

CHOICE

Private lives

Protecting your profile online

TRAVEL TROUBLE

What to do when you lose your passport

194 products TESTED

- Dishwashing liquids
- Espresso machines
- Induction cooktops
- Air purifiers
- Smart doorbells
- Smart locks
- Soundbars



THE DARK WEB

Where stolen data is currency

Packaging overload

Unboxing wasteful wrapping



Data mine

Your data breach action plan

Plus Superannuation scams, a guide to VPNs and more

Handle with care

Our personal data deserves better protection

Privacy. It's such a simple concept, so why does it have to be so complex in reality?

I reckon most of us have pretty simple expectations about how organisations use information that could affect our privacy. They should be upfront about what information they're collecting and how they'll use it, and they shouldn't use it unfairly.

Unfortunately, that's not what the law requires. Under the Privacy Act, businesses have a lot of latitude to decide what information they collect and how they use it. Unless it is 'sensitive' information – such as information about your health – they don't need you to ask for your agreement. In most cases, they can decide their own rules through what they put in their privacy policy.

I don't know if you have ever bothered to read the privacy policy of a large business, but they're often encyclopaedic in scale. A few years ago, we hired an actor to read the privacy policy for Amazon Kindle. Coming in at over 73,000 words at the time, it took our professional script reader almost nine hours to get through the whole thing.

Our objective was to point out how absurd it is to allow a business to cover its back in this way – if a business's terms and conditions are so complicated that you couldn't expect an average person to digest them, the business should not be able to rely upon them.

One way to fix this would be to have much clearer rules in the Privacy Act about what can be collected and how it can be used. If the law was stronger, privacy policies would play a much smaller role.

But even if we fixed that problem, our privacy laws would still be riddled with loopholes that allow some businesses to evade them.

Most businesses with turnover under \$3 million per annum, for example, are exempt from the Privacy Act, meaning they can collect whatever they want, with few consequences if something goes wrong. Small businesses such as real estate agents hold a lot of information that could cause embarrassment or harm if disclosed. It's time to think about whether that's still appropriate.

With a review of privacy legislation underway, the government has an opportunity to design the kinds of laws we need to protect us in a world



where large amounts of information are being collected about us every day, often without us even knowing.

Now more than ever, we need strong, simple laws that capture all businesses, regardless of size, and that ensure the amount of personal information businesses collect is kept to a minimum and can only be used in ways that genuinely help us.

Alan Kirkland, CEO
Email: alan@choice.com.au
Twitter: @AlanKirkland

CHOICE

CHOICE gives you the power to choose the best goods and services, and avoid the worst. Wherever possible, we pay full price for the products we test, so we remain 100% independent. We don't take advertising or freebies from industry. We're not a government body and our consumer publishing and advocacy is almost entirely funded by membership. Memberships include online access and services such as CHOICE Help. CHOICE product ratings are based on lab tests, expert

assessments and consumer surveys. CHOICE staff also research a wide range of consumer services. They reveal the truth behind the facts and figures, and investigate the quality and the claims. **BECOME A MEMBER** To review the full range of membership options and benefits go to choice.com.au/signup. **MEMBERSHIPS/RENEWALS** Call 1800 069 552 or email us at ausconsumer@choice.com.au.








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CHOICE magazine provides a selection of our top product reviews. We can't always include all the models we've tested, but you'll always find the products that scored the best. To view complete results for all our tests, go to choice.com.au, or call Customer Service on 1800 069 552 to add full online access to your membership package.

THIS WEEK'S CHOICE

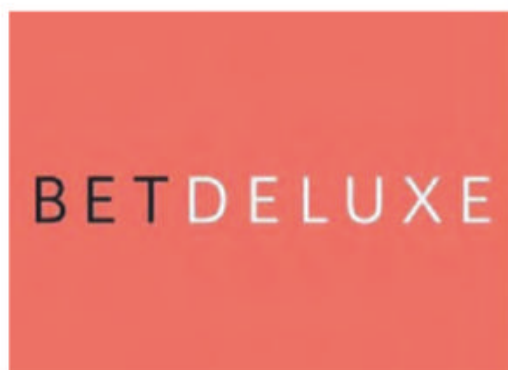
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ACCC inquiry into interest rates

Australian households have more than \$1.3 trillion sitting in bank accounts at the moment, and for years the interest we've been earning on all that money has generally not topped the one percent mark. More recently, as the official cash rate climbed from 0.1% to 3.35%, the earning power of our collective capital has grown.

For many home loan customers, however, any increase in savings rates has been offset by a rise in mortgage rates. And many banks that have increased their home loan rates have not applied corresponding interest rate increases to their savings accounts, leaving customers of these banks falling further behind. Now the Australian Competition and Consumer Commission (ACCC) has decided to look into this disparity.

SOME SMALL INCREASES, BUT CONDITIONS APPLY

The ACCC has announced it will "investigate how banks set interest rates for savers, including differences in interest rate increases between bank deposits and home loans".

While mortgage rates have gone up, the ACCC says "the increases in interest rates on deposit products appear to have typically been smaller and less consistent. In many cases, banks have only applied increases in the cash rate to some of their deposit products, often with conditions attached".

WHAT THE ACCC WILL INVESTIGATE

The information the ACCC inquiry will likely be asking banks to provide will include:

- interest rates on retail deposit products and any terms and conditions that apply
- the strategies used by banks to set these rates
- how terms and conditions on interest rates relate to the rise of the official cash rate
- the level of competition between banks in setting rates
- the degree to which banks use customer deposits to provide credit.

Encouragingly, the inquiry has an additional objective, according to ACCC chair Gina Cass-Gottlieb. "We will also examine the extent to which consumers can benefit from shopping around and switching, and what other barriers are stopping consumers from seeking a better return on their savings," she says.

COST-OF-LIVING PRESSURES VS BANK PROFITS

"The community expects much better from Australia's banks," says CHOICE head of policy Patrick Veyret. "Many people, including older Australians, rely on the interest earnings of their deposit and savings accounts to make ends meet. As cost-of-living pressures persist, the banks are unfairly profiting off people."

A report to the Treasury on the findings of the inquiry is due on 1 December 2023.

ANDY KOLLMORGEN

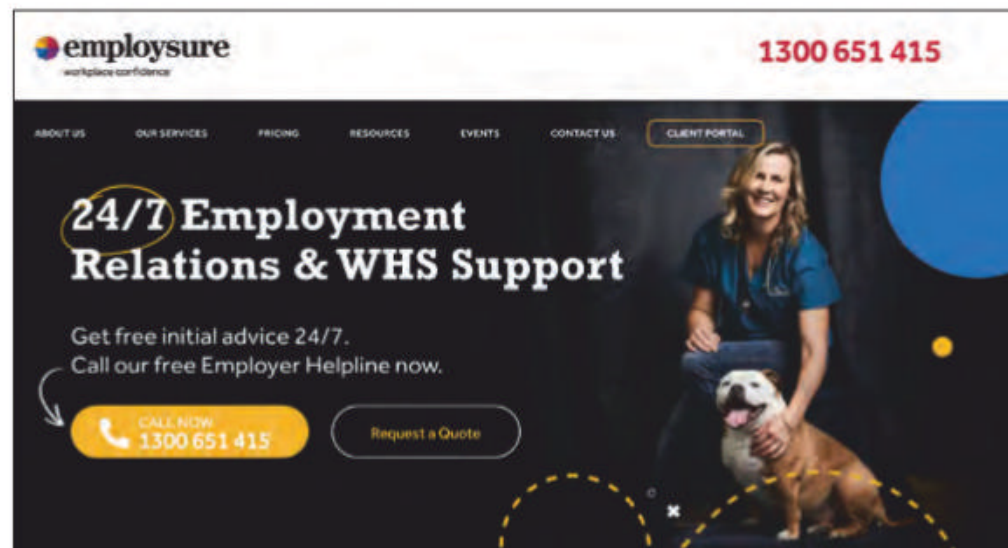
\$3 million penalty for misleading employment ads on Google

The penalty for Employsure, a company which misrepresented themselves as a government agency, has gone up to \$3 million after a Federal Court decision.

The case brought on by the ACCC originally led to a \$1 million fine being imposed, but the full Federal Court found that penalty was inadequate to deter future misleading advertisements by Employsure and similar companies.

The ACCC received more than 100 complaints about the misleading ads that were posted on Google.

“We were concerned that many small business operators were misled by Employsure’s ads into thinking they were getting help and advice from a government agency,” ACCC chair Gina Cass-Gottlieb says. “We appealed the earlier \$1 million penalty order because



we believed the conduct, the company’s size and lengthy period during which they ran the misleading ads meant a higher penalty was warranted.”

JARNI BLAKKARLY

IMAGES: GETTY



Lender fined for COVID credit misconduct

The Federal Court has ordered ClearLoans to pay more than \$6 million in penalties after it found the company had engaged in financial hardship misconduct and breached consumer credit protections in the midst of the COVID-19 pandemic.

The fines come after the company admitted it had failed to act honestly and fairly when dealing with borrowers facing hardship between 2017 and 2020. The court case was commenced by ASIC, which noted its action came at a time when many people were experiencing vulnerability. “ASIC took this matter to court at the height of the COVID-19 pandemic, when many consumers were experiencing financial hardship,” says deputy chair Sarah Court.

“This was a credit business that we believed was not fairly assessing hardship requests as required by law, and in many cases was making it more difficult for consumers to get back on track by failing to notify them of direct debit defaults.”

ClearLoans owned up to various forms of misconduct, including failing to properly respond to and communicate with customers facing financial hardship and not giving borrowers who had defaulted on their loan enough time to rectify the situation before commencing enforcement action against them.

LIAM KENNEDY

Correction

In the washing machines review in February CHOICE, the Shop Ethical rating for Electrolux was given as D. This should have been C (Praises, some criticism), on par with AEG, Kmart and Westinghouse. Fisher & Paykel was incorrectly listed as C when it should have been F (Criticisms). Bosch, which was omitted, has a Shop Ethical rating of D (Criticism, some praise). For more on Shop Ethical ratings, where we get them and what they mean, see page 73.



Widespread support for stronger consumer protections

At the end of last year, the Federal Treasury called for submissions into the regulation of buy now, pay later (BNPL) loans. This February, it was revealed that national banks including ANZ and Westpac, and industry groups including the Mortgage and Finance Association of Australia and the Australian Retail Credit Association, support bringing BNPL providers under the full regulation of the National Credit Act. This change would close the lending loopholes that have allowed buy now, pay later companies to evade important consumer protections.

The full regulation of the BNPL industry now has widespread support from a number of banks, industry groups, consumer advocates, charities, community groups, legal centres, family violence organisations, financial counselling practitioners and others. If you'd like to receive regular updates and to join the campaign for stronger consumer protections, visit choice.com.au/closetendingloopholes.

YELENA NAM

Unfair, but not illegal

In Australia, many companies are engaging in unfair business practices which harm consumers but aren't currently illegal. This means that, as cost-of-living pressures rise, there's little to stop people being harmed by unfair practices, such as web 'dark patterns', used by online retailers designed to trick you into spending more, or charging a 'loyalty penalty' where existing customers get a worse deal than new customers.

Australia is currently lagging behind many other regions including the UK, US and EU, which already have laws against these unfair practices. The result is that Australian consumers are left exposed with little to deter businesses, whose models are based on unfair practices, from taking advantage.

That's why CHOICE is investigating unfair business practices and campaigning for an unfair trading prohibition. An unfair trading prohibition would close this gap in the consumer law for Australians, and help rebuild trust between Australian consumers and businesses. We're currently building a strong evidence base of unfair business practices in Australia. Please send any examples you come across to campaigns@choice.com.au.

ALEX SÖDERLUND



Product safety pledge seems to be working

Online businesses that sign the ACCC's product safety pledge have committed to trying to prevent unsafe products from being sold on their platforms. It's voluntary, but some big operations have signed up, including Amazon Australia, Catch.com.au, eBay Australia and MyDeal.com.au. And the pledge seems to be making a difference.

According to the ACCC, more than 15,000 potentially unsafe products were delisted by online marketplaces during the previous financial year, and 98% of take-down requests initiated by the regulator were actioned within two days. Signatories also used artificial intelligence, image recognition and automated scanning to prevent hundreds of thousands of unsafe products from being listed for sale in the first place, the ACCC reports.

"Consumers need to be aware that banned, recalled, non-compliant and unsafe products continue to be available for sale online," says ACCC deputy chair Catriona Lowe.

"While platforms quickly removed unsafe products after we contacted them, we would like to see fewer unsafe and non-compliant products being listed in the first place. If you're selling goods online, it's your responsibility to check the products are safe and comply with Australian product safety laws."

ANDY KOLLMORGEN



ASIC takes aim at RACQ

Corporate regulator ASIC has launched civil penalty proceedings in the Federal Court against RACQ, claiming they misled consumers on pricing discounts on certain insurance products. Between February 2017 and March 2022, ASIC alleges the product disclosure statements on some RACQ insurance products included "discounts" which were not actually available when premiums were added on.



ASIC deputy chair Sarah Court says, "The failure by insurers to deliver on pricing promises is a key priority for ASIC and we will continue to take enforcement action to hold insurers to account in this regard."

Court also notes that it is an industry-wide issue.

"RACQ is not the only insurer to have reported pricing failures to us," she says. "ASIC has previously taken action against Insurance Australia Limited, and we consider there needs to be a general improvement in insurers' risk and compliance management arrangements to ensure robust systems and controls are in place, enabling insurers to deliver on their pricing promises."

JARNI BLAKKARLY



IMAGES: GETTY

Big tech served by eSafety Commissioner

Child exploitation material isn't just hidden on the dark web, but unfortunately gets shared on everyday digital platforms too. Australia's eSafety Commissioner Julie Inman Grant has served Google, Twitter, TikTok, Discord and Twitch with legal notices, ordering them to explain what they're doing to combat the sharing of this material on their platforms.

The eSafety Commissioner also set a deadline for responses. If they fail to comply, the tech giants face up to \$700,000 in fines. Grant hit Apple, Microsoft, Meta (Facebook/WhatsApp), Snap and Omegle with similar notices in 2022.

Time will tell whether these threats motivate these companies to take action. The Commissioner chastised Microsoft and Apple for not doing enough since receiving their warnings.



Compelling safety disclosures from the world's biggest tech firms

Grant will also be asking these companies about the role their algorithms play in amplifying this dangerous content. With decreasing human involvement in curating, moderating, and monitoring social media content, big tech's algorithms need to be scrutinised with consumer standards on safety online.

RAFI ALAM

US Supreme Court case could rewrite the rules of the internet

The United States Supreme Court is hearing two cases that could have a global impact on the accountability of digital platforms and the rules of the internet. The issue at stake is whether digital platforms should be liable for the content they publish. The longstanding legislation Section 230 has prevented big tech companies such as Google and Facebook from being held responsible for harmful content shared on their platforms, making them hosts rather than publishers.

In the case of *Google v Gonzalez*, the court will determine if the rule applies to content 'recommended' by Google, via recommender algorithms, as distinct from content published directly by users of the platform and hosted by the platform. The family of Nohemi Gonzalez who was killed in a terrorist attack coordinated by the Islamic State (IS) is hoping to overturn a ruling that Google was not liable for recommending IS recruitment videos. If successful, the ruling is likely to have a significant global impact and lead to further legal action, as most digital platforms are based in the US and recommender algorithms power social media platforms.

KATE BOWER



Gambling spammers pay the price

Ever notice that when you unsubscribe from marketing emails you sometimes keep getting them? It's in breach of spam and telemarketing laws, but it happens nonetheless. It's even worse when the spam keeps coming from online gambling businesses, and you can't opt out. But there can be consequences.

In late February, the Australian Communications and Media Authority (ACMA) found that BetDeluxe sent more than 104,000 SMS messages without an unsubscribe function and more than 820,000 SMS messages that didn't include the sender's contact details. BetDeluxe ended up paying a \$50,172 infringement notice.

"We received complaints from a significant number of people, with many expressing their frustration about receiving promotions for gambling," says ACMA Chair Nerida O'Loughlin.

"Any spam can be annoying, but when gambling is involved, the risk of financial and emotional harm can be pronounced, so it's important that wagering operators take compliance very seriously."

In February 2022, Sportsbet paid \$3.7 million in penalties and customer refunds following an ACMA spam enforcement investigation.

ANDY KOLLMORGEN



WA tells consumers to get up to date on pet protections

Western Australia's consumer protection agency is urging pet buyers to get familiar with their consumer rights following a spike in complaints about animal purchases. WA's Commerce Minister Sue Ellery launched an awareness campaign to highlight the protections available to pet owners, saying it's "important for Western Australians to know that they have rights when they buy a new pet, like they would with any other purchase".

Under the Australian Consumer Law, pets must match the description as advertised, be of acceptable quality, be free of significant health issues and live a healthy lifespan that is expected of the breed.

Traders must also meet additional promises to purchasers based on animal pedigree, condition, performance or characteristics. But Ellery warns the existing protections only apply when consumers buy from established sellers.

"To make sure your new pet comes with consumer guarantees, be sure to purchase from reputable local breeders or pet stores, as consumer guarantees do not apply to ad-hoc, one-off purchases from a private seller," she says.

LIAM KENNEDY

BETDELUXE

Apple iPad 10th-generation

The iPad 10 sits in Apple's tablet lineup just above the lower-cost iPad ninth generation, which Apple has kept as a budget option. The iPad 10 is faster, has a bigger screen, USB-C connectivity and a new keyboard option, but is stuck with the original first-generation Apple Pencil that now needs an adapter.

The iPad 10 looks like the more expensive iPad Air, with a 10.9-inch Liquid Retina screen, slim screen borders and a power button with built-in Touch ID fingerprint reader located on the top edge.

The connection port has been changed to USB-C, making it compatible with other USB-C devices, such as external storage and screens. However, like the iPad 9, the iPad 10 uses the first-generation Apple Pencil which has a Lightning connector. So you'll need the new USB-C to Apple Pencil Adapter. This is included in the box if you buy a new 1st-gen Apple Pencil (\$159), or available separately for \$15.

The front-facing FaceTime camera has moved from the short edge to the long edge – a first for any iPad – making it much better for video conferencing when in landscape mode. The dual microphones and stereo speakers are also more useful in landscape orientation.

The new design Magic Keyboard Folio (\$399) is specific to the iPad 10 and comes in two parts that

attach magnetically. The protective back includes a fold-out support stand, while the front includes the keyboard, with a new 14-key function row and trackpad, but no backlighting. We

found the new keyboard a pleasure to use, but the lack of backlighting can be annoying in low-light situations.

Both front and back cameras are now 12 megapixel (MP). The front is Ultra Wide and the rear camera is Wide and handles 4K video and 240fps slow motion video. This is a noticeable jump up from the iPad 9's 8MP rear camera and 1080p video.

Apple's A14 Bionic chip is a generation up from the iPad 9's A13 Bionic. We found the speed boost noticeable and it didn't reduce battery life.

The iPad 10 also gets Wi-Fi 6 (802.11ax), which we found much faster in our tests than the iPad 9's Wi-Fi 5. Plus, there's now 5G (sub-6GHz) capability for cellular models.

Check your budget and crunch some numbers before buying. The iPad 10 (in blue, pink, silver or yellow) starts at \$749 for the 64GB Wi-Fi-only model or \$999 for 256GB storage. With cellular added it's \$999 for 64GB, or \$1249 for 256GB.

For comparison, the iPad 9 had a price rise in 2022 and now starts at \$549 for 64GB Wi-Fi only and \$799 for 256GB.

The front-facing FaceTime camera has moved from the short edge to the long edge

STEVE DUNCOMBE

FIRST LOOK

APPLE IPAD 10TH-GENERATION

PRICE \$749

CONTACT apple.com/au/ipad



Time for banks to step up and block scams, says Consumer Action Law Centre

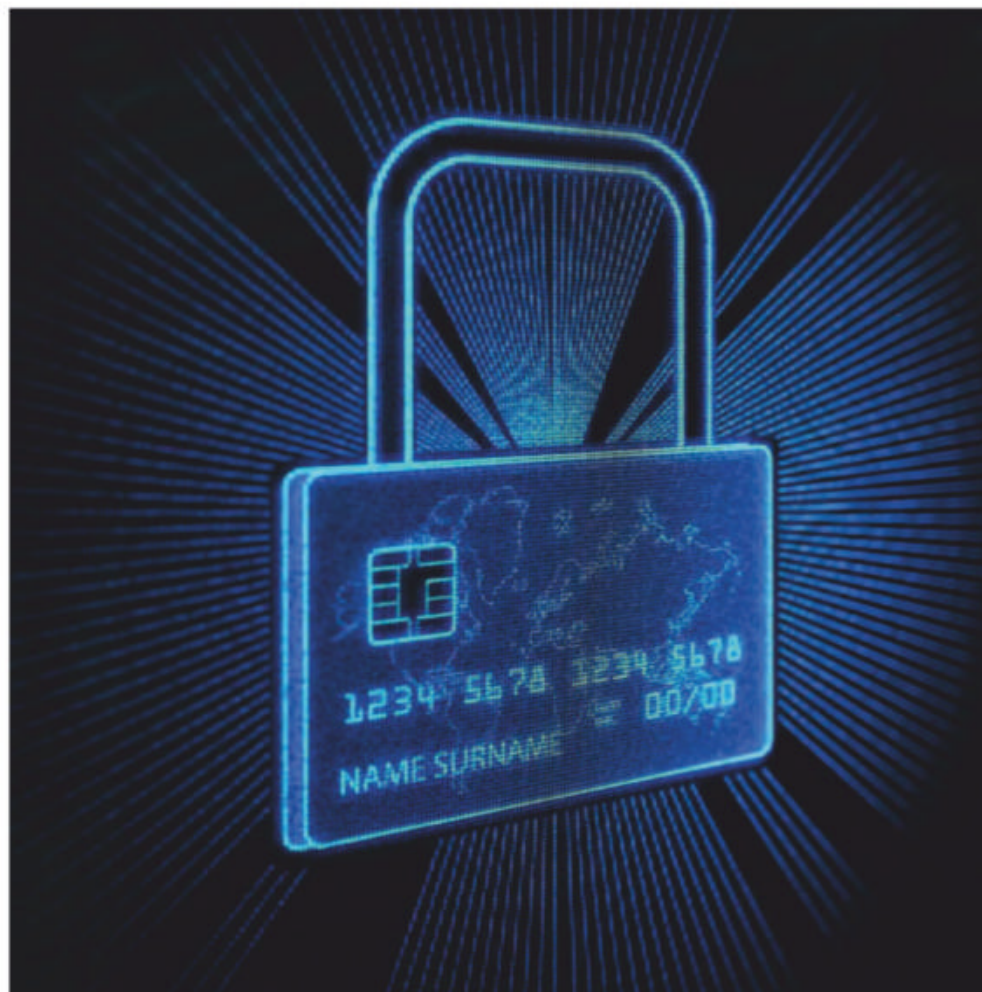
The Melbourne-based Consumer Action Law Centre (Consumer Action) has used a consumer round table in Canberra to call on banks to step up and do more to prevent payments to scammers and reimburse scam victims.

“I am delighted Minister [Stephen] Jones is taking this scams crisis seriously and call on him to use the government’s powers to incentivise Australia’s banks to do more, act now, and safeguard customers’ money and reimburse victims when a scam is happening,” says Consumer Action CEO Stephanie Tonkin.

According to the ACCC, Australians lost a staggering \$4 billion to scammers last year, translating to \$11 million every day. ASIC research also reveals that only around 13% of scam victims report the scam.

“Australia is now a soft target for scammers, that’s why everyone we know is being targeted by increasingly sophisticated scams – but we know some of these could be stopped by the introduction of more robust systems,” says Tonkin.

JARNI BLAKKARLY



YourSuper comparison tool helping people retire with more

In 2021, the government introduced the YourSuper comparison tool, which lets you compare some super products on fees and long-term performance, making it easier than ever to compare super products.

The government has recently begun reviewing the tool. To understand how people use it, Super Consumers Australia commissioned market research with 24 Australians to see what they thought of the tool and whether it could be improved.

Only a couple of the participants had heard of the tool before, but most thought it was useful. One participant described the tool as “fantastic” and said “I wish we had this ... thirty years ago”.

Participants also had a high level of trust in the tool because of its independence.

There was some room for improvement, however. Some testers thought the tool was hard to find on MyGov and on the ATO website. Also, participants unfamiliar with super found it a bit challenging to use and indicated that the tool should present information in a way that’s easier to understand.

Super Consumers Australia director Xavier O’Halloran says the government should do more to help people find and use the tool. “Our research shows that when people use it, they find it helpful. The government should ensure it’s promoted properly and is easy to use. Some simple tweaks would allow more people to find out if their fund is doing a good job building their retirement income.”

DANIEL HERBORN



Low-fee debit cards to use overseas

What could be easier than using your bank card when travelling overseas? Many everyday debit cards are now on the Visa or Mastercard network, which means they're accepted at multiple retailers and ATMs in most countries. They're also a good option for international online purchases.

If you have a low-fee debit card that doesn't charge a currency conversion fee, the exchange rate you get is set by Visa or Mastercard and is usually better than the high exchange rate margins set by travel money cards.

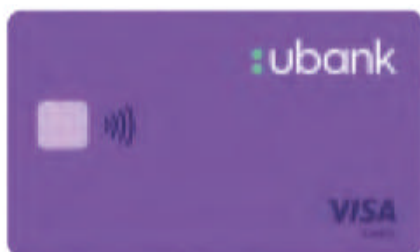
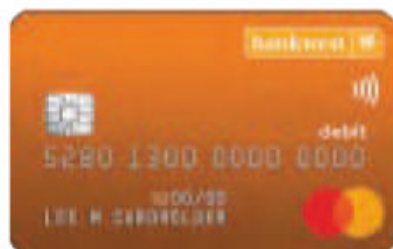
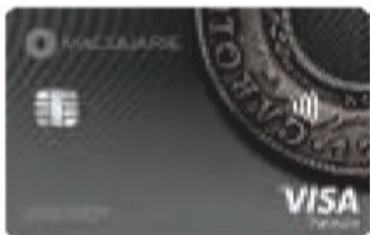
Low-fee debit cards are also a good option for ATM withdrawals in comparison with low-fee credit cards, as they don't charge a cash advance fee. Also, there's no interest rate charge as you are using your own money.

We found several low-fee debit cards that don't charge a foreign exchange fee or fees for purchases or ATM withdrawals, and also don't charge a monthly account fee. These are:

- Bankwest Easy (Platinum)
- Citibank Plus
- Macquarie (Platinum)
- Suncorp Carbon Insights
- Suncorp Everyday Options
- Ubank Spend (with Ubank save account)
- Up Everyday.

The major banks have some accounts with debit cards that don't charge account-keeping fees or waive them if you make a monthly deposit of a few thousand dollars (such as your salary). But they're not a good option for using overseas or for international purchases as they charge overseas ATM fees and foreign exchange fees.

UTA MIHM



Telstra called out for not supporting priority customers

Telstra has promised to do more to help vulnerable customers receive extra services, in a court-enforceable undertaking to the communications watchdog following an investigation.

The ACMA found Telstra had failed on hundreds of occasions to follow up and provide more information to customers who had enquired about receiving priority assistance, and that they hadn't provided enough support to customers already receiving this assistance.

As a condition of its carrier licence, Telstra has to provide priority service to customers who have a life-threatening medical condition, ensuring they have access to a working phone and that any faults are quickly fixed. But ACMA chair Nerida O'Loughlin says her organisation's investigation found clients eligible for this help weren't getting it.

"Some of these customers were having problems with their Telstra fixed-line service at the same time as dealing with significant medical issues," O'Loughlin says. "These are some of Telstra's most vulnerable customers and the telco must have adequate systems in place to make sure these obligations are met."

The ACMA has accepted the telco's undertaking to fix how it provides priority assistance, but may pursue action in the Federal Court if Telstra doesn't follow through on this promise.

LIAM KENNEDY



RANTS AND RAVES

Getting the privacy protections Australia deserves

Does everything feel a lot less private lately?

Maybe you're an Optus or Medibank customer whose data fell into the hands of a cybercroc. Or maybe your phone number seems to be on every scammer list in the country. Or you've noticed how that shop you visited just once now seems to haunt every Facebook ad you get.

And you wouldn't be wrong. With the digital world getting bigger, our personal data is being stored, analysed, and used by more and more companies every day.

It isn't just the usual tech culprits anymore, either. Whether it's applying for a rental online, or using a loyalty card at a Coles or Woolies, data is no longer just big business for big tech – it's a part of our offline lives too.

But that's just the tip of the iceberg. Under the surface, obscure data brokers buy and sell your data every day. Worryingly, some of these data brokers can build a profile of you based on different data sources – to the point of re-identifying you.

These profiles are a hot commodity for businesses that want to hound you with marketing, emails, and content.

Unsurprisingly, Australia's laws and regulations around data are outdated, mostly from a time when we were more worried about who was snooping through our windows than our Windows. But change is on its way. The Attorney-General's Department has finally finished its long-awaited review into the Privacy Act, delivering a mammoth 116 recommendations to reform our privacy laws.

We've combed through the report's 320 pages and found a lot of good in there: changes to definitions that protect a lot more of your information, removing exemptions for small businesses, a tiered penalty system, and letting everyday people pursue action against businesses that invade their privacy.

There are also a few ambiguities and gaps, though. The review proposes a fair and reasonable test for the kinds of data businesses can

collect. It's great to put the onus on preventing harm back on businesses, but what "fair and reasonable" means is left vague. There also isn't as many directives on the use of automated decision-making as we'd like to see, even though we know the harm algorithmic discrimination, personalised prices, and tracking and targeting have on consumers.

We're also interested to see how they'll make sure the regulator – the Office of the Australian Information Commissioner – can do its job. OAIC gets a lot of new enforcement and rule-making powers, but is still severely underfunded. Hopefully the upcoming May Budget has some extra dollars to give the privacy regulator some teeth for its bite.

Australia is lagging behind the international community, and getting up to speed with best practice privacy regulations will give consumers and businesses the support we need in a data-driven economy. By the time you read this, we'll have sent our thoughts on the report to the Department, and hope you'll join us in pushing our politicians to get the privacy protections Australia deserves.

RAFI ALAM

Unsurprisingly, our laws and regulations around data are outdated



ASK THE EXPERTS

Got a niggling question our team can help with?

ASK US

Email your question to asktheexperts@choice.com.au or write to Ask the Experts, CHOICE, 57 Carrington Rd, Marrickville, NSW 2204. You can also tap into the 'brains trust' at www.choice.community.

Q My partner and I were booking holiday flights at the same time. I was using the Qantas App on my phone paying with a credit card, and she was using the Qantas website to log into her account, booking her flights through the 'Manage my account' link and paying with the flight credits (\$1200) she had from a cancelled flight. The total for my flights was \$860 and hers was \$1332. This figure included a \$99 fee for flight change from her original cancelled booking, so the actual flight cost was \$1233. Seeing this enormous discrepancy I checked on the Qantas website and found the price that I paid was available, i.e. \$860. This is clearly unethical, but is it legal?

A CHOICE travel expert

Jodi Bird: We've had several reports of this type of pricing behaviour from Qantas.

Businesses are able to set their own prices, provided they do not mislead or deceive consumers (among other rules, including not engaging in price fixing or anti-competitive conduct; or discriminating based on sexuality, age, race etc.). So while it might not be illegal, it is unfair. More needs to be done to stamp out unfair practices from businesses, and that's something CHOICE will be working on over the coming year. Meanwhile, the Australian Competition and Consumer Commission (ACCC) has monitored airline pricing, so it may be worth lodging a complaint with them, as well as your state or territory fair trading body.



Q In a previous issue you recommended the LG OLED42C2PSA 42-inch TV. I'd like a larger TV though, and was wondering if the 48-inch in the same model would be the same quality?

A CHOICE TV expert Denis Gallagher: It's impossible for us to test all sizes in all series, but we try to cover a range of display sizes to give members the best idea of what to expect. Past test experience has shown that a 65-inch TV in the same series will deliver very similar performance to a 55-inch TV and sometimes a 75-inch TV, if it was produced in the same country. As such, I would feel confident in saying that the 48-inch model of the same series OLED will deliver very similar performance to the 42-inch model we tested.





Q When you tested pyrolytic ovens, did you calculate the cost per clean, or the total energy use per clean? I'd like to compare it to the cost and unpleasantness of using chemical cleaners, to help me decide if I want to buy a pyrolytic oven.

A CHOICE oven expert Fiona Mair: It's not a cost we've measured in the past, but we did a test run on the one pyrolytic oven we have available at the moment. Energy use during a pyrolytic cleaning cycle running it on the high setting for two hours is approximately \$1 to \$2, depending on the degree of cleaning required. And it's not something that you do very often, say two or three times a year, depending on how often one cooks fatty foods, so it's not a large cost. Overall, its running costs for cleaning are cheaper than buying a chemical cleaner at the supermarket or hiring a professional oven cleaner.



IMAGES: GETTY

Q The company that's organising the installation of our new residential solar energy system has asked me to have 10 to 12 roof tiles available should the installer happen to break any tiles while installing the new solar system. Our house's roof tiles are inspected once or twice each year: I am advised if any tiles are cracked and need replacing. All roof tiles should, therefore, be sound. Shouldn't the replacement of broken tiles be the responsibility of the installers?



A CHOICE solar expert Chris Barnes: It's our understanding that the solar installer is responsible for fixing any broken tiles that occur as a result of the solar installation. It's not uncommon for a few tiles to get broken with the installers walking on the roof, drilling holes and so on, and it's common practice for them to ask to have a few spare tiles on hand for that reason, so they can immediately replace any they break. If you don't have any spare tiles, or don't have enough, the installer may ask you to source some, or may be able to locate some themselves. They might not be able to find exact matches, in which case it should be possible to swap tiles around and make sure that any non-matching tiles go underneath the panels where they'll be out of sight. It's good that you've had your roof inspected, and therefore should have a written report showing the current condition of the tiles. That will certainly help in the event of any arguments about broken tiles.



YOUR SAY

If you've had a bad experience, been ripped off or scammed, tell us and help other CHOICE members avoid the same traps. If you've had a great response to a complaint you've taken to a manufacturer or retailer, our members want to know about that too! Letters may be edited for length and clarity.

CONTACT US!

Email us at
yoursay@choice.com.au
 or write to Your Say,
 CHOICE, 57 Carrington Road,
 Marrickville, NSW 2204.

Costly switch

While there is a general move to smart meters ('Power Up', CHOICE Mar 23), in NSW at least, the changeover may not be as straightforward as expected. My supplier Endeavour Energy/Origin advised they wished to change my meter, but left a note: "Customer will need to initiate Level 2 electrician as fuses are in metal enclosure." My house was built in 1960 in accordance with the rules then, which had the service fuse in a cast-iron enclosure. There was no problem with the fuse's temporary removal when the original meters marked "Sydney County Council" were replaced in early 1970s by otherwise identical meters marked "Prospect County Council", or more recently when the failed off-peak controller was replaced, but my enquiries to a Level 2 electrician indicated that the cost to replace the fuse enclosure would now be upwards of \$300 (more than my quarterly bill) and at my expense.

There would be plenty of houses built around or before the 1960s with service fuses in metal enclosures, and it seems sad that the skill required to qualify for Level 2 – a full-time, eight-week course – is necessary



for their removal. People wishing to change to a smart meter should look at their switchboard before making any arrangements that could be costly.

Roger Anderson, Dundas, NSW



In mid 2018, I had a top-of-the-range Zip tap, with hot, cold and sparkling water options, installed by a Zip technician. Less than five years later it stopped working and required full replacement. Zip offered to do this at 50% of the current price, which would have worked out to \$3750.

The tap looked great and I loved it while it worked, but one would expect such a high-end item to last at least eight years. You can see why they make the warranty only three years. Caveat emptor.

Kevin Tanner, Potts Point, NSW



Bank of Queensland (BOQ) offers several savings account products only available through their MyBOQ app.

The BOQ website and advertising claim it to be a world-class mobile banking service. However, I have experienced only frustration, uncertainty and an unreliable network, and have even been unable to access my own savings for up to seven days. The app constantly comes up with error codes, network outages and technical issues that require contacting their call centre, only to be told by customer service that they cannot resolve any issues because they do not belong to that department. I have used several mobile banking apps and this one is the worst.

Vincent Lien, Kelmscott, WA



Your article 'Tricky business' (*CHOICE* Feb 23) was an excellent summary of the psychological marketing tactics used by grocery stores. Another way to save at the supermarket is to never grocery-shop when you are hungry and things you might not need look more enticing.

Blake Stanwick, Berwick, Vic



CHOICE SOCIAL MEDIA

Join the conversation online. We're on Facebook, Twitter, Instagram and our own forum, CHOICE Community. This month: second-hand appliances, dishwasher tips and more.

Community choice.community



What are your experiences with second-hand appliances?

@phb: We have bought a number of second-hand small appliances over the years. Our most recent purchase has been a bread machine.

Why do we buy second-hand? Well for one, they are cheaper and secondly, to reduce e-waste. It is amazing (or disappointing) how many perfectly good appliances are thrown out because they are no longer wanted.

@audlin: Purchased a refrigerator, a standalone freezer and a washing machine second hand. The condition was as good as new. Each appliance was under three years old.

@syncretic: I haven't bought one for quite a while so I can't be specific but factory seconds can be very good value. Things like fridges that have cosmetic damage, like a ding in the door, can be bought at a considerable discount. I recall that these often came with new manufacturer's warranty.

Facebook @choiceaustralia



What are your dishwasher tips?

Lorraine R: My dog does the prewash. I use a tablet and just chuck it in anywhere.

Samantha M: Throw the tablet in the cutlery basket. Works better every time!

Alison V: From our experience, hard water does not do a good job in a dishwasher. Results were fantastic after we installed a whole-house water softener – and no need for rinse aid. Also, many people are unaware that most modern rangehoods have smaller filters which benefit from a wash at monthly intervals.

Twitter @choiceaustralia



Which items do you keep in the fridge – eggs, sauce, berries, apples?

@jboyded: All. When you live in the muggy tropics they go off too quickly.

@Julialrwinator: Eggs and berries because they last longer, sauce because it says on the bottle: Refrigerate after opening.

@Vintuitive: Eggs in the fridge. Makes them last longer.

Instagram @choiceaustralia

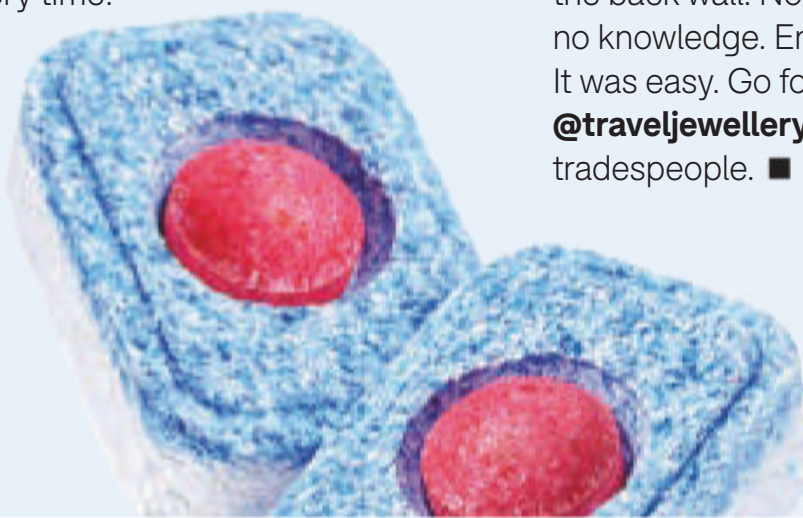


What bathroom renovation traps would you like to avoid?

@throughthelenz20: Doing a cosmetic renovation is a waste of money. Do it properly and it will last decades.

@felixting6: What started as a washer replacement turned into a hissy fit with a hammer and I completely rebuilt a sink unit, bespoke drawers and tiled the back wall. No experience, no knowledge. Ended up great!! It was easy. Go for it!

@traveljewellery: Avoid dodgy tradespeople. ■





THE DARK SIDE OF THE WEB

Personal information stolen in data breaches often ends up on the dark web, but what does that mean? **Andy Kollmorgen** speaks to cyber experts to find out

When Medibank began informing customers that their personal data had been released on the dark web following a major hack of the health fund late last year, few would have known quite what to do with the information.

What, after all, is the dark web? And what's going to happen to your data if it ends up there?

The cybercriminals made off with the names, dates of birth, addresses, phone numbers and email addresses of around 5.1 million current and former Medibank customers, along with the health claims data (potentially revealing diagnoses and procedures) of about 160,000 customers.

How much of this has been posted on the dark web remains unclear.

Paul Haskell-Dowland, a professor of cyber security practice and

associate dean for computing and security at Edith Cowan University, tells CHOICE there is no firm definition of the term dark web, but generally it means websites that are hidden away and can't be googled.

"The internet is this massive network of computers all over the globe, serving up all kinds of content," Haskell-Dowland says.

"And only a very small proportion of it really fits into that definition of what we think of as the internet, the public web, the stuff that we browse."

"When people generally talk about the dark web, they are referring to that dangerous, illicit place where drugs are sold, and data is traded, and criminals chat with each other," Haskell-Dowland says.

"But things on the dark web can be quite innocent. They can just be websites that aren't indexed; that

NEED TO KNOW

- The first order of business for cybercriminals is often to extort ransom payments from the companies that they have hacked.
- Buying and selling stolen data on the dark web is often a secondary objective, but it can have far-reaching consequences.
- CHOICE talks to two cybersecurity experts about what goes on in the netherworld known as the dark web.

have not been made easily accessible." Haskell-Dowland likens websites on the dark web to telephone numbers that are not listed in the directory. If you know the number, you can access the website.

“A lot of the dark web is just like that. It’s perfectly easy to access these sites in a web browser, it’s just that you’ve got no idea how to find them,” Haskell-Dowland says.

Terminology referring to the dark web can vary. Unindexed content is also known as the ‘deep web’, and the dark web can be defined as sites that exist on ‘dark nets’ that can only be accessed using special networks and browsers. One of these is known as the Tor browser, which uses layers of encryption, or ‘onion routing’, to hide the source and destination of information accessed on the web. Tor is also used for legitimate purposes.

Criminal ‘chat channels’

So where is the data stolen in last year’s Medibank breach being held? Medibank and the Australian Federal Police (which is investigating the incident) are keeping this confidential lest they tip off the hackers.

But Haskell-Dowland suspects that when Medibank says the dark web, it means the “chat channels” cybercriminals access through special browsers on hidden networks.

“They will list the data on these sites so they can make it clear to their victims that they have the data and the means of dissemination.”

Resorting to plan B

In the Medibank case, the cybercriminals were hoping for a reported \$15 million ransom payment in exchange for agreeing to not release the data on the dark web, probably the easiest way for the criminals to monetise the hack.

But, in line with a growing trend among corporate hack targets, Medibank refused to pay, not least because trusting criminals to hold up their end of the bargain and delete the data is a dicey prospect.

That leaves the cybercriminals with the probably less lucrative

option of selling the data to other criminals, and probably taking payment in bitcoin or another cryptocurrency.

In November 2022, Home Affairs Minister Clare O’Neil told media outlets that the government was considering a ban on ransom payments to cybercriminals.

UNSW Canberra cyber security expert Nigel Phair says the dark web is a messy place full of “streams of information” without the user-friendly design elements of the visible web. You need to be a pretty good cybercriminal to know what to do with the stolen data.

“The criminals didn’t get the money they wanted, so the next best way of monetising the customer data would be to sell it to other criminals – probably for a dollar or less per credential – or use it themselves. And there’s such a large volume of data. It depends where you are in the value chain and what you want. ▶



For some criminals, having lots of credentials is great because they can use it for identity theft and those sorts of things.”

But, for cybercriminals in general, the first priority is to extort money from their victims as quickly as possible, Phair says.

“They don’t really care for the data – they care for the money. They want to get in, get the money, and get out.”

Identity theft and scams

One of the primary concerns around hacked data is identity theft – criminals using stolen data to take out credit cards and loans in other people’s names, for instance.

But criminal organisations also use the data to set up convincing scams. Having a person’s real name, address, birth date and other data can go a long way toward pulling off an email or phone scam and gaining access to a victim’s bank account or other assets.

“If you’re running a call centre scam operation, the data is valuable because it’s got information you can use to verify that you’re purportedly someone legitimate,” Phair says.

And if you’re a big criminal organisation that collects and keeps stolen data, you can bring a level of sophistication to your scams that significantly increases their effectiveness.

Financial data is relatively short-lived, since people can cancel credit cards and open up new bank accounts. But real names, birth dates, email addresses and other more permanent data can have a long shelf life, which is why victims of data hacks (along with everyone else) should always be on guard. There’s no telling what it might be used for in the years to come.

Criminal organisations also use the data to set up convincing scams

“These criminal gangs that engage in illicit cyber activities are every bit as organised and every bit as capable as big businesses and big industry,” Haskell-Dowland says.

“They employ people and have divisions within their organisations. Many of them will have their own websites, and in some cases they’ll have their own PR teams.”

Better consumer protections

“Consumers are the real victims of corporate cybercrime,” says CHOICE consumer data advocate Kate Bower. “They are the ones who live with the consequences of scams, identity theft or the daily worry of not knowing who has your data and what they might do with it.”

CHOICE welcomes the increase in penalties for serious and repeated breaches of the Privacy Act that were introduced in late 2022 by the federal government.

But Bower believes more should be done to protect consumers and their data and to hold businesses accountable when cybersecurity incidents occur.

“The Privacy Act review is the perfect opportunity to reassess the threshold for breaches of the Act,” Bower says.

“Currently, only ‘serious or repeated breaches’ of the Act incur a penalty, meaning that very few businesses are ever held to account for unlawful behaviour that harms consumers. CHOICE is campaigning for a stronger regulator with more powers, as well as changes to the wording of the Act that would mean any breach of the Act could attract a penalty or enforcement action.”

How you might find out your data has been used

Here are some of the ways people have discovered that criminals were using their stolen data, according to the Australian Institute of Criminology:

- Unauthorised activity on a bank account, credit card or credit report.
- Receiving credit cards in the mail that they hadn’t applied for.
- Calls from debt collectors about unpaid bills that they didn’t recognise.
- An unsuccessful credit application when their credit history is good.
- Receiving goods in the mail that they hadn’t ordered.
- Losing mobile phone service because it was transferred to an unknown device.
- Getting a medical bill for a service they didn’t receive.
- Having a health claim rejected because they had unexpectedly reached their benefit limit.
- Being unable to file taxes because a return had already been filed in their name. ■

If your data is hacked:

- Don’t respond to emails, texts or phone calls that appear to be from an organisation that you do business with, even if they include personal details that make them look legitimate. Instead, contact the organisation yourself to see if the communications are valid.
- Don’t pay up in the event of an extortion attempt, where criminals threaten to publish personal details or photos of you unless you hand over your money.
- If you think you’ve responded to a scam communication, fill out a get help form from the government-funded service ID Care (idcare.org or 1800 595 160).



Data defence

Scammers can use your information to steal from you or your loved ones. **Alex Angove-Plumb** explains what to do if you've been caught in a data breach

After the Optus data breach in September last year that affected up to 9.8 million people (almost 40% of the Australian population), consumers are more aware than ever that their private information isn't always safe in the hands of the companies they share it with.

Data breaches can be unsettling and inconvenient at best and a serious security threat to you (and sometimes those around you) at worst.

If you find out you've been part of a breach, act quickly. Depending on the nature of the breach, you'll need to follow certain steps.

If the stolen data only includes simple information such as your username and password for an

unimportant account, that's possibly a quick fix. For some other contact information such as your phone number, you'll also need to be wary of scams.

But if the breach includes financial or medical information, official documents or ID, account login details you use for multiple services, or a large amount of personal information, you might need to clear your schedule for the next hour or more and stay vigilant for the foreseeable future.

Make new passwords and PINs

Change the password for the affected account immediately. If you use that password (or a similar one) for any other accounts, they also need to be

NEED TO KNOW

- If you've been caught in a data breach, stay calm but act quickly.
- Some breaches are minor and low-risk, but others can be extremely serious and high-risk.
- You can't eliminate risk entirely, but there are steps you can take to increase your online security.

changed right away and you should add those accounts to your list of potentially compromised data.

Some priority password changes include financial accounts, email, insurance and health and government services, but use your own judgement to think of others you might have. Social media accounts are also a juicy target for hackers because they give access to a lot of personal information, as well as allowing direct communication with your friends.

If a password change triggers a prompt to sign out of that account on all your other devices, say yes. ▶



Dos and don'ts for passwords and PINs

- Never use the same (or similar) password or PIN for more than one service. This is a huge security risk.
- Don't use a single dictionary word (e.g. 'Fridge1') as a password. Two unrelated words ('FridgeDog1') are easier to remember and much harder to crack. Even better, use a passphrase ('iloveFridgeDog1') or turn a long but memorable phrase, such as a song lyric, into an acronym.
- Keep it impersonal. Avoid easy-to-guess details such as family or pet names. This also goes for using dates, postcodes, and parts of your driver's licence or phone number as your PIN.
- Make it unusual. A quick web search will tell you if your new password or elements of it are featured on any 'most commonly used passwords' lists that do the rounds a few times a year.
- If you write your login details down somewhere, make sure it's a safe place and out of sight. Don't keep passwords or PINs in an unencrypted file on a connected device. Even a photo of a written-out password can be easily found by modern software. If your recorded password or PIN is used to gain access to your accounts, the organisation in question might not be accountable.
- Password managers help keep track of your login details and can create strong, randomised passwords without the need for you to remember them. Most of these services are subscription-based.

Stick to official channels

It might be necessary to get in touch with organisations or institutions to manage accounts, documentation and other details.

If this is the case for you, use the official contact details on their website to avoid getting caught

by scammers, who might have provided a false phone number or link to a fake website.

Social media accounts are a juicy target for hackers, giving access to a lot of personal information as well as direct communication with your friends.

Don't give personal information to anyone who contacts you over the phone, messaging services or email. It's best to (politely) tell the person on the other end you'd feel more comfortable going through official channels. They might be able to provide you with a reference number to speed things along.

For free advice and phone consultations from specialised identity and cyber security counsellors, you can contact IDCare (idcare.org or 1800 595 160), which is a nonprofit national identity and cyber support service for Australia and New Zealand. IDCare is a registered charity and is featured on the Australian Government's Australian Cyber Security Centre website.

Beware of scammers

Common ways for scammers to get in touch are emails, phone calls and direct messages, but be wary of any unsolicited communications, no matter who they claim to be or represent.

Avoid sharing any personal information unless you're the one who's initiated contact through official channels.

Also watch out for phishing attempts, where the scammer will attempt to trick you into giving away personal or financial information via a fake website or by asking you to answer security questions, among other things.

Financial accounts

For breaches involving financial information, change your online banking and PIN immediately, then contact your institution to let them know you've been part of a data breach. Use official channels rather than any links or phone numbers provided with a data breach notification, which might have been sent by scammers.

Check your purchase history or online statements for unusual activity

such as unauthorised purchases or loans. Keep doing this for the near future to monitor account activity, as scammers may not target you right away.

You can also request a copy or a ban on your credit report. If you do this, it's best to do it with all three main credit reporting bodies in Australia:

Equifax – equifax.com.au/personal or 13 8332.

Experian – experian.com.au/consumer/order-credit-report or 1300 783 684.

Illion – creditcheck.illion.com.au or 1300 734 806.

Government-related accounts

For documents such as a licence, identity card or Medicare card, get in touch with the respective government agency. Explain what happened and they should tell you how to proceed.

For tax-related information, contact the Australian Taxation Office (ATO) and they can monitor for suspicious activity involving your tax file number.

If any health or prescription records have been leaked, contact your health service provider.

Be social media-savvy

Your social media account might have a lot of personal information that can be used to impersonate you. Take note of the information you've added to your account profile and consider ways the information could potentially be used, such as confirming your identity in instances where you've forgotten your login details.

Contact any institutions or organisations you're worried could be tricked by a scammer who knows those personal details.

Also check your messaging services and social media activity to see if scammers have used your account to try and lure friends or followers into a trap.

Where to go for support

Being affected by a major data breach can take a toll on your mental health. The Office of the Australian Information Commissioner (OAIC) has a list of suggested support resources to consider at oaic.gov.au/privacy/data-breaches/data-breach-support-and-resources. But you can also talk to a licensed medical professional.

How to know if you've been part of a breach

You'll often be notified if you've been part of a data breach, but you might also like to check for yourself or sign up to alert services.

If the organisation that has been breached must comply with the Australian Privacy Act, it's obliged to tell you if a data breach is likely to cause you serious harm.

You might read about it in the media, particularly if it's a large-scale or high-profile breach.

Websites like Have I Been Pwned (haveibeenpwned.com) and Firefox Monitor (monitor.firefox.com) can reveal if your email address has been compromised in many known data breaches.

The Australian Cyber Security Centre (ACSC) Alert Service (cyber.gov.au/acsc/register) is a free, government-operated subscription to receive email notifications about cyber security alerts in Australia, tagged with a status of low, medium, high or critical.

Some password managers and security suite software provide data breach

alerts, which can include monitoring the dark web to see if your information is being traded illegally.

If you have any questions about sensitive information that your notification didn't cover, contact the organisation or institution directly. Sensitive information might include trade union memberships, criminal record, sexual orientation or practices, and some aspects of biometric information, among other things.

How to stay safe

There's not a whole lot you can do about the security practices of companies and institutions. You often also have limited control over what data they keep about you. But there are a few measures you can take.

SET UP 2FA OR MFA

Multi-factor authentication (MFA) – also two-factor authentication (2FA) and two-step verification (2SV) – provides a strong defence against some types of data breaches.

This is because you need more than just your username and password

to log into an account – you also need an additional factor,

which is most-often an authentication app on your phone or a code received via SMS, though the former of those two is safer. Not all online accounts support MFA, but many larger companies and institutions do.

But MFA doesn't hide your information – it only helps to stop people logging into a protected account.

If a data breach included documents, financial details, medical records or personal information, that's outside of MFA's domain. ▶



Avoid sharing any personal information unless you're the one who's initiated contact...



And if your MFA-protected account is caught in a data breach, you should still change your login details as soon as possible. This is especially important if you use that password or PIN for other accounts which might not support MFA, so change those too. You can read more about setting up two-factor authentication at [choice.com.au/2FA](https://www.choice.com.au/2FA).

BE CAREFUL WHAT YOU SHARE

A lot of information you share online is optional, even if data tracking is enabled by default. When signing up to a new account, take note of which details are required and which are optional (e.g. date of birth, location, photo of your face, etc.) and consider whether the account requires your real name.

Not all online accounts will have the same security levels as a larger company or institution. If it's something you plan on using only a handful of times, you can use a disposable/temporary email address using websites such as Temp-Mail, 10 Minute Mail, and Mail Proof, among others. If that company is breached, they won't have your email address.

BE SMART WITH PASSWORDS

Good password practices are crucial for protecting yourself against data breaches. Always create a strong

password and different passwords for every account. Password managers can help with this.

TWEAK DATA TRACKING

Many apps and online accounts have privacy settings you can adjust to limit the amount of data a company collects about you. Phone apps and social media services are particularly infamous for this, as are Google and Microsoft devices. But have a think about what services you use that might be tracking your data and do a web search for how to adjust their privacy settings.

Nothing's perfectly safe

There's simply no way to use online services without incurring risk. Some of that risk is up to you, but when it comes to data breaches, much of it's out of your hands.

If you do get caught in a breach, remember to act quickly and calmly. Research the degree of the breach and ask for further details about your stolen information from the organisation or institution. Consider the types of data that have been stolen and plan your response accordingly.

Remember you can still mitigate some threats with good security practices, online habits and by limiting the information you share with online accounts, be it publicly or privately.

A lot of information you share online is optional, even if data tracking is enabled

Delete my data... please?

After the recent Optus and Medibank data hacks, Gail became more conscious of her data and which companies were holding it.

The Sydney resident decided to contact Woolworths and ask that her data from an Everyday Rewards Card she hadn't used in years was deleted and her account closed. The company's response disappointed her.

Woolworths told her via email: "Regrettably, we can't delete your Everyday Rewards account. Instead, we'll continue to hold and use certain information as required or permitted by law."

"I was pretty shocked," she says. "It got me thinking, you know, should I shop there?"

The company did say they would close her account and "de-identify" her personal information, but Gail says this response wasn't good enough.

"Really, I think we need some better regulation and to improve protections," she says.

No right to erasure

Anna Johnston from Salinger Privacy says unlike other jurisdictions such as the European Union, Australian consumers don't have a right to erasure of their data embedded in law.

She said Australians do have a right to ensure company data on them is correct and that it's only being used in a way that is fit for purpose. But, Johnston says, these protections are vague in how they're defined.

"We don't have an explicit right to deletion, but in some situations a customer may be able to argue that the purpose of any data being held has ended and it should be deleted," she says.

"Then we have the company defining the purposes for which they

are going to keep, and keep using, that data. If they say they want to keep using that for marketing, for example, it becomes difficult,” she adds.

But according to Johnston, any changes to a consumer’s right to erasure that come out of the government’s Privacy Act review are unlikely to be a catch-all solution to companies holding on to your data.

“We shouldn’t need consumers to then do the heavy lifting [of having to ask companies to delete their data]. The obligation should squarely be on the organisations to not keep data beyond a reasonable time period and to not use it for purposes that the customer doesn’t want,” she says.

Hoard of personal data

CHOICE senior campaigns and policy adviser Rafi Alam says increasingly the purchase price of goods at the checkout isn’t just in dollars, but in data.

“Whether it’s loyalty programs at Woolies or buying Christmas gifts online, consumers are forced to give

up personal data just to buy the things they need. And under Australian law, this is a lifetime cost, with zero right to have this data deleted by businesses even when it’s no longer needed for their purchase,” he says.

“Personal data is personal for a reason, and businesses shouldn’t get to hold on to this information when customers want it gone.”

He says Gail’s example shows that companies like Woolworths were “desperate to cling to data” despite the customer’s wishes.

“More and more it seems like Australia’s biggest businesses are becoming data brokers first, willing to put their hoards of personal data above their customers’ satisfaction. And with many of these businesses mediating our access to essential services like groceries and housing, customers deserve more than to have their rights pushed aside for profits.”

Woolworths responds

In a response to our questions, a Woolworths spokesperson says their priority is “to do the right thing for our customers, including when it comes to data privacy”.

“When an Everyday Rewards Member requests deletion of data, Woolworths Group takes steps to close their account, which involves the removal of any personal information on their Everyday Rewards account, including their name, address, email, contact number and date of birth.

“Once an Everyday Rewards account has been closed, personal information is no longer visible to our customer teams. However, to manage and demonstrate our compliance with laws, we may be required to continue to hold personal information.

“We are upfront with our customers on this, if they contact us regarding the deletion of their personal data,” the spokesperson says.

Australian consumers don’t have a right to erasure of their data embedded in law

Reform needed

Rafi Alam from CHOICE says he hopes reform of the Privacy Act will give Australian consumers the same right to erasure that shoppers in the European Union have had for a number of years.

“Beyond this, the Privacy Act needs to ensure all businesses are treating their customers with a duty of care – including ensuring businesses only collect and keep the data they need to give consumers what they’re paying for,” he says.

“We’ve seen the risk of holding on to large amounts of personal data in the recent Optus and Medibank data breaches, and we’re likely to see even more egregious examples unless the law is changed.” ■

JARNI BLAKKARLY



IMAGES: GETTY



Going incognito

You can protect your identity online by focusing on anonymity rather than privacy, says **Alex Angove-Plumb**

Keeping your personal information and online activity to yourself is an ambitious goal. Large tech companies such as Google, Facebook and Microsoft are invested in tracking everything you do online – and sometimes offline. Even some small websites and apps will do their best to make a profit from snooping on you.

So, how far must you go to gain a measure of privacy, and what sacrifices will you have to make?

Even though it can be extremely difficult to avoid being tracked, you can still limit your exposure by embracing a strategy of anonymity, rather than privacy.

We won't venture into the territory of becoming a totally anonymous digital wraith. That takes serious commitment, skill, and specialised software, making it far beyond the scope of one article.

Privacy versus anonymity

Privacy refers to stopping people from collecting data and tracking your activities.

Anonymity is not so much about avoiding being tracked, but rather not letting anyone know it's you they're tracking. You gain anonymity by making it harder to link tracking data back to your real identity.

But solid privacy practice is still important because offering up less data makes it harder for third parties to piece the puzzle together.

Tips for staying anonymous online

BEWARE THE WEAKEST LINK

Your email account is a major weak link for a few reasons. Using the same email address to sign up to multiple services can allow companies to realise it's the same person behind

NEED TO KNOW

- Keeping your online activities completely private is very tricky; your best bet is to limit sharing your real name and personal information.
- If you value your online privacy, avoid services that collect a lot of personal data such as Google, Facebook and Microsoft.

various online accounts, especially if they're owned by the same company.

If you use Gmail as your email provider, you might have signed up to non-Google-owned services by clicking that handy button to create the account, rather than creating one with its own login and password.

This links the two services and allows some of your information and activity to be traded in both directions.

Many email providers (largely Google) can read and track every email you get.

Plus, new accounts will send you a confirmation email when you sign up to them, letting a nosy email provider know what accounts you've created and when.

If you want the simplicity of using the same email address for every online account, don't provide personal details in your account profile or email address. And use a privacy-centric, encrypted email client that doesn't gather info from your inbox such as ProtonMail, Mailfence and Tutanota among many others.

For services you don't plan on using much, you can create temporary email addresses using websites such as Temp-Mail (tempmail.email), 10 Minute Mail (10minutemail.com) or the many other disposable email services available (do a web search for 'disposable email' or similar). Using these services has the potential added benefit of keeping you off spam lists.

If you're happy to juggle multiple email addresses, a password manager will help you keep track of which logins you've used for each service.

STOP USING YOUR REAL NAME

Make sure visible usernames don't unnecessarily reflect your real name. If you want friends to be able to recognise you, consider using a nickname. Or you might let your profile photo do the talking for you, but keep in mind facial recognition technology is becoming more effective and widespread, and regulations about its use have been criticised as unfit for purpose in Australia.

If you change your name for an account you've previously used your real name on, this won't keep your details from the company that runs the service because they'll remember your original details. It also won't keep you

Your email account is a major weak link for a few reasons

safe from bad actors who gain access to those server files. Some services such as YouTube let you have multiple user profiles you can easily switch between, meaning you can interact with different types of content using different identities.

LOCK DOWN YOUR SOCIAL MEDIA VISIBILITY

Make sure your social media accounts are set to private. The level to which you can do this varies depending on the service, but most give you at least some control over who can see your posts, activity and personal information.

Consider what information a social account needs. Your location, birthday, gender identity or education history might not serve any purpose for you, but could provide valuable information to others who might not have your best interests at heart.

And think twice before you post personal information, even if only your friends can see it. Just because your account is secure doesn't mean theirs is.

USE A VPN

Your IP address is one of the easiest ways to track you around the web. Using a VPN is a cheap, safe and simple way to get around this.

But make sure your VPN provider is trusted and avoid free VPN services, which on the whole have a bad reputation for privacy (it's been said that if the service is free, you tend to be the product).

KEEP CLEAR OF COOKIES

Most web browsers these days disable unnecessary web cookies by default, but it's best to check in your settings menu that third-party, tracker and advertising cookies are switched off.

That said, there are other ways browsers and websites can track you, which can be harder to control. ▶





Services collecting your data MESSAGING APPS AND SERVICES

Most messaging services aren't totally private. Unless the service is end-to-end encrypted (E2EE), the company running it can read your conversations and record your activity – as can anyone else who gains access.

SMS messages are unencrypted and pass through a large number of servers and towers to get where they're going. Not only can your provider read every text you send, it's reportedly not hard for others to intercept your message traffic, too.

The solution is to find yourself a privacy-focused app that uses E2EE, then convince friends and family to sign up.

Apple's proprietary iMessage service and Signal are both E2EE by default, meaning only you and your message recipients can see your conversation.

iMessage conversations that have been backed up to iCloud are also encrypted, but Apple has the key for this encryption and could theoretically access it. Apple's Messages app uses iMessage between Apple devices (shown in blue text bubbles), but uses unencrypted SMS/MMS for messaging other devices such as Android phones.

Signal's conversation history can be difficult or impossible to transfer to a new device, depending on the devices and context.

It might be difficult to get your friends and family to embrace a new messaging platform. In these cases, some unencrypted messaging services such as Facebook Messenger and Telegram have the option to create one-on-one 'secret' chats that are end-to-end encrypted.

MICROSOFT

Microsoft collects and shares plenty of data about you. Some of it you can limit via settings menus, but not all.

The only way to really keep off Microsoft's radar is to avoid Windows and other Microsoft products entirely.

Many Linux distributions (or distros) such as Qubes OS and Kodachi are set up around privacy, but you'll generally get less snooping compared to Windows from any of the popular options such as Ubuntu, Manjaro and many others.

If you don't like the sound of Linux, you could try Apple products. Apple markets itself as a privacy champion and while it collects plenty of data about your products and usage, it has a policy of not collecting or sharing personal information.

Using Apple devices isn't as private as even the more user-friendly Linux

distributions, but it's less of an overshare versus Windows or Google products.

GOOGLE

You can try to limit Google's data tracking and sharing, but to stay off Google's radar, you need to stop using its products altogether.

This includes Android, ChromeOS and Nest devices, as well as services such as Gmail, Chrome, Google Assistant and anything else owned by this data-collection behemoth.

FACEBOOK

Even if you lock down your Facebook account, the company is still collecting a huge amount of data about you.

Your best bet is to keep your real name hidden, but if you've ever used it for your profile you're out of luck. This goes for Instagram, WhatsApp and Facebook Messenger, too.

If you have any apps linked to your Facebook account, remove those permissions. And avoid using your Facebook account to sign up to any other websites or services.

Your best bet for keeping Facebook at arm's length is to shut down your account, delete the app, and never open it up again. It's up to you to decide if it's worth it.

Only so much you can do

This is hardly an exhaustive guide. Companies and bad actors are constantly inventing new ways to track you around the web and beyond.

You might be able to keep your real name and personal information out of the equation, but completely masking your movements requires a level of sacrifice, commitment and expertise beyond the average person's scope.

But that doesn't mean you should adopt an in-for-a-penny attitude and let it all hang out. You can still regain some control over who knows your information and activities. How far to take it is up to you. ■



Super scammy

Amid a rise in superannuation scams, **Daniel Herborn** explains how to keep your nest egg safe

In 2022, Australians lost a staggering \$377 million to investment scams, and scammers continue to find new ways to steal money from super.

Super Consumers Australia is calling on the industry to do better to ensure scammers don't steal from anyone's retirement income.

"One of the unfortunate things we do hear is when [a scam] occurs in super, the losses are really significant," says Tom Abourizk, a policy officer at Consumer Action Law Centre.

"Last year, we had a couple of clients that lost hundreds of thousands of dollars from their super accounts."

There are some simple steps you can take to help protect your super from scammers.

1. Be aware of the different types of super scams

PHISHING OR IDENTITY THEFT

Scammers may send a text or email with a hyperlink that directs you to a scam website or asks for your password. They may pose as your super fund or a government department or service, such as the Australian Taxation Office or MyGov.

These links may download malware (malicious software) onto your computer or let the scammer steal your personal details.

You can safely ignore any links like these.

If you need to contact your super fund, financial adviser or a government service, type their full address into your browser rather than following a link. ▶

Your super fund will never contact you asking for your password or personal details

NEED TO KNOW

- Scammers may try to access your super through phishing or encouraging you to open a self-managed super fund.
- Super Consumers Australia is calling on all funds to do more to protect people from scammers, including using two-factor authentication.
- Consumer advocates say super funds should have to pay in cases when scams happen and the fund hasn't taken the appropriate care.

Remember, your super fund will never contact you asking for your password or personal details.

DODGY SMSFS

A self-managed super fund (SMSF) can give you more control over how your super is invested. This greater flexibility can be a strength and a weakness. There have been reports of scammers stealing from Australians' super accounts by approaching people to set up an SMSF. They may offer higher investment returns than you can make with a super fund managing your money. They may also offer to invest in different types of assets than a traditional super fund, such as cryptocurrency.

The scammers can then use identity documents and personal information they gain from correspondence to roll your super account over into their bank account.

No legitimate super expert needs to cold call strangers to drum up business and you can safely ignore anyone who approaches you out of the blue.

If you want to set up a self-managed super fund, there are many legitimate companies that can help you. Any financial adviser or financial advice business must hold a licence from the Australian Securities & Investments Commission (ASIC). ASIC's Moneysmart website has a register of these licence holders at: moneysmart.gov.au/financial-advice/financial-advisers-register. Financial regulator APRA also keeps a register of everyone disqualified from giving financial advice at apra.gov.au/disqualification-register.

EARLY ACCESS TO YOUR SUPER

Another common trick of scammers is to claim they can get you access to your super early. There are very strict conditions on accessing your super before retirement age, like having a terminal illness or being in severe financial hardship.

Scammers may approach you out of the blue and offer to help you with this process. They may ask you to put your name to a fake story about why you need your super early.

In other cases, they may be simply charging money to help you fill out the official documents you need to request early access. They might also suggest you move your money into an SMSF. In some instances, the scammer tricks your super fund into paying them the money directly.

Another problem here is that you could be fined and have to pay more in tax if you improperly access your super early.

2. Keep your passwords and identity documents safe

One simple way to safeguard your super is to enable two-factor authentication for your email, online banking and social media accounts. This authentication offers an extra layer of protection, which means scammers can only sign in to these accounts if they have your phone.

Having a password that's hard to guess, keeping it secure (e.g. not written down on a post-it note) and changing it regularly are also good steps to secure your super.

Moneysmart recommends shredding your personal documents. Some funds suggest locking your mailbox to prevent anyone from stealing your records.

Moneysmart also suggests being careful about what information you share on social media.

3. Take your time to make any decision about your super

Scammers may create a fake sense of urgency, saying you must act quickly to take up their offer. But super is a long-term

Tips to protect your super from scammers



Don't click on any hyperlinks you receive via text or email – they could be from a scammer.



Make sure any financial adviser you deal with is legitimate by checking the ASIC register, and ignore cold calls.



Ignore anyone offering to help you access your super early.



Use strong passwords and two-factor authentication where available.



Don't let anyone rush you into changing your super.



investment, and there's no need to make immediate decisions about it. Take the time to confirm that any person or company you're dealing with is legitimate – check the register and only deal with people and companies you've approached, rather than cold callers.

Encounter a scammer? Here's what to do

If any of your personal documents are lost or stolen, let your super fund know immediately.

If you think a scammer has taken your money, you can make a complaint to the Australian Financial Complaints Authority (AFCA). AFCA can order a super fund to repay your money. Unfortunately, however, not all super scam victims get their money back.

The Australian Competition and Consumer Commission's Scamwatch collects information about scams and helps people avoid getting scammed. You can report potential scams at scamwatch.gov.au/report-a-scam.

Being scammed can be distressing. If you need someone to speak to, contact Lifeline on 13 11 14.

The onus should be on funds, not members, to stop scams

While Super Consumers Australia policy manager Franco Morelli says it's a good idea to be vigilant, he also says it's ultimately up to banks and super funds to protect against scammers.

"Every fund should have, at the least, two-factor authentication in place to give Australians some peace of mind around the security of their super," says Morelli.

When we spoke with then CEO of Consumer Action Law Centre, Gerard Brody, for this story, he agreed that funds should be required, at a minimum, to use two-factor authentication.

"Without this [requirement], super funds are leaving their customers open to substantial risk of frauds

and scams. Any payment system needs to be robust and secure, and allowing 'one click' transfers isn't sufficient to protect people."

Who is liable for unauthorised transactions?

Abourizk says that for the most part, where scams occur in banking, the bank will be considered liable when the victim isn't the

one who pressed 'send' on the transfer.

This situation is considered an unauthorised transaction.

But he says tribunals may be treating super scams differently.

"There have been

a few AFCA decisions involving super-based scams where you can't clearly say the victim has pressed 'send' or done anything, but they've still lost money."

"The money has gone out of the super account under the control of the super company, yet the super fund isn't liable. That's something we're concerned about; some cases suggest the super fund isn't taking the appropriate level of care."

Abourizk says super funds should proactively monitor and double-check transactions out of accounts.

"That represents years of someone's work going into a bank account. If that's been obtained fraudulently, that's devastating for people."

Brody says funds should be made to refund scam victims when they breached their duties as trustees or failed to act with reasonable care.

"Placing liability on super funds is appropriate, as it provides an incentive to improve the safety of their systems, including rollover processes," he says. ■

No legitimate super expert needs to cold call strangers to drum up business

Case study: Super fund refuses to pay back scam victim

In 2022, Paul (name has been changed) made a complaint to AFCA about a scammer stealing from his super.

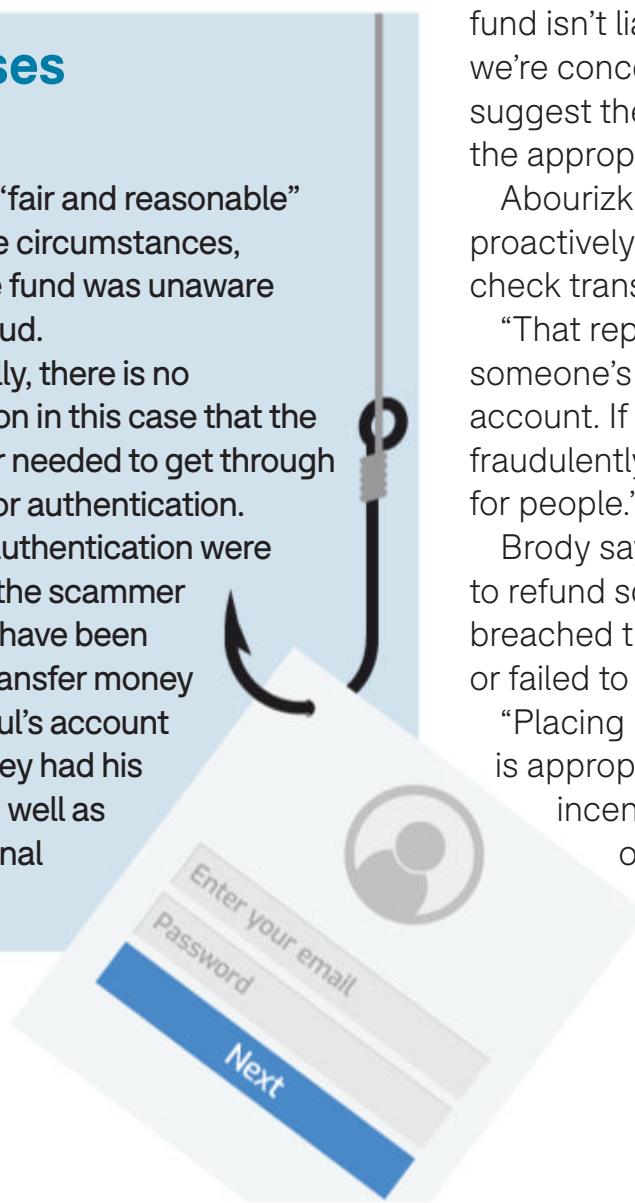
The scammer somehow got his name, date of birth and tax file number and used these details to create a fraudulent second account. The scammer later withdrew money from this account. Overall, the fraudster made three withdrawals—the first was for more than \$14,000.

Paul asked his fund to pay him back the lost money. They refused. He then appealed the fund's decision to AFCA, but they found the fund's refusal to compensate

him was "fair and reasonable" under the circumstances, given the fund was unaware of the fraud.

Crucially, there is no suggestion in this case that the scammer needed to get through two-factor authentication.

If this authentication were in place, the scammer wouldn't have been able to transfer money out of Paul's account unless they had his phone as well as his personal details.





Passport protection

A lost, stolen or damaged passport can ruin a holiday.

Jodi Bird and **Kylie Matthews** explain what to do

Your Australian passport is one of the most valuable items you'll ever own. Aside from being your gateway to international travel, it's still one of the most trusted and secure forms of ID.

So, do you know where your passport is right now? And are you sure it hasn't expired? We break down what you should do if your passport has gone astray or is damaged, and how you can get a new one.

How to report a missing passport

If you've lost your passport or believe it's been stolen, you must report it to the Australian Passport Office as soon as you can. There are penalties under the Australian Passports Act if you

don't report it as soon as possible. This is to protect people against identity theft. (There's no need to report a lost passport that you know had expired.)

In Australia: Call the Australian Passport Office Contact Centre on 131 232.

Overseas: Contact your nearest Australian diplomatic or consular mission in the country of application.

WHEN TO ALERT POLICE

If your passport is stolen, it's recommended you report it to the police, as you'll need a police report to claim travel insurance. Procedures vary depending on which country you're in. If you're in a non-English speaking country, try to find an interpreter to help explain your situation to the police.

Don't risk booking new travel arrangements without a valid passport

NEED TO KNOW

- You're required by law to report the loss or theft of a passport as soon as possible.
- Nearly two million Aussies who might have otherwise renewed or applied for new passports didn't do so during the COVID-19 lockdowns.
- This has led to pent up demand for passport services which is expected to continue through 2023 and into 2024.

How to apply for a new passport

If your passport is lost or stolen, you'll need to apply for a new one. Apply at passports.gov.au if an embassy or consulate hasn't already started the process for you. You'll need two passport photos that meet the Australian passport photo guidelines, documents that prove your Australian citizenship and your identity, and a referee or guarantor.

REFEREE VS GUARANTOR

If you're applying online, you'll need to nominate a referee who's willing to confirm your identity if they're

contacted. Otherwise you'll need a guarantor to sign your application form and endorse and sign the back of one passport photo.

A referee or guarantor must be an adult Australian citizen who has known you for at least 12 months. They can't be related to you, married to you, in a de facto relationship with you, or share your home address. You'll need to give their full name, phone number and either their current Australian passport details or the address at which they've been on the electoral roll for the past 12 months.

These requirements may vary for overseas applicants. Contact the Australian diplomatic or consular mission in your country of application for further details.

PROOF OF IDENTITY

You'll need an Australian birth certificate or citizenship certificate, documents that prove any change of name or gender, and other identity documents that show your photo and your current residential address.

The documents you'll require will vary slightly depending on whether you were born before or after 20 August 1986, so make sure you check the passports.gov.au website to ensure you have the correct identification.

HOW TO LODGE YOUR APPLICATION

If you're in Australia, you'll need to lodge your application in person at an Australia Post outlet. If you're overseas, you can lodge in person at an Australian diplomatic or consular mission or, in some cases, send your application through the mail.

How quickly can you get a new passport?

As travel undergoes a post lockdown renaissance, the turnaround time for a passport application in Australia can vary. At the time of publishing it's at least six weeks, but check the Australian Passport Office website for up-to-date

processing times. If you're overseas, you'll need to factor in delivery time as well – the wait could be a few weeks longer, depending on your location and ongoing postal delays resulting from the pandemic.

If you need your passport sooner, the Australian Passport Office has a priority processing service that can produce your passport in two working days.

IF YOU'RE ALREADY BOOKED ON A FLIGHT

Delay your travel arrangements until you have the necessary documents, and don't risk booking new travel arrangements without a valid passport. If you can't get a new passport or emergency passport in time, you won't be able to check in to a flight or cross international borders by land or sea.

Check with your travel insurer – depending on the circumstances, most policies should cover at least some of the cost of your altered travel plans, extra accommodation and passport application fees.

How to get a new passport if you're overseas

If you need to travel soon (generally in the next 10 days), it's likely you'll be issued an emergency passport, which is enough to get you on a plane home or on to your next destination.

But an emergency passport will be valid only for a short time (up to 12 months) and because it won't include the biometric information of a standard passport, you may face entry restrictions in certain countries.

Contact the Australian diplomatic or consular mission in the country where you are for further details.

WHAT TO DO IF YOU DON'T HAVE THE RIGHT ID WITH YOU

We don't tend to travel the world with our birth certificates or our latest utility bills in our suitcases, so proving your identity can be tricky, especially if your passport was stolen, along with your other forms of identification.

The Australian diplomatic mission to the country you're in will advise you exactly what's required. But ▶



IMAGES: GETTY



in most cases you'll need your birth certificate or citizenship certificate as primary ID, and several more items (with your photo and current address) as secondary ID.

CHOICE tip: Rather than have your birth or citizenship certificate mailed to you, it may be possible to have friends or family take the document to a Passport Office in Australia and have it 'sighted', scanned and faxed to the mission you're dealing with.

What happens to the visa in your passport?

The Australian government can't replace any foreign visas for you when it renews your passport. If you had a visa in your lost or stolen passport, you'll need to contact the nearest embassy or consulate of the country in question to ask whether you should apply for a replacement.

Be prepared for passport loss

No matter how careful you are, sometimes you're just unlucky. Being prepared with the necessary information and documents could mean jumping through fewer hoops,

and getting back to enjoying your holiday much sooner.

1. Know your passport number

It's the first thing you'll be asked when you report your passport missing. If you don't have a good memory for numbers, write it down or email it to yourself.

2. Have important contact information handy

Email yourself details such as the phone number of the Australian embassy in the country or countries you're travelling to, the number of the Australian Consular Emergency

Centre (+61 2 6261 3305 from overseas or 1300 555 135 within Australia), as well as your travel insurance details. Keep a paper copy of this information with you at all times, too.

3. Take extra identification with you and keep it safe

Travel with your driver's licence, credit cards, Medicare card, and an item of mail with your current address. Just don't keep it all in the same bag. Taking your birth or citizenship certificate with you isn't a good idea, but make sure a friend or family member back home can get a hold of it, if necessary.

If your passport is stolen, you'll need a police report to claim travel insurance

Tips for keeping your passport safe

Your passport is a valuable document – not just to you, but to thieves too.

- Keep your passport in a secure place when at home.
- When you're travelling, store it in a hotel safe if there is one.
- Some countries require foreigners to have their passports with them at all times. If so, keep it on your person, not in your bag.
- Use a money belt to carry your passport, cash and credit cards and keep your passport in a ziplock bag to protect it from water damage.

4. Pack two recent Australian passport-sized photos

This will save you having to hunt down a photographer or photo booth overseas. Passport photo standards vary from country to country, too. For example, a photo taken in a photo booth in the UK or the US will not meet the requirements for an Australian passport application.

You've found your lost passport – now what?

So your 'lost' passport was actually just hiding in the lining of your suitcase or tucked safely in a forgotten pocket? Don't celebrate yet – if you've already reported it missing, your passport is cancelled forever.

This means you can't use it to travel and will still have to wait for your replacement. If you try to use a cancelled passport to cross borders, it will be kept at the airport and you won't be permitted to travel.

If you find someone else's passport, you should return it to the nearest Australian passport office or Australian embassy or consulate so it can be cancelled immediately.

Damaged passports

Plenty of travellers have to replace their passport because of damage. According to a spokesperson from the Department of Foreign Affairs and Trade (DFAT), the most common ways that passports meet an untimely end are by fluid damage (spilled drinks, ink stains, perspiration, a spin in the washing machine) and dogs treating them as chew toys.

If your passport is damaged, you can apply for a replacement passport, rather than have to apply for a new passport.

Replacing vs renewing your passport

There's a significant difference between 'replacing' your Australian passport and 'renewing' it.

REPLACING

A passport replacement is only for Australians whose passport has run out of pages or is damaged, or who have changed their name or gender, or are updating their passport photographs. This service is free in some circumstances and comes with a reduced fee in others. A replacement passport is valid only as long as the passport it's replacing (i.e. it's not a renewal). Call DFAT on

131 232 or, if you're outside Australia, contact your nearest Australian embassy or consulate.

(Passport replacement is not an option for Australians who have lost or had their passport stolen. The only option in these cases is to apply for a new passport.)

Plenty of travellers have to replace their passport because of damage

RENEWING

Eligible Australians may be able to apply for streamlined renewal of their passport. All you'll need is your application checklist or form, two passport photos and your most recent passport.

To qualify, you must be an adult and your most recent Australian passport must have been issued on or after 1 January 2006.

- The passport must also have:
- been issued when you were aged 16 or older
- had at least two years of validity when it was issued
- been issued with your current name, date and place of birth, and gender
- never been reported stolen, lost or cancelled.

If you're not eligible for express renewal you'll need to follow a similar process to applying for a new passport, including providing original supporting documents that prove your identity and citizenship, and nominating a referee or guarantor.

Some countries don't let visitors enter on a passport that expires in less than six months, so it's best to renew your passport long before its expiry date – and be sure to allow enough time for processing and postage on top of the six months.

It's best to apply online. If you can't, call 131 232 or contact an Australian diplomatic or consular mission; they'll email or post you a pre-filled form. ■

My passport details were stolen by a hacker!

Been caught up in a data breach? Here's what you need to know or do if you think a hacker may have your passport number:

- As long as your physical passport hasn't been lost or stolen, you're still good to travel.
- Your passport details alone can't be used by someone else for international travel, and the baddies can't use your personal details to issue a new passport. The passport office uses facial recognition technology to protect your passport. So hackers would need your face too, which isn't possible unless you're Nicholas Cage or John Travolta in 'FACE/OFF'.
- Unless you've been advised otherwise, you can still use your physical passport to identify yourself to government authorities, banks or other financial organisations (as long as you haven't already cancelled it).
- Whether or not you need a new passport is up to you and your individual situation. If you're concerned, you can get a new passport at any time.
- For more information on passport data breaches visit passports.gov.au/data-breaches, or if you're concerned about identity theft in general, visit idcare.org.



IMAGE: GETTY



Plastic not so fantastic

A CHOICE review of packaging materials has found that manufacturers are still using plenty of non-recyclables, write **Andy Kollmorgen** and **Wendy Evans**

The not-for-profit Australian Packaging Covenant Organisation (APCO) has an ambitious goal – to make sure all packaging that’s made, used or sold in Australia is recyclable, reusable or compostable by 2025.

And it seems we’re making pretty good progress.

Former APCO CEO Brooke Donnelly told us last year that 86% of the approximately 6.3 million tonnes of packaging that makes its way through the Australian market every year is designed to be recycled here. (Donnelly was succeeded by CEO Chris Foley in June last year.)

Due to inefficient recycling processes and gaps in consumer understanding, however, only about half of it (55%) gets recycled and reused. The rest goes to our ever-expanding landfill sites.

NEED TO KNOW

- We reviewed the packaging materials from 38 popular household products made by some of Australia’s most popular appliance brands.
- While some manufacturers are using recyclable cardboard and fibre, others are still using blocks of landfill-bound polystyrene and other non-recyclable plastic materials.
- Manufacturers need to lift their game to meet sustainability targets.

Packaging waste remains a major sustainability issue.

To achieve its goals for the greater good, APCO has been working with manufacturers in a stewardship role to help them reduce the amount of non-recyclable materials they use.

Expert review of appliance packaging

Over a period of months, we collected the packaging materials that came with some of the products we test in our labs.

We set aside the packaging from kettles, air fryers and stick vacuums – 38 products in all – manufactured by some of Australia’s most popular appliance brands.

Late last year, we hosted a review of these packaging materials with the help of representatives from APCO and the Australian Institute of Packaging (AIP).

The packaging experts used APCO's Sustainable Packaging Guidelines as a basis for evaluating the packaging. They provided expert analysis and comments on how each of the product packages performed in terms of sustainability and identified what was and wasn't recyclable in Australia.

Drawing on the data provided by APCO and the AIP, CHOICE continued the analysis, counting how many packaging components were in each box, determining how many of these were recyclable, recording the number of REDcycle components, and checking for the use of non-recyclable foam. We also reviewed the recycling and disposal labelling.

Too much polystyrene, not enough cardboard

The results of the evaluation reveal that some manufacturers are doing substantially better than others in the product categories we checked when it comes to reducing packaging waste.

(We evaluated a limited number of product packages from each manufacturer. It's possible that those with unsustainable practices in one product category may be doing better in other categories.)

While many are using recyclable cardboard and fibre to package their products, others are still using blocks of landfill-bound polystyrene and other non-

recyclable plastic materials – sometimes in excessive amounts.

And where some manufacturers are using just a few packaging

components made of the same or similar material – making it easier for consumers to recycle – others pack their products in a complicated array of materials, making it difficult to separate and therefore more likely to end up in landfill.

In addition, many manufacturers are still using non-recyclable plastic three-pin plug protectors and plastic-coated wire ties instead of more sustainable options.

In nearly all cases, manufacturers are not doing a very good job of making it clear to consumers in their package

labelling which components are recyclable and what consumers should do with them. This is where the Australasian Recycling Label, or ARL, comes in, but more on that later.

Overall results and key findings

SOLUTION NEEDED FOR SOFT PLASTICS RECYCLING

None of the boxes in our evaluation were free of plastic packaging components. Thirty out of 38 products used soft plastics compatible with the (now defunct) REDcycle scheme, and these were

Only one product, the Black & Decker stick vac, had fully recyclable packaging

noted as being recyclable when the assessment was performed by the APCO and AIP experts.

With the collapse of the REDcycle scheme in November last year, Australian is now without a national soft plastic recycling program, making it harder than ever for consumers to avoid disposing of soft plastic to landfill.

FULL RECYCLABILITY HARD TO COME BY

Only one product had fully recyclable packaging



(including three REDcycle components) – the Black & Decker stick vacuum. Thirteen products had just one non-recyclable component, often a plastic power plug protector. Our external experts noted that these could and should be replaced by paper or cardboard components.

Only two products (the Philips air fryers) indicated on the outer box that the boxes were made of at least 90% recyclable material. The boxes for the Breville and Kambrook products noted that they were “printed on recycled paper”, but other packaging lacked such claims. ▶



What APCO and the AIP want from manufacturers

- Become a member of APCO and commit to sustainable packaging practices.
- Include the Australasian Recycling Label (ARL) on boxes so consumers know how to correctly dispose of each part of the packaging.
- Replace the non-recyclable plastic cover protecting three-pin plugs with a cardboard or

moulded fibre protector.

- Replace non-recyclable plastic-coated wire ties with a velcro tie.

APCO and the AIP were also seeking for manufacturers to join the REDcycle soft plastics return-to-store recycling program, but this no longer exists.



IMAGE: GETTY

The findings indicate that manufacturers on the whole need to do more if the goal of getting rid of all non-recyclable packaging is to be met, including the phasing out of problematic and unnecessary plastic packaging.

OVERUSE OF EXPANDED FOAM

Almost 60% (23) of the product packages contained non-recyclable expanded plastic foams, such as polystyrene and polyethylene (colloquially known as styrofoam). Expanded polystyrene (EPS) has been flagged by APCO as a material of concern and the organisation is working with the Australian government and industry to phase out its use as part of the National Plastics Plan, but no deadline to achieve this goal has been set.

Expanded foam was often present in the form of moulded bases and infill components. A number of products used foam bags, which are not easily recognisable as foam or as a non-recyclable item.

The APCO and AIP experts both made the point that foam packaging components could and should be replaced by cardboard, paper and moulded fibre alternatives. Fifteen products, across all three of the product categories in our review, had no plastic foam components, indicating that phasing out foam is achievable.



RECYCLING AND DISPOSAL LABELLING

The boxes we evaluated featured a variety of different symbols, including the familiar Litterman logo (illustration of a figure putting rubbish in a bin), the Mobius Loop recycling symbol (three arrows forming a loop) and the Plastics Identification Code (three arrows forming a triangle containing a number from 1 through 7).

But we also identified miscellaneous markings that were not easily decipherable. Without an explanation of what these symbols mean, consumers would be understandably confused about whether the materials are recyclable and what to do with them. Some boxes also had symbols in areas not easily found. The Smeg Electric Kettle box, for instance, had a Litterman logo side-by-side with a recyclable label on the bottom of the outer box.

While a variety of recycling labels were used, none of the packaging carried the Australian Recycling Label (ARL) – an APCO-led initiative aimed at giving consumers in Australia and New Zealand clear information about what goes where – the recycling bin, rubbish bin, or back to the store. Many retailers in Australia have embraced the ARL.

Eight product packages contained no recycling instructions on the outer box, leaving consumers in the dark on how best to dispose of the packaging.



How we assessed the packaging

We counted the number of individual packaging components in each product box with the help of our experts, who also helped to identify what was and wasn't recyclable. We then calculated the percentage of recyclable components for each product. The higher the percentage, the more recyclable components the packaging contains.

We also counted the number of REDcycle components in each box and made a note of whether foam-based materials were used. And we recorded the recycling and disposal labels and noted whether or not the packaging was marked with the ARL. Our APCO and AIP experts included comments on how each product did in terms of the overall recyclability of its packaging components, although these have been omitted from the results tables shown here. You can read the expert comments online at [choice.com.au/sustainablepackaging](https://www.choice.com.au/sustainablepackaging).



Expanded foam was often present in the form of moulded bases and infill components

AIR FRYERS

	Recyclable components	Non-recyclable components	% recyclable
Philips Essential XL	6	1	86
Anko 5.3 Litre Air Fryer	4	2	67
Philips Essential	4	2	67
Sunbeam Duraceramic Digital Air Fryer	6	3	67
Breville Air Fryer Chef	4	3	57
Ninja 3.8L Air Fryer	5	4	56
Russell Hobbs Brooklyn Air Fryer	5	6	45
Instant Vortex Plus Clearcook Air Fryer	4	5	44
Tefal Easy Fry Grill & Steam Healthy Fryer	5	7	42



KETTLES

	Recyclable components	Non-recyclable components	% recyclable
Morphy Richards Ascend	9	1	90
DeLonghi Ballerina	9	1	90
Morphy Richards Verve	7	1	88
Anko Stainless Steel	6	1	86
Anko Clear Variable Temperature Kettle	5	1	83
Laura Ashley Elveden	5	1	83
Smeg Electric Kettle KLF05BLAU	4	1	80
Russell Hobbs Paddington Stainless Steel	7	2	78
Sunbeam Kyoto City Collection	7	2	78
Russell Hobbs Stone Textured	8	3	73
Sunbeam Fresh Start	5	2	72
Breville Multi Temp	7	3	70
Cucina Modern Kettle	4	2	67
Breville Temp Set Kettle	4	3	57
Kambrook Scandi Chic	4	3	57
Sunbeam Obliq Collection	4	4	50
Sunbeam Brightside Collection	3	4	43
Cuisinart Multi-Temp Cordless Kettle	3	5	38

STICK VACUUMS

	Recyclable components	Non-recyclable components	% recyclable
Black + Decker Power Series Extreme	7	0	100
Beko PowerClean Pro	27	1	96
Dyson V8	18	1	95
Dyson V12 Detect Slim Absolute	18	1	95
Dyson V11	15	1	94
Bissell Pet Hair Eraser Slim Cordless	10	1	91
Miele Triflex HX2 Pro	12	3	80
Miele Triflex HX1	10	3	77
Bosch Athlet Serie 6 ProAnimal	13	5	72
Shark Cordless Apex Pro Pet Vacuum	7	11	39
Dreame Cordless Vacuum T30	6	14	30

TABLE NOTE: The REDcycle soft plastics recycling scheme no longer exists, but it was in operation when these packages were manufactured and was therefore included in the experts' recyclability evaluations. ■



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CHOICE



Spray matter

Our latest dishwashing liquids test included three spray products. The results are in and, as **Alice Richard** discovers, they're... interesting

No one likes doing the washing up, but a good detergent can make the job a lot less painful, cutting through grease and dried-on food and leaving your dishes sparkling.

Our expert testers put piles of plates through the scrubber to find the best performing washing-up detergents.

"We tested 43 popular dishwashing liquids using plates that were consistently dirtied up with different foods, including bolognaise and egg yolk," explains CHOICE expert Matthew Steen.

"We soak them in each detergent, scrub them a set number of times and then look at how clean the plates are. We also look at how well they wash compared to plain water."

Similarly named products from the same brand can perform differently

liquid in the sink, you spray the detergent on your dishes and then wash and rinse. There were three spray products in our latest lab test. Interestingly, one product – the **Fairy Kitchen Antibacterial** spray – placed second overall, beating out 39 liquid products.

But Fairy's other spray product, plus one from household name Morning Fresh, landed solidly at the bottom of the table. "We followed the instructions for application and left the spray for a few minutes to work on the stains, then ran it through the scrub process, but some simply don't perform as well as others," says Steen.

A clean winner

The results were crystal clear: **Coles Ultra Advanced Power Soak Lime** wiped the floor with its competitors,

scoring 90% overall. It was far and away the winner in our test, scoring a full 15 percentage points higher than its nearest competitor, **Fairy Kitchen Antibacterial**, the dishwashing spray that scored 75%. ▶

Dishwashing winners

The products that topped our latest dishwashing liquids test:



42c/100ml

\$1.33/100ml

To spray or not to spray?

Dishwashing sprays are a relatively new concept – rather than squirting



The Coles detergent is also one of the cheapest we tested, at 42 cents per 100mL – less than a third of the price of the Fairy spray, at \$1.33 per 100mL.

“The Coles detergent is streets ahead in terms of performance and price – a win for both your dishes and your pocket,” says Steen.

Expect the unexpected

However, some Coles and Fairy dishwashing liquids didn't fare so well in our lab tests, with other products from these brands sitting at the bottom of the heap. Many other well-known brands demonstrated similar results, with products towards both the top and bottom of the leaderboard, which goes to show that even similarly named products from the same brand can perform differently when you're scrubbing the dishes.

“Our tests uncovered some wild variation, so never assume that if one product cleans well, similar ones from the same brand will deliver the same results,” warns Steen. “It's worth keeping in mind when you're shopping – otherwise you could grab an inferior product accidentally.”

“Likewise, don't assume an expensive product will outperform a cheap one – our tests found price is no measure of performance,” he says.

The same goes for expecting that a washing-up liquid from this year will perform just as well next year.

“The reason we test every year is because some manufacturers commonly change the formula,” says Steen. “So check back with us each year to see who has the better product.”

Shop Ethical rating

BRAND	RATING
Aldi	C
Coles	F
Community Co	F
Earth Choice	B
Ecostore	A
Fairy	F
Morning Fresh	C
Palmolive	D
Sunlight	D
Trix	C
Woolworths	C

NOTES: Other brands in our review not mentioned here don't have a Shop Ethical rating. For more on Shop Ethical ratings and what they mean, see p73.

The ultimate flop

If you're looking for a fresh new way to tip your money down the sink, look no further than **Morning Fresh Ultimate Power Clean Spray Citrus Fresh**: not only does it cost a staggering \$11 per bottle (seriously, would you spend that much on doing the dishes?), it also received exactly the same score as plain water.

Water didn't exactly do a great job either – it received a CHOICE Expert Rating of just 45% – but at least it's not going to set you back \$2.20 per 100mL. The Morning Fresh spray will leave you with sore arms from all the extra scrubbing, and a hole in your pocket from the steep price.

Other products to avoid include **Palmolive Antibacterial Lemon Fresh** (50%) and **Fairy Kitchen Lemon** (55%).

Dishwashing losers

The products that performed the worst in our latest dishwashing liquids test:



Good buys

These dishwashing liquids didn't make the recommended list, but we consider dishwashing liquids a good buy if they score 65–69%, and cost 30 cents or less per 100mL.

- **Aldi Tandil Antibacterial Lemon Extracts Super Strength:** 65%, 30c/100mL
- **Aldi Tandil Original Super Strength:** 65%, 30c/100mL
- **Aldi Unamat:** 65%, 12c/100mL
- **Earth Choice Dishwash Liquid:** 65%, 24c/100mL
- **Trix Antibacterial Lemon Triple Action:** 65%, 30c/100mL

TABLE NOTES Recommended We recommend dishwashing liquids with a CHOICE Expert Rating of 70% or more. **Type L** Liquid, **S** Spray. **Price** This was for the pack size listed, as at December 2022. Cost per 100mL based on the pack size tested – different pack sizes may result in different costs per 100mL. **CHOICE Expert Rating** Made up of 100% scrub test. We no longer do a foam test as the amount of bubbles have little to no effect on cleaning power. **na** Not applicable. All bottles are recyclable. ■

Recommended		Type	COSTS			PERF. CHOICE Expert Rating (%)	CLAIMS							Origin		
			Price (\$)	Cost/100mL (\$)	Pack size (mL)		Concentrate	Gentle on hands	Biodegradable surfactants	Greywater-safe	Septic tank-safe	Cruelty-free	Plant-based ingredients			
✓	Coles Ultra Advanced Power Soak Lime	L	1.90	0.42	450	90	✓		✓							Australia
✓	Fairy Kitchen Antibacterial	S	6.00	1.33	450	75										Vietnam
✓	Aldi Green Action Plant Based Formula Green Tea and Lime	L	2.79	0.56	500	70			✓	✓	✓		✓			Australia
✓	Aldi Tandil Ultra Antibacterial Lemon	L	2.99	0.33	900	70	✓		✓	✓	✓					Australia
✓	Earth Choice Green Tea and Lime 900mL	L	5.80	0.64	900	70	✓		✓	✓	✓	✓	✓			Australia
✓	Morning Fresh Advanced Fast Dry White Tea	L	6.00	0.92	650	70	✓	✓	✓				✓			Indonesia
✓	Morning Fresh Antibacterial Lemon	L	8.50	1.25	680	70	✓	✓	✓				✓			Indonesia
✓	Morning Fresh Lemon	L	9.50	1.06	900	70	✓	✓	✓				✓			Indonesia
✓	Palmolive Complete Instant Degreaser Citrus Blast	L	2.50	0.50	500	70			✓							Australia
✓	Sunlight Natural Lemon	L	6.39	0.64	1000	70			✓							Australia
✓	Earth Choice Undo this Mess Mint and Lime	L	4.50	0.50	900	70			✓	✓	✓	✓	✓	✓		Australia
	Aldi Tandil Antibacterial Lemon Extracts Super Strength	L	2.69	0.30	900	65	✓		✓	✓	✓					Australia
	Aldi Tandil Original Super Strength	L	2.69	0.30	900	65	✓		✓	✓	✓					Australia
	Aldi Unamat	L	1.19	0.12	1000	65				✓	✓					Australia
	Coles Green Choice 2-in-1 Rose and Rhubarb	L	8.50	0.85	1000	65		✓	✓	✓	✓			✓		Australia
	Coles Ultra Lemon Burst	L	3.00	0.33	900	65	✓		✓							Australia
	Community Co Clean Freak	L	2.25	0.50	450	65	✓		✓							Australia
	Earth Choice Dishwash Liquid	L	2.35	0.24	1000	65		✓	✓	✓	✓	✓	✓	✓		Australia
	Earth Choice Ultra Red Apple	L	5.80	0.64	900	65	✓		✓	✓	✓	✓	✓	✓		Australia
	Earth Choice Ultra Antibacterial	L	2.25	0.45	500	65	✓		✓	✓	✓	✓	✓	✓		Australia
	Ecostore Extra Gentle Jasmine and Harakeke	L	8.30	0.83	1000	65	✓	✓	✓			✓	✓	✓		New Zealand
	Fairy Lemon	L	9.50	1.19	800	65	✓									Philippines
	Fairy Original	L	9.50	1.19	800	65	✓									Philippines
	Morning Fresh Botanicals Lemon Myrtle and Mandarin	L	8.50	1.25	680	65	✓	✓	✓				✓			Indonesia
	Morning Fresh Clean And Green Lemon	L	8.50	1.31	650	65	✓	✓	✓				✓	✓		China
	Morning Fresh Soft Hands Cucumber and Aloe Vera	L	8.50	1.25	680	65	✓	✓	✓				✓			Indonesia
	Organic Choice Lemongrass and Green Tea	L	5.50	1.10	500	65			✓				✓	✓		Australia
	Organic Choice Luxe Botanical Basil Lime And Mandarin	L	5.50	1.10	500	65			✓				✓	✓		Australia
	Palmolive Eco Coconut And Lime	L	2.50	0.50	500	65			✓							Australia
	Palmolive Gentle Care Mild Fragrance	L	2.50	0.50	500	65		✓	✓							Australia
	Trix Antibacterial Lemon Triple Action	L	2.95	0.30	1000	65			✓							Australia
	Earth Choice Undo This Mess Antibac with Citrus	L	4.50	0.50	900	65			✓	✓	✓	✓	✓	✓		Australia
	Woolworths Shine Ultra Pear & Peony	L	3.00	0.33	900	65	✓		✓	✓	✓					Australia
	Aldi Tandil Gentle Care Pure & Fresh Hypoallergenic Super Strength	L	2.69	0.30	900	60	✓	✓	✓	✓	✓			✓		Australia
	Coles Lemon	L	1.20	0.12	1000	60										Australia
	Ecostore Lemon	L	4.50	0.90	500	60		✓	✓			✓	✓	✓		New Zealand
	Ecostore Ultrasensitive	L	4.50	0.90	500	60		✓	✓			✓	✓	✓		New Zealand
	Koala Eco Natural Dish Soap Lemon Myrtle and Mandarin	L	13.49	2.70		60			✓	✓	✓	✓	✓	✓		Australia
	Morning Fresh 2-in-1 Dish and Hand Wash Violet And Blackberry	L	7.50	1.50	500	60	✓	✓	✓				✓			Australia
	Woolworths Shine Ultra Antibacterial	L	3.00	0.33	900	60	✓		✓	✓	✓					Australia
	Fairy Kitchen Lemon	S	6.00	1.33	500	55	✓									Vietnam
	Palmolive Antibacterial Lemon Fresh	L	2.50	0.50	500	50			✓							Australia
	Morning Fresh Ultimate Power Clean Spray Citrus Fresh	S	11.00	2.20	500	45										Australia
	Water only	L	0.00	0.00	na	45	na	na	na	na	na	na	na	na	na	na

IMAGE: GETTY



Smart brew

Wi-Fi apps can add convenience to your coffee brewing experience, just be aware of the information they're collecting, says **Kim Gilmour**

Think your morning coffee has escaped the 'smart home' treatment? Think again. Wi-Fi-enabled coffee machines can now conjure up your morning brew with a voice command, or save your drink preferences – like strength and temperature – on an app. Brands like Jura and DeLonghi offer apps for compatible machines and Miele's top-end models even let you turn the machine on and off remotely so you can make your

morning coffee without getting out of bed. While most automatic coffee machines we've reviewed aren't quite so internet-ready, we predict this feature will become more common in the coming years.

What happens to my data?

Whenever you download an app, you should always check the company's privacy policy to see what data may be collected, where it's stored (either locally on your device or remotely),

NEED TO KNOW

- Several manufacturers have Wi-Fi-enabled coffee machines.
- You can usually save your favourite drink profiles on the app and receive alerts when your machine needs maintenance.
- Some usage data is collected, so check the privacy policies before installing.

whether it's linked to your name or anonymised, how long it is kept and whether it's shared with third parties. The data collected by your coffee machine app could include statistics on error log files and location

information. Details about machine use might be shared with the manufacturer, or the data may only be transmitted via a direct Bluetooth connection between your phone and the machine – details should be outlined in the privacy policy.

Some permissions are usually required for the apps to run as intended, such as access to your photos if you want to add an image to your coffee ‘profile’, and error logs to help diagnose faults.

Privacy policies

While we haven’t reviewed the Miele@home app for coffee machines, it does have a clear privacy policy that outlines how people can consent to the collection of “appliances data” during the registration process or within the app. Such data could include interactions with the appliance’s interface, or appliance information (such as hours of operation). The information it collects is “pseudonymised”, which involves replacing your personal details with an alias to limit identification and meet European data protection requirements, which are stronger than existing Australian privacy laws. According to Miele, they use the information “to create internal reports in order to continuously optimise our products, systems and services”. Consent may be withdrawn anytime.

None of the automatic espresso machines we’ve reviewed need an app to function; all core capabilities and alerts (such as when the machine needs cleaning) are accessible using the control panels. If you’re concerned that a manufacturer might know too much about your caffeine habit, we think you can safely give the apps a miss and just focus on your brew. ▶

HOW WE TEST AUTOMATIC COFFEE MACHINES

Our experts, brothers David and Matthew Gee from Barista Basics and Anee Sampath of Samson Coffee House and BeanCraft coffee roasters, are part of our ‘blind’ tasting. They each get one full espresso shot from each machine, made by our in-house lab tester Adrian Lini, using freshly roasted premium beans. Each espresso shot is assessed for colour and thickness of the crema, aroma, flavour, mouthfeel and aftertaste.

EASE OF USE Adrian assesses the controls, fills the water tank and the bean hopper, adjusts the grinder, makes coffees to assess general programming and operation, and cleans inside and out to see how easy each machine is to use and maintain.

FROTHING MILK Adrian froths milk, looking for a fine, pourable froth. **COFFEE TEMPERATURE CONSISTENCY** After warming up each machine for five minutes, Adrian measures the consistency of four consecutive coffees.

If you’re concerned ... you can safely give the apps a miss and just focus on your brew



IMAGE: GETTY

ALL-ROUNDER



81% Jura E8 (EB) 15372

The E8 is one of the more popular products in Jura's range. It's a great all-rounder with an impressive taste test score. Features include an 'extra shot' function if you want a more intense coffee, an excellent digital display and easy-to-use, well-labelled buttons. Milk-based drinks can be made quickly and automatically with small, easy-to-pour bubbles and it can easily accommodate large cups. The E8 also delivers even temperatures when making successive cups of coffee. As well as the 'piano black' model we tested, it's also available in 'piano white' (15490) and 'dark inox' (15498).

TOP-END TASTE



81% Jura Z10 (INTA) 15423

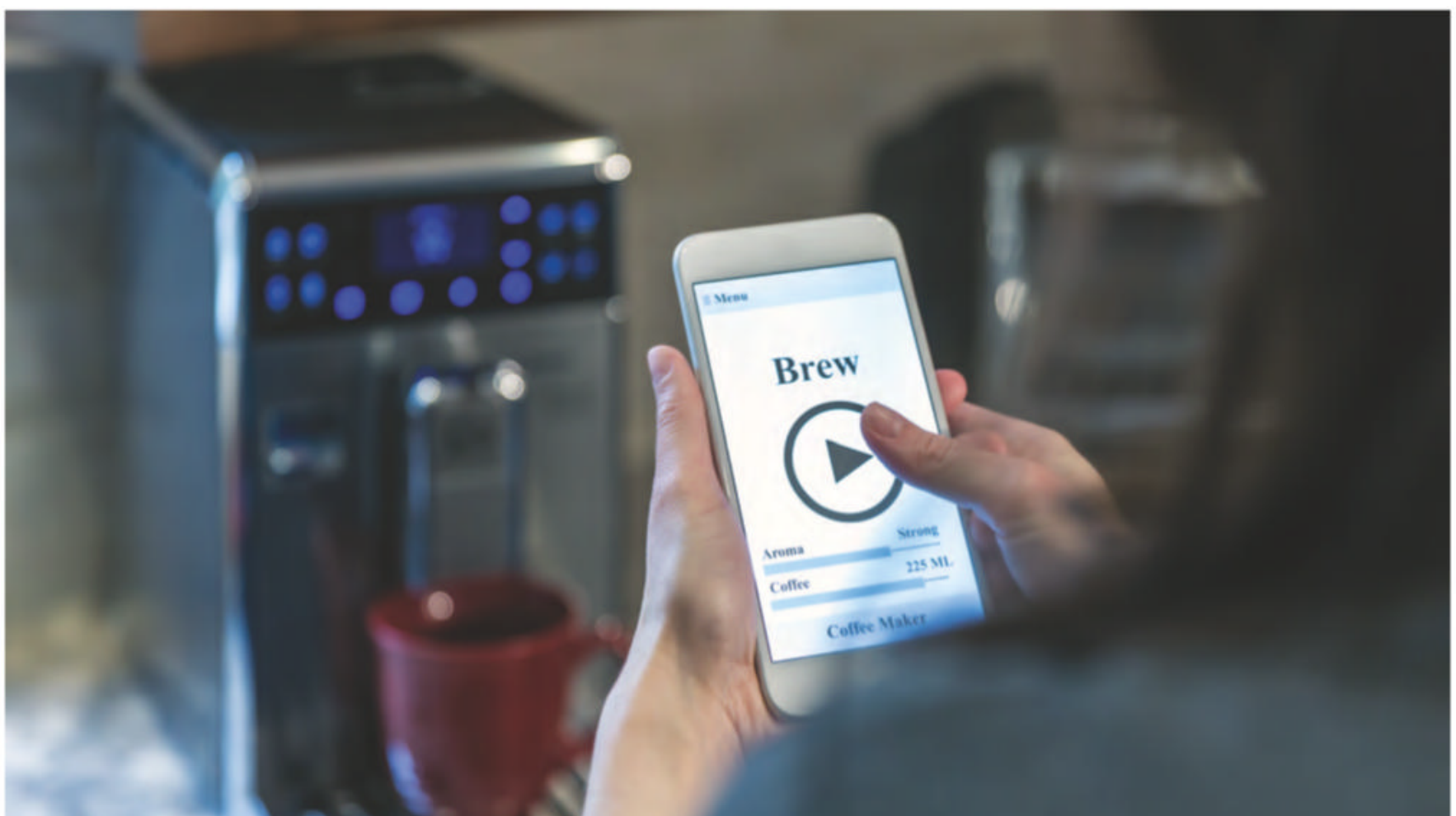
The Z10's very good taste test results are based on its espresso performance, but if you also like specialty coffees like cold brew, there are plenty of options to choose from. The system will adjust the grind depending on the beverage you've selected. You can customise the strength and water temperature if desired and save your favourite drinks to your profile. However, at \$4299 it's one of the more high-end coffee machines we've tested, so it's only for real coffee fans. A manual or semi-automatic coffee machine would cost far less if you don't mind getting a bit involved with your brewing process.

BUDGET BUY



80% DeLonghi Magnifica S ECAM 22.110.SB

This is a relatively affordable automatic coffee machine that delivered an impressive 85% taste test score. The great-tasting coffee might help you to overlook its ease of use, which is only OK, with a few notable pain points. For instance, the grinder fineness control is a little hard to adjust and you'll need to froth the milk manually (although the result is very good). It's also worth noting that when making two cups of coffee or a double shot, the result is a weak shot with a watered-down flavour.





Shop Ethical rating

BRAND	RATING
Beko	C
DeLonghi	D
Miele	B

NOTES: Other brands in our review not mentioned here don't have a Shop Ethical rating. For more on Shop Ethical ratings and what they mean, see p73.

Recommended	Price (\$)	PERFORMANCE							SPECIFICATIONS						
		CHOICE Expert Rating (%)	Taste test score (%)	Ease of use score (%)	Milk frothing score (%)	Coffee temperature consistency score (%)	Measured warm-up time min:sec	Milk frothing	Cup warming plate	Digital display	Water reservoir capacity (L)	Dimensions (cm, H x W x D)	Weight (kg)	Origin	
✓ Jura E8 (EB) 15372	2299	81	80	81	80	90	0:53	A	✓	✓	1.9	35 x 28 x 42	9.8	Switzerland	
✓ Jura Z10 (INTA) 15423	4299	81	80	88	80	60	0:58	A	✓	✓	2.4	36 x 32 x 46	12.5	Switzerland	
✓ DeLonghi Magnifica S ECAM 22.110.SB	849	80	85	69	80	70	1:10	M	✓	✓	1.8	35 x 24 x 43	9	Italy	
✓ Melitta Avanza Series 600 Type F 27 / 0-100	1099	80	85	80	70	50	0:39	A			1.5	35 x 21 x 46	7.7	Europe	
✓ DeLonghi Dinamica Plus ECAM 370.95.T	1699	79	80	79	70	90	0:40	A		✓	1.8	35 x 24 x 41	10.3	Italy	
✓ Melitta CI Touch F630-102	1599	78	75	81	80	90	0:53	A	✓	✓	1.8	34 x 26 x 48	10.3	Europe	
✓ DeLonghi Primadonna Soul with Latte Crema System ECAM610.75.MB	2099	75	75	81	65	80	0:43	A	✓	✓	2.2	39 x 26 x 45	13.1	Italy	
Melitta Caffeo Solo & Milk	1095	75	80	80	40	90	0:55	M	✓	✓	1.2	33 x 20 x 46	8.2	Europe	
✓ Jura S8	3250	74	75	74	70	80	0:50	A		✓	1.9	35 x 28 x 43	10	Switzerland	
✓ Jura S8 (INTA) 15443	2999	73	80	79	60	10	0:49	A		✓	1.9	35 x 29 x 45	10.5	Switzerland	
✓ Miele CM 5310 Silence Benchtop Coffee Machine CM5310	1599	73	75	86	60	30	0:48	A		✓	1.3	36 x 24 x 46	9.6	Switzerland	
✓ Melitta Caffeo Barista TS	2695	72	70	84	60	80	0:50	A	✓	✓	1.8	37 x 26 x 47	10.5	Europe	
✓ Miele CM7750	4199	72	75	84	65	10	0:55	A	✓	✓	2.2	42 x 31 x 44	14.3	Switzerland	
✓ DeLonghi Magnifica Evo Titan ECAM290.83.TB	999	71	70	75	80	40	0:37	A			1.8	36 x 24 x 42	10	Romania	
Smeg Bean to Cup BCC02	1349	70	65	70	80	90	0:50	M			1.4	34 x 19 x 43	8.2	China	
Melitta Caffeo CI	1749	69	65	83	60	80	1:00	A	✓	✓	1.8	35 x 26 x 48	9.5	Europe	
Philips 4300 Series EP4346	1199	69	70	85	60	10	0:59	A		✓	1.8	37 x 24 x 43	7.7	Romania	
Miele CM6360 MilkPerfection	2499	68	60	81	80	80	0:54	A	✓	✓	1.8	36 x 25 x 43	10.2	Switzerland	
Jura E6	1699	66	65	80	65	30	0:40	A		✓	1.9	35 x 28 x 45	9.6	Portugal	
Jura ENA 8	1899	66	70	81	45	20	0:35	A		✓	1.1	32 x 27 x 44	9.2	Portugal	
Gaggia Anima Deluxe SUP043P	1499	64	60	76	70	40	0:44	A	✓	✓	1.8	33 x 22 x 42	8	Italy	
Gaggia Magenta Plus RI8700 (SUP 051W)	1579	64	50	84	80	100	0:49	M		✓	1.8	34 x 22 x 42	7.5	Italy	
Philips 2200 Series EP2221	799	63	60	79	60	50	0:58	M			1.8	37 x 24 x 43	7.7	Romania	
Gaggia Naviglio HD8749	1029	60	60	76	45	40	0:55	M			1.5	36 x 26 x 41	8	Italy	
Beko Full Automatic Espresso Machine CEG5311X	569	58	55	69	70	10	0:26	M			1.5	31 x 18 x 41	7.9	China	
Saeco Royal OTC SUP060	1999	55	40	84	70	70	1:23	A			2.5	40 x 28 x 46	10.5	Romania	
Gaggia Anima Prestige	1599	51	40	80	70	10	0:45	A		✓	1.8	34 x 23 x 44	7.8	Romania	

TABLE NOTES Recommended We recommend automatic espresso machines with a CHOICE Expert Rating of at least 70%, at least 70% for the taste test and at least 55% for milk frothing. **Price** Recommended or typical retail price as of February 2023. **CHOICE Expert Rating** is made up of taste test (60%), ease of use (20%), milk frothing (15%) and coffee temperature consistency (5%). **Warm-up time** is the time taken to heat the machine to operating temperature (not scored). **Milk frothing V** Variable (no fixed settings), **A** Automatic, **M** Manual. ■

IMAGE: GETTY



Full surface cooking

How do induction cooktops with fully flexible cooking zones perform? **Rebecca Ciaramidaro** finds out

Induction cooktops are often praised for their superior cooking performance and fancy features. With fast heat-up times, the ability to respond immediately to changes in temperature and a sleek, easy-to-clean design, there are plenty of reasons to choose induction.

But induction cooktops also come with their challenges. You'll need to get used to a new way of cooking, make sure you have compatible cookware and carefully

If the layout is too cramped, you may find the cooking zones sit too close to the controls

select a model that not only cooks perfectly but also has a layout that offers maximum flexibility, allowing you to use pots and pans in a variety of shapes and sizes to cook up a storm.

The ideal configuration of cooking zones depends on the size of cooktop you need. For a 60cm cooktop, three cooking zones are ideal, four for a 70–75cm cooktop and five zones for a 90cm model. If the layout is too cramped, you may find the cooking zones sit too close to the controls. This can make them

NEED TO KNOW

- Our kitchen lab has tested a fully flexible induction cooktop for the first time.
- Flexi zones on induction cooktops offer flexibility but may not always provide even cooking results.

greasy and unresponsive to touch. Your pots and pans also need to match the dimensions of the cooking zones. Defined cooking zones are useful in this instance as they give clear visual guidance for the size of cookware required.

Fancy features

A useful feature that's becoming more common in newer models is automatic pan detection whereby the relevant setting controls will automatically light

up when a pan is detected. The **Haier HCI905FTB3** and **Miele KM7678F** from our latest test also have a convenient non-slip grip on the glass surface. This makes it less likely that pots and pans move or slide around when stirring. It also means you need to lift rather than slide cookware if moving it to a different zone – something to be mindful of if your pot is quite heavy.

Full surface induction

Flexi zones on induction cooktops aim to give you flexible options for where you place your cookware. It's not new technology – we've tested models with flexi zones before and noticed that sometimes not all areas of the flexi zone perform equally, with some uneven heating and cold spots.

Our kitchen lab has now tested a full surface (also known as fully flexible or zoneless) induction cooktop for the first time. The entire surface of this cooktop is induction, with none of the predefined or outlined cooking zones that we're used to seeing in standard models. The idea is that your pans can be placed anywhere on the induction surface allowing for maximum flexibility and a variety of pan configurations.

These models aren't cheap – the **Miele KM 7678 FL** we tested will set you back over \$6000. This 80cm model can accommodate up to six pots or pans, with the surface split into six cooking zones, each with their own touch controls.

Miele claims your pots or pans can be placed anywhere in the induction area of the cooktop, but in past testing we've found that not all areas perform equally well. Miele recommends you stick with the required size cookware, and states that pans with a base diameter between 100mm and 145mm

The idea is that your pots and pans can be placed anywhere on the induction surface

may not be detected in every position on the cooktop. We placed six pieces of cookware that met Miele's specifications on the cooking surface and found that the pans along the front of the cooktop appeared to take longer to boil.

When conducting our white sauce test with the saucepan on the bottom left corner of the cooktop, the sauce was cooked unevenly. We noticed the temperature was higher on the left half of the pan, causing half the pan to brown, with sauce sticking to the bottom. When we repeated the test with the saucepan in the back left corner, we found the sauce cooked more evenly, producing an excellent result. This suggests that the cooktop may not distribute heat evenly. ▶

How we test

Performance Our home economist Fiona Mair cooks different dishes using a range of heat settings. She cooks white sauce to test the cooktop's ability to work on low heat settings. She boils rice to assess the turn-down capacity, starting at a high heat and lowering to a simmer. She also cooks a vegetable and beef stir fry to test the high heat setting over a short period of time.

Ease of use Fiona checks the controls, their settings, positions, relation to elements, and whether you can easily determine which cooking zone is operating. She also looks at the size and type of elements, their positions, and how easy the cooktop is to clean.

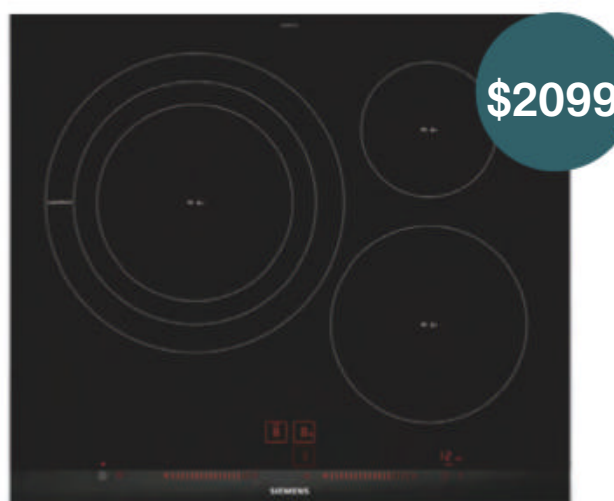


PERFECT COOKING PERFORMANCE



92% Miele KM 7200 FR

The three cooking zones on this 57.4cm cooktop are well positioned, meaning there's no crowding even when using all the zones at the same time. It can also fit large cookware, up to 28cm in diameter. However, there's no written labelling on the controls, so you may need the manual to understand the symbols initially. The framed area may trap residue but the touch controls are easy to wipe clean.



92% Siemens EH675LDC1E

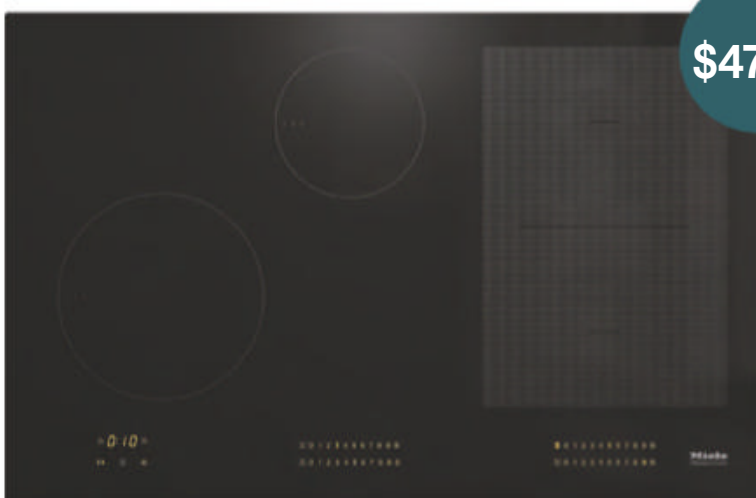
This 60cm model has an ideal layout, with three cooking zones that can be comfortably used at the same time. The large cooking area can accommodate large pots up to 32cm in diameter. It has touch and slide controls but no written labelling. This model comes with a five-year warranty, as opposed to the two-year warranty available for most other models.

Shop Ethical rating

BRAND	RATING
AEG	C
Ariston	C
Asko	F
Beko	C
Bosch	D
Chef	C
DeLonghi	D
Electrolux	C
Fisher & Paykel	F
Haier	F
Ikea	C
Miele	B
Neff	D
Siemens	D
Westinghouse	C
Whirlpool	C

NOTES Other brands in our review not mentioned here don't have a Shop Ethical rating. For more on Shop Ethical ratings and what they mean, see 73.

LARGER OPTIONS



91% Miele KM 7574 FL

This 80cm model has a flexi zone that can be used as two independent zones or as one large flexi zone. But be mindful that the flexi zone may not have even heat distribution. Each cooking zone has its own set of controls along with auto pan detection, which means the zone controls will flash when a pot is placed on the zone. It has a twin booster function for faster heat up, Wi-Fi connectivity as well as 'Con@ctivity' functionality, whereby a compatible rangehood reacts automatically to the settings on the cooktop.



91% Westinghouse WHI943BC

If you're cooking for a bigger family and have the kitchen space to install it, this 90cm model is a good option. It has four well-spaced cooking zones, each with separate controls. Be mindful that the large zone is positioned at the front, and very close to the edge of the cooktop. The controls have written labels (not symbols), which makes them easier to use. This model also has Hob2Hood technology, meaning if you have a compatible rangehood, it will automatically turn on when using the cooktop.

Recommended	Price (\$)	PERFORMANCE								SPECIFICATIONS									
		CHOICE Expert Rating (%)	Cooking performance score (%)	Ease of use score (%)	Simmer score – white sauce (%)	Turn-down score – rice (%)	High heat score – stir-fry (%)	Boil time (min:sec)	Auto heat-up	Keep warm	Power boost	Pause or stop/go function	Number of cooking zones	Flexi zones	Size (cm)	Installation dimensions (cm, W x D)	Warranty (years)	Origin	
✓	AEG IPE64551FB	2299	92	98	82	95	100	100	2:22			✓	✓	4	✓	60	56 x 49	5	Germany
✓	Miele KM 7200 FR	2199	92	100	80	100	100	100	3:57	✓	✓	✓	✓	3		574	56 x 49	2	Germany
✓	Siemens EH675LDC1E	2099	92	100	80	100	100	100	3:42	✓	✓	✓		3		60	56 x 49	5	Spain
✓	Westinghouse WHI633BC	1399	92	97	84	100	90	100	4:12	✓	✓	✓	✓	3		60	56 x 49	2	China
✓	Miele KM 7464 FL	2999	91	98	80	95	100	100	2:42	✓	✓	✓	✓	4	✓	62	60 x 50	2	Germany
✓	Miele KM 7574 FL	4799	91	98	81	95	100	100	2:32	✓	✓	✓	✓	4	✓	80	78 x 50	2	Germany
✓	Westinghouse WHI643BC	1599	91	98	80	95	100	100	2:18	✓		✓	✓	4		60	56 x 49	2	China
✓	Westinghouse WHI943BC	2299	91	98	80	95	100	100	2:26	✓		✓	✓	4		90	88 x 49	2	China
	Ikea BEJUBLAD	699	88	98	72	95	100	100	3:10	✓		✓	✓	4	✓	59	56 x 49	5	Italy
	Beko BCT603IG	1499	87	93	78	95	85	100	2:16	✓	✓	✓	✓	4	✓	60	56 x 49	5	Turkey
	Chef CHI944BB	1999	87	92	80	85	90	100	3:15	✓	✓	✓	✓	4		90	88 x 49	2	China
	Ikea HÖGKLASSIG	1099	87	92	79	100	100	75	2:34			✓	✓	4	✓	60	56 x 49	5	Germany
	Neff T56TS31N0	2099	87	95	74	95	90	100	3:41	✓	✓	✓	✓	3	✓	60	56 x 49	4	Spain
	Asko HI1655G	3099	86	93	75	85	95	100	4:50	✓ (B)	✓	✓	✓	4	✓	60	56 x 48	5	Slovenia
	Bosch PXE875DC1E	2799	86	93	76	100	100	80	4:00	✓	✓	✓	✓	4	✓	80	78 x 50	2	Spain
	Electrolux EHI645BE	1999	86	90	81	95	85	90	2:33	✓		✓	✓	4	✓	60	56 x 49	2	China
	Miele KM 7678 FL	6349	86	88	82	95	80	90	2:30	✓	✓	✓	✓	(C)	✓ (D)	80	78 x 50	2	Germany
	Asko HI1621G	1699	85	90	77	95	85	90	4:34			✓	✓	4	✓	60	56 x 49	5	Slovenia
	Ariston NIS 642 FB AUS	1699	84	87	80	95	75	90	2:39	✓		✓		4	✓	60	55 x 48	5	Italy
	Bellini BI604TG	515	84	90	75	95	85	90	4:10 (A)					4		60	57 x 50	3	China
	Bosch PXE651FC1E	2499	83	85	80	80	85	90	2:12			✓		4	✓	60	56 x 49	2	Spain
	Fisher & Paykel CI604DTB4	2099	83	85	81	95	85	75	4:14	✓	✓	✓		4	✓	60	55 x 48	2	Thailand
	Bosch PUJ611BB5E	1399	82	83	80	95	85	70	2:20			✓		3		60	59 x 49	2	Spain
	Euromaid IMZ64	1299	82	85	78	85	75	95	3:55		✓	✓	✓	4	✓	60	57 x 50	2	China
	Haier HCI905FTB3	1499	82	85	78	95	85	75	3:46		✓	✓	✓	5	✓	90	86 x 48	2	China
	Bosch PVS675FB5E	2099	81	83	77	95	80	75	4:04			✓		4	✓	60	56 x 49	2	Spain
	DeLonghi DEIND603	1199	81	82	79	100	70	95	2:53			✓	✓	3		60	56 x 49	2	Italy
	Fisher & Paykel CI604CTB1	1899	81	85	75	95	70	90	2:36		✓	✓		4		60	56 x 49	2	Thailand
	Euromaid IMZ96	1799	80	83	76	95	80	75	3:20		✓	✓	✓	6	✓	90	87 x 50	2	China
	Omega OCI64PP	698	80	85	72	80	75	100	4:05					4		60	56 x 49	2	China
	Smeg SI2M7643B	1990	80	78	84	85	65	85	2:33	✓	✓	✓		4	✓	60	56 x 51	2	Germany
	Beko BCT903IG	1799	79	82	74	80	90	75	3:54	✓	✓	✓	✓	5		90	88 x 49	5	Turkey
	Whirlpool ACM804BA	1049	78	80	76	85	65	90	3:35			✓		4		60	55 x 48	5	Italy
	Beko BCT601IGN	1499	72	68	78	90	55	60	3:06			✓	✓	4	✓	60	56 x 49	5	Turkey

TABLE NOTES Recommended We recommend induction cooktops with a CHOICE Expert Rating of at least 90%. **Price** Recommended retail, as of January 2023. **Scores** The CHOICE Expert Rating is made up of cooking performance (60%) and ease of use (40%). Cooking performance score is made up of simmer, turn-down and high heat scores (weighted equally). **(A)** No boost. **(B)** When using the auto cooking functions. **(C)** Up to six pans. **(D)** Full surface induction. Ventilation dimensions below and behind are not listed, as these vary depending on what the cooktop is being installed over – for example, cabinetry shelves, drawers or an oven. Check the installation manual or contact the manufacturer to make sure your set-up complies with the requirements before buying. ■



Stay smart about air quality

Smart apps are nice to have, but they don't guarantee good air purifier performance, **Chris Barnes** explains

Only a few years ago, air purifiers were a niche product in Australia, with many people hardly even aware of their existence. Now, as a result of terrible bushfires and then COVID, we are much more aware of the need to improve our indoor air quality. Many households now own an air purifier, and a number of major brands have also added air purifiers to their catalogues in recent years.

And like many home appliances, air purifiers are getting smarter — at least in the sense of including apps for greater convenience. However, they aren't necessarily getting better at

their main task of filtering pollution from the air. Our latest test adds another 15 models to our review, with new models from Mitsubishi Electric, Panasonic, Bissell and Coway joining the list of recommended models, and others proving just average (or worse).

The app can serve as a remote control and may offer other features

Data privacy

Of the 48 air purifiers in our current review, 18 have a companion app available. When you connect the air purifier to your home Wi-Fi network, the app can serve as a remote control and may offer other features, such as automating on/off times and settings for the purifier, or showing data such as the amount of pollution being

NEED TO KNOW

- Be aware of data privacy policies for air purifier apps.
- The most important feature to look for in an air purifier is a HEPA filter.

detected in the room. In some cases, the app allows control over multiple products from the same brand.

When deciding whether to use these apps, it's important to consider their data privacy and security policies. Look for clear statements about the brand's data policies, which should be available on the app store or on the brand's



website. They may collect location and personal user information for the purpose of analysing typical usage and improving the app and the appliance. They should state clearly that such data is encrypted and stored securely, not shared without your permission, and that you can control what data is collected.

While these apps can make the purifier easier to use, they don't necessarily improve its actual air cleaning performance. And if you're concerned about data privacy or any other aspect of these apps, you can skip them; they aren't necessary to operate any of these air purifiers.

How air purifiers work

Typically, an air purifier uses a fan to draw in air from the room and force it through a set of filters, which trap pollutants like dust, pollen, pet dander, smoke particles, various chemicals, mould spores and germs. The cleaned air is then blown back out into the room. Air purifiers usually have air quality sensors and other features to help them perform this task more effectively.

Filter types

HEPA (high-efficiency particulate air): The main filter in most air purifiers, and we recommend you don't buy an air purifier without one. It traps very small particles that are invisible to the naked eye. Generally, HEPA filters can trap at least 99.95% of dust, smoke, mould and other particles in the air, down to a tiny 0.3 microns in size.

Carbon or charcoal: Traps odours and volatile organic compounds (VOCs) such as formaldehyde.

Ionic or ionisation: Uses charged particles (ions) which attach to pollutant particles and break them down or make them drop out of the air. Ionisation of air can produce small amounts of ozone, which is an irritant to breathing; if you're susceptible to such irritation, it may be best to avoid ionisation purifiers. ▶

BEST OVERALL



\$999

87% Samsung AX7500K (AX90T7080WD)

One of the bigger units in our review, with big performance to match. It's the best overall performer, runs quietly and is very easy to use. It's the best we tested for removing dust and smoke from the air, though it isn't so good at removing VOCs, and its filter replacement costs are relatively high.

BEST FOR REMOVING VOCs



\$1730

74% InovaAir Airclean E20 Plus

This is by far the best in our test at removing VOCs from indoor air; if those are a concern for you, then put this air purifier on your shortlist. It's also easy to operate, and OK at removing dust and smoke. However, it's relatively expensive to buy, as are its filter replacements.

BEST BUDGET BUYS



\$599

73% Philips Series 2000i AC2939/70

These are the cheapest of our recommended models and are similar in performance to each other. The Philips is a little dearer, but has cheaper filter replacements than the Bissell. But if you don't run the air purifier often, the Bissell's higher filter costs may not be a concern. The Bissell is comparatively noisy on its low fan setting, which may be annoying at night in a bedroom. If you're after a cheaper model which is still an OK performer, the **Kogan**, **Kmart**, **Philips Series 1000 AC1215/70** and **Ikea Starkvind** models are worth a look.



\$549

71% Bissell Air320 3002F

About the rest

Our recommended models offer the best combination of performance and ease of use. Most of the other models in our test are at least reasonably effective and many are worth considering, but they simply don't match the performance of the recommended models. It's probably no coincidence that some of the lowest scoring models in the table are also among the smallest models tested; it appears that an air purifier needs a certain amount of fan power and filter surface area to effectively and quickly clean a large amount of air.

How we test

We test air purifiers for how well they remove three types of pollutants from the air: dust (we use titanium dioxide particles), smoke (from burning wood chips) and VOCs (acetone). Each unit is tested on its highest fan speed setting. Performance scores are weighted mainly for dust and smoke removal.

We also measure noise levels on low and high power, and how easy the purifiers are to use. This includes using the controls and the remote control if there is one, how easy the unit is to clean, and how clear the instructions are.

Shop Ethical rating

BRAND	RATING	NOTES: Other brands in our review not mentioned here don't have a Shop Ethical rating. For more on Shop Ethical ratings and what they mean, see p73.
Anko Kmart	C	
Beko	C	
Bissell	C	
Breville	D	
DeLonghi	D	
Hitachi	C	
Ikea	C	
Kogan	F	
Mitsubishi Electric	F	
Panasonic	F	
Samsung	F	
Sharp	F	
Sunbeam	F	
Xiaomi	F	

Ozone: Said to be good for removing odours, but at low levels it's been shown to be ineffective at removing air pollution, and at high levels it can cause breathing irritation. We recommend you avoid models that generate ozone.

Ultraviolet (UV): Can kill viruses, bacteria and mould spores. But UV light takes at least a few minutes to kill germs, and it's unlikely any germs passing through the air purifier will be exposed to the UV that long.

Filter cleaning and replacement

An air purifier may have multiple filters that need regular cleaning or replacement. It's more economical to wash and reuse a filter than to buy replacements each time, especially if you'll be using the air purifier frequently. Most pre-filters and carbon filters can be washed and reused multiple times.

HEPA filters are not usually washable and you'll need to factor in buying replacements. That said, you may be able to extend the life of the HEPA filter by gently brushing or vacuuming its surface to stop it clogging up with dust.

Some models have individual filters that can be replaced as needed. Others have an all-in-one filter cartridge, which can be more convenient, but may mean you're replacing the whole lot when only one of the filter types actually needs replacing.

Replacement filters can cost over \$200 a year, depending on how much you use the purifier and how much pollution is in the indoor air. If you're able to run the air purifier only occasionally (e.g. on smoky or high-pollen days), the filters will

last longer and your yearly costs will be lower.

Most air purifiers have a warning indicator to let you know when it's time to clean or replace the filters. Alternatively, the instructions might simply specify to replace the filters after a certain period of time, such as every six months.

Features and specifications

Air quality sensors measure and display the level of air pollution.

Fans draw in air and push it through the filters, then blow the cleaned air back into the room.

Apps and remote controls can be great for convenience, but note the data privacy considerations.

Clean Air Delivery Rate (CADR) is an industry standard measure of the volume of air that the purifier can clean.



TABLE NOTES Recommended We recommend air purifiers that score at least 70% overall. **Price** Recommended retail or typical retail price as of January 2023. **Annual replacement filter cost** Estimated cost per year for replacing filters, based on manufacturer recommendation and assuming best case for how long the filter is claimed to last. **CHOICE Expert Rating** is made up of performance (70%) and ease of use (30%). **Comparative energy efficiency** E Excellent, O OK, B Borderline, P Poor, **Noise** VQ Very quiet, Q Quiet, N Noisy, VN Very noisy. **Filters** O Optional. **(A)** 3–5 years for HEPA filter, 6 months for pre-filter, 1–3 years for carbon filters. **(B)** 12–15 months for HEPA filter, 3–4 months for carbon filter. **(C)** When alerted by unit. **Models in table with remote control:** Breville The Air Rounder Plus Connect LPH708WHT2JAN1; Kmart. Previously tested models with CHOICE Expert Ratings of 55% and below are left out for space. ■

Recommended	COSTS		PERFORMANCE									SPECIFICATIONS						
	Price (\$)	Annual replacement filter cost (\$)	CHOICE Expert Rating (%)	Performance score (%)	Ease of use score (%)	Dust performance score (%)	Smoke performance score (%)	VOC performance score (%)	Comparative energy efficiency	Noise assessment (high setting / low setting)	Pre-filter	HEPA filter	Charcoal filter	Ionisation filter	UV sterilisation	HEPA/charcoal filter change interval (months)	Wi-Fi app	Dimensions (cm, H x W x D)
✓	Samsung AX7500K (AX90T7080WD)	999	298	87	90	80	95	95	43	O	Q/Q	✓	✓	✓		6-12	✓	106 x 40 x 32
✓	Philips Series 3000i AC3033/73	799	50	80	80	80	81	83	65	O	N/VQ	✓	✓	✓		36	✓	64 x 29 x 29
✓	Blueair 3610	929	280	78	85	60	88	90	48	E	Q/VQ	✓	✓	✓		6		52 x 33 x 34
✓	Mitsubishi Electric E85R (MA-E85R-A)	1099	60	78	77	80	79	80	51	B	N/VQ	✓	✓	✓		96		55 x 42 x 24
✓	Sharp FX-J80J-W	749	75	78	77	80	79	82	44	O	Q/VQ	✓	✓	✓	✓	24		73 x 41 x 29
✓	Samsung AX5500K (AX60T5080WD)	799	149	76	74	80	77	79	35	O	Q/Q	✓	✓	✓		6-12	✓	78 x 37 x 32
✓	InovaAir Airclean E20 Plus	1730	224	74	72	80	69	69	95	P	N/N	✓	✓	✓		36-60 (A)		66 x 39 x 39
✓	Philips Series 2000i AC2939/70	599	46	73	70	80	73	74	43	O	N/VQ	✓	✓	✓		36	✓	58 x 27 x 27
✓	Panasonic F-PXU70M	989	134	72	69	80	72	74	35	O	Q/VQ	✓	✓	✓		24		56 x 37 x 28
✓	Winix Zero+ Pro 5 Stage AUS-1250AZPU	785	169	72	69	80	72	71	45	O	Q/N	✓	✓	✓	✓	12		59 x 40 x 23
✓	Bissell Air320 3002F	549	114	71	71	70	72	75	45	B	VN/VN	✓	✓	✓		6		65 x 37 x 22
✓	Coway 1516D Storm	1399	269	71	72	70	75	76	40	O	Q/VQ	✓	✓	✓		12		77 x 41 x 24
	Breville The Smart Air Plus Connect LAP508	599	100	68	63	80	67	70	10	B	VN/VQ	✓	✓	✓	✓	6-12	✓	53 x 27 x 27
	Winix Zero 4 Stage AUS-1050AZBU	670	149	68	63	80	66	66	31	O	Q/N	✓	✓	✓	✓	12		60 x 37 x 21
	Hitachi EP-NZG70J	899	18	67	66	70	72	71	17	O	Q/VQ	✓	✓			120		67 x 36 x 26
	Kogan SmarterHome 5-Stage 3S KASMTPRIFRA	200	280	67	61	80	63	65	34	P	N/VQ	✓	✓	✓	✓	3	✓	60 x 38 x 21
	Samsung X32 Essential AX32BG3100GBSA	399	119	67	66	70	69	69	36	O	N/VQ	✓	✓	✓		6-12	✓	50 x 35 x 23
	TruSens Z3000	549	128	67	61	80	67	67	10	P	VN/Q	✓	✓	✓	✓	12-15 (B)		73 x 26 x 26
	Kmart Anko KJ300GR-G1E	159	68	66	64	70	68	70	17	B	Q/Q	✓	✓	✓	✓	8-12		57 x 35 x 22
	Philips Series 1000 AC1215/70	218	130	66	56	90	59	58	31	B	Q/Q	✓	✓	✓		6-12		54 x 33 x 21
	Xiaomi Mi Air Purifier 3H	350	60	66	64	70	67	66	43	O	Q/N	✓	✓	✓		6-12	✓	52 x 24 x 24
	Ionmax ION430	489	276	65	63	70	66	66	35	P	Q/VQ	✓	✓	✓	✓	3		60 x 37 x 22
	Kogan SmarterHome 5 Stage 4S KAIRPRFR4SA	239	172	64	61	70	63	63	39	B	Q/N	✓	✓	✓		3	✓	50 x 27 x 30
	Coway AP1018F AU	530	140	63	60	70	62	62	37	O	Q/VQ	✓	✓	✓		12		64 x 38 x 18
	Ikea Starkvind E2007	199	90	63	60	70	65	65	17	O	Q/VQ	✓	✓			6	✓	53 x 51 x 19
	Ionmax Breeze Plus ION422	399	70	62	54	80	58	57	17	P	N/Q	✓	✓	✓	✓	6	✓	45 x 33 x 17
	Beko ATP 7100I	399	89	61	57	70	61	62	17	O	VN/Q	✓	✓	✓	✓	(C)		54 x 27 x 27
	Sunbeam Fresh Protect SAP1000WH	249	50	58	49	80	52	54	17	P	N/N	✓	✓	✓	✓	8-2		38 x 23 x 23
	Beurer LR310	400	200	57	47	80	52	48	17	P	Q/VQ	✓	✓	✓	✓	6		43 x 39 x 14
	Smartmi P1 ZMKQJHQPII	299	59	57	52	70	55	56	17	B	Q/VQ	✓	✓			6-12	✓	36 x 22 x 22
	Vornado AC350-(AU)	329	152	57	51	70	56	52	17	P	Q/Q		✓	✓		6-12		45 x 33 x 27
	Breville The Smart Air Connect Purifier LAP308	399	90	56	46	80	50	50	10	B	N/Q	✓	✓	✓	✓	6-12	✓	39 x 23 x 23
	Heller HAP120	300	60	56	50	70	53	54	17	P	Q/VN	✓	✓	✓		12		70 x 19 x 23
	InovaAir Airclean E8	875	132	56	50	70	49	46	75	P	Q/N	✓	✓	✓		36-60 (A)		52 x 32 x 32
	TruSens Z-2000	399	76	54	47	70	50	50	17	B	N/VQ	✓	✓	✓	✓	12-15 (B)		55 x 23 x 24
	Breville The Air Rounder Plus Connect LPH708WHT2JAN1	599	105	53	45	70	46	45	36	B	Q/N	✓	✓	✓		9-12	✓	59 x 27 x 25
	Air Purifiers Australia AD-06	239	116	43	32	70	34	33	17	B	Q/N	✓	✓	✓		3		34 x 21 x 21

IMAGE: GETTY



Who's that at the door?

Protecting your personal data is important, but there are other privacy laws to consider when using a smart doorbell, says **Peter Zaluzny**

A smart doorbell can be a great addition to your home security set-up. The ability to monitor, record and interact with visitors via audio and video lets you keep on top of all the comings and goings at your front door. Being able to do this at home, or while you're away, provides peace of mind all day long.

But some well-publicised security flaws have shown that these devices may not be all that great at protecting your privacy. That's just the start of it. You also need to consider the privacy of others when installing and using the doorbell to record interactions with guests – wanted or otherwise.

Though manufacturers should ensure that their products are safe to sell in Australia, much of the onus lands on you to set up additional security measures. You also need to make sure that your doorbell is operating within the privacy laws of your state or territory.

These devices may not be all that great at protecting your privacy

Are smart doorbells secure?

No, in the sense that any internet-connected device is at risk of being hacked. However, most brands claim to have robust security systems, such as data encryption (whether it's being stored locally or in the cloud) and other tools to stop unauthorised remote access. But these claims

aren't always accurate, as some incidents in recent years have shown.

The most infamous example was when hackers took control of Amazon Ring security cameras in people's homes. Last year, security researchers also found that Eufy was transferring unencrypted user data to their cloud.

While you can't do much to fix manufacturer issues like these, there are some additional steps you can take to help protect your data.

Protecting your privacy

Follow the usual online security rules. Use a unique, strong password, change it every few months and turn on two-factor authentication. Avoid common passwords like birthdays and pet names as these are easy to guess and don't require hacking tools.

Enable automatic updates, or regularly check and manually install them. These will patch vulnerabilities (among other things) that could otherwise be exploited.

Check the update policy and look for products that offer long support cycles – for example, “we guarantee security updates for five years after launch”. The longer the better because once this period ends, the doorbell could be vulnerable.

Finally, remember to mount the doorbell securely if you’re installing it yourself. You don’t want someone to come by and rip it off, especially if recordings are stored in the unit.

Do you need the cloud?

Cloud storage has its advantages. It’s an additional point of backup that doesn’t require extra investment in onsite storage like a hard drive, and it protects data from someone breaking in and physically taking it from your home. You can also access stills and video on the go if you need to. But it’s also an additional possible point of entry for cybercriminals.

Using the cloud means putting your faith in security claims made by the service providers. Large server farms that store the personal data of hundreds of thousands of users are a much more tempting prize for hackers than your hard drive at home. This alone may mean the cloud isn’t worth the risk.

Deleting old accounts

If a housemate, partner or family member has access to the smart doorbell, remember to delete their account and change the password when they move out. Otherwise they may still have remote access to the camera, microphone, settings and other functions.

Though most people are unlikely to do anything nefarious if you forget, there have been cases of partner

and family violence where smart devices have been used to harass victim/survivors, through spying or remote accessing and changing of settings, for example.

Protecting others’ privacy

States and territories have strict rules regarding the use of surveillance equipment for home security and recording and storing footage. Smart doorbells cover a lot of the same ground as they’re designed to be always on, used for surveillance, and are able to capture footage.

Laws vary depending on where you live, but it all comes down to consent between the parties involved and whether interactions are taking place in what could reasonably be considered private or public locations.

There are also important distinctions between what is considered intentional recording or surveillance, and content that is captured incidentally.

You have a responsibility to ensure that your smart doorbell doesn’t infringe on the privacy of others, including neighbours and visitors to your home. Contact the police in your area for legal confirmation if you have concerns.

VIDEO (aka optical surveillance)

Recording video is typically fine when the camera is installed on your own property and isn’t capturing or monitoring what could reasonably be considered a private conversation or location. So, in New South Wales for example, a doorbell capturing part of a public footpath is fine, but may be a problem if it can also see through your neighbour’s window. ▶



If you record a conversation with someone ... you must receive consent

AUDIO

This is where the law gets a lot more specific. Every state and territory, except Queensland and Victoria, requires consent from all parties involved to record a private conversation. This includes all devices capable of recording audio, even if it's not the device's primary function (such as a smartphone).

So, if you record a conversation with someone at your door via the smart doorbell, you must receive consent from them and provide it yourself, even if the recording happens on your property. However, exemptions apply if a recording is reasonably necessary for the protection of the lawful interests of a party.

SHARING CONTENT

Social media is full of "amazing incidents caught on camera". But you may want to think twice about uploading videos from your doorbell because that could be illegal.

NSW law, for example, states that it's illegal to publish "a private conversation or a record of the carrying on of an activity ... that has come to the person's knowledge as a direct or indirect result of the use of a listening device [or] an optical surveillance device..." Like audio recordings, there are exemptions if an offence has been committed, or if express consent has been given. Publishing is also permitted if there is implied consent.

But if your doorbell captures a delivery person carelessly throwing your package at the door, sharing the footage online may be a breach if the activity is considered private, so it's probably not worth the risk.

UP IN THE CLOUDS

77%

Google Nest Doorbell

Though this is the most expensive smart doorbell in our test, it justifies its price tag for the most part. Video quality is at the upper end of good and its audio quality is far better than any of the other models in our test. It also earned the best results in our privacy and security tests, though it's worth noting that Google doesn't provide any information as to where the storage servers are located. This is a bit of a problem as the Nest Doorbell doesn't have local storage – everything goes to the cloud. Even so, there's a lot to like here, including the option to use a battery or hardwired power, Google Assistant support, infrared lighting for night vision and IP54 weather resistance.

\$329



KEEPING IT LOCAL

69%

Eufy Wireless Battery Video Doorbell with 2K HD Resolution

This model fell just shy of a recommendation by one percentage point, but it's still worth considering if you prefer to use local storage rather than the cloud. However, you do need to buy the HomeBase2 unit (either separately or in a bundle) and connect it to your home network, as the doorbell itself doesn't have any onboard storage options. Like Google, Eufy isn't transparent about whether data is processed in the cloud and where, and the privacy policy couldn't be accessed in the app at the time of testing. However, Eufy has apparently resolved the encryption issues mentioned earlier. It has a lot of nice features otherwise, including 2K video support, activity zones, Google Home and Alexa support and IP65 weather resistance. The lack of infrared light, however, means it may struggle at night.

\$215





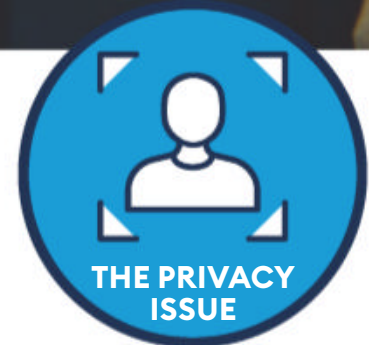
Recommended	Price (\$)	PERFORMANCE							SPECIFICATIONS										
		CHOICE Expert Rating (%)	Video score (%)	Sound score (%)	App score (%)	Install score (%)	Recharge score (%)	Privacy/security score (%)	Internal storage	Cloud storage*	Resolution**	Angle of view**	Dust/weather sealing claims	Activity zones	Human detection	Alexa	Google Assistant	Infrared light	Dimensions (cm)
✓ Google Nest Doorbell	329	77	79	70	90	70	60	79		✓	1280 x 960	145°	IP54	✓		✓	✓	16 x 5 x 3	Thailand
✓ Ring Video Doorbell 3	299	70	72	60	90	60	55	69		✓	1080p	160°	Weather resistant	✓	✓	✓		13 x 6.5 x 3	Vietnam
Eufy Wireless Battery Video Doorbell with 2K HD Resolution	215	69	76	50	90	60	60	63	✓ (A)		2560 x 1920	160°	IP65	✓	✓	✓	✓	14 x 5.5 x 3	China
Arlo Essential Video Doorbell Wire-Free	255	68	81	40	90	48	60	71		✓	ns	180°	Weather resistant	✓	✓	✓	✓	14.5 x 5 x 4	Indonesia
Ring Video Doorbell 2nd Generation	230	68	72	48	90	60	55	69		✓	1080	155°	Water resistant	✓	✓	✓		13 x 6.5 x 2.5	China
Eufy Wireless Battery 2K Video Doorbell Dual Cameras with Parcel Monitoring	245	67	79	35	90	60	60	63	✓ (A)		2560 x 1920, 1600 x 1200	160°, 97°	ns	✓	✓	✓	✓	17 x 6 x 3.5	China
Ring Video Doorbell 4	245	67	69	48	90	60	55	69		✓	1080p	160°	Weather resistant	✓	✓	✓		13 x 6.5 x 3	Vietnam
Orion Grid Connect Smart Wireless Video Doorbell	245	64	72	33	90	58	55	63	✓ (B)		1080p	140°	IP54				✓	13.5 x 5.5 x 4	China
Tmezon Smart Home Video Doorbell	190	63	66	48	80	60	55	63	✓ (C)	✓	ns	145°	IP65	✓				15 x 5.5 x 4	China
Swann Buddy Video Doorbell	215	57	63	25	80	58	55	63	✓ (B)	✓	1080p	180°	ns	✓	✓	✓	✓	14 x 6 x 3.5	China
Kogan SmarterHome Smart Doorbell 2 Pro	235	53	66	43	60	50	10	61	✓ (B)		2MP	145°	IP54			✓	✓	13.5 x 6 x 3	China

TABLE NOTES Recommended We recommend products with a CHOICE Expert Rating of 70% and above. **Price** Recommended retail or typical retail price as of January 2023. **CHOICE Expert Rating** is made up of video (30%), sound (20%), application (20%), installation (10%), recharging (10%), privacy and security (10%). *May require paid subscription. **Claimed. Eufy doorbell has two resolutions and angles of view for top and bottom cameras. **(A)** 16GB built into external HomeBase2 unit. **(B)** MicroSD, 128 GB maximum. **(C)** MicroSD. **na** Not applicable. **ns** Not stated. The Orion, Tmezon and Kogan products are battery-operated only, but all other models can be both battery-operated or hardwired to an existing powered doorbell. ■



Lock it down

Don't bother with a brain-dead bolt. A good-quality smart lock can improve home security, says **Peter Zaluzny**



Are you still opening your door with a key like some sort of caveman? A smart lock can turn this boring chore into the most exciting part of your day.

Smart locks can be controlled using a range of online and offline access options, including PIN (personal identification number), biometrics, geofencing and even smartphone apps that connect via Bluetooth. Smart locks also add security and monitoring features that can help keep your home safe. But like any online device, there are some risks you should consider before buying.

How do smart locks work?

'Smart lock' is a bit of a catch-all term for locks that don't use a key. We test models that have Bluetooth, Wi-Fi or both, as these wireless connection methods tend to fit with what consumers think of when they hear 'smart device'. Other unlock options include PIN, biometrics (fingerprint) and key fobs. Bluetooth or Wi-Fi connectivity gives you the option to use an app as a key, and features like geofencing or remote access. Some even have a temporary



access feature that grants single, or short-term, entry with a temporary code that expires after a set number of uses or a pre-set time period.

All of the smart locks in our test are AA battery-powered. They include a charge indicator, usually in the app, which you need to keep an eye on. If the battery dies, the lock will stop working and you may end up stuck outside waiting for a locksmith (unless it has a back-up keyhole lock). Some do allow you to power the lock from a power bank or smartphone via USB, but this isn't a longterm solution.



KEEPING THE KEYHOLE

Most smart locks include a traditional keyhole lock that's designed as

a handy backup in case you lose your phone, forget the code, if the batteries die or if the lock's smart features fail altogether. Keyless units can look sleeker, but you run the risk of being stuck outside in the worst-case scenario.

A locksmith might be able to open a keyless unit if you lock yourself out, but it can be difficult and time-consuming.

Most smart locks include a traditional keyhole lock that's designed as a handy backup



SECURITY FEATURES

All but the most basic smart locks include security and monitoring tools. They all auto lock after a certain period of time and offer access logs, which keep track of who has come, gone and attempted to enter. These features may need to be manually activated.

User accounts are a must if you live in a household with more than one person. The admin account has complete control while access can be restricted for other users. For example, an adult user could open the lock via an app whereas a child who is too young for a smartphone may only have the option for PIN entry.

Required tech

INTERNET CONNECTION

Although smart locks are generally Wi-Fi or Bluetooth-enabled, you can get smart locks that are able to function completely offline. However, networking adds extra features and functions that can help improve home security.

Bluetooth locks have an app with extra features and functions. Wi-Fi connectivity opens up remote access so you can receive updates in real time and control the lock when you're not home. However, this may require

a Wi-Fi bridge between the lock and your home network which increases the overall cost.

SMARTPHONE

All but a couple of models in our test require a smartphone during the initial set-up. However, most don't force you to keep using it to unlock the door unless you want to change certain settings. But you will miss out on a lot of extra features and security tools without a smartphone.

Buying the right lock

The easiest way to mount a smart lock is to find one that can use the existing holes on your door. Pay attention to the setback of the hole from the edge of the door, and the diameter of the hole for the lock to fit into. The two main types of traditional lock mechanisms are:

Deadbolt: A long, cylindrical bar that slides back and forth between the door and frame.

Latch: A spring mechanism with a smaller, triangular-shaped bar that fits into the frame.

If you match the fitting correctly, the traditional lock mechanism can be swapped out with a smart lock with little to no boring required. Meanwhile, the external parts of a smart lock, such as the handle or keypad, just bolt onto the door.

There are some exceptions, however. These are:

Barrel-only smart lock: A deadbolt tube that fits into the mechanism's cylindrical bore. They have a small footprint with no handle, screen, keypad or interface of any kind and can only open via an app.

Key turner smart lock: This type doesn't have an internal lock mechanism, it simply piggybacks onto your existing deadbolt or latch lock (on the inside of the door), and ▶

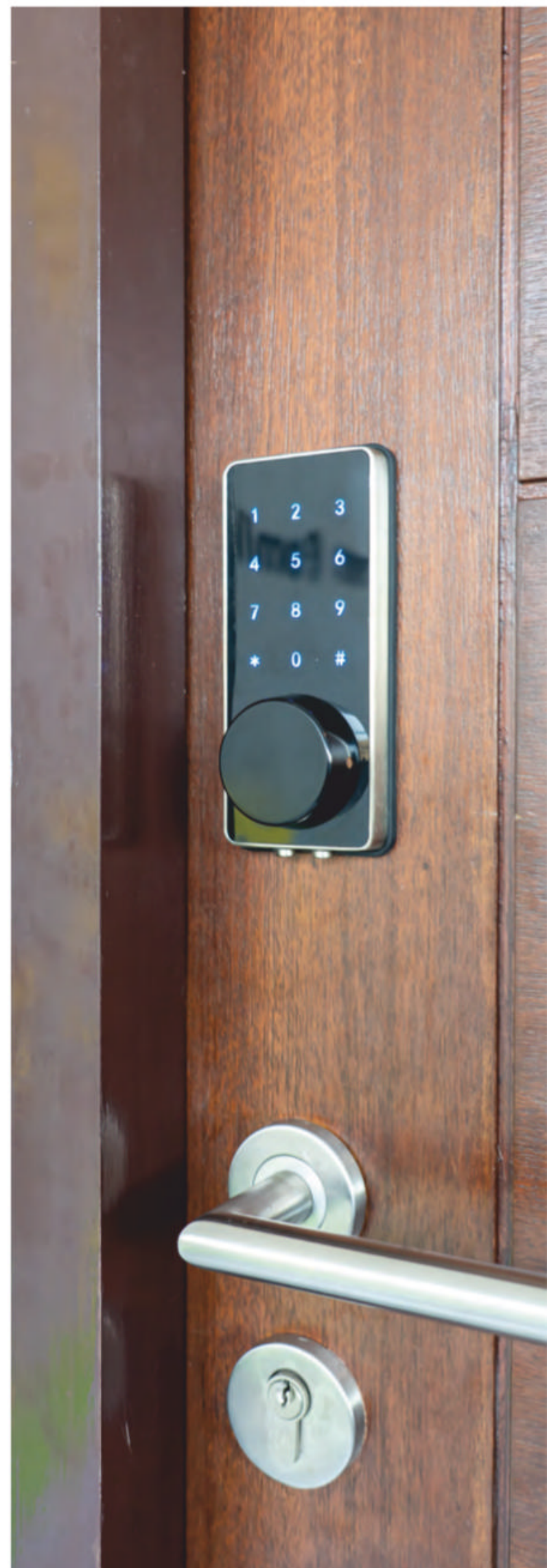


IMAGE: GETTY

is operated with an app. Requires minimal installation, but does need an existing compatible lock in order to work.

Mortice smart lock: An older lock design that houses the lock mechanism in a large rectangular block called a pocket. The mechanism can be a deadbolt, latch or both in some cases. Though you can replace a deadbolt or latch with a mortice lock, carving out the extra pocket space is a lot of work.

Protecting your privacy

There are risks involved when using a connected device of any kind, including smart locks. While you might assume hacking is only a risk for Wi-Fi-enabled models, Bluetooth can be compromised as well. But there are a few preventative measures you can take.



SECURITY SETTINGS

Most smart locks have one or more of these options available, though you typically need to activate

them through the accompanying app.

Anti-peep: Lets you add a random selection of numbers before and after the actual code to confuse anyone who may be watching.

Away mode: Emits an alarm and sends alerts to your phone during an unauthorised entry.

Lock mode: Disables access for all users except admins.

Lockdown mode: Disables access after a few failed entry attempts for a set period of time. The time can be adjusted.

You will also need to follow the usual security rules for smart devices, particularly Wi-Fi locks with remote access. Use a strong, unique password, enable two-factor

authentication, enable automatic updates and look for products that come with long support cycles.



BLUETOOTH

Bluetooth locks send data to and from a connected smartphone or tablet, to authenticate user details and open the door. Without proper encryption, hackers can grab information used to open the lock as it's travelling from your mobile device.

Unlike Wi-Fi, someone needs to be within range of the device to intercept data. Bluetooth has a clear line of sight range of up to 240 metres, depending on the version installed on the smart lock. It's up to the manufacturer to make sure that proper encryption tools are in place. But this information isn't always readily available for consumers. That's not to say your data is definitely at risk, but it is worth contacting the company if you have any concerns.



MANAGING OLD ACCOUNTS

Remember to delete old user accounts when someone moves out of your home and check one-time access codes to ensure that they have expired after use. You also need to disable remote access for former users and reset your administrator password, just in case.

Are they easy to install?

This all depends on your DIY skills, but installing a smart lock should be within the capabilities of most people who have access to YouTube and a basic tool kit. Key turners, in particular, are specifically made for easy mounting.

Deadbolts and mortice locks should be straightforward, as long as the required space has already been bored out, or you're replacing an existing lock. Any additional work on the door probably requires the help of a specialist like a locksmith, or a carpenter, particularly if you don't have much DIY experience.



DEADBOLT DOOR

79%
Eufy T8510T11



Our top scoring model is packed with a range of entry options including PIN, fingerprint and smartphone app via Bluetooth. Remote access is also available, but you need to buy the optional Wi-Fi bridge to access this and other networking features. It has a back-up keyhole and a micro-USB port for emergency power if the batteries die. While it has the best ease of use score in our test, we couldn't adjust the auto lock period despite this setting being available in the app – it just didn't work. You will need a phone to set things up, but after that it can operate offline and without Bluetooth if you'd prefer.

LATCH LOCK

73%
Orion DL031HA



Even though this model didn't quite get a recommendation, it's the top scoring latch model in our test and definitely worth considering if you don't want to use a deadbolt. Bear in mind, however, that it's as big as a mortice lock so installation may get quite involved, especially if you need to start carving out chunks of wood. The optional app isn't required during set-up, which is a plus, but connecting it to the lock opens up a bunch of extra features. You will need Wi-Fi connectivity to access these though, because this lock doesn't have Bluetooth. Back-up entry options include a keyhole and emergency power via micro-USB.

Recommended	Lock mechanism type	Price (\$)	PERFORMANCE						SPECIFICATIONS												
			CHOICE Expert Rating (%)	Ease of use score (%)	Unlock score (%)	Unlock range score (%)	Privacy and security score (%)	Bluetooth	Wi-Fi	PIN entry	Fingerprint entry	Key fobs included	App entry	Keyhole	Geofencing (auto-entry)	Remote access	Anti-peep	Guest access	Away mode	Door thickness (mm)*	Online account required for app
✓	Eufy T8510T11	279	79	82	78	80	61	✓	(B)	✓	✓	✓	✓	✓	(B)	✓	✓	✓	35–55	✓	China
✓	Schlage S1 C5	238	78	81	78	80	64	✓	(B)	✓		✓	✓	(B)	✓	✓	✓	35–55	✓	China	
✓	Ultraloq U-BOLT-SN V2.26	149	77	80	78	80	55	✓	(B)	✓		✓	✓	✓	✓	✓	✓	35–45	✓	China	
	Lockly PGD7YAZMB	200	73	73	78	80	55	✓	(B)		✓	✓	✓	(B)	na	✓		35–50	✓	China	
	Orion DL031HA	189	73	68	80	na	68		✓	✓	✓	4		✓	✓	✓		35–55	✓	China	
	Lemaar 59200GBLK	319	72	67	80	na	68		✓	✓	✓	2		✓		✓		33–50	✓	ns	
	Kogan KASHFNGDLKA	130	69	61	80	na	68		✓	✓	✓	2		✓	✓	✓		35–100	✓	China	
	Lane L520844	348	69	66	74	80	62	✓	(B)	✓	✓	2	✓		(B)	✓	✓	35–51	✓	China	
	Nuki Smart Lock 3.0 - Euro - INT 220799	319	68	68	71	53	78	✓	(B)				✓	(C)	(B)	na	✓	na		Romania	
	Samsung SDS SHP-DS705	235	66	62	74	53	79	✓		✓		2	✓			✓	✓	40–50		Korea	

TABLE NOTES Recommended We recommend products with a CHOICE Expert Rating of 75% or more. **Price** Recommended retail or typical retail price as of February 2023. **CHOICE Expert Rating** is made up of ease of use (50%), unlocking (30%), unlock range (10%) and app privacy and security (10%). Models without Bluetooth don't undergo the unlock range test. For these, the CHOICE Expert Rating is made up of ease of use (50%), unlocking (40%) and app privacy and security (10%). * Adjustable range supported by the lock. (A) Mortice lock. (B) Available with optional bridge. (C) Via existing lock keyhole. na not applicable. ns not stated. ■

IMAGE: GETTY



Secure sound

Improving your TV sound shouldn't come at a cost to your privacy. **Denis Gallagher** highlights the issues

Our listening panel results show that, with few exceptions, soundbars deliver better sound than that produced by your TV speakers. Simply plug the soundbar into your TV and whatever you're watching will generally sound better.

Is your device listening?

WI-FI PROS AND CONS

Wi-Fi support on a soundbar allows you to stream music at the highest quality possible through your wireless home network. But it also means there is yet another device in the home that is connected to the internet, often with various permissions enabled that you may or may not have explicitly given.

Most of the soundbars with Wi-Fi include direct support for voice assistance

(either through Google Chromecast, Alexa or sometimes Apple Siri). This means you can simply talk to the soundbar to play an album from your favourite music streaming service or podcast in much the same way as you would your smartphone.

If you feel uncomfortable knowing that your soundbar's mic is always listening for a command, you can either disable the feature on the soundbar or remove the device from your local network. Of the models with Wi-Fi connectivity, the JBL and Sony models require another device

Soundbars with Wi-Fi are among the worst performers when it comes to standby energy

(such as your smartphone or a smart speaker) to operate the voice assistant and this may be a better option if you're concerned about privacy at home.

Also note that soundbars with Wi-Fi are among the worst performers when it comes

NEED TO KNOW

- A smart soundbar may be handy for music streaming when the TV is off, but if you don't need Wi-Fi don't use it.
- Almost all soundbars will deliver a better audio experience than the sound you will get from a TV.

to standby energy, with all the models in the table scoring 40% or below for this assessment and more than half scoring 0%. This means they're drawing at least 2W even when the unit isn't doing anything.

BLUETOOTH SUPPORT

An alternative to having yet another device connected to the internet is to use Bluetooth (all models in this test have Bluetooth support) to stream your favourite music from your smart device, without the soundbar needing to be connected to the internet.

What is ARC and eARC, and which cable?

The simplest audio connection between a TV and soundbar is the

optical audio connection or Toslink. But while this is a handy connection, it can't deliver the highest quality audio.

The HDMI audio return channel (ARC) provides an automatic two-way transfer of audio between the TV and soundbar, as well as additional controls for volume and power via a single HDMI cable connection between the soundbar and the TV.

The latest HDMI 2.1 standard has support for the latest video formats such as 8K and even higher frame rates (good for gamers), as well as audio formats such as uncompressed 5.1 and 7.1-channel audio, including high bit-rate 3D audio formats such as Dolby Atmos and DTS:X. These higher quality audio technologies are very demanding and require an enhanced audio return channel or eARC.

Don't worry if you find that your TV is compatible with eARC, but your soundbar is only compatible with ARC. You'll still be able to listen to high-quality audio through your sound system. However, due to bandwidth limitations, you won't hear the full audio experience on offer.

Don't spend more than \$30 on HDMI cables for your soundbar or devices to connect to your TV. Look for the term 'HDMI with ethernet' in the model description for the best price and performance cable option.

Shop Ethical rating

BRAND	RATING	NOTES
Bauhn (Aldi)	C	Other brands in our review not mentioned here don't have a Shop Ethical rating. For more on Shop Ethical ratings and what they mean, see p73.
Denon	F	
Hisense	F	
JBL	F	
Kogan	F	
LG	C	
Panasonic	F	
Polk	F	
Samsung	F	
Sony	F	
TCL	F	
Yamaha	C	

BEST OVERALL



85% Polk Signa S2

The fact that this model is still widely available after several years supports our high regard for what must be the best priced performance soundbar we have tested. It doesn't support Dolby Atmos or DTS-X, but HDMI ARC makes it compatible with your 4K player and TV and should satisfy most of your requirements.

Our listening panel felt it did such a good job with the stereo separation that it felt like there was an additional height channel when assessing the movie audio.

At less than 6cm high, this is also a great soundbar for a TV that isn't wall mounted as it won't obstruct your view when in front of your TV on a table.

There's no Wi-Fi so it doesn't support music streaming services by itself, but Bluetooth lets you enjoy music directly from your smartphone, tablet or laptop. An auxiliary port also means you can plug in an iPod or other music player using a 3.5mm jack. The listening panel was impressed with the vocal clarity, the clear sound delivered when playing stereo passages, and the surprisingly good audio separation when listening to movies.

While the lack of smart features and support for higher end audio formats may point to a mid-priced soundbar, the overall sound quality delivers at a level much higher than the asking price.



81% Dali Katch One

While not cheap, this model impressed our listening panel with very good stereo quality and excellent performance for movie audio. There are multiple audio input options, two optical (Toslink) audio inputs, a 3.5mm auxiliary input connection and HDMI ARC support; making this a good option for use as a soundbar and as a premium speaker for music. The selection panel on top gives you easy access to the various sources, whether you're watching TV or listening to music on a CD player or on your smartphone via Bluetooth with aptX.

While not particularly heavy, at around 17cm high, the soundbar could obstruct viewing if placed in front of the TV. Ideally it should be placed below a wall-mounted TV using the funky leather straps or on a table using its wooden feet.

While the Dali Katch One costs more than four times as much as the Polk Signa S2, you do get a powerful sound, a striking design and loads of audio options. ▶

Recommended	COSTS		PERFORMANCE							SPECIFICATIONS													
	Price (\$)	Annual standby running cost (\$)	CHOICE Expert Rating (%)	Voice quality score (%)	Music quality score (%)	Multichannel listening score (%)	Ease of use score (%)	Remote score (%)	Standby energy score (%)	Subwoofer / rear speakers	Wi-Fi	Automatic room calibration	Dolby Atmos	DTS-X	HDMI inputs	Auxiliary input	Multichannel claim	Number of internal speakers	Soundbar dimensions (cm)	Soundbar weight (kg)	Subwoofer weight (kg)	Warranty (years)	
✓	Polk Signa S2	399	1.40	85	97	93	97	58	60	80	✓/–				0	✓	2.1	4	5.5 x 90 x 8.5	1.8	5.3	1	
✓	Dali Katch One	1499	1.20	81	92	83	92	61	60	80	–/–				0	✓	ns	10	16.5 x 86 x 9	3.7	na	1	
✓	Bose Smart Soundbar 300	599	6.50	78	83	90	93	61	50	0	–/–	✓			0		5.1	5	6 x 69.5 x 10.5	3.2	na	1	
✓	JBL Bar 5.0 MultiBeam	349	3.90	78	80	78	90	79	60	20	–/–	✓	✓	✓	1		5	5	6 x 71 x 10.5	2.8	na	1	
✓	JBL Cinema SB110	199	0.70	77	83	78	82	67	40	100	–/–				0		2	3	9 x 95 x 5.5	2.7	na	1	
✓	LG SN5Y	399	3.10	77	90	85	80	70	50	40	✓/–			✓	1		2.1	4	6 x 89.5 x 9	2.4	5.8	1	
✓	Samsung HW-Q930B (front speaker configuration)	1499	21.30	77	90	83	90	66	50	0	✓/✓	✓		✓	✓	1		9.1.4	8	6.5 x 111 x 12.5	5.4	9.8	1
✓	Hisense HS218	199	1.80	76	83	78	83	66	60	60	✓/–				0	✓	2.1	4	6 x 96 x 8.5	2	5.5	1	
✓	Bose Smart Soundbar 700	1050	3.20	75	83	84	80	61	70	40	–/–	✓	✓		0		ns	4	6 X 97.5 X 11	4.8	na	1	
✓	Denon DHT-S217	275	3.20	75	73	82	83	66	60	40	–/–			✓	1	✓	2.1	6	6 x 89 x 12	3.4	na	1	
✓	Hisense U5120G	599	2.20	75	73	72	87	78	50	40	✓/–			✓	✓	2		5.1.2	11	7.5 x 120.5 x 11.5	5	7	1
✓	LG SN4	349	3.00	75	87	78	80	70	50	40	✓/–			✓	1		2.1	2	6 x 90.5 x 9	2.1	5.3	1	
	Denon DHT-S316	495	1.40	74	85	83	73	65	30	80	✓/–				0	✓	ns	ns	5.5 x 90 x 8.5	1.8	5.2	1	
	JBL Bar 9.1 (rear speaker configuration)	999	10.00	74	77	77	87	70	60	0	✓/✓	✓	✓	✓	✓	1		5.1.4	9	6.5 x 92.5 x 12	3.6	11.1	1
	Panasonic SC-HTB700	599	1.20	74	85	75	76	68	50	80	✓/–			✓	✓	2		3.1	3	8 x 105.5 x 12	4.6	5.3	1
	Samsung HW-B650	599	5.10	74	87	80	80	69	50	0	✓/–				1		5.1	7	6 x 103.5 x 11	3.1	5.2	1	
	Sony HT-A5000	1399	3.80	74	77	80	77	77	60	20	–/–	✓	✓	✓	✓	1		5.1.2	9	7 x 121.5 x 14.5	6	na	1
	Yamaha YAS-209	499	5.80	74	90	83	83	62	50	0	✓/–	✓		✓	1		2.1	6	6.5 x 92.5 x 11.5	2.7	8.6	1	
	Klipsch Cinema 400	699	4.60	73	80	75	87	68	60	0	✓/–				0	✓	2.1	4	8 x 102 x 9	2.9	7.2	1	
	Monster MT-SB512DA	999	2.30	73	83	77	73	69	70	40	✓/✓			✓	1	✓	5.1.2	ns	8.5 x 96.5 x 11.5	3.4	4.2	2	
	Bose Smart Soundbar 900	1399	3.00	72	83	77	87	50	50	40	–/–	✓	✓	✓	0		ns	9	6 x 104.5 x 11	5.8	na	1	
	Sony HT-G700	595	2.80	72	73	66	88	70	50	40	✓/–			✓	✓	1		7.1.2	3	6.5 x 98.5 x 12	3.3	7.3	1
	Bose Smart Soundbar 600	799	3.30	71	77	77	80	57	60	40	–/–	✓	✓	✓	0		ns	5	6 x 70 x 11	3	na	1	
	Denon Home Sound Bar 550	799	7.20	71	90	80	80	61	40	0	–/–	✓		✓	✓	1	✓	4	6	7.5 x 65 x 12	3.3	na	1
	LG S75Q	499	2.60	71	60	78	80	70	40	40	✓/–			✓	✓	1		3.1.2	5	6.5 x 89 x 12	3.8	5.8	1
	Samsung Q600B	699	5.10	71	90	80	83	52	50	0	✓/–			✓	✓	1		3.1.2	9	6 x 103 x 10.5	3.8	5.5	1
	Sony HT-S400	449	3.30	71	77	72	80	67	60	20	✓/–				0		2.1	2	6.5 x 90 x 9	2.4	7.3	1	
	Yamaha SR-C30A	399	2.40	71	77	72	77	69	50	40	✓/–				0	✓	ns	2	6.5 x 60 x 9.5	1.3	5.5	2	
	Denon DHT-S517	745	3.50	70	70	83	77	56	50	20	✓/–			✓	1	✓	3.1.2	7	6 x 105 x 9.5	2.5	4.3	1	
	Samsung Q800B	1099	16.10	70	87	75	83	58	50	0	✓/–	✓		✓	✓	1		5.1.2	11	6 x 111.5 x 12	5.1	9.8	1
	Yamaha SR-C20A	279	1.10	70	70	68	73	70	50	80	–/–				0	✓	ns	3	6.5 x 60 x 9.5	1.9	na	2	

TABLE NOTES Recommended We recommend soundbars with a CHOICE Expert Rating of 75% and above. **Price** Suggested by manufacturers as of February 2023. **Annual standby energy cost** Based on 30c/kWh with the soundbar in standby mode for 19 hours per day. **CHOICE Expert Rating** is made up of stereo sound quality (40%), multi-channel sound quality (30%), ease of use (20%), remote control (5%) and standby energy (5%). **na** Not applicable **ns** Not stated. All models in the table support Bluetooth for audio playback using a smart device. All have ARC support using an HDMI connection, and all have optical audio as an alternative if you can't use HDMI ARC. The Yamaha and Dali models have two Toslink connections, and the other models in the table have one. However, not all models we've tested over the years include Toslink so check before you buy. All come with a wall mount except the LG SN4 and the Bose Smart Soundbar 900. The Bose and Panasonic models were made in Malaysia; the Samsung, Yamaha and Denon Home Sound Bar 550 models were made in Vietnam; and the rest were made in China. ■



Private practice

If you want to take your online privacy to the next level, it might be worth using a VPN, says **Steve Duncombe**

One of the best ways to protect your online privacy is to use a VPN (virtual private network). A VPN gives your devices a private, secure internet connection and allows you to get around blocked overseas websites. They're also good to use when you're on a public Wi-Fi network.

In a nutshell, a VPN helps keep your secrets – especially financial information – safe. A VPN encrypts any information sent and received by your computer so that it can't be intercepted and decoded, like

a secure 'digital tunnel' between you and your online destinations. It also routes your information through various servers so that it can't be traced back to you.

As far as websites can tell, you're at the location of one of many worldwide servers that your encrypted data passes through. This allows you to get around geographical restrictions or extra costs that can come from shopping overseas online. To the website you're visiting, it'll look like you're based at the location of the nearest server used by your VPN service. ▶

NEED TO KNOW

- A VPN service will help keep your online location and activity private.
- We recommend paid services over free ones – some free VPN services may be less secure, or you may be subjected to ads, slow speeds and other limitations.

Four reasons to use a VPN

1. To protect yourself from online identity theft while using a public Wi-Fi internet connection.
2. To maintain your privacy by preventing others having access to your online activities, location or identity.
3. To access content only available in other countries due to geoblocking, such as watching Hulu or BBC TV from outside the US or UK. We believe consumers should have the right to buy overseas products and content without geographical restrictions.
4. To get around bandwidth throttling, which is when your internet service provider (ISP) detects and de-prioritises certain types of internet traffic, such as torrent downloads or streaming video, and slows down your connection. Turning on your VPN prevents the ISP from detecting the type of information being transferred, so you should regain normal speed.



and you could be putting yourself at more risk than if you weren't using a VPN at all. Any free service has to make money somehow to keep it going.

A free service may be doing it 'on the cheap' and may not be able to afford to have their security as up to date as paid services. But even if they're on the up and up privacy-wise, you could pay in other ways through ad-riddled browsing, slow speeds and limits on data and time spent online. And if the service is free then maybe you're actually the product. They have to pay for their servers somehow, which could mean tracking information about your online activity to sell to third parties.

So if you're tempted to try a free VPN service, read the terms and conditions very carefully. But this is important even if you're using a paid service.

There are no 'standard' terms and conditions, and they'll vary from company to company.

BEWARE FREE MOBILE VPN APPS

An investigation into 150 free mobile VPN apps by Top10VPN.com in late 2018 (updated in 2021) found that 25% of them failed to protect users due to domain name system and other leaks, and 85% were found to have excessive permissions or functions, creating the potential for users' data to be manipulated or sold to third parties.

Simon Migliano, head of research at Top10VPN.com, said, "Every time you connect to a VPN, you're trusting the service provider to be responsible with your browsing data. This is why it's so critical that VPN companies publish enough information about themselves and their policies to allow consumers to make informed choices." He added that "while these findings show most free VPNs should be avoided, there are a handful of services that are perfectly legitimate".

The bottom line is that if your privacy is important enough to you to use a VPN, then it's important enough to pay for. Only use reputable services, and remember that the real price of a so-called free app may be paid in ways you wouldn't agree to if you knew.

How much do VPNs cost?

If you want reliable download speeds, support, easy set-up and the most features, the cost of a paid VPN is well worth it. Most VPN services will generally cost anything from \$5 to \$15 per month for an individual (not business) user, but choosing one based on the cheapest price isn't the best way to go.

While price can play a part in your final decision, where multiple services offer similar benefits, you need to look at how each provider meets your particular needs.

WHAT ABOUT 'FREE' VPNS?

Should you go with a free VPN service? For most people, the answer is probably no. Choose the wrong one



What a VPN won't do

With all this talk about how a VPN will secure your identity and protect you while online, it's worth noting what a VPN won't do.

IT WON'T SECURE YOUR HOME NETWORK CONNECTION

You still need to make sure your home router or mesh network is securely connected to the internet. Make sure encryption is turned on (the WPA2 setting is the best many are capable of, but the newest and best setting is WPA3), and use a strong password to stop others getting access to your network, using up your data allowance by piggybacking on your connection and possibly even getting access to your private information.

IT WON'T PROTECT YOUR COMPUTERS FROM MALWARE

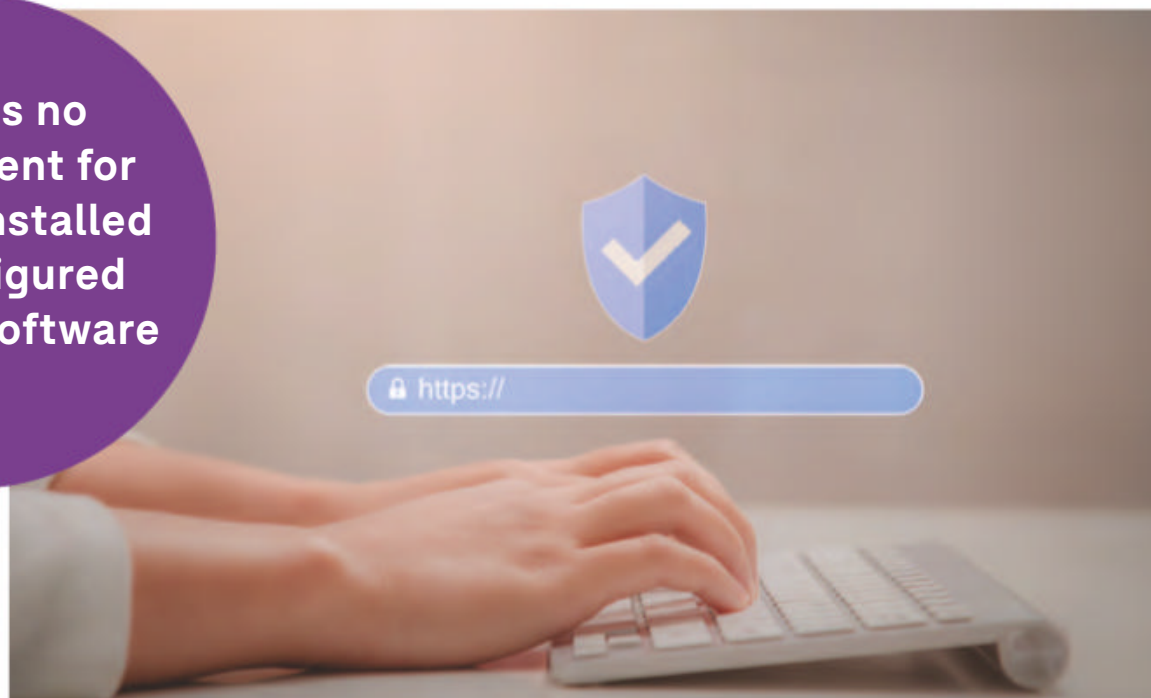
A VPN is no replacement for properly installed and configured antivirus software on your computer. That should always be turned on and kept up to date. Though some VPN services include antivirus checking in their list of features, this should be seen as an extra level of protection and should never be relied on for general protection.

Public hotspot danger

The explosive growth of public Wi-Fi hotspots is a boon for on-the-go consumers. It's also a boon for criminals who prey on unsuspecting customers using laptops and mobile devices with unprotected connections.

Free Wi-Fi is commonplace at cafes, restaurants, public libraries, airports, schools, ▶

A VPN is no replacement for properly installed and configured antivirus software



What to look for in a VPN provider

- **Wide support** via numerous servers in different countries.
- **Unlimited data transfers**, with no excess data usage charges.
- **Unlimited reconnections**, allowing you to connect as many times as you like.
- **Virtual location choice**, allowing you to choose a specific virtual location, like the USA or the UK.
- **Deep packet inspection protection**, preventing the identification of VPN data in transit by third parties (e.g. government, hackers, ISPs) using deep packet inspection methods.
- **Multiple OS support**, with programs and apps for operating systems across computers and mobile devices, including Windows, macOS, Linux, iOS, Android, and Windows mobile.
- **Privacy policy** – does the provider log and store any personally identifiable information about you? Providers may keep track of the number of connections to their servers and when they occur, for load-balancing and maintenance purposes, but shouldn't save logs of who you are and what you connected to. Check the provider's privacy policy carefully.
- **Online and/or phone support** for customer and technical issues, preferably 24/7 because problems can occur around the clock, and support services could even be in a different time zone.
- **Stealth tools** to prevent the VPN being blocked (see 'The VPN backlash', p70).
- **Ease of cancellation** has become particularly important in today's highly competitive market where huge discounts are routinely offered for new users. Joining a VPN service is usually easy, but some services make it a lot easier to sign-on than to opt-out. To discontinue some services you might have to cancel via PayPal separately, email the VPN service directly, or even lodge a support request. Ideally, a VPN service will give you the option of making a one-off, fixed-time purchase without activating a subscription. Not many do this, but some let you simply turn off (end) your subscription in your user management area on their website. Look for a subscription for a specified time (e.g. 1, 3, 6, or 12 months) rather than ongoing.

hotels and local businesses, and government and major telcos are getting on board as well.

This sounds great, but hackers can 'camp' at a popular Wi-Fi hotspot (or nearby within signal range) and 'sniff' your network traffic to see what you're doing. They can intercept any transmissions (i.e. email, web browsing) that aren't encrypted, possibly gaining access to your passwords and other private information.

For example, you should never use banking websites or apps at a public Wi-Fi hotspot without a VPN. How likely is it that your information will be intercepted at a hotspot if you don't use a VPN? Who knows? But is it worth taking the risk? Definitely not.

Isn't a VPN a piracy tool?

The short answer is no. The ongoing controversy around the streaming of overseas videos has put the spotlight on VPNs. Once the domain of business users and hackers, VPNs are now mainstream tools for everyone to use to protect themselves online.

VPNs are now mainstream tools for everyone to use to protect themselves online

VPNs are often mentioned in the context of getting around geoblocking, so that you can watch legitimate commercial online content which is otherwise restricted from viewing in your geographical area. Getting around geoblocking is not the same as online piracy, in which copyrighted content is downloaded without payment. Like torrents, VPNs are legitimate internet tools, but they can be used for legal or illegal purposes.

There are other ways to get around geoblocking, such as using a proxy service. However, this simply bypasses region checking and doesn't protect you by encrypting your data stream. Using a VPN hides your IP address for all your internet activities including browsing, email, instant messaging and VoIP (voice over IP) and encrypts all data.

Why hide your IP address?

A lot of online services know where you're connecting from as soon as you go online and they keep tabs on you from then on. This might add some convenience to your online shopping, social network posts or

even web browsing, but you should have the right to opt out of this tracking when needed.

There are numerous other reasons for wanting to hide your IP address, including:

- encrypting your information transferred over public wireless systems
- shopping overseas online to get around location-based artificial price inflation
- preventing anyone from tracking your web browsing
- leaving no digital footprint of your identity, whereabouts and online browsing and activity
- getting around bans or blacklisting of your IP address
- getting around censorship filters and government snooping that in some countries can put you at risk of losing your job, your freedom or possibly even your life. A VPN can help you communicate with the rest of the world in a way that can't be traced back to you.

The VPN backlash

The rise in popularity of VPNs prompted a backlash of sorts, with some websites blocking them so that you can't access the site if you're using a VPN.





This sort of traffic blocking forces people to abandon the safety of the VPN or not use the website.

There's also the case that you might not be blocked outright – perhaps your internet connection is running slowly because it's being 'throttled' by your ISP. This throttling of your speed can be imposed by an ISP simply because you're using a VPN. Fortunately, there's a way around it.

Many VPN services now include the option of using so-called stealth technology in their product (though it may not be actually labelled as such). Stealth tools can disguise your VPN traffic as regular web traffic, even when subjected to deep packet inspection.

Most commonly, stealth tools disguise VPN data packets as regular HTTPS traffic. Because HTTPS connections are often used for secure transmissions including passwords, credit card numbers and more, they don't get blocked. Stealth mode can impose extra overhead on traffic, so use it only if required.

If you can't access certain websites when you're using a VPN or if you suspect your traffic is being throttled, turn on stealth mode (if you have it) and see what difference it makes.

What happens to your metadata?

The information that VPN services track is always a hot topic, especially since data retention laws came into effect in Australia. Under those laws, telecommunication and internet providers must hold onto communications metadata for all customers for two years.

Metadata includes information about when, where, how, what, from where and to whom it was sent. It doesn't relate to the content of the communication, so the body of an email, the details of a text message, all the content on webpages and phone conversations are not considered metadata. However, metadata gives away certain information that can give insight into communications, which is why law enforcement agencies want it stored. Critics say the system can be open to abuse.

VPN providers know users want privacy and most will state that they don't log personal information.

However, they will admit that they need to record certain non-personal connection information for a time so that they can provide a good service. This can help them track peak demand times, for example, so that they can balance the load on their servers to work more effectively. Again, you

should check the fine print of your VPN provider and query them specifically about any concerns.

Laws that affect the handing over of user information to the authorities vary from country to country.

A legal requirement for a provider in one country may not necessarily be the same in another country. But no matter where you are, just using a VPN is unlikely to provide you with much protection if you're suspected of criminal activity. VPNs can help protect your right to legally access goods and services online, but CHOICE does not endorse or condone the use of VPNs for any illegal activity. ■

VPNs can help protect your right to legally access goods and services online

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* Indicates a correction or clarification (see Checkout).



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RATING	KEY
A	Praises, no criticism
B	Some praise, no criticism
C	Praises, some criticism
D	Criticism, some praise
F	Criticisms



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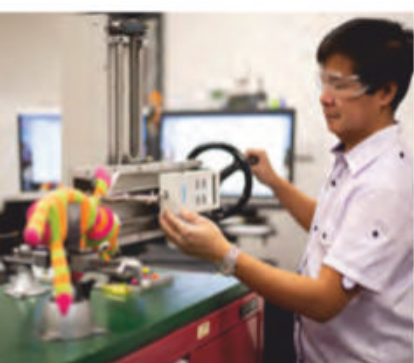
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**NEXT
MONTH
REUSE
& REPAIR**
Out with the new,
in with the old



Second chance

How, when and where to buy used whitegoods & electronics



New uses for old tech

Don't ditch your old iPod, phone or tablet just yet



Meal extenders

Kitchen appliances to breathe new life into leftovers

Plus Simple phones, freezers, robot vacs, headphones & more

SAME SAME, BUT DIFFERENT

So you CAN improve on the original?



HARD WORD

Our long-serving rogues' gallery of dodgy ads, toe-curling typos and misadventures in marketing, as sent in by you – our tickled, angered and bewildered readers. And thanks to the timeless shonkiness of so much advertising, you're always spoilt for choice – so keep 'em coming. Email high-quality unedited photos to hardword@choice.com.au. This month, thanks go to Mal Cockburn (Sprung! Another leek), Mark Harvey (Roped in), Mikey Hillyer (Udderly obvious) and Rod Ziems (Same same, but different).

Compiled by Daniel Wynne

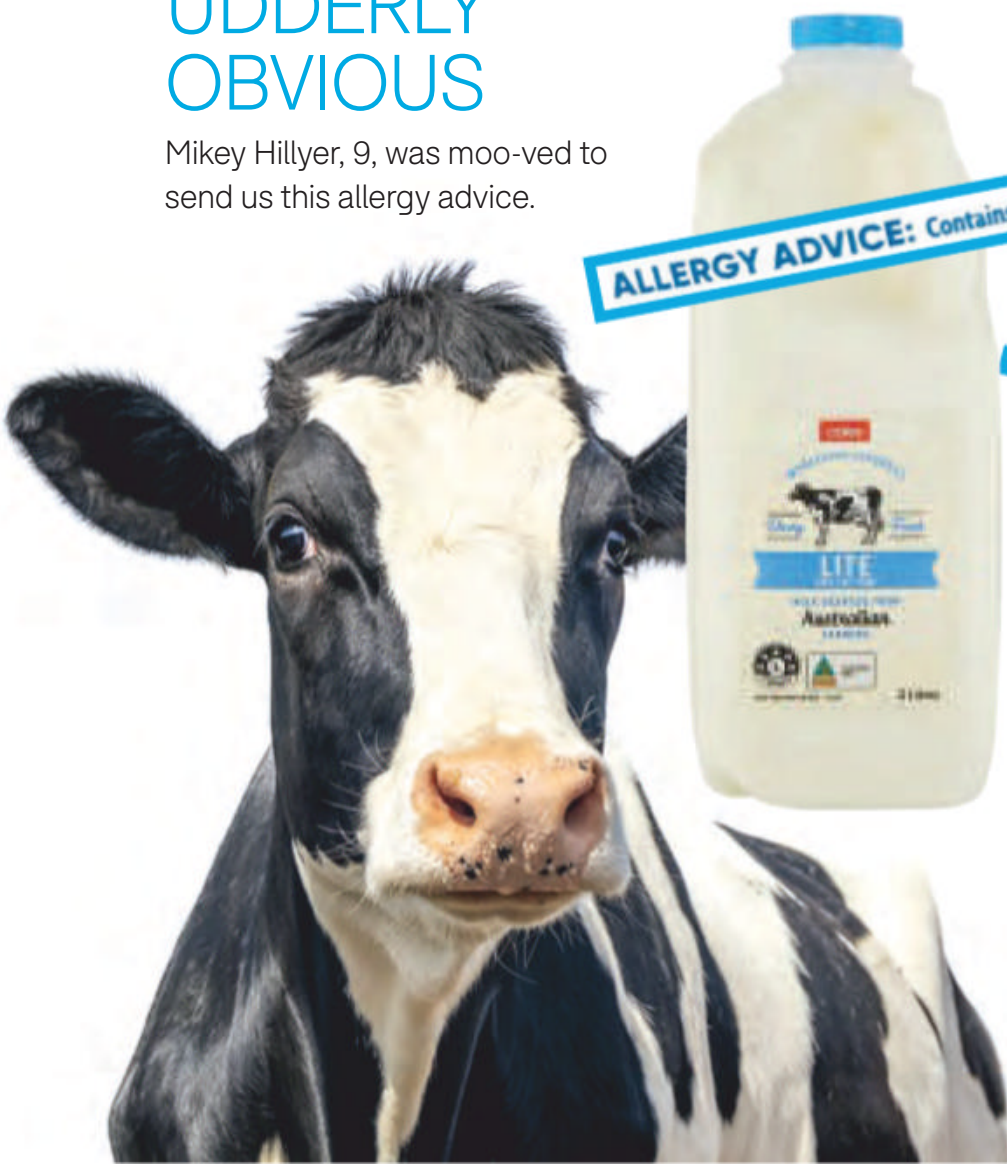


ROPED IN

This rope is not as multipurpose as initially thought.

UDDERLY OBVIOUS

Mikey Hillyer, 9, was moo-ved to send us this allergy advice.



SPRUNG! ANOTHER LEEK

Is this a case of "one, two, many"?

