and paint. (Photo 17 and 18) ■



Bend four 1,350mm lengths



The legs



Position of the oval ring



Start to bend the ring



Circle not yet oval



Don't stress if it's still too big



The ring finally fits



Line up the rings



Weld the ends together



Grind to avoid scratches



Oval fits



Measure 100mm for legs



Use a square to trace line up



Measure for bottom support



Weld legs in place



Weld support in place



Grind all joints



Spray the desired colour

ABOUT ANDRÉ:



After a period of unemployment, André turned his 20 year hobby into a business. He later suffered a setback when his tools were stolen but the tide turned when he won *The Home Handyman's* wine rack competition and became a regular contributor.



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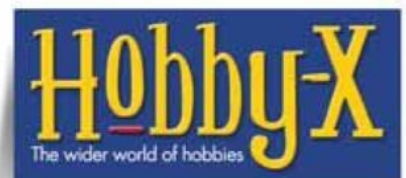
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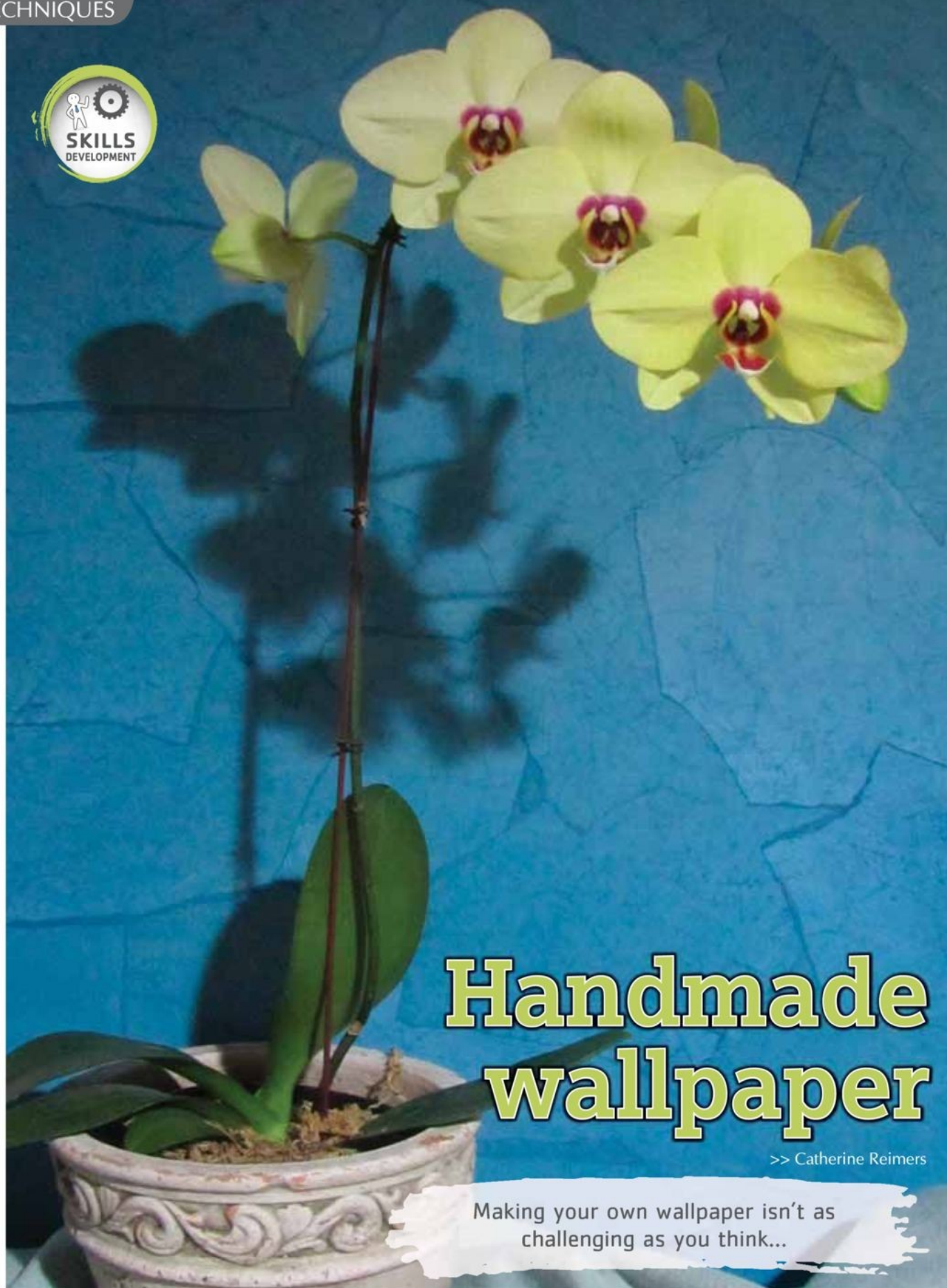
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Handmade wallpaper

>> Catherine Reimers

Making your own wallpaper isn't as challenging as you think...

Tools and materials

- White paper (80gsm). If you're planning on a feature wall, I recommend A3 size paper
- Wallpaper glue
- Bucket
- Paintbrush
- Squeegee
- Mutton cloth
- Any acrylic paint in your chosen colour
- Pegs
- Washing line to hang paper on
- Water-based varnish

Additional items:

- Universal tinters
- Oil paint for a final glaze
- Boiled linseed oil
- Turpentine
- Sponge roller

History tells us that wallpaper is age-old. The Chinese are believed to be one of the first civilisations to use wallpaper – simple sheets of rice paper glued onto walls. European instances of wallpaper point to dates around the early 1500s, and by the end of the 16th century, wallpaper hanging was an artisan trade. It was much later in 1778, when Louis XVI of France decreed that a roll of wallpaper be 34 feet (about ten metres). The first wallpaper printing machine was invented in 1785.

After a seeing a number of popular years, the trend in wallpaper waned. Over recent years it has made a strong comeback, with a number of new and intriguing patterns and textures. Did you know that you can hand-make wallpaper?

This project produces an elegant, textured wallpaper, suitable for an entrance hall or dining room. I have decided to show this finish on a piece of hardboard as I don't have smooth walls! Wallpaper cannot be applied to rough surfaces but it can be used on furniture pieces. One can either wallpaper the backing board of a display cabinet or wallpaper the countertop of a chest of drawers. 📌

Step-by-Step: Making wallpaper

Step 1: Take a piece of paper and start tearing off the edges by hand to get a rough edge all around. It doesn't matter what shape the paper is and perfection is not necessary. Now, each piece of paper is crumpled into a ball. You will have to tear up quite a large amount of paper as they overlap each other in the application.



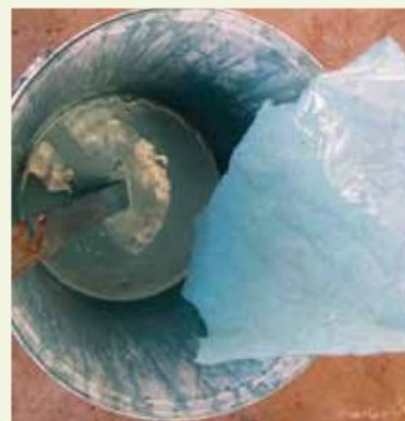
Step 2: Pour a small amount of paint into your bucket and add water. What you want is a very watered down paint. It will look more like coloured water than paint.

Now, take your crumpled paper, flatten it out and dip in the paint mix. Be careful not to soak it too much as it will just fall apart. Now, carefully hang the paper up to dry. If the paper

folds over the line too far it could stick to the other side in which case you may have to tear it off the line losing some of your paper size.

As the paper dries you should be able to see the texture created as the paint deepens into the creases of the paper. Once the paper is dry remove from the line and set aside.

Surface prep: Prepare the surface to be wallpapered. If you're doing a wall, make sure it is smooth and has a sound coat of paint. The same applies if you're doing a furniture piece. Use the recommended primer and basecoat, sanding between coats.





Step 4: Using a utility knife carefully cut off the rough edges. If you are papering a wall, cut neatly under the cornice, sides and along the skirting.



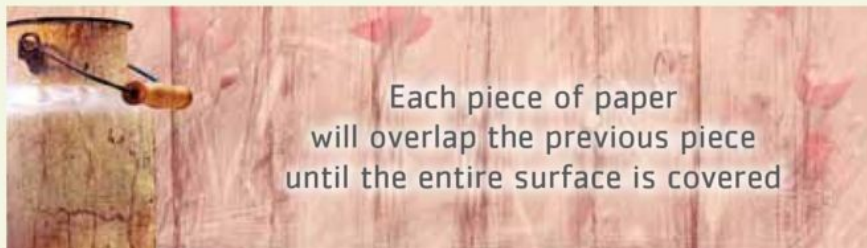
Step 5: You can now apply a coat of water-based varnish. This will seal the paper and allow a better surface if you still want to add a paint finish after. A paint finish will finish off the surface if your paper is too light or has any areas where the paint has missed or if the paper has torn after being coloured. Another option would be to add a universal tinter to the varnish and apply with a sponge roller.



Step 3: Once your surface is totally dry you can apply the wallpaper. Mix the wallpaper glue in a very clean bucket. A small packet of lightweight glue will need two to three litres of warm water.

Set up a table and cover with a plastic drop sheet or table cloth. Using a paintbrush apply glue to the back of your paper and let it soak in. You can apply glue to a few pieces at a time before applying to the wall. Take a piece at a time and flatten onto the wall. Now take the squeegee and push out any air bubbles from the centre outwards. Each piece of paper will overlap the previous piece until the entire surface is covered.

Using a damp piece of mutton cloth gently wipe the glue off the surface and leave to dry.



BRIGHT IDEAS

Readers share their time-saving, space-saving or innovative ideas

Keith Sheard shares some savvy workshop set-up tips

WINNER

1



My bandsaw

Tip 1: A general view of my bandsaw (photo 1) mounted on lockable castors for easy movement in my limited space workshop. The metal stand I panelled with cardboard salvaged from washing machine packaging. The door shown in photo 2 is a simple slide up mechanism. The sliding door is labelled with a picture of my router stored inside the space. I have updated the bandsaw work light, replacing a braai light with a permanently mounted anglepoise light, switched from the bandsaw power control.

Tip 2: The bandsaw mitre guide is always in the way or gets lost on the bench (photo 3). Now it is stored in a

spare door lock striking plate (Photo 5) riveted upright to the bandsaw casing.

Tip 3: The door of the bandsaw has two push sticks hanging (plastic bathroom hooks) on the door face with a protractor mounted on a wood block to facilitate angling the table as needed. (Photo 4)

Tip 4: The storage of my cordless drills and drivers in offcut square PVC downpipe. They hang from the shelf above my main workbench. (Photo 6)

Tip 5: My router bench is mounted with polycarbonate adjustable fence controlled with a sewing machine foot control switch. (Photo 7)

5



Bandsaw mitre guide bracket

6



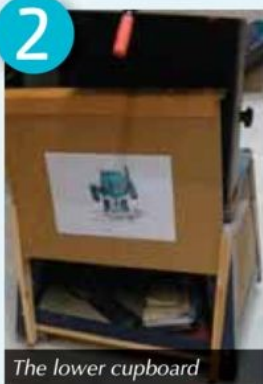
Cordless tool storage

7



Router bench

2



The lower cupboard

3



Bandsaw mitre guide storage

4



Bandsaw protractor

WIN!



A Wetstone chisel, scissors, knife and planer blade sharpener from Multi Sharp

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Congratulations to Keith Sheard who wins a 7-piece Felo Series 200 shockproof screwdriver set, made in Germany.

When it comes to bonding, selecting the right adhesive for your project is the key to success

Strong bonds

Wood glue is usually white in colour and can be used for joining and repairing most kinds of wood

>> Kim Roberts

DID YOU KNOW

Many people refer to 'duct tape' as 'duck tape'. The product got its nickname during World War II when soldiers used it for anything from vehicle repairs to fixing their combat boots. The product was waterproof and hence got the nickname 'duck' – from the saying 'water off a duck's back'. Later a tape brand called 'Duck' was launched – creating further confusion.

For any DIY project, there are a number of products available. Consider your project, the finished product and the materials that will be glued together. Next, choose your glue and follow the manufacturer's instructions on use, handling and also information on ventilation and toxicity. Labels explain how best to use the product and its durability. Follow instruction steps for best results.

There are many types of adhesives available. There are plant-based, animal-based, synthetic (monomer or polymer) and solvent glues. A wide variety of adhesives are available to suit any project, material or application.

The shelf life of adhesives is limited. Exposure to water vapour, heat or oxygen over time degrades glues and prevents proper bonding function. Store your glues upside-down. This keeps air out and so ensures that the glue lasts longer without hardening; and keeps it near the cap, ready for use.

Adhesive application

Adhesive applicators are designed according to the adhesive used and the size of area to which it is being applied. Some glues can be applied straight from the nozzle, or with rollers, brushes, spray guns or glue guns. Films or pellets are also used. Other handy items that can be

Adhesives have been a part of DIY for many years. Archaeological discoveries have revealed that ancient civilisations used tar to bind stone tools to wooden handles.

There is always something around the house or in the garden that needs to be repaired. A general adhesive may be suitable for a number of projects, but will not be suitable for all. Whether your project is a repair job or brand new, it is important to choose the adhesive carefully.

Glues are not only liquid, but also come in rubber tape, sprayable liquid, cement, paste or even mouldable putty forms. Different glues dry/cure to form either firm, flexible or rock hard textures.

Different drying times also need to be taken into consideration – some take 24 hours to form a tough bond, while others need only a few minutes to set. There are even adhesives that set underwater and some which are chemically resistant.





Choose the right tiling adhesive for your tile type

used for application or cleaning include ice-cream sticks, chopsticks, meat skewers, toothpicks, syringes (for wood gluing of narrow crevices), old toothbrushes and even guitar picks!

Before beginning your task, protect your work surfaces by using a vinyl easy-to-wipe table cloth, or a plastic sheet. Part of the secret to success with adhesives is to properly prepare the surfaces to be partnered.

Glue is applied to either both or one of the surfaces to be bonded. Once the separate pieces are aligned and touching, pressure is applied to get rid of air bubbles. Clamps are sometimes required to keep the pieces in place and pressure constant for the drying time required. A variety of clamps are available and some people use creative ideas to hold glued pieces firmly in place. Play-doh modelling clay makes a perfect 'hold-in-position' tool for delicate or small projects. The flattened out clay allows you to gently press the freshly glued project

into it and then it holds the pieces in position until set.

Watch and wait for the glue to set to a jelly-like consistency (on average 20 minutes) for easier excess removal. Wait the specified adhesive cure time and remove clamps and your multiple pieces are now perfectly finished – and in one piece! 📌



If you do craft and paper projects, a glue gun is an invaluable tool

Types of adhesives

Aluminium	Easy three-step bond that will bond on mildly oily surfaces, excellent on aluminium or similar materials.
Contact glue	Used for strong bonds with high shear-resistance (surfaces that have high strain), such as outsoles to uppers in footwear, or bonding Formica onto a wooden counter (laminates).
Cornice	Specifically for polystyrene cornice securing. Cartridges fit a sealant gun for ease of application.
Craft	Non-toxic, safe for children, easy to use and easy to clean. Contains no acid or solvents.

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Tips for using adhesives successfully

- Choose the best glue for your project.
- Roughen the contact surfaces if possible with fine sandpaper, or prepare very glossy or smooth surfaces with isopropanol or acetone.
- Clean the intended contact surfaces very well. If you used any type of liquid cleaner to get rid of dust and residues, allow to dry completely.
- Do a test run on scraps of the same materials to be glued. Is it bonding and is the finish to your satisfaction?
- Apply adhesive evenly - not too much, nor too little. Wipe any excess off quickly.
- Keep the glued portions together for drying time as per instructions, by clamping if necessary.
- Clean and seal your glue container immediately to ensure a longer shelf life and continued usefulness.



A wide variety of adhesives are available to suit any project, material or application

Types of adhesives

Epoxy	Durable, hard adhesive that works on most surfaces, even in extreme environments. Good gap filler with differing flexibility and curing times.
Fabric	White liquid glue, which dries clear and is safe for dry cleaning and washing. It does not bleed through fabric if correctly applied. There are also sheets of iron-on glue that work for appliqué and similar projects. Glitter versions are also available.
Flexible	Tough, yet flexible and shock resistant adhesive. Black is available for vehicle repairs.
Glue sticks	Used for paper and cardboard projects.
High performance	Used for fibreglass, rigid plastic surfaces and aluminium. It can replace rivets and spot welds. Also useful to fill minor gaps. Will work on oily surfaces.
Home/General purpose	This clear or white versatile application can be used on most tasks in the home. The clear variety dries to create an invisible repair.
Hot	Applied with a glue gun; ideal for crafts and household tasks. Quick drying.
Metal	A metal mender and filler that sets quickly. It comes in a range of ferrous metal colours and after two hours it is rigid and able to take sawing, sanding, filing or machining. Also available in mouldable putty. Heat resistant.
Moulding	Architectural moulding; specific adhesive in a useful dispenser.
Polyurethane glues	Multi-purpose glues either in a one or two-part option. For use on metals, glass, plastics, textile fibres, ceramics, variety of wood types and rubber. Six to eight hours of clamping results in a very tough, strong bond. Dried glue can be sanded and there is room for error before glue has cured.
Pressure sensitive	Adhesive tapes, hot melt pellets or liquid form.
Removable	Temporary bond that lasts months, or even years and can be removed without leaving any residue on the surface. Some adhesives can stick and unstick repeatedly.
Rubber tape	The tape fuses on itself and will not undo. It is ideal for making handle grips, fixing leaking pipes and sealing cables. It can also be used for insulating wires and spark plug leads and sealing coolant pipes. Heat resistant.
Spray adhesive	For use on foam board, felt, paper, fabrics, photos. Should be used in a well-ventilated area. For an immediate bond, allow the solvent to evaporate before putting the surfaces together. No room for mistakes and repositioning.
Super glue	Can be used on ceramics, metal, leather, glass, wood and some plastics.
Tape	Common tapes include clear adhesive tapes for office use, double-side tape, packing and strapping for more heavy duty jobs and duct tape – with a myriad of various types and uses.
Tile adhesive	Your adhesive choice is dependent on the tile type, such as porcelain, ceramic, terracotta, slate or other tiles and the surface the tile will be applied to – whether interior or exterior. Standard adhesive is cement-based and suitable for fixing ceramic tiles, mosaics and stone. Specialised adhesives like 'tile on tile' adhesives, mosaic (adhesive/grout) combo and cladding adhesives are also available.
Underwater use	A hand mouldable adhesive that suits underwater use and sets very hard.
Water and chemical resistant	Once cured it can resist for long periods under water. Good bonding to most rigid materials is achieved. It is also resistant to battery acid, diesel, paraffin and oil. Excellent to use on rigid swimming pool plumbing, or as a corrosion prevention coating on metal battery housing or to repair lead acid battery casings.
Wood	Waterproof milky white or yellow glue ideal for wood, paper and fabrics. Some products dry clear, so read the label.

Using G-clamps

G-clamps (also called C-clamps) are the most common clamps used in the workshop. They are suitable for a variety of jobs and come with different throat sizes.

Application: Holding a project/ component still and steady while you work on it (drill, plane, weld etc) or for holding two pieces of wood in place while the glue dries.

Tips for G-clamps

- Work on a firm level surface. G-clamps come in different sizes, so select according to the height of your project. You may need to use several clamps for one job.
- Before you position the clamp in place, use a cloth and wipe off any excess adhesive. Very strong adhesives bond tightly and may glue your clamp to the work piece. Try not to get adhesive on your project as some varnishes won't adhere properly or may discolour when applied to dried adhesive.
- Remember to place wood off cuts or clamp pads under the jaws before clamping down the work. This will prevent bruising of the wood. Clamps may also stick to the wood off cuts, so place a piece of wax paper under the jaws to prevent this.
- Check the clamp pressure. If the clamp is too tight, the adhesive will ooze out of the joint, but if it's too loose, the join may be weak. Ensure that the line of glue visible between the two clamped components is even all the way through. Too much pressure can also push the joint out of place or bend some of the components.
- Tighten a G-clamp by hand – never with a spanner - or you may bend or push the work out of shape. Check for square before you leave the job to dry. On square projects you can measure corner to corner diagonally. If these measurements are equal, your work is square, if not, loosen the clamps and adjust.
- Check the recommended drying time specified by the adhesive manufacturer. Don't be tempted to loosen the clamps too soon. Be patient and allow the glue to dry completely.



ADHESIVE SOLUTION

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APPLICATIONS:

Sealing and bonding in almost every application imaginable. The following are just some examples:
Instant bonding and fixing of house numbers, signs, large panels, wallboards, skirting boards, dado rails, cornices, key holders, picture frames, cladding, electrical boxes, name plates, car bodies, caravans, small mirrors, sanitary fixtures, marble, granite, carpets, ceramic tiles, wooden flooring, cover strips, window sills, sealing of floor joints and much more.

FEATURES:

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GLUEDEVIL

Cutting cornice

Choose a cornice type to suit your taste and budget

Adhesive for cornices

Cornice adhesives have been specifically formulated to bond to the substrates associated with installing cornices. Two types of cornice adhesives are available, a ridged type and a flexible type. The advantage of the rigid type is that it is quicker drying and easy to sand once dry – so the contractors like it. However, the downside of the rigid type is that the adhesive will crack as the substrates expand and contract at different speeds when temperatures rise and then cool. A quality flexible type is slower drying but it will not crack over time because it will expand and contract with the substrates it is bonded to. So if you don't want to see cracks between your cornice and ceiling be sure to use the flexible type.

Smooth and finish off the cornice glue while it is still wet. This will give you a neater finish than trying to do it once it is dry. For longer sections of cornice that may be heavy, use panel pins to hold the cornice in place while the adhesive dries. Cornice adhesive is water-based so the thicker you apply it, the longer it will take to dry. Don't buy cheap, low quality cornice glue because it will be more expensive to redo the job.

[Source] Shane Nadauld, managing director, National Adhesive Distributors cc. (www.gluedevel.co.za)



>> Gina Hartoog

A cornice provides a smooth visual transition between a wall and ceiling. While they are aesthetically pleasing to the eye, creating interest and texture at ceiling level, they also play a practical role by hiding small imperfections that may occur at the joint and in corners between the walls and the ceiling. Cornices can also be used to hide wiring from electronic equipment and security cables. Curved corners direct light into the room and can be used to lighten up a dark room.

With the myriad of different profiles for cornices, the homeowner is spoiled for choice. Wider cornices are best used in larger rooms with a higher roof. It is attractive and draws the eye upwards. Narrower cornices should be used in smaller rooms. Their sleeker lines suit the look of more modern homes, while very ornate cornices work in spaces where the décor is more traditional or classic.

The colour you choose will also impact on the final look. Cornices may be the same colour as the ceiling, or they can be a different colour to the wall and ceiling for a bold and

dynamic statement. LED cornices (XPS polystyrene) have a slot for LED strip lights which provide ambient illumination at ceiling level. You can choose the profile for up- or downlights.

Types of cornices	Points to note
Timber Generally available in SA pine and hardwood. It lends an elegant and classic look to the room.	• Different colours/profiles to choose from • Requires skill to install • Finish may need to be applied (polish/varnish) • Can be expensive, depending on the wood type
Plaster Although relatively cheap, paper covered plaster cornices are heavy and quite brittle. The job requires some skill and you will need someone on hand to help with the install.	• Cost-effective • Few profiles available • Can dent or break • Available in long lengths • Install using nails • Nail holes/dents require filling • Must be painted – water or oil-based paint
Polystyrene Available in two types – expanded polystyrene (EPS) and extruded polystyrene (XPS). XPS is a higher density polystyrene which makes it stronger than the lower density EPS. XPS has a smoother finish and is more durable than EPS. It also takes less paint, as opposed to the courser finish of EPS that requires an extra coat of paint.	• Budget friendly • Easy to install (moderate DIY skills required) • Different profiles to choose from • CFC free • Lightweight • Install with adhesive • Waterproof • Paintable (water-based paint)
Polyurethane (PU) High density polyurethane (PU) is a type of foam that is strong and lightweight.	• Resilient to knocks/dings • Cost effective – for an elegant finish • Profiles – more intricate designs available • Easy to install (moderate DIY skills required) • Tougher than polystyrene • Waterproof • Paintable (water-based paint)



LED cornices have a slot for LED up- or downlights to create ambient lighting in the room

DIY tips

- Before you head out to buy your cornice lengths, measure the ceiling to determine the running length required, then add about 15% to this total. Lengths vary between 2m and 3.6m, so remember to check this in store before you make your final calculation and purchase.
- To do the installation for polystyrene cornices, you will need a polystyrene saw, tape measure, cornice adhesive (if you are using a cartridge, you'll need a sealant gun too), a cloth/sponge and a mitre box.
- Don't mitre and glue in the corners before installing the cornice at ceiling level. "The walls are never straight so one should always check this before doing the mitre," advises Shane Nadauld. "One of the features of a cornice adhesive is to fill in the gaps that are created because the walls aren't straight."
- Once the cornice is in place, use a damp sponge to wipe down edges and joints.



Cornice measurements



Painting tip

Choose a water-based acrylic paint for polystyrene cornices. Allow the cornice to dry, as directed by the adhesive manufacturer. Once dry you can commence with painting - you don't need to prime first.



Peter du Bruyn shares his DIY journey and gives advice on projects and power tool care

GET THE **DIY** JOB DONE

>> Gina Hartoog

Peter du Bruyn is no stranger to the world of DIY. If you watch DStv's *The Home Channel*, you'll know Peter from the Bosch DIY show *Get It Done*. Together with co-host Annalien Grensemann, Peter takes viewers through the steps to make various functional items for the home and garden. The DIY duo have completed seventeen seasons of the popular show, with plans on the cards for a possible eighteenth season.

Early years

Peter started out in DIY as youngster in high school where he was exposed to woodworking through the school curriculum. Some of the earliest projects he recalls are spoon racks, key holders and printer's trays; items he made as gifts for friends and family.

After school, Peter went to the army for his national service and thereafter, into the retail sector. To supplement his income, he turned to woodworking to make extra cash. "I started making bars and custom furniture," recalls Peter. "I would also help people with kitchen cupboards and other projects."

In the retail sector, Peter started in perishables, but a switch to non-foods opened doors into the greater DIY market. It was some twenty years ago that he joined Bosch as a key account manager, with a number of significant stores under his care. This propelled Peter further into the DIY market, and with access to so many power tools, he began to take on more challenging projects.

During this period, Peter realised that the sales representatives in the stores needed training on the tools they were selling. The idea took off and he seemed to have a knack for passing on his knowledge. Very soon other key account managers requested that he train staff at their stores and Bosch eventually put him into training permanently.

Today, the Training Centre at Bosch in Midrand trains approximately 1,500 and 1,700 people annually. Peter is also involved in training in other African countries, up to the equator. He is trained on new tools at the Bosch head office in Germany. Bosch is the first power tool company in South Africa to have their training centre and courses SETA-accredited.

The show

On *Get It Done*, the projects are planned in advance and are often based on what someone – presenters, producers or crew – need at the time. “Projects need to be practical and entertaining but they also need to have an arty side,” says Peter. “I bring the technical DIY side to the show and Annalien brings the fun flare,” he laughs.

Peter says the aim of the show is to show people that DIY doesn't have to be intimidating and anyone can use their hands to make something. The secret is to start somewhere and not be afraid to make a mistake.



Peter's power tool tips

1. Practice tool safety. Check that the tool is in good condition. If something does break, have it fixed properly – avoid those quick fix-ups. Always make sure the cables of your tools are intact.
2. Buy the right tool for you. And for the jobs you do. People often buy on price. This can give them a tool that's under-powered or they buy a huge tool that is actually far too big for the job they want to do.
3. Get training. Learn how to use your tools correctly. There are a number of DIY courses that offer training in a safe environment. This will allow you to use your power tool more effectively.
4. Use the correct accessories. Make sure that you use the right accessories for the job and when you are finished, clean the accessories to stop them from rusting. Clean with paraffin to stop rust.
5. Care for your tools. Lubricate the parts that need to be lubricated. Check what lubrication needs to be used. Clean your tools and remove excess dust. Take your tool to a local garage and blow out the dust using the air hose.



Learn as you go

He recalls a project he made for a bathroom at his previous home in the south of Johannesburg. A recess in the wall proved a good spot for a towel cupboard and after Peter completed the beautiful cabinet, he found he had a problem... he could not get it through the bathroom door and around a tight turn into the dedicated alcove. “I ended up having to cut it in half,” he laughs. “But I never made that mistake again and I always take the finished measurement of the item and where the item will stand into account before I decide where to build it. Denis Lock taught me something important – a mistake is an opportunity to re-evaluate your design.”

Annalien Grensemann is Peter du Bruyn's co-host on the *Get It Done* show. We caught up with her to find out more about Peter behind the cameras and his DIY work ethic.



What Annalien says...

Annalien says: “Working with Peter is a pure pleasure. The energy and expertise he brings to studio lifts the crew's spirits immediately. He is confident and knows exactly what he is talking about and whatever challenge we might have with the material list, he can fix it in a jiffy. He is the man with a plan... which can also be infuriating to the crew and me. We sometimes try to challenge him on decisions or know-how, but we found out we are always wrong and he is right.

Peter taught me woodwork and an attitude towards DIY that I will always be thankful for. Firstly, the ‘measure twice, cut once’ saying is like a mantra ringing in my head when I am working on my own. The other lesson, I would say, the most important lesson is to never assume that the wood you ordered is cut exactly to your materials list; double check everything before you start with your project. It will save you a lot of frustration and time. Having Peter on set is so much fun and we know each so well by now that we quibble like an old married couple, to the amusement of the crew.”

Make a coffee table

We raided the *Get It Done* archives and found a laminate meranti coffee table project. Its gentle curves, rich honey colour and glass top make it an elegant addition to any living room.

To view the video, scan the QR code or log on to <https://youtu.be/GrjCAltMSe4> to follow Peter and Annalien as they take you through the project steps.



While bats do get a bad rap, they are important for our environment and a balanced ecosystem where they keep down the numbers of mosquitoes and other unwanted insects

Bats in the CITY

>> Francois Combrinck

Building the perfect bat box

The very first item in building an effective bat box should be choosing the right design. There are literally hundreds of free designs on the internet, most of which will work, so how does one go about choosing the right design? The answer is quite simple: to attract a bat, you must think like a bat, so hold on tight, this might get weird. What do bats want in a roost?

Setting the mood

A bat box needs to be dark. Bats roost during the day to escape the desiccating effect of the sun and to avoid predators. Although a glass bat box may seem like a wonderful idea, it will not be functional.

Don't be a drip

Bats really hate being wet, so your bat box must be watertight. Apart from deterring bats, a wet bat box will start to rot, seriously reducing the lifespan of your box.

Pump up the heat

Wood is an excellent material for bat boxes as it is readily available, cheap and most importantly, it is insulating. Bats love being warm and by using wood to construct your bat box you are creating a structure that is insulated against the

external environment. This allows more stable conditions inside the box allowing the box to stay warm on the inside – and keeping them happy.

Just breathe

Small ventilation holes or slits may be built into the box, preventing the box from getting too stuffy inside. All ventilation holes need to be on the vertical sides of the bat box to prevent water from seeping in through the holes when it rains. Ventilation holes should be placed in the lower half of the box to create a warm pocket in the top part of the box.

Free to choose

The best designs for bat boxes are tall boxes. Bats need to thermoregulate to maintain optimal body temperatures (pretty peculiar for a mammal, right?) and will move up or down in the bat box depending if they want to get warmer or colder. It is important for the bat box to allow this behaviour. The height of the bat box is more important than the width.



While building and installing a bat box is relatively simple, getting bats to occupy the bat box is a different matter. When researching the topic online, one is met with an overwhelming array of outdated, conflicting and often bizarre tips on how to attract bats into your box shrouding the science of bat boxes in a cloud of mystery, much to the like of alchemy.

Fortunately, our understanding of bat ecology in urban areas has improved much over the last few years, and subsequently we have a greater understanding of what bats are looking for in a roosting site. Although getting bats into your bat box remains a hit-or-miss practice, we at EcoSolutions have found several environmental factors that you can tweak to turn the odds in your favour.

Proximity to water

Apart from drinking, water is vital to bats in several other ways. Bats often feed on the multitude of insects that are dependent on water to complete their life cycles. Additionally, a diet consisting of insects is generally very low in calcium, and as a result many bats obtain the necessary calcium from the water they drink. It is for these reasons that it is always advisable to install your bat box close to a water source.

Afternoon sun

Although bats are mammals, they differ from us in how they regulate their body temperatures. Bats are what scientists like to refer to as poikilothermic –

meaning that their body temperatures may fluctuate in response to ambient temperatures. After looking at numerous bat roosts there is a clear trend that bats prefer the North Western regions of a house as the afternoon sun helps to boost their body temperatures preparing them for a successful night of foraging. When installing your bat box, place it where it will receive abundant afternoon sun.

A diverse array of foraging

The insect assemblage available changes throughout the year in response to the different seasons. Bats often migrate to areas where food availability is higher. To ensure that your bat box attracts bats it is advisable to install it at a junction between different habitats. By doing this you can ensure that the bats have food available to them throughout the year.

Finally

Perhaps the most important aspect of having an occupied bat box is the maintenance of the box. A reality of living in a resource-scarce world is that if you put a house up, something will usually move in. Bees and wasps are common culprits when it comes to hijacking bat boxes, and bats will stay clear of any roosting sites that are already occupied. We recommend servicing your bat box at least once a year to ensure that your bat box is ready when the bats decide to move in. Servicing entails removing any unwanted occupants as well as checking up on the structural integrity of the box and weather-proofing the box again. 🦇



This bat box is installed below the eaves



There are 56 bat species in South Africa



A young bat entering a newly occupied bat box



Fruit bat

Resource

For more information, visit www.ecosolutions.co.za (use the QR code) or email: info@ecosolutions.co.za





Glue guns are very hot! Parental supervision is essential for this project



Use ice-cream sticks and a glue gun to create a birdfeeder and other fun projects

sticks projects

>> Gina Hartoog



Flower pot: We used a jam jar and decorated it with ice-cream sticks. Next, add potting soil and a pretty petunia. You can also use the same idea for herb pots for mom's garden.



Succulent stand: Use a magazine tub lid for a waterproof base. Add a little potting soil and select your plant accordingly. We chose a succulent so that it doesn't need too much water.



Pencil holder: We cleaned out a baby food jar and glued small plain sticks around the jar. Finish off with ribbon and add your pencils or koki pens.

Ice-cream sticks are great craft materials that can be used to create a myriad of different projects. If mom or dad has a glue gun, you can use it to glue the sticks in place. If not, you can use wood glue for the project. Just make sure that once you have applied the glue, that you hold the piece firmly for a few minutes. This will ensure a strong and lasting bond.

Step-by-step: Rainbow birdfeeder

For this project we used large ice-cream sticks, but you can also use the smaller ones.

Step 1: Ask a parent where you can do your project. Outdoors, in a shady area is best, if you don't have a workshop or garage at home. Place paper or newsprint down on the surface so you don't mess on the table.

Step 2: Assemble everything you need for the project.

Step 3: First make the base of the birdfeeder. Place six large ice-cream sticks on your work surface. Now glue two sticks - one on the left and one on the right - perpendicularly to the six sticks. (Photo 1)



Step 4: Choose two additional sticks and glue them in the centre of the base. This will provide a perch for the birds. (Photo 2)

Step 5: Decide on your colours and start building up the sides of the birdfeeder. You can either place a blob of glue on the stick on the birdfeeder,



or you can make mark on a loose stick and place the glue here before pressing into place on the birdfeeder. Take care to glue the sticks directly on top of one another. (Photo 3A or 3B)



Step 6: Build up the sides using your chosen colours. Don't make the feeder too high. About half way up the sides, we cut a stick in half and added another perch. (Photo 4)



Step 7: Decide on how high you want to go. Stop when you have two more rows to add. Now prepare the rope or lacing cord. We used a thin red cord,

but plaited with three stands for extra strength.

Step 8: We used orange and red for our last two rows and glued them together. Now, wrap the cord around all four corners. Knot tightly and glue gun in place. If you use nylon rope, ask mom or dad to help you burn the ends of the rope so that it doesn't unravel. (Photo 5). Caution: melton nylon rope can hurt/burn your fingers. Wet your fingers when you work with it.



Step 9: Glue gun this section in place on top of the birdfeeder.

Step 10: Tie a knot at the top and add your seed. Hang in a tree or on the porch for the birds to enjoy. (Photo 6) 🐦



Project guide

Difficulty: Easy

Estimated cost: R100

Estimated time: 2 hours

Tools & materials

- Rainbow ice-cream sticks
- Lacing cord or rope
- Gun glue and sticks or wood glue

ASK OUR EXPERTS

Our panel of experts answer your questions on DIY problems

ZA plugs query



I've been hearing about these ZA plugs for a while now. Do I need to replace existing plug sockets in my home?

Ross Miller, Edenvale

Mark Palmer, Operations Director at the Electrical Approved Inspection Authority (Southern Africa) answers: The SANS 10142-1 Wiring Code was amended in March 2017 and insofar as socket outlets are concerned, placed a compulsory requirement for the use of the new ZA – SANS 164-2 socket outlets to be installed for NEW socket outlet points with effect from January 2018.

The requirement of the SANS 10142-1 Wiring Code is that for each "NEW socket outlet point" installed from January 2018, that new socket outlet point would contain at least one of the ZA – SANS 164-2 socket outlets. The socket outlet could also still contain an old type SANS 164-1 Socket outlet in combination thereto. The standard does not require all "existing SANS 164-1 socket outlets" to be replaced with the new ZA – SANS 164-2 socket outlet and

if maintenance or repairs are done to existing socket outlet points, the socket outlet can be replaced with a like for like. It must be remembered that the old SANS 164-1 Socket outlet is in a process of being phased out and the new ZA – SANS 164-2 is regarded as the 'conventional' socket outlet system for use in South Africa.

The ZA – SANS 164-2 Socket Outlet has the same hexagonal profile as the Europlug seen on cell phone chargers, laptop chargers etc. – but allows for an earth pin. Manufacturers of equipment will increasingly start to develop their products for use with the new ZA – SANS 164-2 socket outlets and the 'ZA – SANS 164-2 plug-top' is also becoming more available at electrical wholesalers.



A Mac Afric 18V Lithium Ion Cordless Drill from Adendorff

Send us your DIY queries and you could be a winner!

Send your queries to:

The Home Handyman DIY Queries
editorial@homehandyman.co.za or
P.O. Box 24938, Gezina, 0031

Please include your name, physical address and contact number (office hours)

Please note: Queries will only be answered in the magazine. Winners' prizes may take up to six weeks for delivery and are sent by the prize sponsor. Prizes are not exchangeable.



valued at R1245

Extension cords and multiplugs



Extension cords and multi-plugs can be pose a serious fire risk in your home. Always check that plugs are correctly wired and that there are no shorts. Never overload your multiplugs. A loose connection on one of the wires or plugs may spark and start a fire. Every home should have a fire extinguisher – a 4,5Kg DCP (dry chemical powder) extinguisher is easy to handle and suitable for most types of house fires.

Our winning query comes from Jaco Kleynhans who wins a six issue subscription to *The Home Handyman* magazine.

Structural cracks



I recently noticed cracks in the ceiling boards of my parents' retirement home. The house is built on soil subject to heave, on a raft-like foundation and is almost four years old. Hairline cracks have formed in the floor tiles and more noticeably, in the ceiling boards. The two cracks in the ceiling propagate in line with the single brick walls below them. I think that the aluminium brandering to which the ceiling is fixed

is also fixed directly to the top of the wall (rigidly). When differential heave or settlement in these walls occur, it also distorts the ceiling boards - and causes the cracks. Is there a way to fix the aluminium brandering to these walls to allow for movements in the foundation in such a way that the ceiling level remains constant?

Jaco Kleynhans, Website query



Structural engineer, Peter Bond responds:

Without a site inspection it is a bit difficult to give a definitive answer to the problems but please find below some thoughts on the issues.

A raft foundation is usually designed when dwellings are to be founded on expansive soil horizons. The brickwork and super structure is then built on the raft slab. If there is movement of the soil below then every part of the build moves in unison and no cracks should appear. However, as bricks and mortar are of a brittle nature it is not unusual to see small hair line cracks appear in the fabric of the build, even on the firmest of founding horizons.

Hairline cracks in tiles usually are caused by the tiler not allowing for some flexible grouted joints but of course, if the raft fails then the tiles will obviously crack. Also if the tiles were not laid on a flat, even tile adhesive surface, they tend to crack where there is no support.

With regards to the ceiling cracks, it would most unusual for the brandering supporting the ceiling boards to be attached to the walls. The walls support the roof trusses that rest on timber wall plates and the brandering is then attached to the bottom chord (tie beam). Some movement of the roof structure could result in small cracks in the ceiling

boards. However, the first sign of roof trusses moving is a gap appearing between the wall and the cornices. It would be interesting to investigate to see how the ceiling is attached to the aluminium brandering and how the brandering is attached to the roof structure. There is no way you can attach the brandering to the walls. Single brick walls are not designed to support anything but their self weight. I assume that the house was enrolled with the NHBRC and there would be a claim should the cracks be of a structural nature. Just remember the NHBRC guarantee only lasts for five years after completion of a dwelling.

Minor Damage - Category 1 - Mainly Aesthetic Damage

Maximum Crack Width in Walls <1mm

Fine internal cracks which can be easily treated during normal decoration easily filled, redecoration probably required. Recurrent cracks can be masked with suitable lining

Minor Damage - Category 2 - Mainly Aesthetic Damage

Maximum Crack Width in Walls <5mm

Internal cracks easily filled, redecoration probably required. Recurrent cracks can be masked with suitable lining

Moderate Damage - Category 3 - Mainly Serviceability Damage

Maximum Crack Width in Walls - 5mm to 15mm

Cracks can easily be repaired and possibly a small amount of masonry may have to be replaced. Up to 10mm gap between ceiling cornices and walls.

Severe Damage - Category 4 - Mainly Serviceability Damage

Maximum Crack Width in Walls - 15mm to 25mm

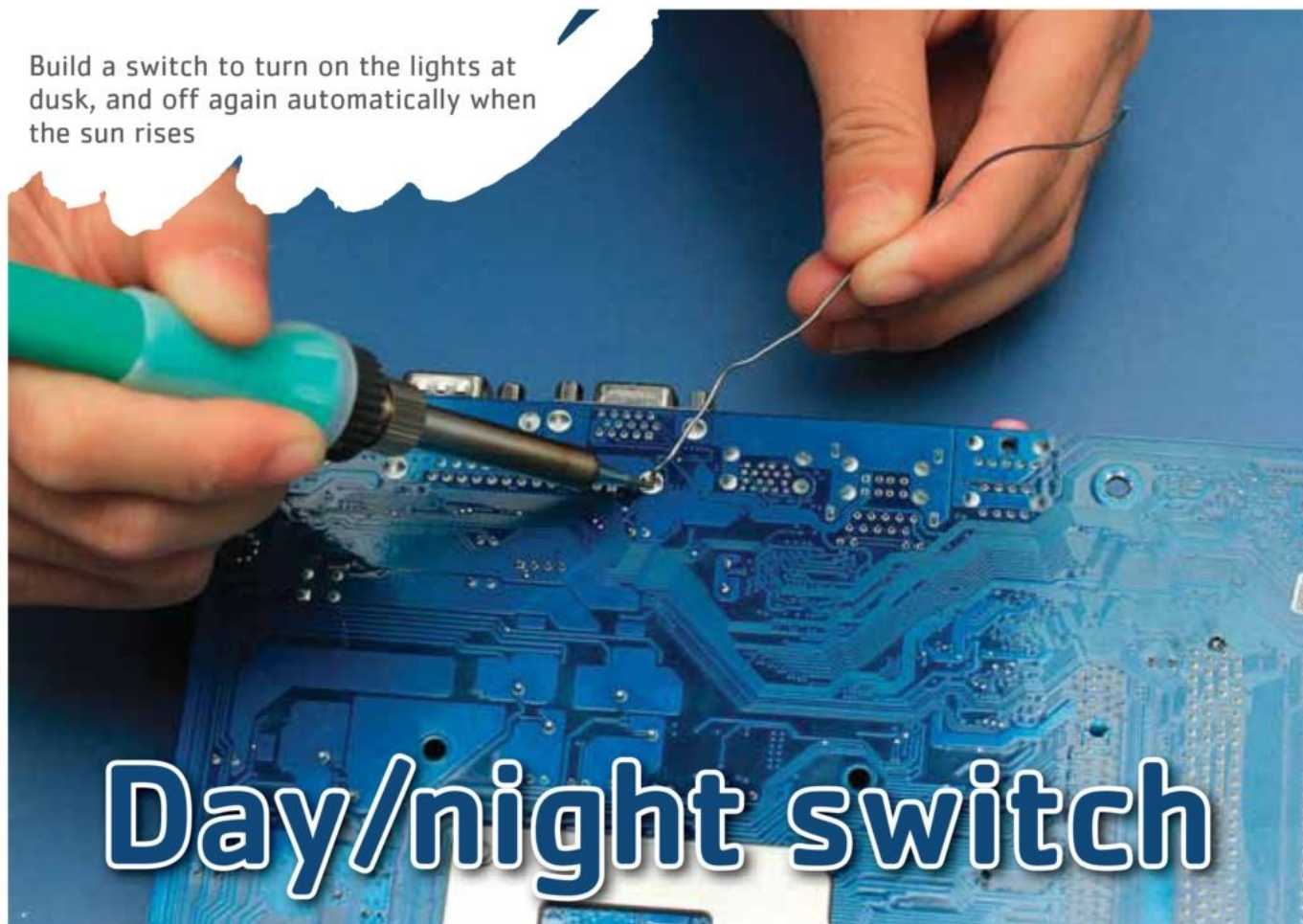
Extensive repair work which included breaking out and replacing sections of walls and beams. Windows and doors distorted, floor sloping noticeably. Walls leaning and bulging. Up to 20 mm gap between ceiling cornices and walls.

Very Severe Damage - Category 5 - Mainly Stability Damage

Maximum Crack Width in Walls - >25mm

Major repair work required, involving partial rebuilding. Windows broken and distorted. Danger of instability.

Build a switch to turn on the lights at dusk, and off again automatically when the sun rises



>> Kin Le Roux

The first voltage is called the 'reference voltage' and the second voltage will be compared to this reference voltage

Project guide

Difficulty: Easy

Estimated cost: R80

Estimated time: 20 minutes

Materials required

- One 1 x 5V power supply (an old cell phone charger is perfect)
- One light sensitive diode
- One comparator board IC (LM393)
- One relay board
- Thin cables

In this project, we build a day/night switch that will automatically switch lights on at dusk and off when dawn breaks. One unit is powerful enough to switch on four to six outdoor lights. This project can also be used in conjunction with the previous project – and if used together, it will only detect movement at night.

We measure light with a light sensitive diode (LDR). In the previous project we spoke about resistors, and specifically, a variable resistor also called a potentiometer. The number one function of a resistor is to lower the volts going through it. A potentiometer allows you to change the resistance by turning a knob clockwise or anti-clockwise.

An LDR works similar to a potentiometer but the main difference is that the amount of light that shines

on the LDR will change the resistance of the LDR instead of us turning a knob manually.

Comparator IC

Included in this project is a comparator IC (LM393) with a potentiometer on a PCB. The only thing a comparator IC does is to compare two voltages and then send a signal out to one of the pins depending on the finding of this IC. The first voltage is called the 'reference voltage' and the second voltage will be compared to this reference voltage. As soon as the measured voltage is the same or higher than the reference voltage, the IC will send a signal voltage out from one of the pins.

This board will compare the volts from the LDR with a pre-set value and

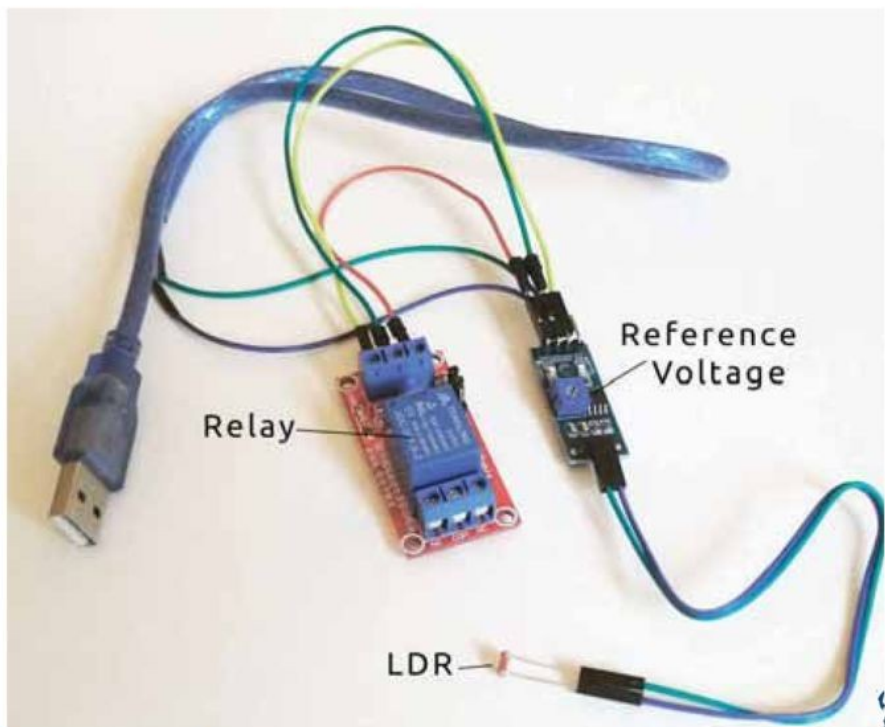


The completed project

once the LDR voltage is higher than the pre-set value, a signal will be sent to the relay board that switches the relay on or off. When connecting the outdoor lights, as discussed in a previous project, you can easily have your outdoor lights switch on automatically.

The benefits of reference voltage

This project is a 5V project like our previous projects and a 5V cell phone charger is fine for the project. To create a reference voltage we will use a resistor



Reference voltage



To order back copies of the magazine for previous electronic projects, visit our website www.homehandyman.co.za

between the 5V and the reference IC pin to get a low voltage of around 2V. We use a potentiometer to allow us to change the reference voltage to a different value.

Why is this a great benefit? This set-up allows you to fine-tune the lights. You will be able to set when the lights switch on and off – based on your personal

preference. You probably do not want it to get too dark before the lights go on, but you wouldn't want lights to be on when there is still enough sunlight – this is a waste of electricity and money. To get the correct setting you can turn the potentiometer to change the reference voltage to your preference. Wait until it is almost dark outside, then turn the potentiometer until the light goes on.



Light sensitive diode

Step-by-step

Step 1: Connect the LDR to the comparator board. An LDR can be connected any way around, it does not have '+' or '-' poles.

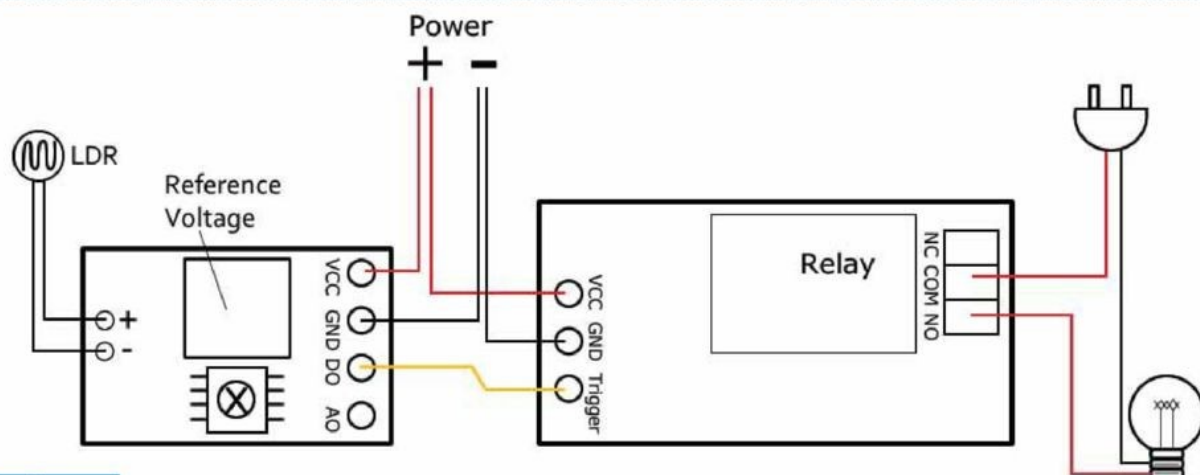
Step 2: Connect the power to the comparator and relay board but do not plug the power in the mains yet. Cut the

plug off the 5V power supply cable and to connect the power wires to two female wires on the positive power supply wire (red wire) and another two female cables to the negative power supply wire (black wire). Both boards have descriptions on them so you know where the power should go.

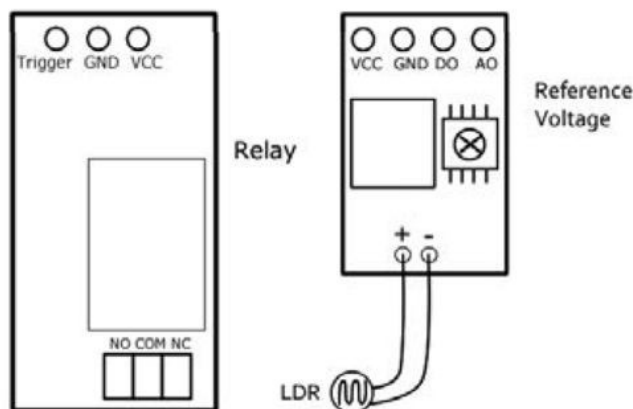
Step 3: In the diagram, you can see the yellow wire connecting the comparator board with the relay board.

Resource

All parts used in this project and upcoming projects are available for purchase from Bot Shop – www.botshop.co.za



Relay diagram 1



Relay diagram 2



You can connect low power lights like 12V LED lights without danger to yourself. Warning: it is dangerous to connect high voltage equipment like 220V to relays. IT CAN KILL YOU!

WOODWORKER'S SHOWCASE

Showcase your woodwork projects

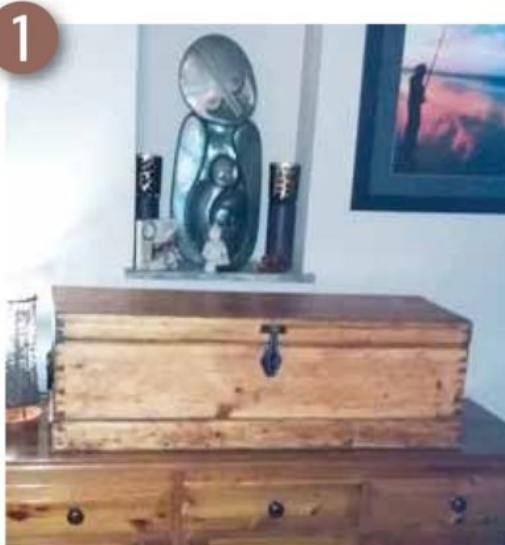
New start

Inga Barnes shares her woodworking journey: "Three years ago I started woodwork classes with Kevin Owen* after my interest was sparked when trying to restore my Dad's old tool box. I soon learnt that taking on a task like this was not as easy as I first thought. Once I had help from the master, I managed to get the job done and my interest to learn more was sparked. (Photo 1).

Soon Wednesday evenings were the highlight of the week. Armed with a head full of questions, an anticipation for the evening's project and a few refreshments - woodwork is thirsty work - I would head over to Kevin's workshop and be totally captured by the project he had set for the evening. Now came the homework part and to put into practice what I had learnt. This was a true test on my abilities and Kevin's patience and to be honest his patience far out-weighed my abilities. Often the project that he had set for me didn't turn out quite like it should have, but none the less I was very proud of my efforts. I did get better and as time went on. I soon found that I preferred to work on rustic projects - maybe I realised that my measuring skills were not as sharp as they needed to be! Kevin once again helped me with invaluable information and tips on how to achieve what I wanted to do.

Woodwork started off as a therapy for me to get through a rough patch in my life but since then it has become a world I can escape into and lose myself in. The feeling of pride and self-satisfaction that I get once I have made something from a raw piece of timber is unbeatable and very satisfying. I thank Kevin for opening this world to me."

**Kevin Owen shares his top finishing tips on page 60.*



Outdoor bench

Mervyn Hummel's wife Michelle uses 38 x 38 pine offcuts to make these benches. The couple are pensioners and try their hand at making various items.



Write to us



The Home
HANDYMAN

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Please send us pictures of your project.

Write a caption with your name, surname, inspiration, type of wood, etc. and send to editorial@homehandyman.co.za

Bradi trolley (Part 2)



The grain of the apron flows through the drawer face as if it were cut directly out of the apron without disturbing the surrounding wood.

How was this achieved? Read on.

Drawer fronts, like doors, are focal points of pieces of furniture and deserve extra attention. I use one of three approaches depending on the drawer configuration. For a horizontal set of drawers I try and cut all fronts consecutively from a single board. This can be seen in photo 1 which is a built-in dressing table made of red oak. The grain pattern in the drawer fronts runs continuously from left to right. In retrospect I should have made the fronts each some 20mm longer and covered the vertical dividers. Even so, you must admit that the end result is much better than three random non-matching drawer fronts. For a vertical stack of drawers I try and match the grain pattern on all drawer fronts as seen in photo 2. This is one of a pair of bedside pedestals

made from sapele mahogany. The other three drawer fronts (not shown) have the same swirling pattern. The match was achieved by having a commercial board upgrader apply consecutive strips of veneer. For similar applications I have re-sawn consecutive 3mm veneers from a board using my bandsaw. I laminate these to 18mm boards of the same species. Quite a bit of extra work but the result is well worth it.

The third approach I use can be seen in the main photo of this article: a drawer set into the apron of a table. Here the drawer front features as part of the apron and the grain pattern of the apron flows through the drawer face as if it were cut directly from the apron. This is obviously not a job for a jigsaw: it

>> Denis Lock

was done using a table saw. I start with an apron piece that is 7mm too wide and 7mm too long. Why 7mm? That is two saw kerfs. Two rip cuts (fence set at 20mm) remove pieces A and B (photo 3). Two rip cuts (stop set at 50mm) remove pieces C and D (also photo 3 – ignore the foreshortening). Photos 4 and 5 show how the four pieces (A, B, C and D) were glued back together to make an apron with a rectangular opening for a drawer. What is not obvious in photo 4 is that a 0,5mm shim (two pieces of a playing card) were placed where the two arrows are shown. This results in an opening that is 1mm longer than the drawer front. These shims can be seen in photo 5. Each long edge of the drawer front had 0,5mm planed off resulting in a fit with 0,5mm clearance all round.

1



Horizontal drawers

This accuracy of fit can be seen in the main photograph. After a touch up with an orbital sander the joints in the re-assembled apron are invisible. Magic? Actually quite simple!

Making the drawer

Drawers are yanked open and slammed shut. The joints, especially the two which join the sides to

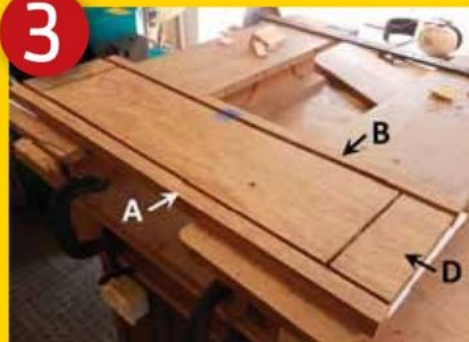
the front, must be strong. The woodworking purist would insist on hand-cut half-blind dovetails. There are many other options: I use what snobbish English cabinet makers call a French dovetail. The joint is shown in photo 6: this photo is from another project. I call it a tapered dovetail housing joint or tapered sliding dovetail joint. It is extremely strong

2



Vertical drawers

3



Cutting drawer front from apron

4



Setting up apron to reassemble

5



Gluing apron back together

6



French dovetail

7



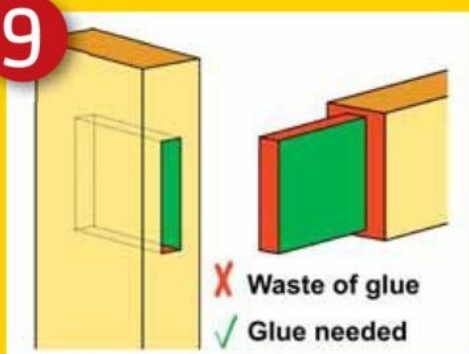
Drawer components

8



An indispensable tool

9



Where glue is needed

10



Save those ice cream sticks

(stronger than a half-blind dovetail) and is very easy to assemble. The female part of the joint (left side of photo 6) is a tapered dovetail housing or dado and is cut with a hand-held router guided by a guide bush. The male part of the joint (right side of photo 6) is a tapered dovetail stub tenon that is cut on a router table. The joint has a double taper that results in full interlock. The taper over the depth of the joint is 1-in-4. This results from the 14 degree dovetail router bit. The taper along the length is 1-in-100. This results from the use of 1mm plastic shims in the jigs used. Photo 7 shows the drawer components before gluing up. The base is 6mm MDF. I won't use anything thinner. My pet hate is drawers with bottoms made from 3,2mm Masonite. You just have to look at them and they sag. I guess I shouldn't use the name Masonite any more. Masonite was rebranded as Evowood in South Africa more than two years ago.

Assembly

The most stressful part of a project is the assembly. Glue is slippery,

you only have one pair of hands and you are often fighting the clock. Bad assembly can ruin good joinery. I always do a full dry (no glue) or practice run. You don't want to be laboriously adjusting the openings on clamps while glue is setting on you. Nor do you want to find that a tenon (or slip tenon) is a fraction too long and the shoulders won't pull up tight. The most important tools are a good square (photo 8) and a gauge rod to check that diagonals are equal.

Many woodworkers use far too much glue. Some woodworkers believe that it is the glue that squeezes out of the joint and drips on the workshop floor that holds the project together. The strength of a glued joint comes from face grain to face grain mating. End grain does not glue well. Photo 9 shows this schematically. You want glue on the areas shown in green. Glue on the red parts is a waste. Don't just squirt a few drops of glue into the bottom of the mortice and hope for the best. Michael and I coat the face-grain surfaces using an ice cream stick (photo 10): we actually work the glue into the surface.



Drawer runners

I didn't use metal runners on this project. I enjoy the challenge of making accurate wooden runners. There is something special about wood, with a film of candle wax, sliding on wood. Photo 11 shows the drawer runners in place. The side guides must be at right angles to the apron. A piece of 6mm MDF with an accurate ninety degree corner and a few C-clamps facilitate this (see photos 12 and 13). Note how an "L" koki pen mark indicates the accurately cut corner. One of the advantages of metal runners is that, if accurately installed, they provide stops that ensure that the drawer is not pushed in too far or pulled out too far. Photo 14 shows how I achieve this with wooden runners. Two spacers

(S) at each back corner ensure the drawer is not pushed in too far. A simple toggle (T) ensures that the drawer can't be pulled out spilling the contents on the floor. Push the drawer in partially, reach in and turn the toggle to engage the apron.

My assistant, Michael, learnt a lot from this project. I hope that you have picked up some tips and tricks from my two articles. 📖

ABOUT DENIS:



Denis Lock runs a woodworking school and shop in Midrand, Gauteng. He can be contacted at lock@worldonline.co.za or 082-267-5948. Visit his website at www.routingwithdenis.co.za
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Drawer runners



Ensuring 90 degrees



Side guide square to apron



Spacer and toggle

WOODWORKER'S CORNER

Sharing techniques, ideas and a love of wood

Top tool review

Intelligent, inexpensive new products don't come along every day in woodworking. However, here is something that woodworkers worldwide are really getting excited about... the new Micro Jig MatchFit Dovetail clamp!

These clamps are a game changer for one man workshops and are equally at home in production environments. They have a multitude of applications, from auxiliary fences for your bandsaw, table saw, router table and drill press, extremely versatile jigs to fully fledged dovetail clamp assembly tables and additions to existing workbenches.

All you need is a matching dovetail groove in your wood and voila, your clamp slides to any position you require.

Micro Jig cleverly redesigned a dovetail router bit specifically for these clamps and it really works incredibly well.

Very easy, quick and limited only by your woodworking imagination, these clamps are fast becoming a standard item in hobby and professional workshops alike. Micro Jig have cemented their position in woodworking history with their GRR-Ripper, MicroDial Tapering Jig and 3D PushBlock and these new Dovetail Clamps are sure to join these products on the podium.

Specifications:

Clamping Range: 0 – 133mm;
Clamp Pressure: 270 kg open at 100mm;
Jaw Depth: 60mm; Minimum Dovetail

>> Tobias Lochner

Slot Length: 95mm; Recommended Dovetail Slot Depth: 9.5mm; Dovetail Profile: 12.7 mm (1/2 inch).

Micro Jig MatchFit Dovetail Clamps and the Micro Jig Dovetail Bit are available from BPM Toolcraft in Plumstead, Cape Town or online www.toolcraft.co.za



Finishing techniques

A random orbital sander is a great tool to have and I would not be without one. However, the rotating action of the sanding disc does leave fine scratch marks on the workpiece. Photo 1 shows this clearly. This is a piece of cherry and was sanded first with a 150 grit disc, then a 180 grit disc and finally with a 220 grit disc. Even though the finish is mirror smooth, the scratch marks from the

rotating action of the sander are clearly evident. This is where some good old fashioned elbow grease is needed.

At this point, I go back to a 150 grit sandpaper and sand the workpiece by hand making sure that the sanding direction is parallel with the wood grain. Repeat this with a 220 grit piece of sandpaper and finally followed by a

vigorous finishing with fine steel wool. This is guaranteed to give a perfect finish. Photo 2 shows the final finished product before applying any varnish. Photo 3 is the workpiece with one coat of Woodoc 10. I normally apply two to three coats of Woodoc 10 and each coat is followed by a rubdown with fine steel wool. The end result is a perfectly smooth, very attractive workpiece!

>> Kevin Own

1



2



3



For details on courses, contact Kevin on 083 275 5841 or log on to www.kevinswoodworking.co.za

Workworking associations

The Knysna Woodturners Guild (KWG) was established in 1996 by Mike Kaplan, Dave Stephenson, Ian Armitage and Grant Marshall to foster and encourage the growing interest in woodturning in Knysna, the heart of the indigenous timber industry in the Garden Route.

Monthly meetings were held in various members' workshops, offering help and advice on different aspects of woodturning such as the handling of various tools, bowl design, tool sharpening and finishing.



In 1998 the meetings moved to Sedgfield and during 1999 Dave Stephenson took over from Mike as chairman of the KWG. Meetings are held on the first Thursday of every month – these casual get-togethers continue to take the form of demonstrations by the various members covering all aspects of the craft. Afterwards a bring-and-braai is held for those who wish to chat further – this often includes subjects totally unrelated to woodturning!

The KWG has over thirty members coming from as far afield as Knysna, Sedgfield, Wilderness, George and Great Brak. The KWG is regular demonstrator

at the Knysna Festival of Wood and other timber related shows.

Interested parties are welcome to contact Dave on 072 119 4397 to learn more about the Guild. If you are visiting Garden Route and would like to meet up with other woodturners, do give Dave a call.

Woodworking associations' details are available on our website at www.homehandyman.co.za

To add your club details or provide details for many upcoming events for us to publish on this page, please email details to editorial@homehandyman.co.za



<http://ptawoodworkers.com>

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5 October 2019
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6 October 2019
08:00–14:00

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Scholars: Free

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Kiaat (*Pterocarpus angolensis*)

>> Stephanie Dyer

SPOT-LIGHT

If one of our southern African hardwoods had to be singled out as a 'superior timber', the accolade would go to kiaat. A protected species in South Africa, this tall, upright tree produces wood that has been recorded as being the best known, most generally used and most valuable in southern tropical Africa. Apart from its prized wood, the bark and other tree parts of kiaat are widely used in traditional medicine.

Kiaat is a very stable timber, with exceptional strength for its density. It is suitable for a wide range of uses, including construction, flooring, furniture, cabinetry, panelling, joinery, decorative veneer, turnery, carving, musical instruments and toys. Stability in

wet conditions, as well as high durability and resistance to wood borer, make it suitable for use in exposed positions, like doors, window frames, boat building, canoes, paddles and fish spears.

Kiaat heartwood is reddish-brown to dark brown, with attractive gold and darker figuring. The sapwood is yellow and clearly defined. The texture of the wood is coarse and uneven and the grain is interlocked and seldom straight. Freshly sawn kiaat has a characteristic, pleasant odour.

The wood saws easily and it planes and moulds to a good finish, nails satisfactorily with thin-gauge nails and glues well. The wood polishes to a very fine finish and takes paint and varnish

well. It has moderate bending properties, making it suitable for steam bending. It has good turning and carving properties and peels easily for decorative veneer. Protective gear is recommended when working with kiaat as the wood and sawdust contain irritants that may cause nasal irritation, bronchitis, asthma and dermatitis in sensitive individuals.

Rob Scott, a cabinetmaker, summarises working with kiaat as follows: "World class cabinet making material! It is stable, moderately hard, glues well and has a pleasing scent. Planing can be challenging, with awkward grain. Beautiful wood to cut joints. Finishing is difficult. Oiling makes it colourless and featureless. Woodoc or Shellac is the best."



For more information, please consult Dyer, S, James, B and James, D. 2016. Guide to the Properties and uses of Southern African wood. (Briza Publications)

TOP TIP!

If you are drilling a deep hole, stop and remove the drill bit to clean out the hole. Remove sawdust from the flutes on the drill bit. Clogged flutes can cause the bit to wander off-centre.



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Dave's new car

If you plan on getting a new car, don't let Reuben in on the secret...

So, we are back to the people that worked for me, with me, against me - and family. No one was safe from my insatiable appetite for pulling pranks on them. I remember my son, when he was around ten years old, once asking me if he could have one day in the week when I would not prank him.

People who had no sense of humour developed one in a very short period of time. Even my late business partner (who was as serious as a heart attack when I first met him) developed one over the years, granted... it was a very limited version. But they all had one thing in common - develop one or live a life of misery around me.

Dave, whom you have met in a previous *Tailpiece*, was one of those lucky or unlucky people who fell prey to my pranks on, shall we say, a regular basis. I remember the day he got his new company vehicle; it had all the mod-cons and extras of the day.

There was great excitement the morning the vehicle was to be delivered. I had arranged that all the staff gather in the parking lot behind the shop for 'the handing over of the keys', a bit like 'The Changing of the Guards' but nothing like it. At this juncture I might point out

that this was not normal practice and everyone expected something to happen. Could it have been fireworks, champagne and snacks? Alas, none of the above!

Dave came strolling down the driveway feeling like a million dollars, dressed to the hilt and chomping at the bit to show off his new car. As I ceremonially handed him the keys, he could not wipe the smile of confidence off his face. Little did he know he was going to be the source of entertainment for this unusual gathering.

As to my usual attention to detail and careful planning of my pranks, I had come in at the crack of dawn, armed with a bottle of baby talcum powder and a state of the art homemade paper funnel. I carefully filled each and every one of the vents with talc and switched the air conditioner on full power.

Dave got in the vehicle, closed the door and gave everyone a broad smile. For a minute or two he basked in the glory, inspecting the interior and all the mod-cons. There was a murmur of disappointment among the staff as they turned to go back to their stations, they expected a little more of a show. Then Dave turned the ignition... and the show began! It was like pushing the lever at

>> Reuben Hart

a demolishing site. A cloud of powder engulfed Dave and the interior of the vehicle. There were screams. Some staff ran for cover. It was Armageddon. Dave rolled out of the open door which he just about yanked off its hinges and scurried away on all fours. He looked like a caricature out of *The Walking Dead*, all white with glaring red eyes. The screams and panic turned to a roar of laughter. Dave somehow failed to see the humour in the situation, but by the time the vehicle had been vacuumed and smelling like a baby's nursery, his sense of humour slowly returned and a weak smile forced its way to his lips.

I would now like to take the opportunity to publicly apologise to friends, family, staff and all others who suffered my warped sense of humour. ■

ABOUT REUBEN:



With 40 years of his life in the hardware business and 12 years on radio as 702's DIY guru, behind his belt, Reuben 'The Screwman' Hart decided to pack it up and run for the hills. After traveling 7000km, he and his wife found their hill in Barrydale in the Western Cape.



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