

4X4 CULTURE

4x4 Adventure | Travel | Lifestyle

Issue 50



Celebrating 50 Issues



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It really doesn't seem that long ago that I sat down with one of my colleagues, Debbie Kaye, and the two of us discussed the concept of producing an in-house magazine at ARB.

That conversation took place fifteen years ago, a time when disseminating information was far more challenging than it is today, given that business websites were clunky or non-existent and social media platforms like Facebook were unheard of. Devices like iPhones and iPads had not yet been invented, not surprising given that there was no web content worth viewing on them at the time.

Companies like ARB were reliant on more traditional means of communication such as print and TV advertising, which meant the success of any new product launch at ARB was highly dependant on how many advertising dollars we were prepared to throw at it. This was also a period where our company witnessed strong growth as our product line expanded through increased engineering resources and manufacturing capability. We really felt that what was needed was a regular customer communication method that gave details on new product activity at ARB, and provided a behind the scenes insight into the requirement, vision, and expertise that went into the development of products at ARB.

In a nutshell, we wanted to provide a window into all of the action that was happening at ARB, and so "ARB 4x4 Action" was born. While the original directive of providing comprehensive product information remains to this day, as ARB has grown, so too has our magazine. We've introduced material such as travel articles, bush cooking recipes, tips for 4wheeling with dogs, advice on trip planning and taking a beautiful photo. Rather than actively going out looking for content, in most cases we've been approached by specialists in their respective fields such as Ron Moon (4WDs), Al McGlashan (Fishing), Ken Duncan (Photography) who have wanted to be part of ARB 4x4 Action.

The magazine has served as a means of alerting folks to proposed nanny state legislation that governments have attempted to introduce that would hamper our ability to go four-wheel driving, and on a brighter note, has been used as a platform for numerous charitable organisations that have a close affiliation with recreational four-wheel driving.

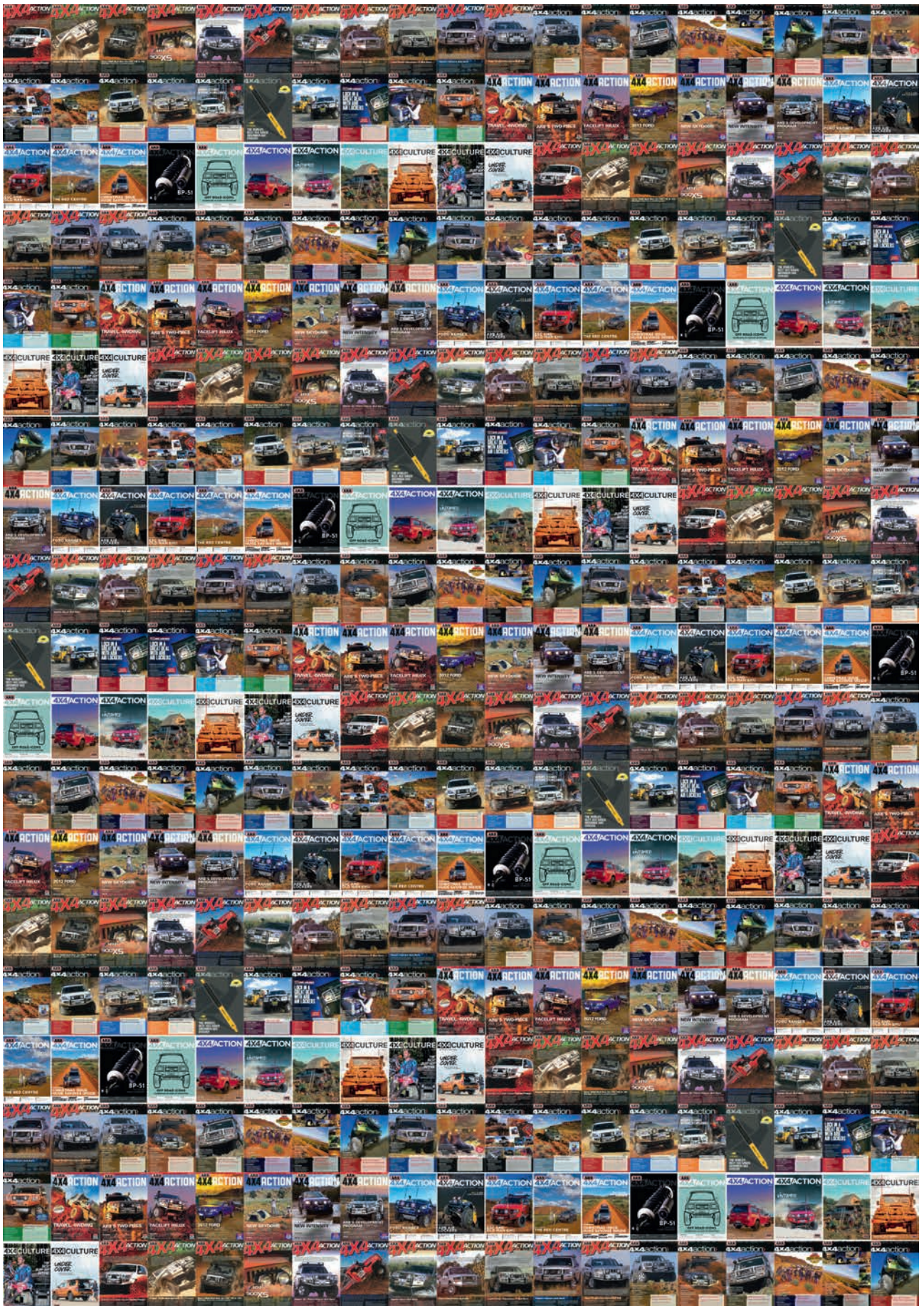
What started out as a publication about 4WD vehicles and accessories, has evolved into a magazine covering topics like camping, cooking, fishing, hiking, clothing, boating...You name it, we've featured it.

It was the current editor, Jess Vigar, who chose to rename the magazine ARB 4x4 Culture in recognition of what the publication had become... A celebration of everything 4x4 related.

Despite repeated offers, we've declined all forms of advertising over the years, choosing to keep the mag purely as an information source for our customers. While the magazine is viewable online, we've also chosen to continue to offer customers a paper copy of the publication. We've been approached by overseas printing companies offering us cheaper deals, but continue to have the magazine produced in Australia by the nation's first printer to achieve ISO14001 Environmental Certification.

Even though ARB 4x4 Culture is seen by hundreds of thousands of people each issue, we never actually set out to be a publisher. It came about through a bunch of enthusiastic staff at ARB who wanted to share the passion and expertise the broader team here have for everything off-road.

We hope you enjoy this 50th edition as we reflect back on some past issues and introduce some cutting-edge new products for the future.



TOTAL CONTROL



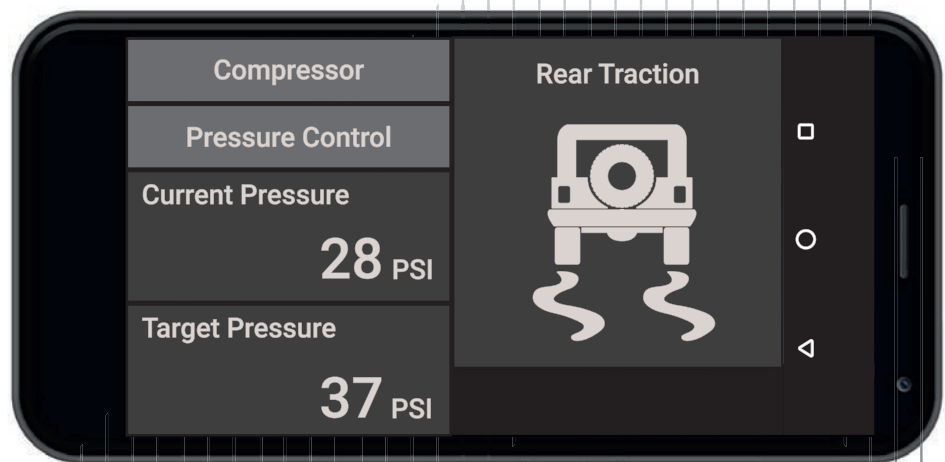


The all-new ARB LINX gives drivers total control over a variety of vehicle accessories and systems via a single dash-mounted mobile touchscreen display.



ONE DISPLAY ONE CONTROLLER

ARB has developed a revolutionary new system called LINX that integrates seamlessly with your vehicle, offering total control over a wide range of accessories via a compact mobile touchscreen display.





The LINX system provides drivers with fingertip control over vehicle accessories including front and rear Air Lockers, air compressor, driving lights and air suspension, as well as providing valuable vehicle information such as battery status and a GPS speedometer.

With LINX, accessory controls are consolidated onto one central device, decluttering your dash by negating the need for separate accessory switches. This simplifies accessory control and eliminates the need to drill holes throughout your vehicle's cabin to install various accessory switches.

There are two main components to LINX: a mobile touchscreen display that is mounted on the vehicle's dashboard and an out-of-sight controller.

"The LINX has a controller, which is an onboard computer that mounts under the dash on most vehicles, or under or behind the seat or wherever it's convenient," explains Daniel Bongard, ARB Senior Designer and Engineering Supervisor. "You don't actually see this component but it is wired to all of the vehicle accessories that it controls.

"And then there's the touchscreen mobile display that's mounted on the vehicle dash and connects to the controller via Bluetooth or USB, allowing the driver to take control of vehicle accessories."

The controller and the mobile display share sensor data so the system is aware if the vehicle's lights are on or off or if the high-beam lights are on or if the vehicle's ignition is in the accessory (ACC) position. The mobile display also has a built-in GPS so it can determine vehicle location and speed, and this allows the controller and display to share sensory data back and forth to make decisions about what to do with the vehicle accessories.

"The touchscreen mobile display looks similar to a mobile phone or tablet, but we've re-engineered how it works to take control of the operating system and show what we want it to display," says Daniel. "We've even increased its temperature resistance so it will keep working in a very hot vehicle, and in very hot climates like Australia, where other electronics would usually shut down."

Target pressure is possibly the easiest way to inflate and deflate your tyres.



Modules

LINX is currently provided with seven pre-installed modules. They control front Air Locker, rear Air Locker, air compressor, switchboard (for control of lights, etc.), a battery monitor, a GPS speedometer/positioning module and an air suspension control.

Using the Front and Rear Traction module, the driver can independently turn front and rear Air Lockers on and off as required.

"The Front and Rear Traction module, or diff lock module, is quite straightforward," says Daniel Bongard. "Select the module and you'll see that you can independently lock the front and rear diffs.

"You can set it up to operate the front diff separately or you can select 'Front Axle Second', which is how we normally wire up diff lock switches for safety, meaning that the front diff lock is not available until the rear diff is locked."

When Air Lockers are activated, the LINX system will automatically detect if there's a demand for air and activate the air compressor when needed.

For vehicles fitted with traditional Air Locker switches, there's an option to select "External Lock Switch Installed", which allows the drivers who are used to reaching for these switches to engage the Air Lockers manually when desired.



Compressor Pressure Control

The manual control for the air compressor through the LINX display is a simple on or off, as would be the case if you had a switch situated on the dash. The Compressor Pressure Control module, however, adds much more functionality.

"The air compressor is simply on or off because it basically replaces the air compressor switch you used to have on the dash," explains Daniel. "But what we're really proud of is a module add-on that's called 'Pressure Control', which allows you to set target pressure."

Target pressure is possibly the easiest way to inflate and deflate your tyres. Simply attach the air hose to the tyre valve and the current tyre pressure will be displayed on LINX, which can be viewed in either full- or split-screen view simply by double-tapping the screen. You can then set the target pressure by typing in the desired pressure and LINX will either inflate or deflate the tyre to that selected pressure.

"If you want to drop tyre pressures to go off-road, you just set the required pressure on the touchscreen interface and LINX will deflate the tyres," says Daniel. "Deflation is not as fast as using an E-Z Deflator because it's still got a Schrader valve in there, but the great thing is you can walk

around, set up your camp, have a beer or do whatever you want to do while the tyre is deflating, and with the pressure displayed on the screen nice and big, as soon as it gets down to 18psi it will change from a grey to a black background and you can easily identify that it's done."

Options within this module allow the user to set a maximum pressure to prevent over inflation of tyres or other devices and there's an option to "Disable When Engine OFF", which prevents the compressor from operating when the vehicle's engine is not running. This prevents the starting battery from draining or the compressor from stalling and blowing fuses when trying to start on a depleted vehicle battery.

Compressor Pressure Control also allows for accurate inflation of items other than tyres. "We spent a lot of time on this algorithm," says Daniel. "It works not only on 4WD tyres but things like tiny bicycle tyres with a very small air volume, you can even set 8psi for a basketball if you want. It's very sensitive... when the air hose is attached to a device, the first thing LINX does is measure the volume of the device by the fill rate and then it readjusts the fill algorithm to suit the size of the device that it senses is there."

Accessory Switchboard

The Accessory Switchboard module can be viewed in full- or split-screen displays by simply double-tapping the screen. In this module, LINX can display up to six switchable accessories, all of which can be personalised and named. These might include driving lights, light bar, reverse lights or other accessories. In addition, operation of these accessories can be tailored to suit the user's preferences so they can be set to be triggered by the ignition, low beam, high beam, reverse selection or set to manual operation.

"In Switchboard you can assign a personalised name to accessories," says Daniel. "There are up to six accessories you can personalise, so if you want to control your reverse lights, for example, you can call this setting 'Reverse' and you can see that they're hooked up to the vehicle's secondary battery."

"If, for example, you have two Intensity LEDs fitted, you've got accessory automation selections so you can automate those driving lights to come on when you put your high beams on. Or you can turn those automation selections off to say, 'Don't come on with the high beams.' Instead, you could say you want them on every time your low beams are on or you could have them come on whenever you have your reversing lights on, for whatever reason. You could even have them come on any time the key is in ACC position."

The Accessory Switchboard module also allows the user to protect the battery by selecting "Low Battery Protection" for various accessories, which will ensure the accessory is switched off if battery voltage drops to a certain level. If the vehicle has more than one battery, the user can choose between up to three batteries.

Battery Monitor

To access Battery Monitor settings, the user simply holds their finger on the chosen battery. The battery name can be personalised and a low-battery voltage can be set.

"You can see on the screen if there's a dual-battery kit installed in the vehicle, in which case LINX will monitor both batteries," says Daniel.

"Knowing which batteries you've got your Intensity LEDs hooked up to, for example, means that you can assign a battery to monitor. So if you have your Intensity lights wired up to the primary battery, you can see on the battery monitor display what voltage the battery is running at. You can set a low voltage alarm to that specific battery, say at 11.3V or whatever you want, and then if that battery drops to 11.3V, LINX will turn off those spotties if they're on."

Speedometer

The Speedometer can be viewed in full- or split-screen modes and it displays speed, altitude and bearing, and the user can set a speed limit warning.

"The speedo uses GPS to calculate your speed, so it's independent of your tyre size," says Daniel. "You can also set a speed warning that, for example, lets you know when you're over the speed limit. When you inadvertently go over the set speed, LINX will display a red alert on the screen."

Suspension Control

This module has been designed to provide complete control over air suspension settings on vehicles equipped with airbags. It can control up to four airbags so is suited to vehicles equipped with airbags fitted to the rear axle, front axle or both.

"Owners of vehicles equipped with airbags can add an optional valve kit that talks to the controller, and then the touchscreen interface provides control of the airbags," explains Daniel. "You can quickly configure how many airbags the vehicle has, so for example, on a vehicle with airbags in the rear only, you can specify that there are no front airbags."

"You also have control over how the airbags in your vehicle are set up. For instance, you can specify that they're Y-piped together and they both share one control line so they will both always be set at the same pressure. Or, you can stipulate that they are split, allowing you to control left and right airbags separately."

To control airbag pressure, the user simply selects the desired airbag on the LINX touchscreen and it will be highlighted in yellow with "+" and "-" displayed. You then simply adjust to the desired pressure.

The air pressure settings are also completely customisable and can be assigned names for easy selection, such as "Towing", "Loaded", "Unloaded", etc.

"You have four modes and LINX will remember your previous settings so if you've got a boat and a caravan, you can have a 'Boat' mode and a 'Caravan' mode," says Daniel. "You can set up each mode with a tape measure, get it all locked in and then store each mode with its assigned name."

For vehicles with airbags that have split plumbing, you can adjust each side separately to ensure the vehicle is completely level, front to rear and side to side, then store that mode, assign a name to it and then you'll have the ideal set up each time you hitch your trailer to the vehicle. Then, when you're not towing, simply select your preset "Unloaded" mode.

Another feature allows the option to deflate to minimum pressure when the vehicle's ignition is turned off and to re-inflate the airbags when the engine is again fired up.

You can also select minimum and maximum pressures for front or rear axles.





General Settings

Access to the LINX General Settings is just a simple swipe on the mobile touchscreen display. The settings screen displays all active and non-active modules and allows them to be individually switched on or off. As LINX is further developed and more modules are released, this will allow users to customise their display to match the accessories fitted to their vehicle.

"We were sensitive to the fact that once you start getting many modules, the LINX can be customised to reduce the time spent scrolling to find your favourite screens," says Daniel. "If you decide that 'Diff Lock Switches' is your favourite screen, you can set it by pushing and holding that button until 'Save' comes up. If you then want to check your battery level, just press 'Battery' and that will be temporarily displayed, before reverting back to your favourite screen.

"You can also delete modules; say you don't have air suspension, untick that box and it will be deleted from your list

so you've customised your dashboard to what it is you want to control."

As LINX is integrated with other vehicle systems, in the settings menu it displays current vehicle input status so you can see if ACC, low beam, high beam or reverse lights are on. There's also an Auto Night mode that allows the driver to set screen brightness when the headlights are switched on, in the same way that your dashboard lights do.

You can personalise units in the settings menu to display kilometres per hour or miles per hour, metres or feet, Celsius or Fahrenheit and kilopascals or pounds per square inch. Theme colour can be set so the LINX display matches the OE dash lights of your vehicle, giving a fully integrated appearance.

Finally, the Settings mode provides the option to update apps when LINX is connected to the internet.

Summary

LINX has been in development for three years and it has been designed to be fully upgradable so as new modules are launched they can be easily installed.

"It's completely updateable and upgradeable," says Daniel. "We already have a plan at this stage for over 25 different modules to be introduced as they are developed and that's just the plan so far. LINX will have seven modules at launch but as new modules are developed, a LINX user just goes into settings and selects 'Update App' and LINX will check online for updates and download and install them."

For vehicle owners with numerous accessories fitted, LINX brings control of those systems into one single, easy-to-use unit, not only simplifying accessory operation but also decluttering the dashboard.



ALL CLEAR TO THE REAR

It's little wonder most new vehicles are fitted with a reversing camera as standard equipment. After all, the safety and convenience benefits are obvious, with a well-positioned camera providing visibility to the rear of a vehicle that might otherwise be obscured, either by vehicle design or cargo.

Reversing cameras have traditionally been marketed to drivers concerned with children playing in the driveway while they're trying to back out of it. However, focusing on this aspect alone ignores the many other benefits of a quality camera set-up. Reversing cameras are a handy visual aid when backing into tight parking spots, launching boats, hitching trailers and driving off-road.

While many older vehicles are not fitted with a reversing camera, that's no reason to forgo the benefits of this potentially life-saving technology.

There are several things to consider when looking for the right reversing camera for your vehicle; it needs to be of a high quality, it should be upgradeable and it should suit your vehicle.



Monitors

There are a number of choices when it comes to selecting monitors, including a dedicated reversing camera screen, a replacement rear-view mirror with in-built monitor or utilising an existing screen already fitted to your vehicle.

A rear-view mirror incorporating a hi-res monitor is a good solution for drivers who don't want to clutter their cabin with an additional device. The mirror is also an obvious location as it's where a driver naturally looks when reversing a vehicle.

A replacement mirror monitor will not be an option on some vehicles that may have rear-view mirrors equipped with sensors or cameras for other vehicle accessories, such as automatic wipers or lane departure systems. For these vehicles, a dedicated dash-mounted reversing camera monitor

is a good alternative. Look for a screen with a high-resolution display and adjustment for brightness and contrast.

If you already have a device with a screen fitted to your vehicle, such as a sat nav unit, this may incorporate a dedicated input for a reversing camera, in which case it should display the reversing camera image as soon as reverse gear is selected.

No matter what monitor solution you choose, the ability to manually activate the camera is a great feature, particularly when towing, as it allows you to check on the trailer at the push of a button. Another handy feature is a secondary camera input that will accept a signal from an auxiliary camera, which you may fit elsewhere on the vehicle such as at the front, on a roof rack or in the canopy area of a ute.



Cameras

Any reversing camera fitted to a 4WD needs to be robust as it will be subjected to extreme conditions. A camera designed for fitment to a 4WD should be waterproof and dustproof, preferably with an IP68 rating. As well as the camera itself, the cables and connectors need to be waterproof.

The camera's mounting arrangement is also important; it needs to be located where it's going to provide a good view to the rear of the vehicle, but also be out of harm's way so it doesn't cop any damage in off-road conditions. A camera with a licence-plate mount is often the ideal out-of-the-way position on a 4WD.

A camera with a wide-angle lens will provide the best view to the rear and the sides of the vehicle when reversing. A 160°

lens is ideal. Consider a camera with an adjustable bracket so you can angle it for the best view depending on your vehicle and whether or not you're towing a trailer.

A selectable multi-view camera will offer the ultimate in rearward vision. It allows the driver to choose between different viewing angles, such as a wide angle when backing down a driveway, an undistorted rear view when backing into a tight parking spot, an overhead view when lining up a tow ball with a trailer and a side view providing split left and right images on the screen simultaneously.

Also consider a camera with a built-in microphone, which will allow you to hear any warnings or noises emanating from behind the vehicle while you're reversing.



Upgradeable

For those who tow regularly, make sure the reversing camera system you select is upgradeable with a secondary input so you can fit an additional reversing camera to the rear of your trailer.

Consider an infrared camera for night-time use. There are kits capable of providing up to 10m of visibility in low-light conditions.

Another feature to look for is parking guides. These are virtual lines displayed on

the monitor that help the driver ascertain vehicle direction and position when reversing.

Finally, make sure your reversing camera is covered by a comprehensive warranty.

For any other information on reversing cameras for 4WDs, as well as for vans and passenger cars, drop in to your nearest ARB store or check out the ARB website.

ARB Reverse Camera Systems

Offering exceptional reversing visibility in any circumstance, ARB's range of reversing cameras and monitoring systems add an extra element of safety to your daily driving needs.

Multi View Camera

ARB's Multi View Camera is easy to install and comes complete with a number plate and universal mounting system. Providing the user with four selectable views (top, rear, side, panoramic), the camera features an inbuilt microphone, CMOS sensor and low light performance to 0.5lux.

5.6" Dash Mount Screen

A large, high resolution screen, designed to be mounted on a level area of your dash or console. The screen is supplied with a wiring loom, provision for two camera inputs and a sun visor to reduce glare.

Auxiliary Infrared Camera

Ideal for night time driving, the ARB auxiliary infrared camera provides up to 10m of vision in dark conditions.

Auxiliary Camera

An auxiliary camera is perfect for obtaining an alternative view, and is suitable for front, rear, side, roof, trailer or internal vehicle placement.

Trailer camera kit

The perfect solution for tourers, this kit is designed as a bolt on accessory for the reversing camera and monitor system, providing users with rear vision from the camper, caravan or trailer.

Reversing Camera and Monitor System

Designed to improve visibility at the rear of your vehicle, the reversing camera and monitor system is perfect for reversing in tight places, residential areas or connecting a trailer, camper or caravan to your vehicle.

The Big Five O

Words by Dean Mellor

What started out as little more than a quarterly eight-page news bulletin back in 2004 has developed in to a bona fide 4WD lifestyle magazine, both in print and online.

When ARB launched its very own magazine back in 2004, no one at the company could have foreseen how an eight-page newsletter would grow over the years into the glossy 4WD lifestyle magazine that you're reading today, either in print or online. Yep... ARB's 4x4 Culture is now 50 issues old and to celebrate we thought we'd take a look back on what was undoubtedly an industry first. It's still a unique publication designed to inspire people to get out there and explore the world in their 4WDs.

There have been three Editors over the 50 issues of 4x4 Culture, or 4x4 Action as it was called until recently, and the first of those says it was a challenging task to start up a brand new publication from scratch.

The Idea

"The idea for the magazine was already there when I started at ARB," says Debbie Kaye, the founding Editor of 4x4 Action. "Matt Frost [ARB Sales and Marketing Manager] proposed the newsletter project and I was fresh out of university so it was a little bit daunting.

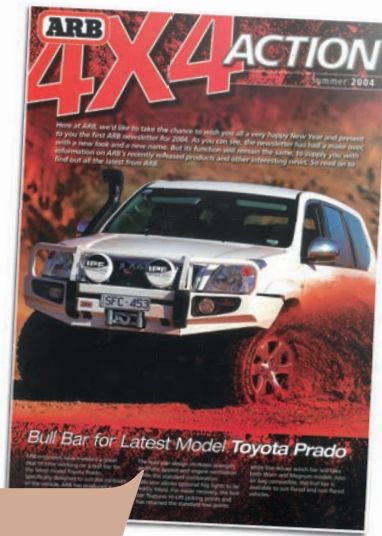
"It just started with press releases and really basic stuff. I think we managed eight pages at the start and it just grew from there."

According to Debbie, the idea behind 4x4 Action was to provide a platform so that ARB could communicate directly with customers. Of course, like many large companies, ARB's marketing team would regularly send out press releases to media and retail outlets, but these releases would rarely land directly in the hands of customers and if they did, there was a perception that they weren't necessarily being read.

"Customers don't read press releases, customers read magazines, so the idea was to start 4x4 Action as a newsletter that could be sent out to customers," recalls Debbie.

Matt Frost agrees. "Coming from a sales background within ARB, I was used to seeing all these brand new products come out on the market and I felt that ARB wasn't doing a good enough job of letting people know about those products," he says.

"You've got to remember that back then the internet was very rudimentary and very few people had it so printed material was still by far the most effective way of communicating a message to people," continues Matt. "So we had this idea of doing a magazine specifically for our customers. We had no interest in putting advertising in there, we just really wanted it to be an informative means of bringing people up to speed with some of the behind-the-scenes activity, and also new product activity, that was going on at ARB."



"We had this idea of doing a magazine specifically for our customers."

Matt Frost



The Early Days

That first Autumn 2004 issue of 4x4 Action consisted of a few new product stories covering ARB bull bars, canopies, roof racks, OME suspension and Warn winches, as well as a couple of short off-road event stories, announcements such as the winner of an ARB competition and a profile piece on ARB store owners Ian and Tina Schultz of what was then called Bendigo Off Road. There was also a piece announcing the arrival of ARB's new website, which, of course, has gone on to become one of ARB's main ways of communicating with customers.

Throughout its history, 4x4 Action evolved significantly, not only the content within its pages but the way in which that content was presented. With limited space in the very early issues, this presented various challenges.

"At the start, we had four or five press releases for the period and we had to try to make them sound interesting," says Debbie. "It wasn't simply a case of writing, 'Here's what we've done, here's just a bit of material selling something.' We were trying to make it more personable."

In other words, the challenge was to provide readers with something much more interesting than regurgitated press releases. We needed something that they would really want to read, which is why new product content in the magazine started to evolve to include behind-the-scenes analysis of how products were designed and developed, and why.

This was clearly the case by the time the fourth issue of 4x4 Action was delivered to readers, which included a two-page Product Feature on ARB bull bars. The aim of this feature was not just to spreek the benefits of an ARB bull bar but also to explain why it was designed the way it was, to examine all of its features and to show precisely how it was manufactured, all accompanied by in-the-field and in-the-factory photography.

"I think the images had a lot to do with the quality of the end result," explains Debbie. "Having Mike Ellem [Offroad Images] do the photography, even back then... it made it more about quality. Rather than just hashing something out quickly, we took the time to get it right."

“Having Mike Ellem do the photography... made it more about quality”

Debbie Kaye





Is There Anybody Out There

Readers could pick up a copy of 4x4 Action at their local ARB store, at 4WD shows or through their 4WD club, but the success of the magazine was hard to judge with very little reader feedback making it back to ARB.

"At the start, everyone around the company was excited, but it was hard to know if anyone was reading it," admits Debbie. "Store owners liked it but it wasn't until we started to introduce competitions and bring in features and articles about 4WDing and trips that we started to get feedback that people were really enjoying receiving the magazine."

At this stage, there was no subscription form in 4x4 Action but there was still a mail-out list. "It was a very modest one," admits Matt Frost. "We started sending it out to 4WD clubs and things like that. When the magazine first came out, I think it was only eight pages so

it wasn't really something that we could go out there and push. But we put more resources into it and it started to grow and was received well by our customers.

"At this point, we decided to encourage people to actually request it, so we set up a customer database where people could leave their details with us, in store or at shows, and then we'd mail it out to them."

By 2006, 4x4 Action had grown to 16 pages and as well as the now familiar mix of new product content and other features on 4WDing. There was now a subscription form; by filling it out and returning it to ARB, readers could now have 4x4 Action delivered direct to their door... for free!

"Once people figured out they could get a free magazine by filling out a little form – this wasn't just a sales brochure, it had a bit more content – I think it went down well," says Debbie. "The investment ARB put into it was obviously quite substantial, but it was something that was worth pursuing."

A Real Magazine

"All of a sudden we realised we had this 'almost a magazine' and we thought we should take the next step," says Debbie. So, in 2006, 4x4 Action received its first redesign with a new masthead and the inclusion of a Matt Frost-penned editorial column called "Snapshot". A contents list was also included for easier page navigation and, in a seeming admission that there was a hell of a lot of work going into the magazine's production, there was also an imprint listing staff and external contributors.

As the magazine grew, so did the list of people who contributed to it, both in-house and externally. On the inside were staffers including Mark "Lowmount" Lowry, Stuart Fooks, Daniel Bongard, Mark DiStefano and Greg Milton, while the external contributor list was bolstered when existing contributor Steve Baile was joined by renowned explorer Neil Cocks in the Summer 2007 issue.

"I always started with the press releases and the new releases that had come out in the previous three months," explains Debbie. "Then I got all the other bits and pieces that revolved around it, the competitions and the store profiles. Soon people started approaching us about wanting to submit articles and we engaged contributors like Neil Cocks to write articles for the magazine."

Overseas content also increased and US writer Chris Collard was brought on board, covering off-road events and penning travel stories from all over the world. By 2010, other familiar names to appear in the imprint included Pat Callinan, Mark Allen, Norm Needham and Simon Christie, and by 2011, Ron Moon was also contributing to 4x4 Action.



“We wanted to find a wider audience, people who wanted to travel, not simply purchase ARB products”

Kelly Tietzel

Time for a Change

After seven years at the helm of 4x4 Action, Debbie Kaye decided it was time to broaden her horizons and pass the baton to someone else. “I really loved that job and I loved the company and part of me really didn’t want to leave,” says Debbie. “But it was one of those things where you realise you’ve been there since you left university and you know you have to branch out and try something different and see what happens outside your comfort zone... and also Matt [Frost] had been encouraging me for years to quit my job and go travelling [laughs]; he was a big advocate of that so eventually I took his advice.”

When Debbie left, she knew that 4x4 Action would be in good hands as she always saw its production and success as a team effort. “I was in charge of driving it and developing it but it wasn’t just me,” Debbie says. “It was always the team, the guys in my department and everyone in the company who were always trying to help and even everyone outside, like Michael Ellem and Vanzella Graphic Design... it really was a great team effort.”

One member of that team was Kelly Teitzel, who had been working in the ARB marketing department since 2007 and who

readily admits she was more than keen to step up and take over editing 4x4 Action when Debbie left.

“I was helping Deb with the regular articles like everyone else was doing,” says Kelly, “... and then when Deb left it was just like, ‘Well, who wants it?’ and I think I would’ve killed anyone else who put their hand up to get it.”

Kelly’s first issue of 4x4 Action saw the magazine undergo another significant redesign and this time there was also a format change; the magazine was now up to 68 pages in size and the staples that once held it together were flicked in favour of classier perfect binding.

“Essentially, I just wanted to put my own mark on it,” admits Kelly. “Deb had done such an amazing job, she was so instrumental so we were all feeling the gap with her leaving. We got the designers to start on a new look and add in quite a few more travel pieces... we wanted to find a wider audience, people who wanted to travel, not simply purchase ARB products. Thankfully Matt [Frost] gave the go-ahead to invest more money into production and printing.”

Balance and Growth

4x4 Action continued to be a handy vehicle for promoting and publicising new ARB products, but there was now more space to further emphasise the lifestyle content, such as travel stories and feature articles. Kelly admits that finding the right balance, however, was no easy task.

“It was a case of finding the best balance that would most likely draw readers in and also satisfy the [ARB] Directors,” says Kelly. “There was a bit of back and forth... it just took a bit of time to get the balance right between what the readers were asking for and what the stakeholders and the Directors wanted.”

By the Autumn 2012 issue, things were cruising along nicely with 4x4 Action and the magazine had grown to a total of 88 pages. And although circulation continued to grow, ARB saw an opportunity to reach more readers by introducing a free, downloadable iPad version of the magazine.

“The iPad version added a whole new element, which was really good. It got traction very quickly; we even had it hit the top rankings on iTunes a couple of times so that was very exciting,” says Kelly.



Seasonal Change

The Summer 2012 issue of 4x4 Action was the last with a seasonal label, which was followed by four issues labelled with the month of release and then an issue simply labelled 4x4 Action Issue 37. "We changed it to numbers," laughs Kelly. "The reason was, we were just so busy with the other projects that we weren't necessarily hitting the seasonal deadlines."

The deadlines were being pushed back because the release of new ARB products didn't always coincide with the magazine's production schedule. "We would have new products that would come out that didn't suit our timeframe... the magazine had to be moved to suit that, so it no longer fitted perfectly within the seasons," says Kelly. "So we decided to just go with numbers..."

"It's a company magazine and the point is to sell products, even though the marketing team really wanted to be selling the lifestyle," continues Kelly. "It was costing the business money and it had to prove its worth, so [the production schedule] was timed to suit the launch of important products."

"It was a sneaky solution but no one noticed," laughs Kelly.



A Fresh Look

Issue 37 also introduced a fresh new look for 4x4 Action with a new masthead and a redesign that made better use of the brilliant photography that ARB had on file.

"Our image library is so big, there are so many beautiful images I think it was something that stood ARB apart from other competitors in the industry," says Kelly. "There's this massive number of images and I didn't feel like we were utilising them enough."

"We did a lot of research into travel magazines and how they were utilising images, and then we sat down with the design team and came up with some different concepts. In the end, that first redesign, we ran out of time and so we had to run with stuff that I wasn't happy with, but you're never 100 per cent thrilled with what you've got and so I had to sit on that design for a little while before I could get the go-ahead to redesign some more."

Kelly introduced a number of popular new sections to 4x4 Action that survive to this day, including Michael Ellem's "Behind the Shot". "We have such a great relationship with Michael Ellem and he has so many amazing photos that we don't always get an opportunity to make use of them," says Kelly, "so I remember talking to Mike and just saying to him, 'Can you choose some favourite images and the story behind them and we'll do a DPS [double-page spread] on them?' Those are my favourite spreads, 'Behind the Shot' and also his 'Photography Tips & Techniques', those are my favourite regulars."



A Voice for All

As well as giving the “experts” a voice, 4x4 Action also gave readers a platform to share their views through letters, competitions and, of course, the very popular kids’ section. The next step was to introduce a section on readers’ vehicles.

“It’s such a thriving community and industry, and we were always getting images through social media or via snail mail,” says Kelly. “Or we’d get a call from a store saying, ‘This guy has just come by to show off his vehicle’ and ‘Can we acknowledge how keen this person is?’ It’s all part of the idea of just going off-road and adventuring.”

From its inception, 4x4 Action always contained a percentage of overseas content; after all, ARB has a presence all over the world. Kelly continued this tradition throughout her tenure, retaining the services of experienced US-based 4WD journalist Chris Collard and bringing South African-based Patrick Cruywagen on board.

“Going off-road and adventuring is obviously not something that’s contained within Australia,” says Kelly. “So if you can stretch your dream a little bit bigger and go to Africa or some insane trip in the desert over in the US or up with Arctic Trucks or wherever, then why not? It’s all part of the off-roading culture.”

The Next Stage

After seven years at ARB, Kelly decided she needed a change, but like her predecessor, she found it tough to leave 4x4 Action behind. “I loved that magazine,” Kelly says. “That was the thing that kept me going, it was the reason that I stuck around to begin with, because I was hoping that one day I’d get my hands on it, and then I got my hands on it and just kept wanting to rework it into something that I was really proud of. But then you get to the point when it’s not enough and you need to hit the reset button and move on.”

Assisting Kelly to produce her last couple of issues of 4x4 Action was Jessica Vigar, a new staff member in the ARB marketing department who was employed as a Visual Communications Specialist. Under deadline pressure, Kelly asked Jessica to write a few articles for Issue 39 and to help out with proofreading and a few other production-related tasks.

“I didn’t have an editing background,” admits Jessica, “but previously I’d worked closely with a bid manager who had postgraduate degrees in writing and editing. I worked alongside her for years and learnt so much from her that when I came here [to ARB] I didn’t even realise I had already developed those skills and was able to help Kelly out.”

Initially, Jessica was listed in the 4x4 Action imprint as a contributor, but by the next issue she was promoted to the role of Sub Editor. “Kelly started to make plans to move on and she was really keen to get me more involved with the magazine,” says Jessica. “I loved it so much and it was something that I think she felt I’d be able to take over and make her proud, so she started training me up on it...and that’s how I became Sub Editor for Issue 40.”

“When Kelly left, on her recommendation, Matt [Frost] passed the reins over to me and I became the Editor from Issue 41. I put a comic in the magazine as a tribute to her, ‘Kelly the Koala’,” laughs Jessica.

Like every new editor, Jessica was keen to put her stamp on 4x4 Action and with her background in visual communications, the best way to do that was to push on with the redesign that Kelly had instigated a few issues prior. “I really wanted to update the look and feel of the magazine,” says Jessica. “I worked with the graphic designers and we gave it a fresh new look... It evolved over a couple of issues and it’s only really in the last two issues that we’re really happy and settled with the way it looks.”



Content and Analytics

Jessica's influence on 4x4 Action would soon go far beyond the look and feel of the magazine. "I also wanted to get more involved with the product managers and sales team, to really ascertain what the feedback was from customers... and what sort of things they'd be more interested in reading about," says Jessica. "The magazine almost had a set structure and before she left, Kelly had encouraged me to restructure it, so that's when we started looking at adding new elements like 'You Wouldn't Read About It', where we got customers involved in supplying content."

Jessica soon discovered another way to judge the performance of the magazine was through analytics; after all, with many people now reading the magazine online there was plenty information available to her.

"When I first started, I found it very difficult because I didn't have the analytics that I have today," explains Jessica. "Now I'm

able to figure out what really works and what doesn't, plus the marketing team has changed a lot, there are very statistics-driven people in the department that can look through the magazine and figure out why one spread might do well and another spread might not."

Like the editors before her, Jessica also found it difficult to find the right balance between using 4x4 Action to promote and publicise new ARB products as well as appeal to readers with interesting travel and lifestyle stories.

"I didn't want to upset upper management by pulling out all the product and just having beautiful pictures, so it probably took me a few issues to figure out how far I could push the limits," laughs Jessica.

"If we're selling a new product, instead of it being simply about that product, we'll run an educational article about the features of that product," explains Jessica. "So instead of advertising, say, a fridge monitor, we'll also have an educational article on fridges in general and how fridges can help our customers and what to look for when buying fridges in a generic sense."

Drilling It Down

"In regards to travel stories, by analysing each different article we've been able to ascertain that stories that don't feature 4WDing don't do well," says Jessica. "This might seem obvious but now we really make sure that we're focusing on 4WD-related travel."

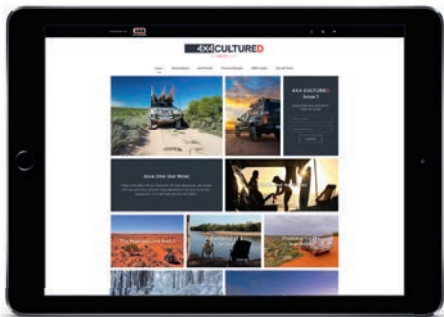
As well as the story list, the study of online analytics has changed the way information is presented in 4x4 Action, such as splitting up the stories into smaller blocks of text. After all, most readers in the electronic age seem to have very short attention spans.

"Mark Berger [ARB Brand Marketing Manager] helps me go through all the spreads and then we can talk to the designer and say, 'This worked really well and this didn't'," explains Jessica. "So we've been adding a lot more things that are visually interesting; instead of having a whole page of text, we break it down into chunks and instead of a travel story that's 1,200 words all at once, we break it down into different areas so if someone only wants to do half a leg of the trip, it's all laid out before them."

One of the other big changes implemented by Jessica was 4x4 Action's recent name change. From Issue 46 on, the magazine has worn the 4x4 Culture masthead.

Culture and CultureD

What started as an eight-page newsletter is now much more than a 100-page printed and online magazine; ARB has also developed a complete online platform to communicate with customers called 4x4 CultureD.



"4x4 CultureD, an online platform, is actually a complimentary magazine to 4x4 Culture," explains Jessica. "It's an online version and we're trying to work these two together so, for instance, I could put part one of a story in the printed magazine and part two of the story online, and then that way people can get that sort of holistic involvement with the entire world of 4x4 Culture. It's now 4x4 Culture and 4x4 CultureD, the 'D' is for digital.

"With CultureD, we're moving towards a real hub of information, so anything you need to know, whether you're a beginner or you're an advanced 4WDer, we'll have information on there that's going to be able to help you," continues Jessica.

"So from a beginner who's never been out on the tracks who needs to know what recovery gear is, to someone who's advanced, we can give them information on how to get out of a sticky situation. We're working with both the magazine and the online portal to make them something that our customers will keep as reference guides."

4X4 CULTURE



What's in a Name?

When you start a new publication, no matter how modest at the start, it has to have a catchy name and, according to ARB Sales and Marketing Manager Matt Frost, it was founding Editor Debbie Kaye who came up with 4x4 Action.

"Debbie came up with 4x4 Action," says Matt. "The reason she did was that 'action' gave two meanings; it was talking about the action that was going on at ARB, which was obviously a key driver for the magazine, but also action as in what was happening in the world of 4X4, so things like the off-road events that we would cover in the magazine, like the Outback Challenge and the Eldee Easter Event."

It was current Editor Jessica Vigar who decided that ARB's magazine needed a title change and in Issue 46, 4x4 Action became 4x4 Culture.

"There were a few reasons behind it," says Jessica. "Firstly, there was another magazine that later came into the retail space with a similar name,

so one of the reasons was to prevent confusion. But also it was a comment from my brother; when he finished reading an issue, he said, 'I really like your mag, Jess, but I don't understand why it's called 4x4 Action. It's not exactly an action-packed magazine.'

"We were really looking into the analytics of our customer and what sort of 4WDing they were doing. We realised the name of the magazine wasn't really applicable to our customer and the company itself. We're a very premium company and we wanted to push that we're the authority in the industry when it comes to 4WDing.

"And so we thought 4x4 Culture was a lot more applicable to what was in the magazine because it was about everything to do with 4WDing... it's a combination of product, education in all areas of 4WDing, recipes, kids' stuff... it just encompasses everything in the 4WDing world."



“it’s a combination of product, education in all areas of 4WDing, recipes, kids’ stuff... it just encompasses everything in the 4WDing world.”

Jess Vigar



Company Support

The magazine has always been an important component of ARB’s marketing strategy, but it has now morphed into something much greater that’s read by many thousands of enthusiasts who want to know everything about 4WDing, not just what’s happening at ARB.

“I’ve been very fortunate with the support of Matt Frost and Andy Brown, and it’s been quite amazing how progressive the company has been,” says Jessica. “This magazine has been with the company for so long and I find it really impressive that it is free, that anyone can read it online and our customers can go into a store and pick up a 100-page, high-quality printed magazine completely free! I think that’s a real credit to the company.”

“And the editors... we’ve always worked really closely with Andy Brown,” continues Jessica. “He looks over the magazine before it goes to print and he reads the whole thing and he’s always there to provide advice or answer any questions; he’s always been like that with the editors.”



“You wouldn’t think that the director of a multimillion dollar company would be so involved in something like this, but he is and it’s something that he values and always wants to make sure is just right.”

“The magazine isn’t something that just gets pumped out by a group of people who don’t really have anything to do with it, it’s written by engineers and product managers and everybody is involved. And when the magazine comes out, every single staff member gets a copy, they all read it and they all love it. It’s a real credit to the company.”

SAND SURF + SUN

Words and Photography by Steve Fraser





In previous articles, we've shared some incredible adventures around the globe—from Antarctica to Africa. As this is the very special fiftieth edition of ARB's 4x4 Culture magazine, I thought I'd share a few favourite spots in my own backyard –Western Australia's South West.

On my most recent trip, I packed the Troopy with all the usual gear, but it was winter, so I threw in some extra jackets and my faithful, well-worn Blundstones. The camera gear was charged and the fridge was full. What more do you need?

PEMBERTON

Early on a Friday morning, after a five-hour drive from Perth, which included a mandatory bakery stop, I made it to the Warren National Park, just south of Pemberton.

I love this area and the old-growth forest in winter is especially beautiful. There's nothing like breathing in the scents of the forest surrounding the Warren River on a foggy morning.

A great camping spot can be found at Heartbreak Trail, off the Old Vasse Highway, about twelve kilometres south of Pemberton. The track follows the Warren River and has a number of designated camping areas. Apart from school holidays, it is always quiet. If you're brave enough,

you can swim in the rather chilly Warren River. The track is fine for an SUV, just be careful after a lot of rain as it gets a bit slippery.

While I waited for my mate, Glen, who planned to join me well after dark on the Friday night (some people actually have to work on a Friday—which seems very overrated to me), I set up my trusty swag, got the fire going, and cooked up a nice dinner. Glen arrived with his flash rooftop tent and I have to admit to being a bit jealous of him later in the night, when the heavens opened big-time and the ground became quite damp. It's character building stuff!

The next morning, it didn't take much to convince Glen that we should head into Pemberton to one of my favourite cafes for breakfast. On the way out of the trail, the sun started to break through the fog and I got one of those rare and very beautiful photographic moments that require very little preparation or planning, just a bit of luck. It was a breathtaking scene and I knew I had a winning shot. What a great way to start the trip! I didn't know if I was still elated from the amazing sunrise or if it was the cold weather, but either way, breakfast tasted pretty great.



BLACK POINT

The next destination was Black Point, on the coast directly south of Dardanup. I'd never been there before, but a friend who works at one of the local tourist centres assured me I wouldn't be disappointed.

There are three ways of getting into Black Point. During summer, the easiest is on Black Point Road, which runs over a dried-up lake. The problem on this winter's day was that the lake was full, so we took the track that runs on the eastern side. (I'm not sure of the name of the track, but it runs off Pneumonia Road, and was on my Hema map.)

It's definitely 4WD only and I would suggest something with a higher ground clearance, depending on the time of year. We came across a couple of fallen trees, so we detoured bush and squeezed the Troopy through some interesting gaps.

The track is mainly sandy, so let the tyres down, relax, and enjoy the beautiful scenery. The last bit of the track into Black Point is really soft, but fairly straightforward and most well-set-up 4WDs will get in with ease.

When you arrive, it's a stunning 180-degree view from high on a clifftop. This is pretty unique for WA, as normally, once you make the coast, you are close to sea level. We set up camp as close to the edge of the cliff as we could, started a fire, and decided it was time for a cold drink.

Sunset was a couple of hours away and the only other people there were four hardcore surfers from Albany. They headed down the goat track to the ocean and enjoyed some of the nicest waves I'd come across in a very long time. Sunset didn't disappoint. The sky came alive with an explosion of colour and I got another postcard moment in my own backyard.

On Sunday, Glen had to head back to the city because of this inconvenient thing called work, but not before we tried the third track out of Black Point. It's on the westerly side via the Woodaburrup Road. It's more open track, still sandy, but easier than the route in.



Little Beach Sunrise

ALBANY

I then headed to Albany for a couple of days. I had a few locations that I was sure would make for great photographs. Albany is a wonderful area to visit with its rich history; beautiful architecture, and very friendly locals. As an added bonus, a mate has a holiday house in Albany so I was in for a bit of luxury for a couple of nights and the swag got a chance to dry out.

East of Albany, there are some incredible beaches and I planned on visiting a few of them. I started well before sunrise the next morning at Nanarup, where an inlet meets the ocean. Lots of locals fish around here and you can drive a 4WD onto the beach easily.

There wasn't a breath of wind and I was happy about that. Wind is the enemy of a landscape photographer. I left the Troopy back in the inlet as I didn't want it in my shot and started the hike up the beach. The sand was incredibly soft and made walking difficult, especially with about fifteen kilograms of camera gear. I decided I might need to get to the gym more often.

I climbed up one of the sand dunes to get a nice perspective and enjoyed the best part of my day. As a photographer, sunrise is always a surprise, as you don't really know if it's going to be amazing, or a bust until it happens. In contrast, it's easier to predict if a sunset is going to be worthwhile or not.

As the first light started to warm the sky, I waited patiently. The light crept over the rocks and finally the sand. It was a 'winner, winner chicken dinner' moment and was proving to be an amazing start to the week.

I spent the rest of the day as a tourist and visited the incredible National ANZAC Centre in Albany. I don't say it too often, but well done to the government. This was money well-spent and a must-visit if you are in the region.



The track is mainly sandy, so let the tyres down, relax, and enjoy the beautiful scenery.

TWO PEOPLES BAY

I left my rather comfortable accommodation early the next morning and headed east to Little Beach in Two Peoples Bay in time for sunrise. It's around forty kilometres from Albany and there are lots of kangaroos on the road early in the morning, so take your time.

I have photographed the beach on a number of occasions and I didn't really need another shot of the bay, but I love this beach so much that I keep coming

back. Little Beach rarely disappoints me. If you're here for the photos, there are so many different angles and interesting views, you'll be sure to get an image that will work.

If you like salmon fishing, then this spot is perfect at this time of year. I've seen some really big salmon pulled in here on previous visits. It was another beautiful sunrise and I started to wonder if it really was winter with all this nice weather.

CAPE LEEUWIN

After Little Beach, I headed west towards Cape Leeuwin. It's an area I've visited many times and I love the dramatic coastline covered with beautiful granite boulders. I had a spot in mind that could make for a great sunset image. At the last minute, I decided to have a little fun on the way and take the 4WD track into West Cape Howe. After all, why own a tough Troopy if you are not going to give it a workout every so often?

The track starts as a sandy trail near Shelley Beach and the council have put some rubber matting down on the steeper sandy sections to stop erosion. The trail gets narrow at points and I found a little extra pin striping on the cruiser afterwards.

About a kilometre from the Cape, there is a serious drop off in the road. It's a very short, rocky section and there were three 4WDs

parked up at this point with the drivers walking the rest of the way. I didn't want to walk so it was time to engage low-range and my diff lockers. The tow bar scraped on the way down, but it was all-good. The return approach looked a lot more daunting than it proved to be and the Troopy ate it up with just a little wheel spin. I love my truck.

I arrived at my location near Cape Leeuwin a few hours before sunset, so I got set up for the night. I had something to eat and sat back to wait and see if the weather would be kind or not. It was fairly overcast, but it didn't take long for that to change. As it got closer to sunset, the clouds cleared. Watching the distinctly Australian-coloured sunset over the water reminded me of how incredible this great country is. You rarely get these sorts of colours anywhere else in the world.



Black Point



Cape Leeuwin



The trail gets narrow at points and I found a little extra pin striping on the cruiser afterwards.

DUNSBOROUGH

The next day was another early start and I decided to head to a favourite café, near Dunsborough—Bunker’s Beach Cafe. If you want to start the day well, then this café won’t disappoint. Bunker Bay is my idea of paradise. A white, sandy beach fringes the turquoise waters of the Indian Ocean and the café is located right on the bay, overlooking one of WA’s best beaches. It’s a great combination of good food, coffee, and sitting back, listening to the waves roll in. Ah! You can feel the serenity!

I’m a huge fan of the South West (can you tell?) and I especially love this area in winter. There are very few people around, the weather is mild, and it’s really easy to get a seat at your favourite cafe. However, I didn’t have much time to sit and relax, I had to scout a couple of locations for sunrise the next day and then make my way back to Bunker Bay for sunset.

I set up at Bunkers for a shot and, just as the light was starting to get really interesting, I turned around and behind me was this amazing scene. Strong pastel colours lit up the sky, the waves created shell-shaped patterns in the sand, and a perfect one-metre wave rolled in, just for good measure.

SUGARLOAF ROCK

The next morning, I headed for the well-known Sugarloaf Rock. It was only a short drive from my overnight stay in Dunsborough, but it was really windy and pretty stormy—so my early start was a waste of time. That’s the risk you take as a photographer.

I told myself that sunset might be better and hit the bakery in Dunsborough for a well-earned breakfast. The storms blew over around lunchtime, which is pretty common in the South West, so I tried my luck again at Sugarloaf Rock for sunset.

It turned out to be the perfect end to a few amazing days in the south west. The light was incredible and I got my shot.

It was pretty cold, but I have to tell you, I felt warm on the inside. (No, I hadn’t been drinking.)

What can be better than watching the sunset over the ocean? I sent Glen a quick photo of what he was missing (that’s what mates do!) and then reminded myself how lucky I am to call this work.



START 'ER UP



STRANDED WITH A FLAT BATTERY IS A THING OF THE PAST WHEN YOU HAVE AN ARB JUMP STARTER IN YOUR VEHICLE.



Even if you think you have all of your vehicle's power requirements sorted and you've fitted a dual battery system, charging system, solar panels and more, there's still the possibility that one day your starting battery simply won't have enough juice to fire up your engine. When this happens, you'll be glad you're carrying your ARB Jump Starter.

Despite its diminutive size, the Jump Starter packs enough punch to jump start 12V vehicles with up to a 5.0L V8 diesel engine or a 6.0L petrol engine. When we say small, we mean really small. The Jump Starter itself measures just 188 x 134 x 37mm and weighs just 860 grams, but it has a potent lithium-ion battery with a 24,000mAh capacity. That's enough grunt at full charge to jump-start an engine up to 20 times (depending on engine size).

"One of the best things about it is that it's small," says Ben Rieson, ARB Product Manager. "It's around the size of a small novel. It's only 3.7cm high and when it's in its supplied carry case it only comes

up to 10cm. It's lightweight and it uses a high quality lithium-ion battery, which is thoroughly tested when it comes out of the factory."

Safety and reliability were high on the list of priorities when developing the ARB Jump Starter. The whole device is packaged in a fire retardant casing and features include an in-built smart charger control to prevent overcharging and discharging. The Jump Starter is also supplied with intelligent heavy-duty jump cables with boost function, reverse polarity and spark protection.

The boost function is designed to start engines that have a completely dead starting battery. "If your battery is completely dead, if there is minimal charge available whatsoever, you activate the boost function and the Jump Starter pushes the amperage right out to 1,000 amps as required; it also delivers anywhere up to 15V so there's plenty of power there for a short period of time to jump start vehicles that have really low power left

in their battery," says Ben.

To ensure reliability in harsh off-road conditions, where the Jump Starter may be subjected to dust and high ambient temperatures, ARB has beefed up the circuit board compared to other products on the market. "We have put coatings over the top of the PCB (printed circuit board) and have thought carefully about the location of internal components to ensure they are robust enough to handle being knocked around or when vibrating over corrugated roads all day, every day," says Ben.

The Jump Starter is supplied in a zippered EVA nylon carry case and comes with the aforementioned heavy-duty jump cables, 240V AC and 12V DC chargers, and a smart cable that's capable of charging both micro and lightning USB smartphones.

Additional features of the ARB Jump Starter include a built-in 100 Lumen flashlight, a battery level indicator, 2.1A and 1A USB outlets, and a 12V accessory outlet for powering larger devices. In fact, the Jump Starter can even be used as an emergency back-up power supply for lighting, depth sounders or a GPS (dependent on power consumption).

JUMP STARTER SPECS

DIMENSIONS

Unit only: 188 x 134 x 37mm
Carry case: 250 x 140 x 100mm

WEIGHT

Unit only: 860 grams
With accessories: 1,710 grams



· YOUR ·
TOP
50

TO CELEBRATE OUR 50TH EDITION,
WE SURVEYED **OVER 9,000 4WDERS**
ABOUT EVERYTHING OFF-ROAD, FROM
THE BEST OFF-ROAD TRACKS TO THE
BEST CAMPING TUCKER.





WITH OVER 2,700 IMAGES SUBMITTED, IT WAS TOUGH TRYING TO CHOOSE OUR FAVOURITES. THANKS TO EVERYONE WHO WENT TO THE EFFORT OF GIVING US YOUR TWO CENTS AND SENDING YOUR PICS THROUGH. HERE'S WHO GOT PUBLISHED:

COVER IMAGE

Darcy Hegarty, WA

4WDS OF YESTERYEAR

1. Jamie Prado, NSW
2. Nathan Christian, VIC
3. Rye Young, VIC
4. Andrew Wise, NSW
5. Andrew Pill, QLD

AUSTRALIAN 4X4 TRACKS

1. Cameron Chapman, QLD
2. Dan Pushnick, WA
3. Peter Dodson, NSW
4. Chris O'Keefe, NSW
5. Geoff Riddle, VIC

4WD DESTINATIONS

1. Kylie Van Vugt, QLD
2. Anthony Roy, NSW
3. Danny Englund, TAS
4. Jess Fleming, VIC
5. Mitchell Gassman, QLD

OUTBACK/COUNTRY PUBS

1. Stan Furmaniak, SA
2. Dean Lawtie, WA
3. Casey Gray, VIC
4. Kristen Lecht, VIC
5. Michael Jacobson, VIC

OUTBACK STATIONS

1. Peter Berry, QLD
4. Simon Moore, VIC
5. Justin Coleman, NSW

HOBBIES

1. Rodney Coogan, WA
2. Chris Villani, VIC
3. David Sasin, VIC
4. Matt Outback, VIC
5. Peter Tzaralis, SA

'MUST HAVE' ACCESSORIES

1. Darren Thomas, WA
2. Jarrod Roberts, VIC
4. Dallas Schulz, VIC
5. Dennis Wright, SA

LAST MINUTE ESSENTIALS

1. Nathan Smith, QLD
2. Lee Yates, QLD
3. Adam Selby, WA
4. Shane McClymont, NSW
5. Christopher Freudenberg, QLD



TOP 5 CURRENT 4WDS

1. Toyota LandCruiser 200 Series It's little wonder the Toyota LandCruiser 200 has topped this list. Powered by either a 4.6L petrol V8 (227kW/439Nm) or a 4.5L twin turbo-diesel V8 (200kW/650Nm), the Cruiser is the ideal long-distance tourer and towing vehicle. As well as performance, it offers excellent on-road comfort and refinement, great off-road capability and the best sales and service network in the country.

2. Ford Ranger The Ford Ranger is the first 4X4 ute to challenge the HiLux for number one spot on the sales charts in Australia and with a powerful 3.2L five-cylinder turbo-diesel engine, excellent on-road manners and hefty 3,500kg towing capacity, it's easy to see why. The Ranger is also packed with comfort and safety features, and is as good as anything in class when it comes to off-road capability.

3. Toyota HiLux The HiLux has been Australia's favourite 4x4 ute for as long as anyone can remember and it still fights for the number one spot month in, month out. With legendary reliability and the best sales and service network in the country, the HiLux is still a rural and remote-area favourite. The HiLux is powered by an economical 2.8L four-cylinder turbo-diesel engine and matches the Ranger in the towing stakes with a 3,500kg rating. It's an effective tourer and capable off the road.



#1 TOYOTA LANDCRUISER 200 SERIES



#2 FORD RANGER



#3 TOYOTA HILUX



#4 ISUZU D-MAX



4. Isuzu D-MAX A recent revamp has added to the D-MAX's appeal with revised styling, new equipment levels and a "pumped up" 3.0L four-cylinder turbo-diesel engine that now makes a competitive 430Nm of torque from 1,700-3,500rpm. Isuzu also updated the D-MAX's six-speed auto box, which results in better fuel economy. The D-MAX offers a great balance of on-road refinement and off-road capability, and has sharp pricing compared to many of its competitors.

#5 MAZDA BT-50



5. Mazda BT-50 Built on the same platform as the Ford Ranger, the Mazda BT-50's 3.2L five-cylinder turbo-diesel engine pumps out a claimed 147kW of power and 470Nm of torque. Like the Ranger, the BT-50 offers a hefty 3,500kg towing capacity, is a comfortable on-road tourer and effective off-road machine but it's never come anywhere near the Ford in sales. Why? The BT-50's polarising styling is the likely culprit. The BT-50's 2015 update was mainly cosmetic but nothing improves the look of a BT-50 more than equipping it with a quality ARB bull bar.

TOP 5 YESTERYEAR 4WDS



1. Toyota LandCruiser Prado 90/120 Series

The first Prado to land in Australia was the second-generation 90 and back in 1997, it was a direct competitor to the Mitsubishi Pajero. The Prado 90 offered a choice of petrol and diesel engines, class-leading fuel capacity (159L), great on-road manners and good off-road capability. The Prado 120, launched in 2002, was improved in every area, including a fuel capacity increase to 180L. Both vehicles are well built and stand the test of time, and it's little wonder they're a favourite second-hand buy.

2. Toyota LandCruiser 80 Series

The 80 Series was Toyota's first LandCruiser station wagon to feature live axles with coil springs front and rear. While base-spec models had a simple part-time 4x4 system, mid- and top-spec variants scored full-time 4x4. Throughout its decade-long model life, the 80 was offered with a variety of petrol, diesel

and turbo-diesel engines. For remote-area travel, you can't go past the old-school 1HZ 4.2L six-cylinder naturally-aspirated diesel; it ain't fast but it's simple and reliable. The 80 Series is an effective off-roader and good tourer.

3. Toyota LandCruiser 100/105 Series

The 100/105 Series LandCruiser was the 1998 replacement for the 80 Series. In its most basic form, the lower-grade 105 was essentially an 80 Series with a new body, retaining live axles front and rear with coil springs and even the carryover 1HZ diesel and 1FZ-FE 4.5L petrol engines. Higher-spec variants, called 100 Series, had independent front suspension and were offered with either a 4.2L direct injection turbo-diesel engine (1HD-FTE), a 4.7L petrol V8 (2UZ-FE) and by 2000, the 4.5L petrol 1FZ-FE. All engines offer strong performance but the turbo-diesel is the pick for long-distance touring.

4. Nissan GU Patrol Nissan launched the GU Patrol in 1998 and underneath its then-new bodywork was a separate chassis with live axles and coil springs that were carryovers from the GQ Patrol. GU buyers were offered a choice of 4.5L petrol, 4.2L diesel or 2.8L turbo-diesel engines; although lacking in performance, the 4.2L diesel (TD42) was the pick. In 2000, the GU Patrol scored a turbocharged version of the TD42, aptly named TD42T, as well as a four-cylinder 3.0TD (ZD30). The six-cylinder TD42T is the pick of the engine line-up.

5. Land Rover Defender 90, 110, 130

The Land Rover Defender nameplate was introduced in 1990. With a separate chassis, live axles front and rear, long travel coil spring suspension and lockable full-time 4x4, the Defender is a formidable off-road machine and is a favourite amongst overlanders the world over. Of course, a reputation for poor reliability is not unfounded but often the result of improper care and maintenance. The Defender is available in 90-, 110- and 127-inch (called 130) wheelbase lengths, and wagon, van, single- and crew-cab body styles. Over the years, engines have included the 200Tdi, 300Tdi, Td5, a 2.4L Ford TD and the most recent 2.2L TD. With production coming to an end in 2016, Defender prices are on the up.

TOP 5 AUSTRALIAN 4X4 TRACKS



#5 BILLY GOAT BLUFF, VIC



#4 BIRDSVILLE TRACK, SA/QLD



#3 CANNING STOCK ROUTE, WA



#1 OLD TELEGRAPH TRACK, QLD



#2 GIBB RIVER ROAD, WA

1. Old Telegraph Track, QLD Accessible only during the dry season, the Old Telegraph Track runs for 350kms and is located on Cape York in tropical North Queensland. Starting at Bramwell Junction, the track follows the old telegraph line and passes through iconic 4WDing obstacles such as Palm Creek, Gunshot Creek and Cockatoo Creek. The majority of traffic on this track travels from South to North, which is the recommended option as there are few passing opportunities on the route.

2. Gibb River Road, WA Stretching almost 600kms between the Kimberley, the Gibb River Road is a former cattle route that runs between Derby and the Kununurra and Wyndham junction of the Great Northern Highway. Often closed due to flooding during the wet

season (November to March), the Gibb River Road is touted as one of the last true outback adventures and takes you through spectacular scenery, passing countless gorges, waterfalls and rivers.

3. Canning Stock Route, WA A solution to getting beef cattle to the south from the Kimberley, the Canning Stock Route was surveyed and created in the early 1900s. Running nearly 1,800kms, crossing 800 sandhills and four deserts, it is on many 4WDers' bucket lists, combining challenging Australian remoteness with Aboriginal culture. The Canning Stock Route runs from Halls Creek in the Kimberley to Western Australia's mid-west at the town of Wiluna.

4. Birdsville Track, SA/QLD Passing through three outback deserts, the

Birdsville track runs for 517kms between Birdsville, QLD and Marree, SA. Keen 4WDers tackling this track will pass through one of the driest parts of Australia with an average annual rainfall of 100mm. The only roadhouse along the track is Mungerannie, about halfway along, providing travellers with fuel, meals and drinks.

5. Billy Goat Bluff, VIC One of the steepest tracks in the Victorian High Country, Billy Goat Bluff Track ascends 1,200m in only seven kilometres and is famous for its steep cliff edges. Climbing to the tip of the Pinnacles, this track offers spectacular views of the Alpine National Park from the Pinnacles Fire Tower. Many travellers base themselves in Dargo when tackling Billy Goat Bluff.

TOP 5 AUSTRALIAN 4WD DESTINATIONS



1. Cape York Peninsula Cape York, also known as "The Tip", is the largest unspoiled wilderness in northern Australia and is on almost every 4WDer's bucket list. There are two main roads passing north-south through Cape York Peninsula, the Peninsula Development Road and Telegraph Road, yet most keen 4WDers are only interested in the Old Telegraph Track (see Top 5 Australian 4x4 Tracks). From the Western Cape and the Gulf of Carpentaria to the Coral Sea and Great Barrier Reef, this remote part of Australia offers visitors amazing wildlife, cultural experiences and adventure. No 4WD enthusiast's off-road portfolio is complete without a photo standing in front of the famed Cape York Tip sign, indicating the northernmost point of the Australian continent.

2. The Kimberley Twice the size of the state of Victoria, the Kimberley is home to one of the world's greatest 4WD road trips. Made up of majestic canyons, freshwater swimming holes, countless wildlife species and several outback stations, the Kimberley is one of the world's last wilderness frontiers. The region's major gateway is the outback beach town of Broome, famous for its 22km white sandy Cable Beach and daily sunset camel trains. The Kimberley



is home to the world's most premier 4WD adventures along the renowned Gibb River Road, passing through some of the most rugged country on Earth.

3. Fraser Island Located along the south-east coast of Queensland, Fraser Island is the largest sand island in the world, stretching 120kms in length and 24kms in width. Made up of rainforests, woodlands, mangrove forests and sand dunes, Fraser Island offers 4WDers soft sandy highways and the famous 75 Mile Beach on the eastern side of the island. Beach camping, whale watching, fishing and swimming will keep you busy while visiting this World Heritage-listed wilderness.

4. Victorian High Country Made up of thousands of kilometres of constantly changing 4WDing tracks, the Victorian High Country is not for the faint hearted



or inexperienced. Steep climbs, large rock ledges and deep water crossings are combined with breathtaking scenery and rich historical heritage. Noteworthy destinations include Blue Rag, Billy Goat Bluff, Tom Groggin, Sheeppark Flat and Mount Terrible.

5. Moreton Island Twenty minutes from Brisbane and one of Australia's largest sand islands, Moreton Island remains one of the few areas of untouched natural wilderness along the east coast. Accessed by a 75-minute ferry ride across Moreton Bay, the island has no roads and is a 4WDers' paradise. Breathtaking scenery, massive sand dunes, wild forests and beautiful lakes and beaches makes this a "must visit" for every 4WDing enthusiast.

TOP 5 OUTBACK STATIONS

#2 KINGS CREEK STATION, NT



#3 BULLO RIVER STATION, NT



#1 EL QUESTRO STATION, WA

1. El Questro Station, WA Described as the heart of the Kimberley, El Questro offers explorers over 700,000 acres of majestic mountains, deep gorges, thermal springs, rainforests and cascading waterfalls. Accommodation options include rooms at the station, a resort at Emma Gorge with 60 tented cabins, allotted power sites, general camping, bush camping and station tents. The beautiful wilderness can be explored by both land and air, discovering waterholes, hot springs and waterfalls. El Questro offers many dining options for hungry travellers from casual dining at their bar and grill to breathtaking cliffside table settings.

2. Kings Creek Station, NT Established in 1891, Kings Creek Station lies 36kms from the magnificent Kings Creek (Watarrka) and is the largest exporter of wild camels in Australia. Accommodation options include camping, safari cabins, luxury glamping and an old drovers' camp. Kings Creek offers quad safaris, helicopter flights and swimming, a station shop that sells basic supplies and a café serving up their famous Kings Creek camel burger.

3. Bullo River Station, NT Situated close to the WA border in East Kimberley, Bullo River Station is a Top End ranch

#4 ELDEE STATION, NSW



sprawled across half a million acres. Endless adventures are on offer for visitors including barramundi fishing, 4WDing, cattle mustering, helicopter flights, Aboriginal art and a plethora of outback flora and fauna. Despite Bullo River Station's extreme isolation, they are at the forefront of green change and as of 2009, embarked on a "going green" project, installing a solar system that reduced their fossil fuel emissions by 70%. Accommodation options at Bullo include the homestead and a pair of huts by a lake, accessible by helicopter or 4WD.

4. Eldee Station, NSW With over 100kms of 4WD tracks, Eldee Station is an eco-friendly outback escape. Currently in the hands of a fourth generation station family, the Schmidts, who have held the lease since the 1930s, the Eldee Station owners have always been passionate about the natural history and heritage

#5 HOME VALLEY STATION, WA



of the landscape. The station offers eco-friendly accommodation, camping and caravan sites, a licensed restaurant, scenic flights and sunset tours. The famous ARB Eldee Easter Event is held at the station every year and involves 4WD challenges, kids' activities, an Easter egg hunt and plenty of family camping fun.

5. Home Valley Station, WA Located close to the Pentecost River at the foot of the majestic Cockburn Range, Home Valley Station provides travellers with an unforgettable Australian outback experience. Accommodation options on offer include Grass Castles, guesthouse rooms, eco tents and campground facilities. The station features towering gorges, sparkling waterfalls, billabongs and ancient landforms and ranges. Hiking, horse trekking, helicopter rides and sunset tours are just some of the options on offer at Home Valley Station.

TOP 50 OUTBACK/COUNTRY PUBS



1. Birdsville Hotel, QLD The Birdsville Hotel is on many keen 4WDers' "must visit" list. Accessed by the often unpredictable Birdsville Track, this iconic Australian pub is a great jumping off point for adventures to the Three Corners, the Outback Loop, the Big Red Bash and the Simpson Desert Racing Carnival. Built in 1884, its weathered sandstone walls have been welcome refuge to weary travellers for over 130 years. The hotel offers air-conditioned accommodation units, pub grub and a bar overflowing with memorabilia including the famous Hat Wall.

2. Daly Waters Pub, NT Built in 1930, the Daly Waters Pub has witnessed murders, street shoot-outs, cattle stampedes and drunken brawls. One of the NT's most well-known watering holes, the pub is famous for its ceiling of bras, a tradition

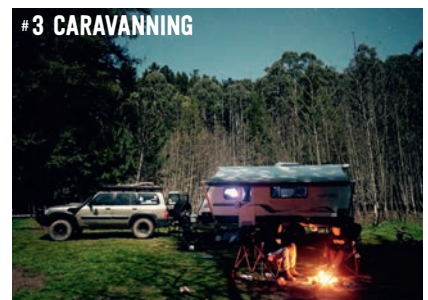
started in the 80s as a drinking bet between a coach driver and his female passengers. Accommodation options include camping and caravan sites, budget rooms, cabins and motel rooms. Located off the Stuart Highway, the Daly Waters Pub sits 600kms south of Darwin and 900kms north of Alice Springs.

3. Dargo Hotel, VIC Established in 1898, the Dargo Hotel is nestled in the foothills of the Dargo High Plains and at the entry point for the Alpine National Park, Avon Wilderness Park and the Mitchell River National Park. Open seven days a week, the hotel offers indoor and outdoor dining, cold beer, wine and Bundaberg Rum on tap. A very popular overnight spot, the Dargo Hotel provides log cabins, bunk rooms and even a historical experience at "Grandma's House" across the road.

4. Lion's Den Hotel, QLD Just 28kms south of Cooktown, near the Black Mountain National Park, the Lion's Den Hotel is a historic Queensland watering hole. Named after the Lion's Den Tin Mine on the nearby tableland, the hotel was opened in 1875 by Jack and Annie Ross. Access is available all year round via the Mulligan Highway but keen 4WDers prefer to approach via the Coast Road through the Daintree. This route involves river crossings and steep hill climbs. The Lion's Den Hotel offers camping and caravan sites, safari tents and onsite cabins, and one of the few safe swimming holes in the area.

5. Silverton Hotel, NSW Sitting in the centre of Silverton, just 26kms north-west of Broken Hill, the iconic Silverton Hotel is one of the most filmed and photographed hotels in Australia. The hotel is full of film memorabilia and offers a great range of souvenirs. The movie *Wake in Fright* was filmed on the premises in 1970 and since then countless films have used this iconic pub in their productions. Publicans Peter and Patsy Price are always happy to share local knowledge with visitors as well as a range of cold beers and wines and the famous Silverton Hotel hot dogs.

TOP 5 HOBBIES OTHER THAN 4WDING



1. Camping Some of the world's best campsites can be found in Australia and there is just no better way to enjoy this beautiful country. A 4WD can make the difference between a cramped and busy campsite, with generators and loud music until three in the morning, and a secluded spot next to the river or beach with nothing but peace and quiet for kilometres. Having the convenience and room to be able to spend a weekend, week, month or year on the road makes

4WDing and camping go together like a meat pie and sauce.

2. Fishing Whether it be estuary, freshwater, reef or fly, fishing is a great way to relax and leave behind the hustle and bustle of the real world. Some of Australia's top fishing spots are synonymous with the country's top 4WDing destinations. Whether the destination is Cape York, the Top End or Fraser Island, having a 4WD opens up a myriad of possible fishing spots and angling adventures.

3. Caravanning Caravanning and camping is rated as one of Australia's most popular leisure-time activities. It brings all sorts of people together with the simple aim of enjoyment, relaxation and having a great time. Having a vehicle that can safely and comfortably tow a caravan is of vital importance to ensure a successful and enjoyable holiday. Weight distribution, sway control, braking systems and suspension are all factors that make 4WDs the ideal towing solution.

4. Boating Launching a six footer down your local boat ramp using a Barina is not exactly an ideal concept, making it little wonder why 4WDing and boating go hand in hand. Some of Australia's

best fishing spots are the hardest to get to and having a 4WD can make the difference between a mullet and a marlin. Nothing rivals the towing capacity of a 4WD and when Martin Brody tells you, "You're gonna need a bigger boat," getting it in the water won't be an issue.

5. Hunting Australia is a beautiful country, teeming with an abundance of varied and unique wildlife. Unfortunately, with the introduction of foreign species, Australia is also overrun with many pests. It is little wonder then that there are over 300,000 active hunters in Australia and over 5.8 million legally owned firearms in the country. Hunting is as old as Australia itself with Aborigines using boomerangs, throwing sticks and fire to hunt and also shape the entire landscape and ecosystem.

TOP 5 "MUST HAVE" 4X4 ACCESSORIES

#1 BULL BAR

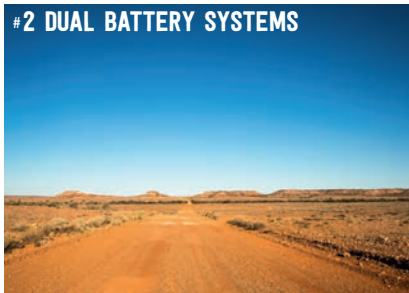


1. Bull Bar Vital for rural and remote area travel, bull bars provide substantially improved protection for vulnerable mechanical components against animal strikes whilst providing a solid base for mounting other accessories like driving lights, winches and CB antennas. Whether it be steel, alloy or polyethylene, there are bull bar options out there for every vehicle and every trip.

2. Dual Battery Systems Designed to make camping and touring safer, more comfortable and more enjoyable, reliable power sources and accompanying battery management systems are a necessity. A dual battery system provides peace of mind and allows you to power additional accessories without the risk of draining the main battery. This is especially important when heading off-road for extended periods of time, but is also extremely handy when wanting to keep a few luxuries powered on a weekend away.

3. Air Compressor If you want to head off-road or decide to take your pride and joy for a beach drive, you will need to lower your tyres. An air compressor is a must-have accessory for when it's time to head back to the blacktop. Not

#2 DUAL BATTERY SYSTEMS



just handy for pumping up tyres, air compressors can be used for inflating camping accessories, running air tools, reseating a wheel or activating air locker differentials.

4. Suspension Once you've loaded up your 4WD with a bull bar, roof racks, a fridge, the family, all their stuff and the kitchen sink, your suspension will struggle. Upgrading your suspension for your 4WD set-up will ensure a smooth, safe and reliable ride when road conditions deteriorate. If you intend to tackle some more serious terrain, having upgraded suspension will also improve ground clearance, ensuring you don't get stuck.

5. Snorkel Being able to take your 4WD anywhere can often be prevented by a deep water crossing if you haven't

#5 SNORKEL



#4 SUSPENSION



#3 AIR COMPRESSOR



already fitted a snorkel. Not just important when protecting the engine from water, a snorkel is vital when travelling dusty roads. Relocating the air intake to a much higher position keeps your airbox cleaner and your fourby running smoother.

TOP 5 CAMPING MEALS



1. Spit Roast/Camping Oven Roast No matter how much gear you're packing, there's always room for the spit. Many culinary non-essentials have been left at home in order to fit the biggest piece of meat possible in the fridge. One of the best ways to spend a lazy afternoon on the tracks is sitting in front of a slowly rotating roast, drinking a beer and sneakily stealing any loose morsels that would otherwise be claimed by the fire. Chuck a few foil-wrapped spuds in the coals and if you're feeling super fancy, crack open a shop-bought container of coleslaw... delicious!

2. Bacon and Eggs There's nothing quite like waking up in your swag to the mouth-watering smell of bacon cooking over a campfire. A 1kg pack of bacon, a dozen eggs and a loaf of bread is all you need to worry about when heading on an overnight 4WDing adventure. You can even get super fancy with a pack of snags and a can of baked beans. However you like your morning fry up, nothing says off-road brekky like bacon and eggs.

3. BBQ Steak Is there anything better than chucking a steak on the barbie? Either getting five-star with salads and sides or teaming your steak with some sauce and a cold beer, nothing tames

hunger like a thick-cut chunk of seared meat. Whether you enjoy a dinosaur-sized T-bone or a Wagyu delicacy, camping isn't camping without a good old-fashioned Aussie steak.

4. Toasted Sandwiches Baked beans, ham and cheese, canned beef stew, banana and Nutella, the fillings for a toasted sandwich are endless... and tasty! Nothing beats concocting a delicious feast, contained between two slices of bread and shoved into a hot fire. Toasted sandwiches are a perfect and simple camping meal. Make sure you have a good quality toastie maker and watch out for the famed toastie tongue burn, a well-known affliction to every hungry and impatient toastie eater.

5. Sausage Sizzle Whether it be outside your local Bunnings or voting time at the

polling booth, nothing says Australia like the traditional snag in bread. An easy and quick off-road meal on your portable cooker or hotplate over a campfire, a sausage sizzle is a great hunger buster. This tasty meal can be as simple as a sausage in a slice of white bread with a squirt of dead horse (tomato sauce) or jazzed up with some fried onion and mustard or relish.

TOP 5 LAST MINUTE TRIP ESSENTIALS



1. Fridge No point bringing along number three if you can't keep it cool. Not having to worry about your ice melting in your esky and spending half your weekend drinking warm beer is enough of an incentive to make sure you have a good quality fridge in your fourby. Available in multiple sizes, depending on your requirements, it's no wonder that fridges came in at number one for the most essential last minute trip accessory.

2. Recovery Kit While most last minute trips are based on just winging it and having a good time, every 4WDer knows that a recovery kit is just something you don't hit the tracks without. Even if you know another mate has one, nobody wants to be "that guy" that gets stuck and has no way to get out. A good recovery kit should come with at least a snatch strap, bow shackles, gloves and a recovery damper.

3. Beer, Whiskey or Wine Need we say more?

4. Camera In today's age, if you don't get it on camera, it didn't happen. There's nothing worse than hauling in that massive catch or wanting to rip your mate later about getting stuck and not having your camera with you. It's no wonder then that this came in at

fourth as the most needed last minute trip essential. Whether it be a fancy SLR with all the bells and whistles or just the camera on your phone, make sure you remember to pack yours next time you head off-road.

5. Swag When your mate calls you up and suggests a weekend away, it's as easy as chucking the swag in the back of the ute and your accommodation is sorted. Quick and simple to set up, nothing's more Aussie than a swag. Whether you prefer to stretch out in a double or want the extra packing space that a single affords, the swag is every camper's last minute essential.

Rok On

Volkswagen Amarok Protection



A powerful new addition to the Volkswagen range, the 2017 Amarok packs a 3.0L, 24 valve turbocharged diesel that provides 160kW of power and 550Nm of torque. With a big focus on pulling power, the Amarok can engage an “overboost” function that increases power to 180kW and torque to 580Nm.

Such a powerful machine deserves the best protection and ARB’s engineers have worked tirelessly to develop an extensive range of equipment specifically designed to complement the styling and strength of this impressive utility.

We reported on the ARB Summit bar and Classic Plus canopy for the Volkswagen Amarok in Issue 49. We can now confirm release of ARB Summit side rails and steps to complement the ARB Summit bull bar and a newly developed ARB Summit rear step tow bar.

ARB Summit Side Rails and Steps

With the recent release of the Summit bull bar to suit the Amarok, Summit side rails and steps have been developed for the Volkswagen Amarok and fit all vehicle models from 2010 on.

With a design-registered attachment system, larger steel tubing and anodised aluminium tread plate, the Summit side protection range encompasses the very best in design and vehicle protection.

Built for the next generation of 4WDs, Summit side rails and protection steps defend the Volkswagen Amarok’s doors and side sills from expensive damage encountered off-road. Manufactured from high strength 60.3mm tubular steel, the attachment system connects the side rail to the bull bar securely, while a tough nylon cover sleeve provides an integrated look.

ARB Summit Rear Step Tow Bar

Volkswagen’s recent update to the Amarok has provided ARB engineers with the opportunity to develop a Summit rear step tow bar to suit. Whilst primarily designed for the updated Amarok, a supplementary kit is available to enable fitment to earlier models.

To maximise departure angles whilst still allowing for number plate fitment under the tailgate, ARB has adapted the Summit rear step tow bar design. Still retained, however, are the proven features of the Summit platform including press-form wings, press-formed diffuser and centre lift panel, and Hi-Lift jacking points at the rear and side.

The 60.3mm tube work, finished in Integrit textured black powder coat, has been formed to provide the necessary protection and strength to the tow bar assembly.



TRIPLE TREAT

Strong, sleek and stylish, the ARB Summit Sahara is one good-looking bar and is now available for the new Isuzu D-MAX, latest Holden Colorado/Trailblazer 2016 on and Toyota Prado 150.

ARB Summit Sahara

The Summit bar range is specifically designed to complement each vehicle, engineered to seamlessly integrate with the design of today's modern 4WDs. This attention to detail ensures that the bar not only looks good but fits and functions in the best way possible.

Sharing many of the strength-related features of a Summit bull bar, including ARB's five-fold upswept and tapered wing profile, the Summit Sahara bar offers a different look without sacrificing practicality.

Like the Summit bull bar, the Summit Sahara bar also provides a solid platform for adding other accessories such as winches, driving lights and CB antennas.

Colorado Combat

Holden Colorado and Trailblazer 2016 on owners now have even more protection selection with the release of the vehicle-specific Summit Sahara bar. The Summit Sahara bar shares a number of features with the Summit bull bar including a press-form top pan and winch cover, recessed winch control mount, 30mm wing and pan radius and driving light mount access.

Whilst ARB's mounting system – developed for the 2012 on model Colorado and Colorado 7 – has largely been retained, additional wing braces are included to add structural integrity to the wings, traditionally braced by the outer frame assembly of a Summit or Commercial bull bar. This additional chassis reinforcement provides an airbag compatible mounting platform that is capable of withstanding up to 10,000lbs of winch load.



Prado Protection

Following the popular Summit bull bar for the Toyota Prado 150, an ARB Summit Sahara bar has been designed and developed for the 2013–2017 GX and GXL models.

A number of subtle design changes have been implemented including a differing wing depth and angle to complement the Summit Sahara fit and finish on the vehicle. Whilst chassis mounts are retained from the Summit bar design, new under wing panels have been developed for fit with the redesigned wings.



D-MAX Defence

Revised styling of the MY17 D-MAX has been taken into consideration when designing an attractive bar and the ARB engineers have developed a Summit Sahara bar that provides vehicle owners with an alternative to the Summit and Commercial bull bars already on offer for their vehicle.



Whilst ARB's mounting system – developed for the 2012 on model D-MAX and MU-X – has largely been retained, additional wing braces are included to add structural integrity to the wings. The added chassis reinforcing and attachment to the vehicle chassis provides a mounting platform that is both airbag compatible and capable of withstanding winch loads of up to 10,000lbs (angled and in-line with the vehicle).



OUR WAY AND THE HIGHWAY

WORDS BY KIM AND PETE CUMMINS

“THERE’S GOTTA BE ANOTHER WAY OF DOING THINGS”

In a previous life, we were just a suburban couple from Melbourne running a maintenance plumbing business. One shitty invoice too many started a conversation between the two of us about breaking the cycle of day-to-day, week-to-week existence and cold Melbourne winters. This, coupled with a series of less than ideal medical diagnoses of close friends and family, encouraged the decision to take 12 months off to get away and have a really good look at our vast backyard. What began as 12 months has turned into close to six years on the road.

We started with a 100 Series Toyota LandCruiser and a 2002 hard floor Kimberley camper with a 3.2m tinny, surfboard and two dogs. It had taken four years to complete our initial lap of Australia and we were having difficulty adjusting to the idea of settling back into mainstream life. Thoughts then turned to the possibility that we may have missed something in our travels... we had better go and have another look.

We wanted to keep our life simple, so decided to upgrade all our gear in an effort

to make travelling easier, more comfortable and a little more enjoyable. We also wanted to solve the problem of always having to move 20 things to get to one. So the planning began. There is no perfect set-up that suits everyone, so we needed to tailor each aspect to suit our needs. Our biggest concerns were weight, size and storage. After nearly assaulting fellow travellers with questions and hours spent researching online in search of the perfect set-up, we settled on a chopped 200 Series with a custom canopy for storage.

The majority of our time is spent in high range rather than low, touring the country. A 79 Series was out of the question given the fact that comfort is paramount (Pete heeding the age old wisdom of “happy wife, happy life”). The much larger imported vehicles can be difficult to source parts for and service, which was a major consideration given the remote areas we choose to travel. After our wonderful experiences in our 100 Series GXL, the 200 Series GXL was an easy choice, plus it came with the confidence of a Toyota dealer in most towns.

WHY WE CHOSE TO CHOP

The main reason we decided to chop the 200 Series was so that we could carry everything we wanted. This included a generator, 3.7m tinny, outboard boat engine, fridges, water, fuel and Kim's makeup case. We had seen more than the odd twin-cab 4x4 split in two on a tilt tray due to improper weight distribution, so we decided that a GVM upgrade and chassis extension would be our best bet to be able to legally carry what we required. Functionality was another consideration; we needed to spread our load whilst still remaining practical and comfortable, a great touring vehicle in its own right or with a camper. The 200 Series' physical size and accessibility to remote areas was top notch and combined with its comfort, functionality and a custom lockable canopy to safely stow all our gear made it an easy choice.



TIME TO ACCESSORISE

After owning the 100 Series with all the fruit on it, we were very mindful of what we really needed without going over the top. Ultimately, we wanted to build something that mostly took care of itself. Much to our surprise, once the figures were done, it proved to be financially (and from an engineering perspective) better off purchasing new versus second-hand.

Once we had decided on the 200 Series, we wanted to have as few companies involved in the build as possible. This came down to three businesses: Creative Conversions from Queensland, Concept Canopies from Queensland and ARB head office in Victoria.

At the time, we were travelling the west coast of Western Australia and needed to trust our chosen companies to do the job they promised. After a quick visit to Creative Conversions and Concept Canopies, we knew they worked well together, understood each other's requirements and build flow, and both had great reputations. The build would take approximately 15 weeks.



Creative Conversions:

- Converting the wagon to a dual-cab ute with a 650mm chassis extension
- 4,200kg GVM & 3,500kg towing with 7,700kg GCM
- 180L Long Ranger fuel tank
- ALMAC custom boat loader
- Allied mags & BFG KO2s
- REDARC Towpro Elite brake controller
- Fully upgraded suspension

Concept Canopies:

- Aluminium canopy 1,900mm x 2,000mm
- 80L water tank
- Two under tray tool boxes
- Rear sliding drawer
- MSA drop-down fridge slide
- Internal drawer fitout
- Outboard engine mount and slide
- Rear-view camera
- Two rear wheel carriers
- Fully insulated interior
- Instrument panel
- Battery storage boxes
- Remote locking

ARB

Given our previous experience with ARB head office, we chose them for our aftermarket gear in collaboration with REDARC for the electrical fitout of all power components. The electrical fitout was a major consideration in our planning. All accessories on the vehicle are powered off two lithium batteries supported by the REDARC BM30 with a dedicated 200 watt flexible solar panel mounted on the cabin roof rack.

- ARB twin compressor
- ARB Summit bull bar with WARN 12,000lb winch (to get ourselves out of trouble)
- ARB side rails and steps
- ARB under vehicle protection and recovery points
- ARB roof rack
- Charging points in the dual cab along with charge points in the canopy
- Intensity LED driving lights and Intensity LED light bar
- Safari snorkel
- UHF Radio

After the ARB component was completed in Victoria, we then returned to Broome in Western Australia where we have been based for the past three years. Our first trip will be to visit friends in Newman and explore what the Pilbara has to offer. Once completed, we hope to bring this story to print and to inspire more people to step out of their comfort zone and explore this magnificent country while they still have their health and these beautiful remote areas are still accessible and open.

PERFECT PROTECTION

WITH SO MANY DIFFERENT STYLES OF BULL BARS ON THE MARKET, CHOOSING THE RIGHT ONE TO SUIT YOUR VEHICLE AND YOUR REQUIREMENTS IS NO SIMPLE TASK.

A bull bar is definitely at the top of the list when it comes to equipping your 4WD for adventure. As well as offering protection for your vehicle, it's a platform for mounting other equipment such as a winch, driving lights and antennas. Also, being such a visible product means it should also complement your vehicle's appearance.

With a choice of steel, alloy and plastic (polyethylene) bull bars, winch and non-winch models, bars with and without outer tubes, polished, powder-coated and colour-coded bars, and even nudge bars, just how do you choose the one that's right for you?

Important considerations when choosing a bull bar include where the vehicle will be driven and what accessories will be fitted to it. Of course, the design of a bull bar is also a very important factor; it should comply with all relevant standards and design rules and it must be compatible with a vehicle's SRS Airbag System. Compatibility with other protection equipment should also be considered and it's vitally important that the bull bar doesn't adversely affect vehicle systems such as engine cooling.



WHERE ARE YOU GOING?

Where you intend to drive your vehicle will be a major consideration when it comes to selecting the correct bull bar, particularly when it comes to bar design.

"If you're going to be doing a big trip like the Simpson Desert or Cape York, there's probably a reasonable chance that you may have an animal strike so it makes good sense to have the complete protection of a full style bar," explains ARB Product Manager, Steve Sampson. In the ARB range, that includes bars such as the Summit bull bar, Deluxe bull bar, Commercial bull bar and Alloy bull bar.

"If you're just going to be doing coastal driving, where you may only need

somewhere to mount a winch and driving lights, then you'd go for a Sahara or Summit Sahara style bar," adds Steve. These bars offer the strength of ARB's five-fold upswept and tapered wing design, and can be fitted with or without a polished centre tube.

For those who simply want a platform for mounting accessories such as antennas and driving lights, there's the ARB Nudge bar, which suits a range of compact and medium-sized SUVs, 2WDs and 4WDs.

Of course, the amount of money you want to spend is also a consideration when buying a bull bar, particularly if you're buying a bar to suit an older vehicle, where a bull bar can be a big investment compared to the actual price of the vehicle. "We have several different bars depending on what budget a customer has," says Steve.

Regardless of which bar design you think best suits your vehicle, it's important that the bar is properly engineered to suit local conditions and that you have access to service and support, no matter where you're travelling.

"One of ARB's major advantages is that our engineers design and develop each bar in house," explains Steve. "Also, because we manufacture everything, we have the full range of spare parts available... pretty much every single nut and bolt is available as a spare part.

"With the instructions we supply with each bull bar, there's a full description as to what each particular nut, bolt and washer is so even if you can't get to an ARB store, if you go into a bolt shop you will know the grade of material used in each particular fastener."

STEEL, ALLOY OR POLYETHYLENE?



STEEL

Put simply, steel bull bars offer maximum vehicle protection due to the strength of the material from which they are made.

"First and foremost, the greatest benefit of a steel bull bar is its actual strength," says Steve. "In terms of being a platform for fitting other accessories, having a steel bar means that the winch cradle is built into the bar rather than having a separate winch cradle. You can also fit side rails and steps straight up to a steel bull bar." Other advantages of steel include the potential for colour coding so that the bar offers an integrated appearance with the vehicle to which it's fitted and the fact there's such a wide range of bar styles available to suit both new and old vehicles. "Because

we have been making steel bars for 40 plus years, we have quite a wide range of vehicles that we can fit a bar to," says Steve.

So why would anyone choose a material other than steel? "The only real downside of steel is in terms of weight," explains Steve. "Steel is a heavier material than alloy or polyethylene..."

"At ARB we obviously sell steel bars, that's what we are known for, but now we also have polyethylene bars, which are made by SmartBar, and we also manufacture a range of alloy bars for most of the popular current-model vehicles on the market."

ALLOY

The main advantage of an alloy bar over a steel bar is weight saving and some people also like the highly polished finish of an alloy bull bar. Up until recently, alloy bull bars have not offered the same protection as steel bull bars but ARB has invested heavily in the development of its Alloy bull bar range to ensure maximum strength has been achieved.

"Nowadays, we design the alloy bars so they offer the same sort of strength that you'd expect out of a steel bar," says Steve Sampson. "This is achieved through the design of the bar and also the types of materials that we use depending on whether it's part of the bar's wing, pan or other components.

"The wings on the ARB Alloy bull bar have extra bracing, resulting in comparable strength to a steel wing."

ARB Alloy bull bars are compatible with a range of winches but a separate winch cradle needs to be fitted. "We offer the winch cradle as a separate item because one of the main advantages of the alloy bar is its weight saving, so for those customers who don't need a winch, the absence of a winch cradle saves a fair bit of weight," explains Steve. "A winch cradle is traditionally around 10-15kgs and then you can add around 35-40kgs if you fit a winch as well."

Alloy bars are also ideally suited to 4WDers who live or drive near the coast as the highly polished alloy finish will not be affected by salt spray.

The main downside of an alloy bar compared to a steel bar is the initial purchase price. Put simply, a sheet of alloy costs more than a sheet of steel so higher production costs result in a higher retail price. If you want to keep your Alloy bull bar looking nice and shiny, you'll have to look after it. "In terms of maintenance, you will need to polish an alloy bar on a more

NO MATTER WHAT MATERIAL YOUR BULL BAR IS MADE FROM, IT'S IMPORTANT THAT IT'S COMPATIBLE WITH THE OTHER ACCESSORIES FITTED TO YOUR VEHICLE.

Choosing a bull bar

regular basis than you would a steel bar,” advises Steve.

ARB manufactures alloy bull bars to suit a wide range of current-model vehicles, although if you want a bar to suit an older vehicle then you’ll have to choose from the extensive steel bull bar range.



POLYETHYLENE

SmartBar, a wholly owned subsidiary of ARB, manufactures bull bars made from roto-moulded low-density polyethylene that are lightweight, durable and cost-effective.

The material used in the construction of SmartBars is UV stable and resistant to chemicals. In many cases when a SmartBar is subjected to a minor impact, it will return to its original shape.

Like bull bars manufactured from other materials, many SmartBar models can

be used as platforms for fitting other accessories such as winches and driving lights. In the case of winches, a winch cradle needs to be fitted.

The SmartBar has been tested to ensure it doesn’t interfere with the correct deployment of a vehicle’s airbags and, like other bull bars in the ARB range, vehicles fitted with a SmartBar retain their ANCAP rating.

One particular SmartBar model, the StealthBar, is the only bull bar that meets the European standard for pedestrian safety and it is ideally suited to vehicles used in urban environments.

Another advantage of a SmartBar is that it’s made from polyethylene, so there is no risk of corrosion.

So what are the downsides? Polyethylene bars do not offer the strength of steel or alloy bars, there are limited colour choices (black, white and high-vis options only) and they are not compatible with side rails and steps.

COMPATIBILITY WITH ACCESSORIES

No matter what material your bull bar is made from, it's important that it's compatible with the other accessories fitted to your vehicle. If you want to fit a winch, then you'll need a winch compatible bull bar or at least a bar that can be fitted with a cradle to accept a winch. If a winch is not to be fitted to your vehicle, there are several non-winch bull bars to choose from. Combination bars can be fitted to vehicles without a winch and then upgraded to have a winch fitted at a later date.

"The features of a bull bar come down to what a customer values the most," says Steve Sampson. "Things to look for include whether a bar is winch compatible and whether it has mounts for driving lights and antennas."

A bar should be considered as more than just a standalone product as it integrates with all of the other accessories you might wish to fit. "In terms of ARB bull bars, there is compatible equipment such as Warn, Bushranger and Smittybilt winches, and then items such as Bushranger driving lights, IPF driving lights and also ARB Intensity lights," says Steve. In the case of the innovative ARB Intensity LED light bar, the mounting system has been specifically developed to be compatible with ARB bull bars.

If you're intent on protecting the underside of your vehicle as well as the front, then you'll want to make sure that the bull bar you choose is compatible with protection plates and the like. "When we design under vehicle protection (UVP), we design it first and foremost to suit ARB bars but it's also designed around the OE front bumper," says Steve.

"The UVPs are designed so that they will provide protection starting from the front bar itself, which will have a centre stone shield, and then it will have three or four under vehicle protection panels that will go all the way back to the transfer case, meaning protection from the front to basically halfway down the vehicle."



STAYING COOL

One very important aspect of a well-engineered bull bar is that it will not hinder airflow to a vehicle's cooling system.

"When our engineers design bull bars, they measure, in terms of area, the airflow from the factory front bumper and the factory under-panels and then replicate that in both the front bar and the under-panels supplied with the bar," explains Steve.

ARB also conducts real-world testing to ensure cooling systems still operate as the vehicle manufacturers intended. As one of the first of the new breed of utes with a

3,500kg towing capacity, ARB conducted extensive on- and off-road testing of the Ford Ranger when it was launched in 2011.

"When the Ford Ranger was first released, we did a lot of airflow testing on that particular vehicle and a lot of towing testing as well," says Steve Sampson. "It was one of the first utes with a reasonably small engine but a reasonably large tow rating so we wanted to see what effect having a front bar on it had when towing." This extensive testing confirmed that ARB's split pan and under panel design provided more than adequate airflow to the vehicle's cooling system.





AIRBAGS AND ANCAP

When you buy a bull bar you want to be sure that it doesn't have an adverse effect on your vehicle's safety systems. Many bull bar manufacturers claim their bull bars to be airbag compatible, ARB has physically crash tested vehicles to ensure correct deployment of SRS Airbags.

In the very early days of airbags, ARB decided that real-world crash testing was the only way to ensure its bull bars and its mounting systems were compatible with airbags. ARB engineers worked in conjunction with a team at Monash University to come up with a solution in the form of a bull bar chassis mounting system with a now-familiar concertina shape. The team then conducted crash testing to ensure the airbags on a bull bar-equipped vehicle would operate as intended by the vehicle manufacturer. The lessons learnt through this physical crash testing proved invaluable and ARB undoubtedly gathered more information and developed a better bull bar mounting system than if it had relied solely on computer-simulated crash testing.

More recently, to ensure fitment of an ARB bull bar has no effect on a vehicle's ANCAP (Australian New Car Assessment Program) rating, further crash testing was conducted. "In 2014, we did an ANCAP frontal offset crash test on the Ford Ranger," explains

Steve Sampson. ARB's accessories will have no effect on a vehicle's ANCAP five-star occupant safety rating.

Since 2012, the ARB group has conducted four ANCAP crash tests of its frontal protection systems. In all cases, the presence of the frontal protection system did not affect the ANCAP five-star rating of the vehicle for occupant safety. These results confirmed the results of ARB's own modelling.

Of course, not all bull bar testing involves physically crashing a vehicle. "When the engineers first start the development work on a new bull bar, a lot of the first work is done through FEA testing so before we actually make any parts we've already measured in-house how suitable all of the mount and bar assembly will be for that particular vehicle. A lot of the work is done before we actually make any physical parts," says Steve. "We also utilise our in-house 30 tonne press for testing mounts and bar assemblies.

"Physical crash tests are obviously quite an expensive undertaking so we can't do that on every single vehicle but the bar fitted to the ANCAP crash test vehicle came straight out of stock, so the advantage of that endeavour was that it confirmed everything that the engineers do, actually works on the vehicle itself."

LOOKING AFTER YOUR BULL BAR

It might not have any moving parts but, like any other component on your vehicle, your bull bar needs to be regularly inspected and maintained. Pre- and post-trip checks are a good habit to get into.

"Similar to other accessories on your vehicle, you have to make sure the bull bar is secured tightly, ensuring it's not too tight," advises Steve. "All the fitting instructions for ARB bull bars have the torque settings for each of the bolts, which should be followed and in terms of any pre- or post-trip checks, look to make sure the bar still sits centrally on the vehicle.

"If you do hit anything with the bar, make sure the force hasn't impacted on any gap conditions in between the bar and the vehicle itself. Those gaps are there to account for body movement in relation to chassis movement and can be affected by strikes.

"Pre- and post-trip checks also allow you to see if there are any rocks or debris that might be caught in behind the bar, which could lead to issues such as overheating of the vehicle."

If you don't feel confident performing these checks yourself, simply swing by your local ARB store for a thorough bull bar inspection.

If you have a colour-coded steel bull bar, you should look after the paint finish in the same way as you would for the rest of the vehicle. Regular washing and occasional polishing will keep it looking good. In the case of powder-coat steel bull bars, a quality carnauba wax is the best product to protect the finish.

Alloy bull bars will require more regular polishing to maintain a shiny appearance. Use a quality car wash and a specific alloy polish. In the case of a SmartBar, you just need to use a standard car wash product.

ISUZU PROTECTION



Isuzu have recently given the MU-X a facelift, and ARB's engineers, excited at the opportunity to develop another premium vehicle-specific product, have taken on the challenge and produced an ARB Summit bull bar to suit changes to the bonnet, grille and headlight assembly.

ARB's mounting system, developed for the 2012 on model MU-X, has largely been retained. When the model was first released, ARB engineers increased chassis reinforcement to ensure airbag compatibility and winch load capability of up to 10,000lbs both angled and in-line with the vehicle.

A new grille and bi-LED projector headlights (with a self-levelling feature useful for those who tow and lug varying cargo loads) are changes to the front of the vehicle that ARB engineers carefully considered when creating the bar. The bar was designed with the new modern MU-X look in mind and the larger ARB fog light and surround, two-piece split pan grille and recessed winch control box mount ensure the vehicle maintains a sleek, integrated appearance.

Summit side rails and steps to suit the MU-X are in final stages of design and development.

NAVARA TAKES COVER

Same classic design with a clever little twist! The ARB Classic Plus canopy replaces the twin-locking rear door with a single centralised electronic handle incorporating keyless entry and "slam shut" operation.

Development is complete and Nissan Navara NP300 Dual Cab 2015 on owners can now enjoy the style and convenience that comes with the Classic Plus canopy. Complementing the Navara's tailgate and spoiler design, the rear door offers quick access to the canopy with the simple press of a button.

Available in a smooth painted finish with a new look rear door, the Classic Plus canopy

offers increased security with its centrally locked rear window, tinted safety glass and keyed alike side windows. A choice between side sliding and side lift up windows is available with both options positioned low on the canopy shell to maximise access into the cargo area. The front canopy window is a lift style to allow maximum rearward vision and easy access to clean the vehicle's cabin rear glass.

Inside the canopy – housed in a new interior door cover – is the emergency override handle, allowing operation of the door even if the vehicle battery is flat. The rear door can also be overridden from the outside with the supplied separate emergency key.

ARB's unique laser-cut steel mount system is bolted directly to the Navara's existing vehicle hard points located at the front and rear of the vehicle tub to form a solid foundation for the canopy, whilst additional brackets have been added to the rear of the side bedrails to support the rear door frame and door strikers.

ARB canopy shells are made from a special co-extruded ABS plastic for strength and durability. ABS plastic is inert and with suitable venting is safe for the transportation of animals. Being a recyclable material, ARB has the opportunity to reduce the amount of landfill at the end of the canopy's life.





HIGH COUNTRY HUT HOPPING

WORDS AND PHOTOGRAPHY
BY EMMA GEORGE

From one hut to another, every shack has its own story, whether it be a humble cattlemen's shelter, a famous movie set or the dark secrets of unsolved murders. Summer is the season to explore the High Country as the roads are open and it's still cool enough at night to appreciate a good campfire. After touring around Australia for six months, we were returning to our childhood homes in northeast Victoria to spend Christmas with our families. It was the perfect opportunity for a 4WD trip with the cousins and grandparents to explore this rugged and historic terrain together.

Good preparation for such an iconic 4WD trip is essential, so first things first, we gathered to watch *The Man from Snowy River*. The scenery was breathtaking, the horsemanship incredible and even this 1980s flick managed to captivate my boys, who are usually only intrigued by Star Wars-type action movies. The steep terrain and rocky tracks of the High Country are, in many parts, unsuitable for camper trailers and after six months of traversing some of the roughest off-road 4WD tracks, it was the first time we had to unshackle and rethink our set-up. The kids were already sleeping in swags and as Christmas was approaching, my husband, Ashley, and I called into the ARB store in Albury to purchase a double swag along with a High Country Victoria Atlas and Guide. Organising the car was pretty simple; the swags were on the roof and we had the bare camping necessities, food and water along with our recovery bag. It made me wonder if we had been lugging too much gear all the way around Australia and it felt liberating to leave most of it behind.

The historic old gold mining town of Beechworth is on the doorstep of these beautiful ranges and even though I grew up there, I had never explored the magical High Country. Camping with my family was great but our Holden Kingswood only got so far off-road, so we avoided anything challenging. All this changed when I married into a serious 4WDing family. My in-laws had been on many adventures driving through the High Country and for Ashley and his brother, Jason, taking their children on the same expedition was like reliving some of the best bits of their childhood.



ONWARDS AND UPWARDS

Our three-car convoy, filled with three generations of campers aged seven to 70 years, planned to meet late Friday night on the Wonnangatta River. We would spend two nights camping beside pristine mountain streams and three days traversing some of the roughest tracks to the tops of mountains and visiting huts, some of which are over 100 years old.

Stocking up on supplies in Myrtleford, it was a relatively tame first day driving along Buffalo River Road to Abbeyard Road, then winding our way to Riley Creek Hut where the boys entertained themselves catching tadpoles in a defunct concrete trough.

“No, you can’t take them with us,” I repeated myself until the kids finally

released their prized tadpoles and we headed along the Wonnangatta Track to our rendezvous point on the Wonnangatta River. Tall trees surrounded a grass-covered flat clearing, right next to the clear and picturesque river. This was a postcard moment. After hundreds of nights on the road, camping in some of the driest, dustiest campsites, I would only dream of the perfect grassy abode. Over 30,000 kilometres later, here it was, my favourite campsite of our trip so far and we only had to share it with a few birds and possums.

The boys ran to the river looking for frogs as we threw the swags down from the roof, set up camp and started a crackling campfire. It was after 9.00pm when the kids’ cousins arrived and following a 600km drive, the girls were happy to escape the car and join the family around the campfire for a Milo and toasted marshmallows. I couldn’t think of anything more perfect than the

present moment. Not even the fanciest five-star resort would beat the simple pleasures of camping with family under the stars in such an idyllic location.

Smoke filled the air in the morning as the fire was stoked for a hearty bacon and egg breakfast. We donned our jumpers and waited for the sun to warm the morning’s crispness. The kids were already busy alongside the river, happy in each other’s company, painting art on the smooth river rocks with a mixture of coal and water. Since camp was a basic affair, it didn’t take long for us to roll the swags, pack up our cooking gear and head towards Wonnangatta Station, our first stop of the day.





MURDER IN THE HIGH COUNTRY

Exploring the old Wonnangatta Station, which was established in the 1860s, is amazing as you get a real feel for the incredibly difficult lives the families endured while trying to run the old cattle farm. The remoteness and physical hardships, not to mention inclement weather, is all too apparent when strolling through the family graveyard. The first lady of the house died in childbirth and the following family lost children. It's a sad story that provides a true appreciation of how easy our lives are in comparison. The beauty and history of this area is worth making the effort to see, but it was the story of the unsolved murders that really intrigued us all.

Just over 100 years ago, John Bamford was hired as a cook at the Wonnangatta

Station, but he was known to have a violent temper and also suspected of strangling his wife. When the decomposed and decapitated body of Harry Smith (a friend of the owner of Wonnangatta Station) was discovered, everyone suspected Bamford. Bamford had gone missing after the murder but it wasn't until the snow melted in the spring of 1817 that a body was found under a pile of charred logs near Howitt Hut. The body was that of Bamford and the murder mystery still remains unsolved.

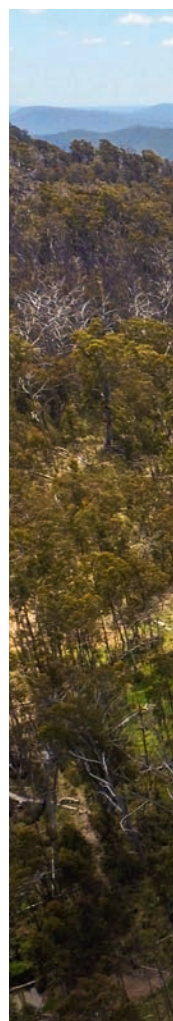
Naturally, the kids were keen to visit Howitt Hut, the scene of the next crime, and we took the challenging Zeka Spur Track to the top of the Howitt Plains. The road was steep and it was interesting to pass through areas of mountain ash and tree ferns, but as we climbed higher, the snow gums took over and the temperature soon dropped despite being a sunny day. As we reached the top of the plains, the small, slightly

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dilapidated Howitt Hut came into view; it was the perfect place to stop for lunch and explore the area. It is great that you can still access all the old huts, but this dark dwelling had a slightly different atmosphere and we all wondered what really happened there so many years ago.



**I HAVE NEVER
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GETTING ROUGH

The tracks were steep but it hadn't seemed so bad from the passenger seat so I decided to get behind the steering wheel; the Howitt Road to View Point was fairly straightforward. We had postponed our trip due to bad weather the previous weekend so it was great to be rewarded with beautiful sunny days. It was a short, steep walk to the lookout at View Point, but from there, it felt like we were on the top of the world as we could see mountain peaks for miles. Feeling confident, I climbed back in the driver's seat for the next leg along the King Billy Track to Lovicks Hut. It didn't take long for me to regret my decision as this was one of the most difficult tracks I had ever driven.

Relieved to be the last vehicle in the convoy, I carefully watched the lines taken by the cars in front and listened to advice on the radio of upcoming

obstacles. Despite the complaints from the back seat about my rough driving, I was pleased to have Ashley beside me, giving me calm directions on gear choice and direction. I have never concentrated so hard; the sheer death drop off the side of the mountain was only a metre from our wheel tracks. Couple this with hairpin bends, loose rocks, and steep ascents and descents, it was definitely a hair-raising experience.

After what seemed hours on the track, we finally arrived at Lovicks Hut and I have never been so relieved to exit the driver's seat. After a quick exploration of the expansive hut and the surrounding area, we were back in the cars and off to Bluff Hut, where we would relive one of the most famous scenes from *The Man from Snowy River*.

Bluff Hut was small and it was easy to tell it was well used by hunters, hikers and horse riders seeking an overnight

reprieve from the often inclement weather. The original hut burned down in the 2006/07 bushfires but it was rebuilt the following year. During winter, the only access is by horseback, hiking or skiing. Ashley and I escorted three extremely energetic kids to the lookout made famous in the movie. The walk to the Bluff is a couple of kilometres and as we dodged a snake and the pace picked up, I wished I had a horse to ride along the ridge. The rest of our convoy went ahead with the younger kids to light the fire and set up camp on the Howqua River.

Once we reached the top of the ridge, the lookout was worth the walk and it truly felt like we were on top of the world. We perched on the granite outcrops and counted the peaks in the distance.

The fire was burning well by the time we drove into camp and once again, we had another perfect site with grass underfoot, nestled next to a pristine mountain river. It was heartening to see



such great facilities with wooden camp tables, fire rings, spikes for billies, along with composting toilets, all provided free of charge.

Bindaree Falls was the first stop on our final day and the cool mist showered us as we watched the water cascade into the mass of ferns below. The kids were keen to visit Craig's Hut, one of the most famous and popular huts in the area. Built in 1984 for *The Man from Snowy River* movie, it was also reconstructed in 2008 after it was burnt down in the same fires which engulfed Bluff Hut. The hut was far grander than any we had visited on our trip and the views were truly magic.

It was an easy drive down Circuit and Speculation Roads to the demure King River Hut, but despite its modesty, the tall trees and grassy plains provided the ideal lunch stop and a perfect campsite for an overnight stay.

Our final stop was the Lake Cobbler Hut and we decided to take the shortcut via Speculation Road, which involves navigating a track aptly named "The Staircase". I stayed well clear of the driver's seat and despite the warnings about the series of rough jump-ups, it was slightly better than what I feared, although that may have been because I wasn't driving.

We boiled the kettle beside the small but well-used Lake Cobbler Hut and shared a cup of tea before saying our goodbyes. The Abbeyard-Lake Cobbler Track led us to Buffalo River Road and even though we had barely done 200 kilometres over the three days, it had taken us well over 10 hours driving along the slow and steep tracks. It felt like we had done and seen so much; the huts, history, scenery and stunning campsites exceeded all expectations and sharing the trip with family made it even more memorable.

4WD Tyres

THE RIGHT RUBBER

Words by Dean Mellor



If you plan to take your 4WD off the bitumen, you're going to need tyres that can handle off-road conditions. Here's how to choose the best rubber for your rig.

Choosing the right tyres for your 4WD is one of the most important decisions you're likely to make, particularly if you intend to drive it on unsealed roads and tracks. Just think of all the jobs you need your tyres to do: provide good on-road grip in both dry and wet conditions; provide off-road traction on sand, gravel, mud and rocks; offer good puncture resistance at various inflation pressures; have long life expectancy despite harsh off-road conditions; emit minimal noise when driving at highway speeds... and the list goes on.

While the standard tyres fitted to most modern 4WDs do a great job on the road (grip, longevity and low noise), they are usually inadequate as soon as you drive off the blacktop. Sure, they might look off-road capable but chances are they have a Passenger Car (P) construction, just like the tyres fitted to a Toyota Corolla or a Ford Focus. While they will be the correct size and have the appropriate load and speed ratings for the vehicle to which they're fitted, they will not be up to the demands of serious off-road driving or long-distance remote-area travel on unsealed roads.



PASSENGER CAR TYRES

So what would prompt vehicle manufacturers to fit P construction tyres to some of the toughest 4WDs in their model ranges? A tyre with a P construction is built as lightly as possible to allow it to dissipate heat easily (which aids tyre life), to allow it to flex (which improves ride quality and comfort) and to minimise rotational forces (which benefits vehicle performance and fuel economy). It will also likely have a car-like tread pattern that will aid on-road handling in both dry and wet conditions, minimise braking distances on the road, extend tread life, aid fuel economy and minimise on-road noise levels.

The characteristics that make a P construction tyre suited to on-road driving will work against it off the road. The thin, flexible sidewall will be prone to damage from rocks, sticks, tree roots and other sharp objects. The tread surface will be prone to punctures. And the tyre's tread blocks will be susceptible to chipping and breaking away.

LIGHT TRUCK TYRES

If you're driving mainly on the road with occasional forays onto unsealed but well-maintained roads, a P construction tyre might be up to the task but if you do a significant amount of off-road driving or you're going on a long trip to the outback on rough unsealed roads, you'll need to upgrade to a tyre with a Light Truck (LT) construction.

An LT tyre is built more heavily than a P tyre, usually with extra strengthening in the sidewalls and across the tread area. This is achieved in a number of different ways, often by adding more plies (or layers) as the tyre is built, making those layers out of tougher materials, and by altering the design of the tyre carcass and the way it is put together.

Due to their tougher construction, LT tyres are able to better withstand the rigours of off-road driving, offering far better puncture resistance in both the tread area and the sidewalls, but there are a few on-road drawbacks: they are heavier so fuel consumption will increase and they have less flexible sidewalls that can result in a firmer, bumpier ride. But these drawbacks are a small price to pay for the assurance of off-road puncture resistance, durability and performance.



TREAD PATTERNS

Once you have tyre construction sorted, the next decision to make is how aggressive you need the tyre's tread pattern to be. Different tyre manufacturers have different recommendations on what tyre to choose depending on how much off-road driving you intend to do, but the type of off-road driving you'll encounter is just as important. Regardless, for off-road use you'll want a tread pattern that's more aggressive than a highway tyre.

By "aggressive" we mean a tyre with wide-open blocks that allow the tyre to get good bite in slippery terrain such as mud or on rocky hills. But bear in mind the more aggressive the tread pattern, the less effective the tyre will be on the road; it won't wear as well, it will make more noise and it will likely not offer the handling and braking performance of a tyre designed specifically for on-road use.

Most manufacturers offer LT tyres in a couple of different tread patterns. An intermediate tyre (often referred to as an all-terrain), with a tread pattern about halfway between a highway tyre and a heavily block-treaded mud tyre, will suit the 4WDer who spends most of their time on the road but still needs something aggressive for the occasional off-road trip on unsealed roads or formed tracks.

A super-aggressive mud tyre is a no-compromise tyre designed specifically for regular off-road use. If you buy muddies simply because they look tough, you'll probably regret it as they start to wear and become noisier and noisier on the road.

The ideal solution for the 4WDer who spends a lot of time on the road but also has to occasionally deal with very slippery off-road conditions is to fit a set of highway tyres to one set of wheels and a set of LT muddies to another set of wheels, swapping them over before heading off on a trip. But for those who want a do-it-all tyre, an LT with an intermediate tread pattern is a good compromise.

ARB TYRE PRESSURE MONITORING SYSTEM

The ARB TPMS is available as a DIY external sensor kit or as an internal valve replacement kit. The TPMS allows you to monitor all four tyres while you are driving and an alarm alerts the driver of a possible tyre failure.



TYRE BRANDS

There's plenty of choice out there when it comes to off-road tyres but it's best to go with a brand that you know. The next time you're at a 4WD show, have a look in the carpark to see what fellow 4WDers have fitted to their vehicles or ask at your local ARB store; as 4WD enthusiasts, they'll be able to offer better advice than a general tyre outlet.



AIR COMPRESSORS

ARB offers a number of air compressor solutions in both portable carry cases or permanently affixed options, including the High Output Compressor and the Twin Compressor. Related accessories for tyre maintenance include a push-on air chuck, a clip-style air chuck, a 4L aluminium air tank, a pump-up kit and more.

LOW PROFILE TYRES

One of the easiest ways for a manufacturer to improve a vehicle's on-road handling is to fit low-profile tyres. Lower profile tyres have significant handling advantages on the road primarily because their lesser sidewall depth doesn't flex so much, which aids steering feel, as well as cornering and braking performance. But off the road it means there's less space between the uneven surface of the ground and the wheels, which are therefore more prone to damage, as are the tyre sidewalls themselves, as they can be more easily pinched in the smaller gap between the ground and the wheel rim.

The profile is measured by tyre sidewall depth relative to tyre width. An example of a vehicle manufacturer opting to fit lower profile tyres is Land Rover with its Discovery wagon. Ten years ago, a Discovery 3 wore 235/70R17 tyres while in 2017, a Discovery 4 wears 255/55R19 tyres; this has resulted in a decrease in sidewall depth from 164.5mm to 140.3mm. In what could be seen as an admission that Land Rover went too far, the just-released

Discovery 5 is available with 235/65R19 rubber for an increase in sidewall depth of 12.5mm.

The trend to lower profile tyres isn't limited to 4WD wagons. For example, in 2007, the top-spec Ford Ranger XLT was equipped with a P245/70R16 tyre; 10 years later, the top-spec MY17 Ford Ranger Wildtrak wears a P265/60R18 tyre.

On the 2007 model, the "P" refers to Passenger construction, "245" refers to the width of the tyre in millimetres, "70" refers to the depth of the sidewall as a percentage of tyre width (70 per cent of 245mm equals 171.5mm), "R" means the tyre is a radial tyre and "16" refers to the wheel diameter.

On the 2017 model, the "P" refers to Passenger construction, "265" refers to the width of the tyre in millimetres, "60" refers to the depth of the sidewall as a percentage of tyre width (60 per cent of 265mm equals 159mm), "R" means the tyre is a radial tyre and "18" refers to the wheel diameter.

ARB INFLATION CASE

A handy bag in which to store all of your ARB inflation, deflation gauges, air hoses and general air accessories.



Just about all manufacturers have gone down the path of fitting lower profile tyres to larger diameter wheels on modern 4WDs. As well as the handling benefits these lower profile tyres afford, the bigger wheels also allow for the fitment of bigger brake discs and callipers for better braking performance.



TYREPLIERS REPAIR KIT

This is an invaluable kit for repairs that require the tyre to be removed from the rim, such as with tubeless tyres.

MINIMUM REQUIREMENTS

Regardless of the tyres you want to fit to your vehicle, there are certain minimum criteria that they must meet or exceed concerning tyre size, speed rating and load rating, and this information is listed on your vehicle’s tyre placard, usually affixed to the inside of the glovebox lid or on or near one of the front doors. The tyre placard will list the tyre size suitable to the wheel fitted to your vehicle, the speed rating for the tyres and the minimum load rating for the tyres. It will also list recommended tyre pressures depending on the load on board the vehicle.

Armed with the info on the placard, selecting the right tyre size for the wheels fitted to your vehicle is straightforward. And like the tyre size, the speed and load ratings are listed in a code stamped into the tyre’s sidewall (see box-out). For example, a tyre marked 265/75R16 119N has a Load Index of “119”, which means it is capable of carrying a maximum of 1,360kgs, and a speed rating of “N”, which means it cannot be driven at speeds greater than 140kms/h.

You can legally fit tyres with a lower speed rating than that listed on the placard so long as you don’t exceed the maximum speed listed on the tyre when driving and the tyre’s speed rating is at least “N”. In Australia, tyres with off-road features must have a minimum speed rating of “N” anyway.

In regards to load ratings, you must never fit tyres with a lower load rating than that listed on your vehicle’s tyre placard.



Speed and Load Ratings

Speed Symbol	Speed
J	100kms/h
K	110kms/h
L	120kms/h
M	130kms/h
N	140kms/h
P	150kms/h
Q	160kms/h
R	170kms/h
S	180kms/h
T	190kms/h
U	200kms/h
H	210kms/h
V	240kms/h
W	270kms/h
Y	300kms/h
VR	>210kms/h
ZR	>240kms/h

Load Index	Max Weight per Tyre
101	825kgs
102	850kgs
103	875kgs
104	900kgs
105	925kgs
106	950kgs
107	975kgs
108	1,000kgs
109	1,030kgs
110	1,060kgs
111	1,090kgs
112	1,120kgs
113	1,150kgs
114	1,180kgs
115	1,215kgs
116	1,250kgs
117	1,285kgs
118	1,320kgs
119	1,360kgs
120	1,400kgs
121	1,450kgs
122	1,500kgs
123	1,550kgs
124	1,600kgs
125	1,650kgs
126	1,700kgs

SPEEDY SEAL PUNCTURE REPAIR KIT

This kit includes everything you need to repair tubeless tyres including a spring steel insertion needle, hardened reamer, lubricant, 30 self-vulcanising repair cords, valve core tools, spare valves, valve caps and a pencil-type air pressure gauge.



TYRE LIFE

When it comes to looking after your tyres, there's no better place to start than by checking the tyre pressures and doing it regularly. Low pressures generate high temperatures, which in turn cause the tyre to deteriorate rapidly.

While you're crouched down checking the pressures, have a good look over the tyres – checking the tread for any punctures, cracks or chipped tread blocks – and inspecting both the inner and outer sidewalls for any signs of damage or discolouration (if it has a blue hue, chances are it's been running too hot). Also have a good look at the valve stem and check that the valve itself isn't leaking and that the dust cap is in place.

A tyre pressure monitoring system (TPMS) is a great way to keep an eye on your tyres. It tells you the pressure and the temperature in each tyre and alerts you to any sudden drops in pressure that can prevent a blowout. Just one tyre saved by a TPMS is usually enough to pay for the device.

Assuming your spare tyre is fitted to the same style wheel as the other four tyres on your vehicle, add it to your tyre rotation

cycle – you'll go 25 per cent further before you have to buy a new set of tyres and, if you change tyre model or brand, your new spare will match the other four new tyres.

Finally, use the correct tyre pressures for the conditions. The obvious example here is to lower your tyre pressures when driving in sand. It will result in less wheel spin and potential damage to tyres and the track on which you're driving, not to mention minimising wear to your vehicle's driveline components and reducing fuel consumption.

You should also lower your tyre pressures when travelling on gravel and unsealed roads, as it will reduce the chance of a puncture, aid tyre life, improve ride quality and once again minimise vehicle wear. The correct tyre pressure will depend on your vehicle, the load it's carrying and the conditions. For more information on tyre pressures, check out our 'Take the Pressure Down' article in Issue 46 of 4x4 Culture.

TYRE MAINTENANCE AND REPAIR

Whenever you drive off-road, you should carry a tyre repair kit and the know-how to use it. You'll also need a suitable air compressor and spare bits and pieces such as valve stems, valves, a valve tool, tyre plugs, patches and, if you have tubed tyres, spare tubes and levers. If you're heading off on an extended remote area expedition, you'll also need to carry a second spare tyre.

AIR PRESSURE GAUGES

ARB offers both analogue and digital air pressure gauges that are easy to use, easy to read, are protected by a rubber gauge guard and come with a flexible hose with dual chucks for all rim and valve types.





PUNCTURE REPAIR

ARB has recently updated its Speedy Seal tyre repair kit by adding additional components including a blade, quality pliers, extra self-vulcanising repair cords and a new and improved hi-visibility orange case.

The ARB Speedy Seal Series II now has everything you need to perform up to 40 emergency tubeless tyre repairs without having to remove the tyre from the rim or the wheel from the vehicle.

Supplied in a tough moulded-plastic case, the Speedy Seal Series II contains a high quality spring steel insertion needle, a hardened reamer tool, 40 self-vulcanising repair cords, long-nose pliers with cutter, blade, Allen key, dual-chuck tyre gauge, lubricant, four valve cores, a tyre valve tool, four metal valve caps and two replacement valve stems.

Additional packs of 50 self-vulcanising repair cords can be ordered separately to keep your Speedy Seal Series II kit stocked and ready for your next adventure.

TURNING TABLES



The ARB Roller Drawer Table is the ideal addition to your vehicle's drawer system, providing a pull-out stainless steel surface on which you can place items from your fridge, prepare food for meals or use as a workbench.

Manufactured from brushed stainless steel, the Roller Drawer Table attaches to the top of ARB Outback Solutions Roller Drawers and can be extended when the drawer is open or closed. It's available in two widths, making it compatible with all ARB Outback Solutions Roller Drawers manufactured since 2010.

"The Roller Drawer Table is such a handy

device and it's especially suited to vehicles that don't have room to put your goodies on, or that don't provide a tailgate on which you can place items you grab from the fridge," says ARB Product Manager Ben Rieson.

"We've made it from 304 grade stainless steel so you can chop up tomatoes, make sandwiches or prepare other food straight on the surface; it's safe and clean."

The Roller Drawer Table is easy to fit, has a convenient grab handle, an 8kg load capacity, rounded corners, and it slides in and out on adjustable nylon runners, which offer enough friction to keep it in

place when deployed and keep it in its closed position without the need for any locking mechanism.

"It's a fantastic product and it's very easy to fit," adds Ben, making it ideally suited to DIYers with a standard toolkit. The table is supplied with comprehensive instructions and recommended DIY fitment time is just 20-30 minutes. Alternatively, you can have it installed by a qualified fitter at your nearest ARB store.

PERFECT FIT



**WITH THE VERSATILE
ARB CARGO ORGANISER,
YOU'LL ALWAYS KNOW
WHERE TO FIND THINGS
IN THE BACK OF
YOUR VEHICLE.**

Cargo drawers have got to be the best way to organise your gear in the back of a 4WD wagon or ute but what happens when the drawers themselves need organising?

ARB has the answer and it comes in the form of their new Cargo Organiser bags designed to fit ARB Outback Solutions Roller Drawers and Rear Rack and Divider systems, as well as many other cargo drawer set-ups.

Available in three sizes, and manufactured from tough 600D PU-coated heavy-duty Oxford nylon, the Cargo Organiser keeps all of your items where they belong for easy access when you need them.

Cargo Organiser



Features of the Cargo Organiser system include tough and durable webbing handles to make it easy to carry the bags, a zippered top section to keep contents secure and clean, ID label holders so bag contents can be quickly identified, removable internal dividers (large and medium), an easy-to-clean PU-coated nylon interior and rubber grip feet to minimise movement when the bags are situated on carpeted surfaces.

The three sizes have been specifically designed for snug fitment to ARB Outback Solutions Drawers in a variety of combinations. "The way we've designed the system allows for a lot of versatility," explains Ben Rieson, ARB Product Manager. "You can fit four medium bags in a drawer; or two mediums, a large and a small; or three of the large square bags; or you can load up to seven of the small ones. They are all purpose-built to fit inside most roller drawers."

The bags are also the ideal size to be situated across the top shelf of wagons fitted with an Outback Rear Rack and Divider. "You can fit the small or medium rectangle bags on the top shelf," says Ben. "And the bags have handles so they can be easily slid in and out of that space."

As with any luggage system, care should be taken when loading items into the Cargo Organiser bags to prevent sharp edges from causing damage, but these tough bags are able to handle a surprising amount of weight. "They will handle weight up to around 10kgs," says Ben. "We don't advise people throw in anything that's ridiculously heavy but they can be used as a tool bag and be loaded up with spanners, shifters and the like... but always maintain a reasonable weight carrying limit."

Another great feature of the Cargo Organiser bags is that they can be flat-packed when not in use. "When you're finished with the

bag – say if you were using it for food and you worked through the whole bag – you take the base out of it and it folds down flat, and then you can just slide it up beside other bags fitted in the drawer," says Ben.

Identifying what is in each of the bags is made easy thanks to the supplied labelling system. "They have pre-printed labels – 'Tools', 'Recovery', 'Electrical' and 'Cooking' – or you can flip the labels over and write down whatever is inside the bag, like 'Day One Food', 'Kids Toys' etc. so you can personalise the labels to suit what you're carrying."

If you're like many 4WDers, chances are you leave a lot of your gear in the drawers after a weekend away, but with the Cargo Organiser it's a much easier job to take this gear out and stow it on a shelf in the shed where it belongs. "Say you use the bags for all of your camping gear, when you get home you just pull them all out, stick them in the shed and you have an empty drawer again," says Ben. "It's a two-second job and you're not carrying around all that excess weight in the back of your vehicle when you don't need to."

The medium bag is supplied with one movable and removable divider and the large bag with two dividers, further adding to the system's organisational versatility. Additional dividers can be purchased separately and for those who appreciate an integrated look, the Cargo Organiser bags match the colour and styling of the rest of ARB's Cargo range.

Dimensions	
Large	40cm (W) x 40cm (D) x 18cm (H)
Medium	60cm (W) x 20cm (D) x 18cm (H)
Small	40cm (W) x 16cm (D) x 18cm (H)

DIFF HAPPENS

Words and Photography by Jessica Vigar

4x4 Culture magazine editor, Jessica Vigar, spent 12 months planning for a 10 week 4WDing adventure through the Gulf of Carpentaria and NT with her family. She learnt the hard way that no matter how much you prepare, when a string of bad luck and unforeseen problems start snowballing, you've just got to adapt and roll on.





As we cruised along the tarmac, Broken Hill receded in the rear-view mirror. Looking around the cab of our brand new (to us) Nissan GQ Patrol, I could finally relax. The past few weeks had been a whirlwind of broken cars, midnight mechanics and sleepless nights. This was (literally) all behind us as we headed for Cameron's Corner.

"Something's wrong," my husband, Glenn, said. "The battery light's just come on... and there goes the power steering." I quickly jumped on the UHF to alert the rest of our convoy that we were pulling over; too late, it seemed, as I received no response. We both jumped out of the car and Glenn slid under the engine bay to assess the problem. "We're stuffed!" I heard uttered from under the car. Only 30kms into our journey and Glenn's words were a complete understatement of our situation.

**"I THINK WE MIGHT
HAVE A PROBLEM"**

Three Weeks Earlier

Rewind three weeks and the situation we were in was eerily similar. Glenn had been working on our GQ Patrol for months and it was now at Bluey's Automotive in the capable hands of Ian Bailey, a mechanic and former ARB employee who was also responsible for getting the ARB Icons 40 Series ready for the Simpson Desert trip. Ian was swapping the old blown 2.8 engine with a more reliable 4.2 (taken from our previous GQ, remnants pictured above). He also replaced the diffs and the heavy-duty front and rear arms, and installed an ARB Air Locker. Glenn picked it up and it ran like a dream. We were running things tight time-wise but still on track to be ready

to leave when planned.

"I think we might have a problem," Glenn uttered as he hung the phone up. As it turned out, the engineer we had lined up to provide the engineering certificate on the new diff had decided to do what we were planning and gone on holidays. After an entire morning of ringing around, trying to find someone who could see the car in time, we realised we were in big trouble. The timeline of finding an engineer who could see the car, getting the roadworthy and then getting it seen by VicRoads was looking like an almost impossible mission.

Plan B

Luckily for us, we had recently sold our house and were in the unique position of having a decent kitty sitting in our bank account. Glenn had had his eye on an amazing and very clean GQ for sale for a while, merely a pipedream as the asking price was quite steep. After a bit of convincing, Glenn called the owner and just like that, we were buying another car. Glenn booked a train ticket to Wangaratta and, with a pocket full of cash and a quick prayer, he headed towards our (hopefully) future solution.

Late that night, I heard the familiar and very satisfying rumble of a GQ's turbo diesel engine as our new 4WD rolled up the driveway. The fresh gold paintwork glistened even in the dark. As I opened the door, I was greeted by the sight of a spotless interior. Reliability is what we were paying for and this Patrol's previous owner had meticulously restored a dinosaur into a work of art. A new radiator, clutch, wheel bearings, turbo and exhaust had been installed as well as a rebuilt injector pump and injectors, brand new bushes, alternator and starter motor. Glenn got to work straight away and installed an OME BP-51 suspension system, ARB drawers, ARB bull bar, Intensity LED driving lights, a Safari Snorkel, UHF radio, REDARC dual battery isolator, REDARC inverter and an ARB 60L fridge freezer.



Brother Troubles

While all of this was going on, our garage was being shared by my brother, Mark, who had also been preparing his GU Patrol for the same trip. Mark (with the help of Glenn) had just completed an engine swap and converted his GU wagon into an extra cab ute, building a custom tray complete with workboxes and a swing-away wheel carrier. Our 4WD was at the air conditioning mechanic so both Glenn and I were helping Mark out, trying to get him ready to leave on time. Mark was burning the candle at both ends and whilst building his car in time for the trip, he was also building a double storey house in his backyard.

Nothing had been going right for Mark and it seemed like the Patrol curse we had

been afflicted by had transferred over to him. After installing his dual battery and returning the interior lining and seats, it was time to start her up. The engine roared to life. Finally, things were looking up; that was until we looked down. Oil was spewing out all over the garage floor. After a frustrated groan, Mark shimmied under the car to find the problem. Glenn arrived home from running some errands and quickly joined Mark under the car to assess the damage. Devastatingly, the oil filter housing had cracked and after a few calls around, Mark was looking at a \$1,700 replacement part and a three-week wait to ship it from Japan. Utterly defeated, Mark went home.





Gotta Go

There was nothing Glenn or I could do and we already had two cars waiting for us in Broken Hill. We set off at 9.00pm and drove through the night, stopping in Mildura at 4.30am for a few hours' shut-eye. We then powered on the next morning and joined our group in Silverton. Meanwhile, Mark and his wife, Christie, were desperately trying to solve their problem. Eventually, they came to the exact same solution we had. A new car. Mark had found a "ready for touring" Toyota LandCruiser 100 Series online. Being a die-hard Patrol fan, Mark was very nervous with this purchase. Only ever touring in a ute, he was also faced with the age-old problem of trying to pack everything into a wagon. A few non-essentials had to be left at home.

Fast forward to our side-of-the-road situation (and the start of this article) and we were in a world of pain. Later we would find out that the retaining nut on the harmonic balancer had come off, causing the harmonic balancer to spin on the crank and destroy the keyway on the nose of the crank. In layman's terms, almost catastrophic failure to the engine. We managed to get the vehicle back to Broken Hill and waited for Monday to take it to a mechanic. Meanwhile, Glenn began calling around to source parts. Mark's tragedy (and ensuing delay) had been our saving grace. Christie ran around picking up a new crank, balancer, bearings, timing cover, gasket kit and a rear main seal while the mechanics got to work removing the engine. Mark and Christie arrived a few days later with the parts and Glenn delivered them to the car.

Back on the Road

After a few more days of waiting and a total delay to our trip of a week, Glenn and I finally got the Patrol back and once again headed out of Broken Hill. The original plan had been to travel up through Cameron's Corner, Innamincka, Birdsville and then on to Mount Isa. Our fellow tourers, Olly and Tara, had left days earlier and would prove to be the only car that actually followed this route. The rest of us detoured through central NSW and powered to Mount Isa via Bourke.

Finally all together, we began our (now) nine-week Gulf trip adventure. As I sit here writing this, in the idyllic Adel's Grove in Lawn Hill with the peaceful sounds of birdsong and the gurgling of the creek in the background, I look over to Mark's LandCruiser, surrounded by tools and men, attempting to find the source of a suspicious noise coming from the front end of the car. While I'd like to say the worst is behind us, I'm not quite sure.



THE ACTUAL ROUTE

SECOND SKIN



.....
GIVE YOUR 4WD THE PROTECTION IT DESERVES WITH TOP
QUALITY, HARD-WEARING, GREAT-LOOKING AND AIRBAG
COMPATIBLE ARB SEAT SKIN SEAT COVERS.
.....



As every outdoor enthusiast knows, 4WDing can be a dirty affair. Whether you're driving along a dusty track or crawling around in the mud trying to attach a snatch strap to your vehicle, sooner or later that dirt is going to find its way into your vehicle.

To protect your vehicle's seats, ARB has developed Seat Skin seat covers, which are manufactured from a tight-fitting, comfortable, durable, water-resistant and good-looking composite material made up of a knitted polyester fabric laminated to a thermoset elastomer.

Available to suit a wide range of new vehicles, as well as a few older models, ARB Seat Skins have been made using specialised Japanese sewing machines, creating a unique stitch pattern that, when fitted correctly, doesn't interfere with the deployment of airbags. The Seat Skin seat cover has also been independently tested in accordance with Australian Standards to ensure it's airbag compatible.

"The Seat Skins have been tested in hot, cold and normal conditions" explains ARB Product Manager Ben Rieson. "The product has to perform within certain set parameters and the side of the seat cover

cannot restrict any of the airbags from correctly deploying.

"The airbag deployment location is sewn using the stitch rate and thread tension that will allow the seat cover seam to release the airbag unimpeded. To ensure the correct stitch, two new Japanese-made sewing machines were purchased that are designed to perform that particular type of stitch. A final visual check is performed on all covers."

Unlike many neoprene seat covers on the market, ARB Seat Skins are made from a polyester fabric laminated to a 3mm-thick premium thermoset elastomer, which creates a robust composite material that is used in the Original Equipment (OE) automotive industry as it's hard-wearing and resistant to dirt, mud and oils.

"Although similar to a wetsuit material, it's different, it's more of a commercial grade than something you would wear on your skin like neoprene," says Ben. "It's easier to clean and less susceptible to oils and greases and dirt and muck. If you tip water on it, it won't go into the seats and if you spill something on it, it's not going to cause a stain.

"ARB's composite Seat Skin material is also much better for UV protection," continues Ben. "With fabric and neoprene used in wetsuits, it's in and out of the sun all the time; with our seat skins, they can endure direct sunlight day in and day out, as well as the high temperatures that you get inside a vehicle, and they are not going to fade."

The Seat Skins also feature a rubber backing material that stops the seat covers from slipping around and also acts as another barrier against spillages. The fabric material is also flame resistant.

A perfect fit is assured as Seat Skin seat covers are tailor-made to suit specific vehicle models. For a great-looking finish, Seat Skins feature the popular ARB topographic print and highlight red stitching. Front seat covers have a map pocket and personal pocket on the front and front sets are supplied with a matching centre console cover. Second-row seats are also available.

Open Air

ARB has significantly upgraded its popular SkyDome Single Swag with the launch of a new Series 2 model that features increased ventilation for greater comfort in hot and humid environments, without sacrificing its legendary protection from the elements.

Like the original SkyDome swag, the Series 2 features a spacious side entry with nylon mesh, as well as meshed openings at the head and foot, both with awnings. In addition, the Series 2 has a large meshed roof opening and meshed side panel, which all combine to provide excellent cross-flow ventilation.

The SkyDome Series 2 still offers excellent weather protection in harsh conditions. It's manufactured from heavy-duty 500gsm water- and rot-proofed canvas and it has a heavy-duty 970gsm PVC base with a generous 75mm high return to protect

Living



against water ingress. Welded corners and PVC anchor tabs prevent water wicking through the seams.

All of the SkyDome Series 2's openings are covered by zippered roll-up storm flaps to keep water out should there be a change in weather and YKK zips are used throughout. The large side entry also features a rain gutter to prevent water entry.

The SkyDome Series 2 comes with a comfortable 75mm-thick corrugated foam mattress with anti-microbial additives and a non-rustling, machine-washable cover.

The sleeping area is a generous 2,150mm long by 900mm wide and the dome shape offers plenty of height so you can move around inside.

Convenient features of the SkyDome Series 2 include a head awning with a wide-brim hat holder that can be accessed from inside or outside the swag, four internal accessory pockets for stowing items such as phones, wallets and drink bottles, and two internal high-mount hooks and a Velcro holder for securing items such as torches, lamps and keys.

The SkyDome Series 2 has corrosion-resistant, nickel-plated brass eyelets and is supplied with durable elasticised 11mm aluminium bows for easy swag set-up and storage. There are also heavy-duty straps and buckles, and a soft carry handle for easy transportation of the swag once it's rolled up.

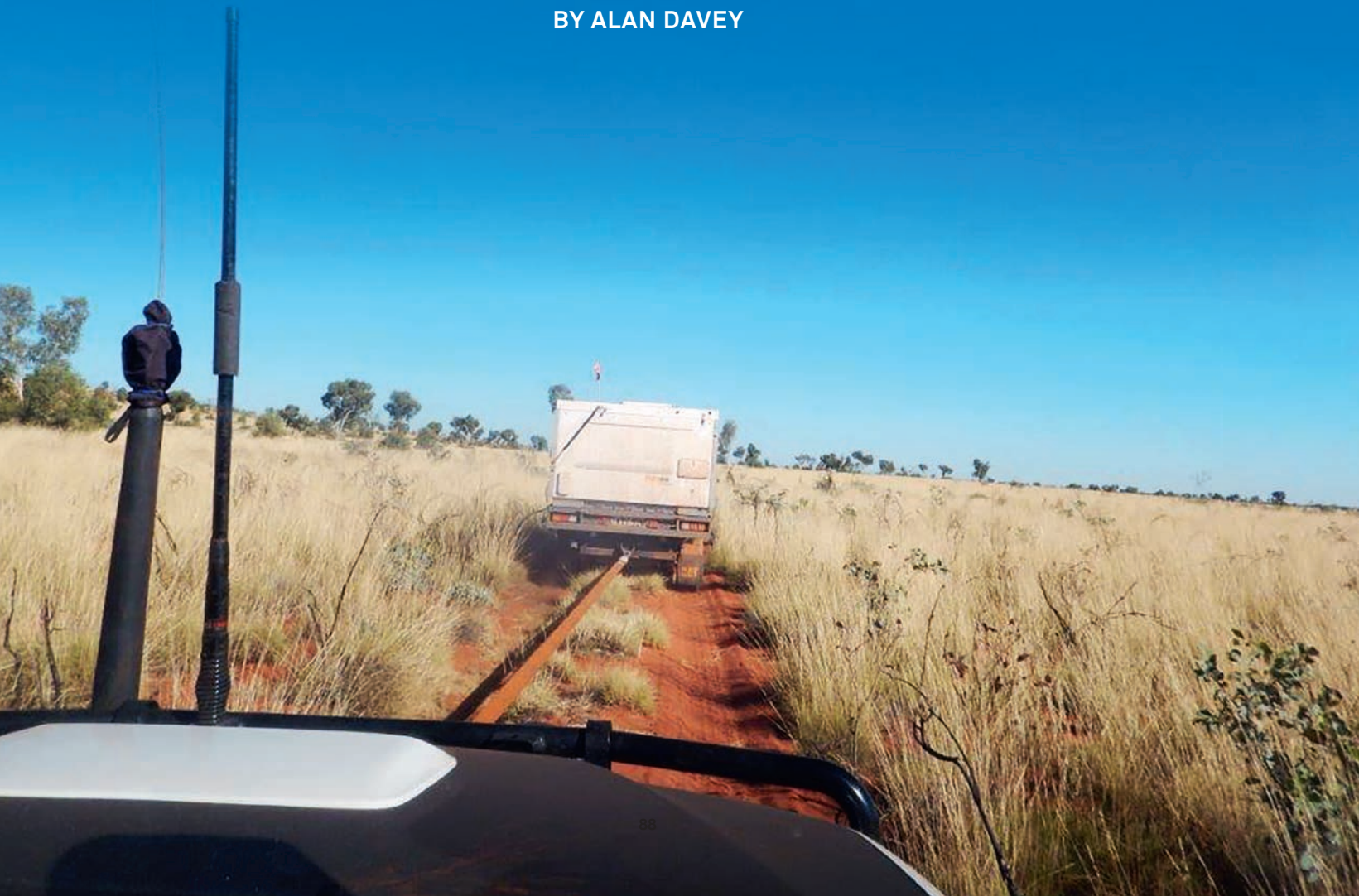
So whether you're camping in the high country or the tropics, the SkyDome Series 2 will ensure you get a great night's sleep on your next bush adventure.

Wouldn't Read About It

WOULDN'T READ ABOUT IT

CANNING STOCK ROUTE ANGELS

BY ALAN DAVEY



AROUND TWO YEARS AGO, I DEPARTED SOUTH AUSTRALIA HEADED FOR WESTERN AUSTRALIA AND THEN ONTO THE NORTHERN TERRITORY IN MY "ONE-WITH-THE-LOT" 2015 TOYOTA HILUX SR.



Now, I have proven to be a little anal in the past; I like to make sure that everything is new and I mean brand new. I had brand spanking new recovery gear, chain saw, air compressor but as you will find as you read on, it doesn't matter how well you pack and prepare yourself, if the 4WD gods aren't on your side, then no amount of preparation matters.

Life was great. I travelled across the Nullarbor before heading down a track just past Balladonia. This track takes about a day and travels through station country, passing tonnes of camels, roos and donkeys. After restocking with food and water, I headed north towards Meekatharra, pulled up for a week and detected just under \$2,700 worth of gold. Gotta be happy with that!

At the entrance to the Canning Stock Route, I let down my tyres and my OME suspension really came into its own. Where safe, I was skipping along around 50-60kms per hour. That night I pulled into camp, sharing a campfire with a group of fellow travellers. When I told them that my destination was Arnhem Land, they had a chuckle. "You've got some travelling to do, mate!"

Push that in there, pack that up, zip this up and I was back on the Canning Stock Route the following morning. From memory, I drove past Well 24 and was making good

time. At about 3.00pm, I noticed a large mob of camels coming up on my left, around thirty-odd. I found a flat, clean area to pull over just off the track and grabbed my Canon and long distance lens. After getting some cracking shots, I jumped back in the Lux.

Now, a brand new HiLux (from memory it had only 15,000kms on the clock) is a pretty reliable bet for crossing the country. I should know, I've owned five of them. So when I got back in the cab, put my hand on the gear stick, hit the key and went to give the stick a wiggle, I was surprised to find something didn't feel right...the bloody thing was stuck in reverse!

I reversed the Lux to a solid-looking tree and hooked up the winch. This gave me a little chuckle; I remembered putting up a fight with the ARB salesman as I had never owned a 4x4 with a winch. I pulled the Lux up to the tree, pulled the winch tight and then tried to jump it out of where it was locked. The 4WD wouldn't even release the manual five speed.

In the back of my mind was the last conversation I had had with my partner, telling her I would call her on Thursday night. I had two days of travel just to get to an area where I could fire up the HF radio and call a base in South Australia, just to get them to contact her and let her know all was okay.

As I watched the sun set over the horizon, I began to ponder, "Just how many people are travelling on this track at this time of year?" I wasn't too worried; I had a 78L ARB fridge full of food and about 60L of water. I reckoned I could last a week, maybe two if I really rationed.

After pulling the console out, I could see through the bell housing. There were six small bolt heads that would put me into the gearbox. I decided it wasn't too smart to be stripping down a gearbox on the Canning Stock Route. I leaned against a nearby gumtree and pondered my situation:

1. The HiLux could move but only in reverse.
2. It could be towed if I disengaged the joey box/transfer case.
3. I had a snatch strap.
4. I had a powerful winch and dual batteries.

Suddenly, I had a comical thought. Me in the Guinness World Records or on the front of the NT News – "Man winches himself out of the Canning Stock Route".

The following morning, I was feeling rather positive. I had no reason to stress, I wasn't injured and I had enough time to wait for someone to hopefully pass my predicament. Suddenly, I heard the groan of a 70 series in the distance. I put a call out on the UHF with no reply.



70 SERIES ANGELS

If any of you reading this could imagine the huge, looming figure of John Wayne climbing out of a grey single-cab cruiser, this was the view before me. This wasn't John Wayne, it was Andrew.

His partner in crime and full-time navigator, Joanne, (who came up to his chest pocket) walked over to me. "What the bloody hell are you doing, mate?" she asked. The three of us stood there having a laugh at my situation and exchanging stories for the next twenty minutes.

Andrew pulled out his sat phone. "Me son's a mechanic. If anyone knows what's wrong with this thing, he will," he shouted as he went to grab me a bottle of water. I am a reasonably good judge of character and I could immediately tell that these folks were just about the nicest people you could ever want to meet, even when you weren't in the pickle I currently found myself in.

Andrew hung up the sat phone and folded the aerial up. "I'm towing you out of here, mate, it's as simple as that." Andrew and I formed our game plan and it was pretty simple. He would tow me up the dune for as far as he could, we would then undo the shackle, he would go just over the summit of the dune, I would then hook my winch onto him and I would winch myself over the summit of the dune.

Over the next three days, we became a full-on team. If you know the Canning Stock Route, you know how big the dunes are. One day when I was walking back some 50 metres to my lifeless Lux, I remembered back at ARB Morphatt Vale when I was tossing up buying the Smitty winch and the salesman had said, "Alan, you will get stuck one day and you will thank me that you bought this." I reckon I owe that guy a slab.

Once we cleared the dunes and started rolling along reasonably quickly, I unloaded my fuel supplies to Andrew's prime mover.

Halls Creek couldn't come soon enough and then up the tar to Kununurra where the Lux was booked into the waiting Toyota agent.

Andrew pulled me all the way for the total amount of just over 800kms. It would have been around 3.00pm when we unhooked the snatch strap and I asked Andrew for one last favour. If he could drive me to the bank to get out some cash... His instant reply was a resounding, "No." "Andrew, you have pulled me for four days, I have to give you something," I protested. "No, that is not going to happen," he replied. "Mate, you're safe and I am not gonna take any money off you for that. We were both going the same way, you just slowed me down a little." As Andrew and Joanne pulled away, he yelled, "Hey, Al! Pay it forward!"



**"ANDREW
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PAYING IT FORWARD

There wasn't anything wrong with the gearbox, it had just been locked up. They pulled it out, stripped it down, oiled it up and put it back. I drove away two days later.

The story doesn't end there. Some three hours east of Kununurra, I was driving through the night and up in front of me was a small white sedan on the side of the road. I pulled up, grabbed my torch and headed towards the car. Standing before me was a guy with his collar on back to front. "Father, how are you?" I asked. "I need some help," he replied and the hairs stood up on the back of my neck.

I leaned over the engine bay and identified the problem. I pulled out my O-ring kit, spun off his filter and went to work putting a new

O-ring on the diesel filter. As I fumbled about, I tell him about John Wayne and his navigator and about paying it forward. "He told me to pass it on so here I am, Father," I said. "Did you need this newfound friend to make you pull over to help me?" he asked. "No," I replied. "This is all part of the journey, you see, Alan. Don't forget about the bigger picture," he said as he touched me on the shoulder. "Hell yes!" I replied.

While finishing up, I asked the priest if he could say a little prayer for a close friend of mine who had contracted a terrible cancer called myelofibrosis. And to this day, it hasn't started attacking her body.

Pay it forward.

Cheesy Burger Dogs



Ingredients:

500g beef mince
Steak seasoning
4 leftover cooked sausages
1 ½ cups pizza cheese
1 large bag BBQ flavoured chips
4 hot dog bread rolls
Burger relish or tomato sauce

Method:

Separate the mince into four equal portions. Season each section with steak seasoning to taste. Flatten single mince portion into a square to around 1/2cm thick and large enough to wrap once around a sausage. Sprinkle ¼ cup cheese over mince and press into meat. Place sausage horizontally across the bottom of the mince square and roll up tightly, ensuring both ends are sealed. Repeat with remaining three sausages.

Pour half of the BBQ chips into a plastic zip lock bag. Release all air from bag and seal. Using a can or your fist, crush the chips into fine pieces. Pour crushed chips onto a plate and roll in each mince sausage, pressing firmly to ensure chips stick to mince.

Heat up a hot plate over the campfire. Cook each sausage, turning frequently, ensuring you do not cook them too quickly and the sausages in the centre are heated through. Serve in hot dog buns, topped with remaining cheese and relish or sauce.

Pineapple and Blueberry Pudding



Ingredients:

800g pineapple pieces in juice
2 punnets of blueberries
½ cup sugar
1 packet vanilla cake mix
1 cup pecans, chopped
¾ cup butter, melted

Method:

Line a camp oven with two layers of aluminium foil and preheat in the campfire. Grease the foil with some butter.

Pour the pineapple and juice into the camp oven. Arrange blueberries evenly on top. Sprinkle over sugar. Evenly cover with cake mix. Sprinkle pecans over the top and then pour melted butter over the whole thing.

Arrange some coals just outside the fire, place camp oven on coals, cover with lid and scoop a shovelful of coals on top. Bake for 35-40 minutes or until brown on top and bubbling. Serve with custard or cream.

BEHIND THE SHOT



CHARACTERS OF THE BUSH



I must admit, through photography, I have been fortunate enough to meet a huge variety of people.

But there is one thing for certain, outback pubs seem to bring out the more unusual. I guess you really need to be unique to want to spend years running a pub in the middle of nowhere.

This guy is a character I will always remember. He will welcome you in and shout you a beer but he'll knock you down a peg just to let you know he's thinking of you, then shout you another beer.

His generosity amongst strangers shows the trust he puts into others. He loves a drink in this thirsty little town but he mostly loves entertaining behind his bar, more often than not with a drink in his hand.

On a busy night at Phil's Mungerannie Hotel, I wanted to capture an image that showcased the old weathered Canon camera, which was found in the spring years before, and the somewhat equally rustic characteristics of the man himself. I love the old camera, which is still covered in mud, and I think Phil and I have a mutual respect for old stuff, and whilst the focus needs to be the camera, the two in this shot must work well together to create an awesome photo.

So in the dimly lit bar, armed with a camera and an awesome couple of subjects, plus

a few guys who wanted to lend a hand, we began to create this image.

They say you shouldn't work with children or animals. I'm in a bar with this larrikin and a bunch of guys who have been here a while so I better make sure that I get this right really quickly.

I worked the shot out before the camera was placed on the bar and immediately asked for a couple of the guys to bring their iPhones out to assist in lighting the scene.

The mixing of lighting colours helps Phil stand out in the background with the white light from the iPhone, whilst the focus of attention for the viewer would be the earthy tones on the camera lit by the warmer room lighting. All the angles help the shot balance, with Phil and the camera leaning over to the left whilst the bar runs through to the bottom right.

I love this shot as much as I love visiting this place. I think Phil would be proud of this image.

Phil doesn't run the Mungerannie Hotel anymore but there are plenty of characters in the bush pubs who can be extremely entertaining.

Cheers for all the great times, Phil...
– Michael Ellem



FILTER OUT

There are many types of filters available in the photography world and all sorts of brands and qualities. With filters, you do get what you pay for. But do you really know what you need? The guy in the camera store says that you should buy a filter for your new DSLR... so that's what you do. He sells you a UV filter to cut the ultraviolet light from affecting your images. UV filters haven't

been a requirement since the film days but they still sell them to us.

Lenses can be expensive. To place a piece of poor quality lens glass in front of an expensive lens doesn't make sense, so make sure that you buy the right filter to suit your requirements and to match your lens and camera technology levels.

And before you spend your hard-earned cash on a filter, read through this article to clarify the details relating to filter types that will assist your photography and those filters that will not.

Note: Filters are not intended to create an image that is unrealistic. However, used incorrectly they can do exactly that. So understanding what

these filters are capable of before you set out to make your purchase might help. And remember, lenses were designed specifically to get the best result for the investment with the light passing as cleanly as possible through the lens to the sensor. Whatever you place in front of that lens has the potential of reducing the image quality.



UV filters haven't been a requirement since the film days but they still sell them to us.



Neutral Density Filters

The idea of neutral density (ND) filters is simply to cut or reduce the light travelling through the lens without altering its colours.

For a landscape photographer, the light on any given day can at times be too bright for the result required. You can reduce the light by utilising an ND filter, providing reduction control of the light entering the lens.

Why would you do this? The answer to this relates to

creating or freezing motion. If we cut light, we can increase the length of the exposure to create motion or motion blur. A good example of why you would use an ND filter is when photographing a waterfall, you can shoot a moment in time with frozen water or by adding an ND filter and reducing light through the lens, you can expand the exposure time and create motion blur, softening the waterfall's motion. The benefit of this is the look it creates and the contrast of hard rock surfaces and smooth water.

When filming with DSLR systems, ND filters are essential in order to get the shutter speeds down and match that required to suit the edited frame rate, usually around 1/50th of a second for here in Australia.

There are a variety of NDs available and you can work out the exact filter to suit your needs by working out how many stops of exposure you would like to reduce. When selecting an ND, there are usually two different figures provided as can be seen in the table on the next page.

Photography brands like Hoya will provide a numbered filter associated with a denominator of the fraction relating to its effect on light. So an ND2 allows half the light through. Therefore, ND4 will allow a quarter of the light through.

The other system is a log system based on the factor of light being reduced. So with filters like Lee, 0.3 allows half the light to pass through and 0.6 allows a quarter of the light to pass through the lens. It's a little complicated but more simple using the guide on the next page.

Example Hoya filter	Example Lee filter	Transmitted light Reduction	No. of stops reduced
ND2	0.3	1/2	1
ND4	0.6	1/4	2
ND8	0.9	1/8	3
ND16	1.2	1/16	4
ND32	1.5	1/32	5
ND64	1.8	1/64	6
ND128	2.1	1/128	7
ND256	2.4	1/256	8
ND512	2.7	1/512	9
ND1024	3.0	1/1024	10

Circular Polarising Filters

Most people believe that a polarising filter is used simply to make the clouds pop in the sky, creating a deeper blue sky and cleaner whiter clouds.

But there are many other ways that you can use the polarising filters in your photography.

For some photographers, the polarised filter is the most used filter in their kit. It can add more contrast and saturation in landscape images. In the middle of the day, when the light can be extremely harsh and flat, one thing for certain is that the landscape you are looking at will photograph flat and lifeless. The sun's harsh light reflects off the many surfaces in the landscape, affecting the image greatly. By controlling the light with a polarising filter, you can build up contrast and saturation during the image capture.

A polarising filter can be used to reduce reflections

in water, water droplets, wet rocks and reflective surfaces such as glass, removing these unwanted highlights and catchlights of reflected light from the bright sky and increasing the depth in contrast and saturation.

Whilst landscape photography can benefit from polarising filters, there are also some negative aspects to consider. Polarising filters take time to set up and use and they can only be used at certain angles from the sun when incorporating the sky. Shooting 90 degrees from the sun's direction works well. However, pushing other angles can create extremely strange and unnatural sky formations. Another undesirable effect comes from shooting sunsets with a polarising filter as this can often create a strange effect of light.

When using a polarising filter, it's important to know that the wider lens you use, the more troubles can be created. When shooting with the sky, try not to shoot wider than around 35mm lens on a full frame camera to reduce inconsistencies in the blue sky gradients.

When using polarising filters, the light coming through the lens will be reduced by two stops. This means that your exposure will be affected, requiring either longer shutter speeds or bigger apertures. This sometimes may require the use of a tripod or a larger ISO.

There are two major types of polarising filters, circular and linear polarising filters. It's extremely important to understand when buying polarising filters that linear filters may not be suitable to all DSLR cameras as they can affect the camera's focusing systems.

UV Filters

The UV filter was originally designed to reduce ultraviolet light affecting the blue layer of colour as it enters the lens. Modern DSLR cameras have filters of their own within the camera to stop the UV effect. So if they don't do anything, why are UV filters so heavily sold with camera systems? Basically put, they only serve as a clear protective filter to

reduce damage to the front element of your lens. There are other filter styles that are marketed as protective filters. I recommend trying one of these.

There are many other styles of filters available on the market. Do you need them? Probably not but that really depends on your style and the result you are trying to achieve as a photographer.

There are graduated filters, coloured filters, distortion filters, effects filters, etc. If you can get a good understanding as to how the neutral density and polarising filters will work for your system and when to use them, you can build an understanding of how all these other filters may be able to help you with your photography styles.

Enjoy but remember to keep it real.

CARGO COVERED

MAKING SPACE



ARB has developed a new Adaptor Kit to suit vehicles fitted with Roller Floors that allows useable space to be maximised, while providing an attractive and functional carpeted finish.

The Adaptor Kit can be fitted to vehicles equipped with a Roller Floor only, a Roller Floor next to a standard height Roller Drawer or two Roller Floors side by side. The Adaptor Kit maximises storage space and functionality by filling in the space up to the Side Floor Kit and it makes up for the discrepancy in height

between Roller Floors and Roller Drawers, providing a smart and integrated finish.

The Adaptor Kit includes three fully carpeted panels with the same finish as the current ARB Roller Drawers and Roller Floors, and is available in left- and right-hand versions.

The Adaptor Kit is compatible with all ARB Roller Floors produced since 2010, allowing vehicles already equipped with such a drawer system to be updated.

STORMPROOF SAFE



Proven to be an extremely popular accessory, ARB's Cargo Gear stormproof bag range has recently received an update and an entire new size added to the collection.

The new, medium sized stormproof bag conveniently accommodates 70 litres of cargo inside its durable, dust and waterproof design.

Retaining the large roll up opening, the stormproof range provides perfect access for packing and unpacking your contents. This roll design, combined with side tie down buckles, creates a waterproof and dustproof environment, allowing you to store

your cargo bag outside or transport it on your ARB roof rack.

The updated stormproof bags now feature looped webbing straps on either side of the bags, accommodating tie down straps to retain your bag on the roof rack, also allowing extra gear or hooks to be attached to the exterior of the bag.

The complete range is available in three sizes – Small (50L), Medium (70L) and Large (110L).

The Delicate Sound of
THUNDER
PART II

Words and Photography by Chris Collard





**WE CONTINUE OUR
JOURNEY WITH
INTERNATIONAL
ADVENTURER, CHRIS
COLLARD, IN PART II OF
HIS CAMBODIA TREK.**

Banteay Srei and Ground Zero

"Do you have a ticket?" the guard asked. It was closing time and I was standing behind a rope security boundary at the edge of an 800-year-old Khmer temple. The entrance booth had been empty 15 minutes prior and we had walked right in. "No, there was no one selling tickets when we arrived," I responded, slightly concerned that I was in for a tourist shake-down act. Ever so pleasantly he began a short dissertation on the history of Banteay Srei, one of the smaller Khmer complexes near Siem Reap. It ended with, "There is no one here. I can let you past the rope and into the temple for \$5." Even though Sam had wandered off to another area, I decided this was not an opportunity to pass up.

We stepped over the barrier and he proceeded with his oration, pointing out the intricate details of each statue and pillar, serpent and demon. We entered a small portal into the central temple. At the end of a dark passage, candles burned at the base of a shrine, dimly illuminating the musty stone walls. I noticed several blankets and crumpled newspapers in the corner behind it. My host said that he stayed there at night to protect the site from tomb raiders, who given the opportunity, will steal the remaining antiquities and sell them on the black market. The reverence he held for his country's heritage and dedication to preserving it were commendable. When our time together came to an end, I said I could not give him money for breaking the rules, that it would not be honorable. Dismay spread across his face as I continued, informing him that I would instead leave \$10 in a stone bowl at the entrance, a donation to help preserve his country's antiquities. I'm sure my message was mixed, but I also knew that the small contribution could feed his family for 2 weeks.

Although we had camping gear and supplies, in a tourist area like Siem Reap you are better off getting a room. Working on a tight budget, we decided to go local and get an economy room south of town. The power was off on the second floor where our room was located, and I clicked on my headlamp to find the door. We were greeted by a placard with three international symbols: a gun, hand grenade, and hypodermic needle, each with a diagonal slash through them. There was another placard over the toilet that was equally enlightening. Sam and I glanced at each other with feigned smiles. The room was tidy, we did not possess any of the listed contraband, and we figured if the door was locked it would be okay.

In the morning we were standing under the stone arch entrance to Angkor Wat, UNESCO World Heritage site and one of the planet's most remarkable examples of pre-modern architecture. This was ground zero of the Khmer Empire, the economic and spiritual hub of a people caught in the crosshairs of Southeast Asia's unremitting bid for resources. Construction began in the 12th century under the order of King Suryavarman II, who dedicated it to the Hindu deity Vishnu. The outer, 15-foot wall measures 1,380 by 2,650 feet and is protected by a 600-foot moat. The 200 acres shielded behind the fortification feature expansive gardens, the private residences of high priests, and dozens of temples, each adorned with intricate bas-relief engravings. Nāgas, great deities that have taken the form of a cobra, guard the cardinal points of most structures, and tangled webs of tetrameles roots appear to be devouring much of the complex like a giant squid.

Angkor Wat's social and economic history have ebbed and flowed with the tumultuous tide of the nation. It was transformed to a Buddhist temple complex near the beginning of the 13th century, and has remained a protected place of spiritual significance since the setting of its first cornerstone. Throughout the Vietnam War, and in the years that the Khmer Rouge occupied Angkor Wat, its sandstone towers were off limits to carpet-bombing and raids. Sam and I spent the day exploring its corridors and galleries, engrossed in the complexities of its mysterious past.

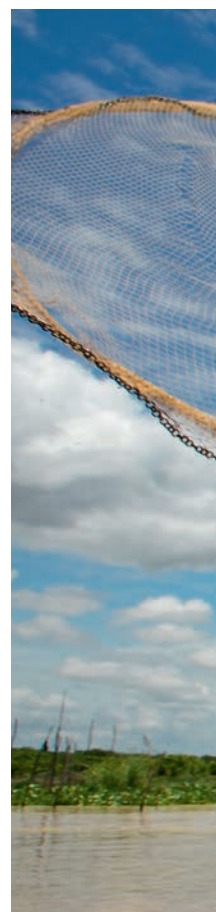


The Delicate Sound of Thunder

"Chhb, anak nung tow bok touk!!!" I had no idea what they were screaming, but when the bow of our 40-foot longboat rounded a bend and sheared off the uprights of another vessel like a machete through a stand of toothpicks, the need for a translator had passed. It was midafternoon and we were bound for the village of Kompong Phluk—a name that conjured up visions of a bad tequila hangover more than a floating fishing community. All had escaped injury and we found ourselves threading our way down a narrow, muddy river with high, bare banks to each side. The captain was all of 13 years old, and his confidence was optimistic considering his dubious skills at the helm. On the rear deck, our engineer, also around age 13, managed the long-tailed outboard, or go-devil mud motor, typical in these parts of the world. They were young, but in their world an extended childhood is not an option.

This was the western edge of Tonlé Sap Lake Basin, which occupies nearly 40

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percent of Cambodia's landmass and supplies much of the country's fresh fish. Corrugated-metal homes began to appear, built on stilts and 25 feet above the water level. It was the dry season, but when the monsoon rains fall, the entire region floods and Tonlé Sap rises to meet these lofty doorsteps. Young children jumped off the gunwales of tethered boats, laughing and giggling as children do, while all other members of the village took advantage of the dry season to repair their craft, patch fishing nets, or seek relief from the unrelenting tropical sun. I observed a few boats arriving with their daily catch. Interestingly, the specimens, such as snakehead and catfish, were quite small. Maybe it was a bad day, or maybe the reports are true that the country's increasing population and associated commercial fishing is taking its toll. The Mekong catfish, which can grow up to eight feet in length and weigh 600 pounds, was hunted almost to the point of extinction. It is now off-limits to all fishermen. Kompong Phluk was fascinating. I would have been content to step off the boat and spend a month living with and learning about the ways of this unique community.

But I didn't have a month, or even a week. Sam and I were due in Kenya just a short 72 hours later and needed to move south. We spent our last night camped on the banks of the Tonlé Sap River under an angry sky. The fold-down door of our Landy doubled as a bar, and we sipped gin and tonic while sheet lightning radiated the sky and thunder rolled across the lake, buffeting our tents and rattling our bones. I thought about the world's opinion of this small country in the heart of Southeast Asia. Prior to arriving here and meeting Mr. Red, the two men on the levy road, and the guard at Banteay Srei, I may have had a predisposed view—one of killing fields, torture, and oppression. These chapters, which are disturbingly factual and quite recent, cannot be rewritten. The scars have not completely healed, but the country and its people have closed that archived book. The elders are passing and the next generation is penning a new volume, one of prosperity, hard work, and contentment. We poured another gin and tonic as the last of the throw-net fishermen disappeared with the light. A new page had been written.

THE ADVENTURES OF FOURBY AND FRIENDS



FOURBY AND ARIEL ARE EXPLORING SOME MUDDY TRACKS AT THEIR LOCAL OFF ROAD PARK AS IT LIGHTLY RAINS.



WHILE PASSING A CAVE, THEY SEE SOMETHING SHINY TWINKLING FROM INSIDE AND GO TO INVESTIGATE.



ARIEL'S HEADLIGHTS LIGHT UP THE SHINIEST FRIEND THEY'VE EVER SEEN, ALMOST BLINDING FOURBY AND ARIEL.



WHAT ARE YOU DOING IN HERE ALL BY YOURSELF?



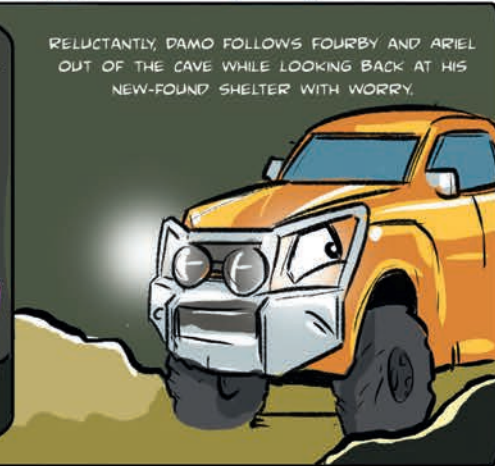
I'M DAMO THE D-MAX AND I'M WAITING FOR THE RAIN TO STOP AND THE MUD TO DRY..



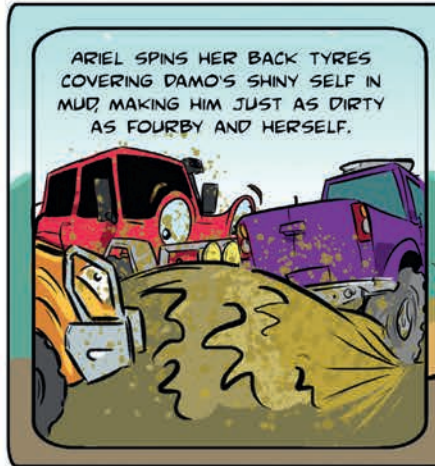
MUD IS NOT SCARY, IT'S FUN TO GET DIRTY, WE PROMISE!



"FOLLOW US!" FOURBY AND ARIEL SHOUT AS THEY DRIVE OUT OF THE CAVE AND BACK OUT INTO THE RAIN & MUDDY TERRAIN.



RELUCTANTLY, DAMO FOLLOWS FOURBY AND ARIEL OUT OF THE CAVE WHILE LOOKING BACK AT HIS NEW-FOUND SHELTER WITH WORRY.



ARIEL SPINS HER BACK TYRES COVERING DAMO'S SHINY SELF IN MUD, MAKING HIM JUST AS DIRTY AS FOURBY AND HERSELF.



DAMO RACES PAST FOURBY & ARIEL AS THE MUD FLIES IN ALL DIRECTIONS WHILE HE EXCLAIMS

YOU WERE RIGHT! BEING DIRTY CAN BE JUST AS FUN AS BEING CLEAN!



THEY ALL RACE OFF INTO THE DISTANCE AS THE SUN STARTS COMING UP BEYOND THE CLOUDS.





Why Warn

You've probably been there. You're driving solo. On a difficult track with lots of mud and ruts. You approach a section that looks particularly tricky but you need to get through.

Despite continual and significant throttle, you can feel yourself losing traction. You give it more throttle but it's no use. You're slowing down, you're sinking into the muck and in nanoseconds, you're thinking about what to do if you are truly stuck. Thankfully, you brought your recovery gear: straps, shackles, snatch blocks and, of course, a winch. That winch is a product that has to work when you need it, especially if you're adventuring solo; it can be your only means out of a sticky situation. It can be the difference between making camp where you want to and making camp where you have to.

The old adage "you get what you pay for" is definitely true in the winching world. You need a product you can trust so you don't end up in the scenario above. For years, off-road enthusiasts around the globe have trusted Warn winches for their adventures. The red "WARN" badge stands for being equipped to handle anything, ready to conquer any challenge that may come your way. That badge has represented off-road excellence for nearly 70 years. During that time, Warn hasn't stopped innovating or striving for perfection.

Why Warn?

Warn pours its effort and thirst for adventure into every product they make. At the US headquarters in Clackamas, Oregon, there is a small army of engineers, technicians, machinists and assemblers who design and refine Warn products, bringing them as close to perfection as possible. Their work is backed up by legendary quality control that doesn't just stand up to rigid Warn standards, it lives up to the toughest demands of the world's top vehicle manufacturers and military suppliers. How do we know? Because they've partnered with Warn for decades.

This quest for peerless reliability – the Warn difference – will be around as long as Warn Industries is in business – at least *another* 70 years.

Sure, there are less expensive winches on the market. But when you're out in the middle of nowhere and your winch fails, you'll wish you'd spent the extra money.

A History of Innovation and Reliability

Warn was founded in 1948 in the rugged Pacific Northwest of the USA. In the early 1950s, the company pioneered the use of electric winches. Before this, off-road vehicles were equipped with power take-off (PTO) units that only worked when the vehicle was running. Keep in mind, back then, most vehicles were carburetted and if you've ever been on a steep incline with a carburetted vehicle, you'll know they can experience fuel starvation and engine cut-out. But, as a Warn expert would've told you back in the early days, an electric winch will work whether the engine is running or not. This was a major innovation (and selling point) back then and transformed the vehicle recovery landscape forever. While the idea of an electric vehicle-mounted winch may seem like basic innovation now, this idea revolutionised the off-road recovery world. But Warn Industries never stopped innovating.

Whether it's the original (and still iconic) M8274 winch (originally released in 1974 and still for sale) or the latest state-of-the-art ZEON Platinum, Warn prides itself on putting more design, engineering, research, testing and manufacturing know-how into their products than any other winch manufacturer. Many Warn workers are not just employees, they're enthusiasts, so they use the products they make.

THE WARN FAMILY OF WINCHES



Premium Series Winches

Moab. The Indonesian jungle. The Gobi Desert. The Australian outback. Legendary places are littered with the ghosts of lesser winches. But those are the kinds of places that salute the Warn Premium Series winch: ZEON. As reliable as a swollen creek is fast, this winch stands as a top performer on the world's toughest trails.

The Warn ZEON line-up is tough enough to tackle anything with a look that is advanced, capable and strong. Muck-busting IP68 waterproofing keeps everything out but the good times. The hyper-durable, cast-aluminium armour not only protects the internals but also aids in heat dissipation. That convertible control pack also allows for a variety of mounting options.

The ZEON set the bar for all other winches in the industry and still leads the pack. But for those looking for the most advanced, high-performance winches in the world, the ZEON Platinum is pulling winching into the 21st century.

Ultimate Performance

From the top of Alaska's remote Dalton Highway to the tip of Tierra del Fuego, adventure-seeking 4WD enthusiasts trust the ultra-reliable Warn Ultimate Performance winch: ZEON Platinum. It's the pinnacle of Warn winch technology (and anyone else's for that matter). Make no mistake, this is the top of the winching food chain.

The waterproof ZEON Platinum is controlled by the Advanced Wireless Remote, a controller unlike any other in the world. This easy-to-use remote not only controls power in and power out, it operates the clutch and can control up to two auxiliary accessories. These 12V accessories, such as a set of LED lights and a light bar, can be plugged directly into the winch itself and controlled with the Advanced Wireless Remote. That means no need to spend time and hassle drilling through your rig's firewall, running wires and finding a place to mount yet another switch on your 4WD vehicle.



This remote also displays the winch's motor temperature and can shut the winch off if it gets too hot. It also displays the vehicle's battery level so you'll never worry about whether or not you have enough juice to start your rig.

The ZEON Platinum is also fast becoming the choice for racers across the globe due to the remote clutch. Because you no longer need to go back to the vehicle to engage the winch, racers save time on the course. But you don't need to be a racer to take advantage of this time-saving feature. These winches also have 33 per cent faster line speed than other Warn winches, feature the most durable gear train in the line-up and offer up exceptional efficiency, providing a great duty cycle.



Standard Duty

When you hit the trails – from mud bogs to your favourite camp – you have to be ready for anything. You will be with the Warn Standard Duty Magnum winch. Warn-engineered and tested to the extreme, Magnum has been proven reliable in the extremely rugged conditions of Oregon's backcountry. Warn Magnum is the winch you can trust at a price you can admire. The Standard Duty Warn Magnum is the gateway to the Warn brand and features best-in-class performance and exceptional durability for a price that won't empty your wallet.

Heavyweight Series: Big, Powerful Winches

Big, powerful trucks need big, powerful winches. The Warn Heavyweight Series winches fit the bill and then some with capacities that run up to 7,484kgs (16,500lbs). Heavy-duty carrier plates help them withstand the brutal gear train stresses of recovering the heaviest loads. Your truck may bog down but your Warn Heavyweight winch never will.

The Classics

Warn still offers a host of specialty and classic winches, including the iconic M8274 that looks like standard issue on Toyota LandCruisers and a host of other vehicles, too. There's the bread-and-butter M8/M8-S with their 3,630kg (8,000lb) capacities, ideal for a wide range of vehicles. Don't forget about the high-performance 9.5xp and the classic low-profile XD9, too.

Global Service Organisation

No matter where you are in the world with your Warn winch, the company offers replacement parts so you can get your rig back on the trail again. This global service organisation lets you go prepared with confidence knowing the company stands behind its products.

Warn winches are not the least expensive option on the winch market. However, no other company in the world puts as much design, engineering, research, testing and manufacturing know-how into vehicle-mounted winches. And when you need the best, most reliable and most trusted winches, you can be sure to go prepared with Warn.

BUSHRANGER



Mud Tamers

The Bushranger Mud Tamer Floor Mats are designed with deep edges to capture all the debris that is brought into the vehicle from outside. Sand, dirt, mud, snow, even water can be contained within the mats.

Made from a solid rubber construction that retains integrity and shape and is easy to clean, the underside of the mats feature pips

to prevent slippage. Generous in size, they can also be trimmed for a superior custom fit for your vehicle footwell.

Available for front and rear, the Bushranger Mud Tamer Floor Mats come with a three year warranty.



Wheelee Bin

The Bushranger Wheelee Bin is the perfect storage bag for your vehicle, providing storage for unwanted rubbish, recyclables, wet gear, motorcycle gear or even for easy access to your recovery gear - the options are endless! Like anything that's been around for a while, a little freshen up never hurt. Our updated Wheelee Bin design features:

- Four 25mm side release buckles that securely hold the main lid in place, as well as velcro tabs to improve ease of use.
- The large overlapping flap has been increased in size to better protect against dust entry.
- An additional two 5L mesh side pockets have been added for more storage, easy access and content visibility.

- Increased material quality, manufactured from extremely tough polyester yarn, individually coated with PVC.
- Three vented eyelets in the base to allow liquids to drain.
- Added reflective strip for increased night time visibility.
- No colour fade, UV exposure tested to a minimum of five years.

All the features you know and love have been retained, including the self supporting 57L main compartment with moveable centre divider and five year warranty. The Bushranger Wheelee Bin is your perfect off-road accessory.



BRING YOUR LIFE ON THE ROAD

Whether it's exploring spectacular nature in the great outdoors or travelling the world with family and friends, we all have a passion for enjoying an active life.

At Thule, we share your desire to spend more time enjoying our passions – which means less time worrying about how to bring all the stuff we need. For 75 years, Thule has been totally focused on developing smart, stylish products that are environmentally sound, high quality, safe and easy to use.

Wherever your passion takes you, whatever you're bringing, with Thule products, you're free to live your active life to the full.



Thule Vital Hydration Backpack

Applying years of biking expertise, the Thule Vital collection helps you get the most out of every mountain bike ride with a hands-free hydration system, optimal weight distribution and innovative pockets designed to access gear without slowing down.

Hands-free Hydration System

The Thule ReTrakt hydration hose keeps your hands on the bars and your focus on the trail as it automatically returns between sips and stays in place until you need it. Each bag comes equipped with a HydraPak reservoir to ensure you stay hydrated and maximize your performance.

Built to Ride

Thule Vital Hydration Packs are constructed with a low centre of gravity and optimal weight distribution to improve bike handling and reduce muscle strain. Lightweight, ventilated materials offer ultimate comfort on any terrain, while unique jersey-style pockets allow quick access to items without slowing down.



Sport & Travel Bags



Gear It Up!

Thule Chasm is the ideal companion on any travel adventure – big or small. Durable, weather resistant and with smart features like the wide mouth opening, side access and removable padded straps. Thule Chasm makes it easy to travel on your own terms – and still bring all the gear you'll need. Available in four sizes, ranging from small (40L) to extra-large (130L), and several attractive colours, Thule Chasm is a versatile, robust and stylish bag that will hold just about anything.



For the Modern Business Traveller

In 2011, Thule expanded into the luggage category with the Thule Crossover; a series of travel gear targeting the active lifestyle consumer. It was a natural progression for the brand, combining Thule's industry-leading engineers with a world class design team. Since its debut, Thule Crossover has received numerous accolades including Outside magazine's Gear of the Year Award (March 2011), first place in the International Travel Goods Association's Product Innovation Award (March 2011) and Men's Journal's Gear of the Year Award (December 2012). Following on from the success of the Thule Crossover, we are very proud

to announce a new product line geared towards the modern business traveller.

Much like the Thule Crossover, the Thule Subterra leverages the award-winning design team with world-class Thule engineering. The result: a complete line of high quality, sleek and contemporary travel bags and luggage with a focus on smart design and ease of use for the active business traveller. Whether it's a bike path, a trailhead or an airport, Thule has been designing products for over 70 years that help you bring what is most important to your journey. From city to summit and everything in between, Thule helps you bring your life.

CAPTION THIS!

Competition Winners

We asked for some creative captions and loved what you guys came up with.



**"If I stuff this up,
I could be charged"**

– Gary Bourke

**"Who would've
thought, camouflaged
jumper leads!"**

– Stuart Donnelly

**"Bugger! Should I tell
him I'm colour blind?"**

– Paul Leeder

**"Yep, left the car
Fridge on overnight....
AGAIN!!!"**

– John Cooke

**"Who stole my ARB
hat? A quick zap from
the jumper leads and I
betcha they'll talk."**

– Keith Worsley

**"When he said, 'Stand
by to shock' I thought
he was bloody kidding!"**

– Andrew Webster

**"I wonder if these
would flash fry the
sausages?"**

– Lester Bowen

**"Choices, choices,
choices. Which one of my
mates' behind am I going
to send off terraferma"**

– Peter Waite

**"New ARB BBQ
steak tester: Red-raw/
Black-burnt"**

– John Climpson

Little Tacker Competition

Send us a pic of your little tacker enjoying the off-road life and you could win one of ARB's latest Medium Cargo Gear Stormproof bags and a fourby plush toy.

