REEL TALK

AUGUST 2024

Official newsletter of the Surf Casting and Angling Club of WA (Inc.)

Surf Casting and Angling Club of WA (Inc.)
Reel Talk – June 2024

Cover picture – Swan River whiting.

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LIFE MEMBERS

Ian Cook
Terry Fuller
Mal Head
Bob Henderson
Peter Osborne

Deceased life members

Dudley Brown
Vic Davis
Lloyd Dunn
Doug Edward
George Holman
Bob Klein
Ron Kildahl
Noel Knight
Eric Parker
Les Shand
Jim Strong

CLUB COMMITTEE

September 2023 – August 2024

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Be Reasonable
Do it my way!

AUGUST GENERAL MEETING

Wednesday 14th of August

Location: Croatian Club in Wishart Street, Gwelup

Doors open no earlier than 6:45PM

Meal at 7.00PM with General Meeting at 8.00PM

Please RSVP to secretary for catering purposes by Noon On Monday 12th August.

ANNUAL GENERAL MEETING

The Annual General Meeting will be held during the August General Meeting at the
Croatian Club Wishart Street, Gwelup
On Wednesday 14th of August 2024.
Members and Guests are invited to attend.

Please advise the Secretary of the numbers of members and guests attending for catering purposes.

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August Birthdays

Alissa Pizzolante	6/8
Theo Van Niekirk	7/8
Allan Jones	8/8
Bob Henderson	8/8
Rhi Harvey	9/8
Ian Taggart	24/8
Gary Gildersleeves	31/8

Any frontal attack on ignorance is bound to fail because the masses are always ready to defend their most precious possession.
their ignorance.

Competition Year May 2024 – April 30, 2025.

Field day dates for the 2024 / 2025 Competition Year have been set and Long Weekends have been noted

DATE	VENUE	BOUNDARIES
3rd, 4th & 5th August	Rottnest & Open	Open
21st, 22nd, & 23rd September	Bowes River to Murchison River Mouth King's Birthday L W E	Mandurah to North Mole
October 12th & 13th	Yanchep to Moore River (incl. Moore River)	North Mole to Yanchep
November 16th & 17th	Cape to Cape Location to be decided at General Meeting	Mandurah to North Mole
December 14th & 15th	Preston to Dawesville Cut Including Peel Estuary	North Mole to Yanchep
January 25th 26th & 27th	S Bend to Dongara	Mandurah to South Mole
February 15th & 16th	Cervantes to Jurien Bay	North Mole to Yanchep
March 1st 2nd & 3rd	Reef Beach to Bremer Bay L W E	Mandurah to North Mole
April 19th 20th & 21st	Bluff Creek	North Mole to Yanchep

Standard weekends

Lines down Saturday 0600
Lines up Sunday 0900

Long weekends and Rottnest

Lines down Saturday 0600
Lines up Monday 0900

SCAC July 2024 Field Day Report

Two members signed on for the July Field Day which was an "open: go anywhere", Mark and Vince T [and the hounds: Dougie & Heidi] met up on the river side of North Mole near the Rous Head ferry terminal mid-afternoon on the Saturday. The conditions were fine with a light south-westerly breeze in our faces.

Once comfy chairs and the requisite fishing paraphernalia was set up we settled in for easy fishing. I fished with soft plastics on light gear while Vince used bait; Dougie went straight down the rocks to the waterline, hunting for fish, while Heidi hung around us for morsels of dropped bait. All the bites were on the hungry bottom, the first catch was a whiting a couple of casts in, we fished for about four hours catching and releasing whiting, wrasse, undersized black bream and a couple of mystery fish that were later identified as "Western Striped Cardinalfish". It was pleasant fishing off the little platform watching the varied boat traffic traversing the river, as the sun set.

The Club's next Field Day is another Rottnest adventure, it looks like there will be a window of good weather while we are there. With many more members and a lot more fish

Mark Hansen, Acting FDO

Western Striped Cardinalfish

TOP 10 SCORES UP TO JULY

Rank	Angler	Total Points
1	Peet Wessels	400.8
2	Sandra Wessels	325.7
3	Mark Hansen	308.0
4	Vince Iozzi	192.2

The Fremantle Port Authority are to re-open the South Mole to vehicle access in the near future, following the installation of parking meters.
Yes, you're going to have to pay to park whilst fishing !
Check with the Port Authority web site for access before going fishing there.
https://www.fremantleports.com.au/

JULY 2024 DRY CASTING REPORT

"Not Coming" to casting cos it's going be too wet said Mal, and watching the weather forecast on Saturday night I wondered if another cancelation was going to happen. No, it's clear weather as I drove to the Guilford casting area, and on arrival there was no pond to be seen down at the southern end and the ground was firm underfoot, so the casting area was set up with assistance from Gary.

We got through the DHA event, I got a bullseye that startled the lads. Gary won this event. We started the SHA but only got one cast away before the rain came which caused a 15-minute delay. Back into it we finished this event with a win to me. Another brisk shower had us diving for cover again. We started the distance events but stopped quickly when a heavy shower was on the way, so we shut up casting, headed over to the Guilford Polo building and fired up the . sausage sizzle and experienced a very heavy shower. So heavy that it was hard to see the gate thru the downpour. High and dry we enjoyed a snag or two.
Twenty minutes later we finished the casting events. Gary had a breakoff and I got in a few good casts. Special thanks to Vince for helping out with the scoring of the distance events, even his casting is improving though we need to help out improving his casting gear. The air was very heavy which restricted distances, and hardly any breeze did not help also.
With all the rain delays it was close to noon when we finished, and I thank all fellow casters for persisting with the rain. We ran an event and did not cancel.
DCO Bob Henderson

The results of 23/24 Dry Casting competition using the handicap system have provided some interesting results. Several members who would be way behind have come up in the rankings and their results have made them very competitive.

NAME	56 g	H/C	**SCORE**	ART/BAIT	H/C	**SCORE**	112 g	H/C	**SCORE**	**TOTAL**
Gary	117.39	2	**119.39**	0	5	**0**	121.12	6	**127.12**	
	117.70	2	**119.70**	104.56	5	**109.56**	129.90	6	**135.90**	**997.16**
Bob	120.38	14	**134.38**	99.36	17	**116.36**	122.09	18	**140.99**	
	121.04	14	**135.04**	89.32	17	**106.32**	126.95	18	**144.95**	**980.04**
Mark	88.57	35	**123.57**	81.89	34	**115.89**	110.09	42	**152.09**	
	72.75	35	**107.75**	90.95	34	**124.95**	106.05	42	**148.05**	**962.30**
Vince	63.20	87	**150.20**	61.82	65	**120.82**	63.81	91	**154.81**	
	60.56	87	**147.56**	55.77	65	**120.77**	63.97	91	**154.97**	**1034.13**

Winner on Handicap Vince Tomazin.

Next casting day is **Sunday 4th of August 2024**.

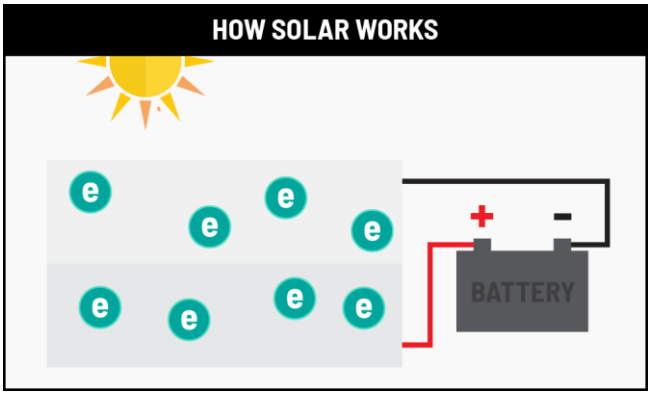
For further details regarding Dry Casting please contact Bob Henderson

Don't take life too seriously
It isn't permanent!

HOW TO CHOOSE SOLAR PANELS AND GET THE MOST OUT OF THEM

By Wes Whitworth from June Unsealed 4x4 magazine

Solar is one of those things that you're going to need if you plan on pulling up stumps at one campsite for more than a few days, or have your fridge running all day while you're at work. If you're staying in one spot camping, so long as you've got food and water, power is the next most critical thing (next to beers, of course).



How solar panels work

Solar, or photovoltaic (photo = light, voltaic = voltage/electricity) panels, whether monocrystalline, polycrystalline or amorphous all work in essentially the same way.

Energy and light from the sun knocks electrons loose from silicon atoms (the most common construction material used) on the top side of the cell to the bottom, creating an overbalance on the bottom of electrons. The only way those electrons can get back to the other side is via the positive wire, through your battery (charging it on the way through) and back up the negative wire to the panel. Throughout the process nothing is used up; the electrons continue to travel around the circuit, equalising themselves out as more are knocked through, charging your batteries as they go.

Panel efficiency

Roof-mounted panels are an easy way to have the solar always charging; however it is never as efficient as being able to face a panel directly into the sun.

Panel efficiency boils down to how much electricity you can extract from a panel of a given size. Clear, direct sunlight overhead supplies around 1000 watts per square metre. A good quality solar panel will run at around 16-17 per cent efficiency, meaning a one square metre panel, in direct, clear sunshine, will generate approximately 160-170 watts of energy. Cheaper panels will often generate less than that, but we'll talk more about that below.

However, it goes beyond watts per square metre, and for those of us trying to reduce weight from our four-wheel drives, another way to look at it is watts per kilogram. Where the amorphous cells, like those used in some solar blankets, really shine is in their weight difference. Your average alloy framed monocrystalline or polycrystalline panel that you can bolt to the roof or unfold and face to the sun would be likely to generate approximately 10 watts for every kilogram. When you put that against the amorphous panels, they will generate upwards of 25 watts per kilogram. From a weight perspective, amorphous panels are much more efficient; however, are quite a bit more expensive.

Size of Shadow

The 260W panel offered up 17A with the sun directly overhead, on a perfectly clear day.
Further to the efficiency of the panels is what is known as the 'Size of Shadow'. The amount of power generated by a solar panel is proportional to how much sunlight is shining on it. What this means is that the bigger the shadow the panel makes on the ground behind it, the more energy it will generate – a panel at 45 degrees to the sun (with a smaller shadow than at 90 degrees) will not generate as much as a panel perpendicular to the sun.

The same panel, however late afternoon where the sun was at around 30 degrees to the panel, offering a much smaller 'size of shadow'.

To get specific with the maths, at 45 degrees it will generate 70 per cent as much power – Cos 45 degrees = 0.7 = 70% (My year 12 maths teacher was right… I did end up using trigonometry as an adult!). This also does not consider reflected sunlight off the glass or dirty panels, which reduce efficiency further again.
Where you can maximise the size of shadow is if you're setting up a foldable panel, position it so the shadow it makes on the ground behind it is as large as possible. You will achieve this by ensuring it is perpendicular, or at right angles to the sun.
In so far as shade over the panel is concerned, having the panel in full direct sunshine is critical. Ten per cent shading over a monocrystalline panel will reduce the energy generated to near zero, whereas the same shade over an amorphous panel will still reduce the output, but not as much.

The shadow from the swag severely limits the amount of power able to be gained from the panel.

Regulated or unregulated panel
When utilising your solar set-up with a dual input DC-DC charger (like the set up I'm going to use in the HiLux), you will need to run the panel directly into the charger, without using a regulator. All of REDARC's BCDC dual input chargers have a built-in MPPT solar regulator so, like any regulator, it requires an unregulated panel on its input. Should you attempt to connect a regulated panel into a dual input charger, it's likely the BCDC solar input won't even turn on. If your panel has an inbuilt regulator that you can't bypass, you will need to connect the panel directly to your battery, or alternator/main battery input on your charger.

How much solar power do I need?

First off, you'll want to work out how much you're going to draw. You're going to need to use a bit of maths here, beyond just adding it all up. What you'll want to do is work out how many watts you're going to use for all your accessories, convert it to amps and put that against your battery bank/auxiliary battery capacity.

For example, let's say I've got a 12V fridge, some LED lighting in the canopy and a USB phone charger plugged into a 100Ah auxiliary battery. So we know the phone/USB charger will draw 12W, the LED light strips will use about 20W and the fridge I've got is rated at 3.5A.

To work out the conversion, we divide watts by volts to get amp draw or multiply amps by volts to get watts We already have our fridge amp draw (mind you that's when it's cycling), but our USB converts 12W ÷ 12V = 1A. Our LED lights convert 20W ÷ 12V = 1.6A. Add our fridge and we're going to draw 6.1A in an hour. Say we run them on average for 6 hours a day (fridge cycles 15 minutes/hour, phone/iPad isn't always on the charger and you'll turn your lights on only when it's dark); we're going to draw 6.1A x 6 hours = 36.6Ah in a 24-hour period.

Now we convert our amp draw to watts 36.6Ah x 12V = 439.2Wh. So we need to put back at least 439.2 watts of power over 24 hours just to maintain our batteries. Let's assume we're getting eight solid hours of direct sunlight onto our solar panels, for this specific example, with everything in a perfect world and conditions, we'll need – 439.2W ÷ 8h = 54.9W of solar to maintain the battery in perfect conditions. But conditions aren't always perfect – it may be cloudy, you could have a tree cast a shadow over your panels, the kids might throw a towel over it without you noticing, or you could be in a valley and only get six hours of direct sunlight. The rule of thumb is to have at least 20 per cent more input than you'll use. So with just one charge, one fridge and some lights (not thinking about everything else you want to run, an 80W panel would be perfect. Add to your power draw the everything else, or the kids in the fridge every five minutes, and your requirements are going to go up.

If you don't want to sit there and run the numbers, there are many calculators out there to help you work out how much input you'll need. Within the calculator, there are different examples of appliances you may own to calculate your power requirements, from fridges to stereos and LED lighting. There are also apps available for iOS and Android devices that will help calculate your solar requirements. The simple answer is that you can never have too much solar!

You can also use this when deciding how big a battery, or battery bank you'll need in the camper, caravan, or back of the four-wheel drive. I've run two 110Ah AGM batteries in the back of the 80 Series, and that has covered me pretty well, with the Travel Buddy drawing 15A while it's on, and charging camera gear and laptops on trips. You may not need this much, or you may need more. The calculators above will help you work it out.

Are cheap panels just as good?

Simply put, no…

A decent panel will put out the rated power or better – not just claim arbitrary numbers to sound the best – We've all seen the eBay ads "OnE mIlLiOn MeGa WaTtS!!!!!!!";

They use only the highest efficiency 'A' grade cells, meaning maximum cell size with minimum imperfections – not from the 'factory seconds bin';

The portable black blankets use top-of-the-range SunPower cells;

They utilise genuine industry-standard Anderson plug connections and are wired and terminated properly; and you can get on the blower to someone from a reputable company and pick their brain. Good luck trying to track down tech from 'Solar Panels Are Us!' on eBay when your panel is not working as it should.

As with everything, the poor man pays twice, and when you're looking to get proper off-grid for weeks at a time, you really don't want to have to run your 4X4 for a few hours every day to stop the fridge falling over and wiping out your food (or beer).

SPOTLIGHT ON WESTPORT – FAR FROM SOUND PLANNING IN COCKBURN SOUND

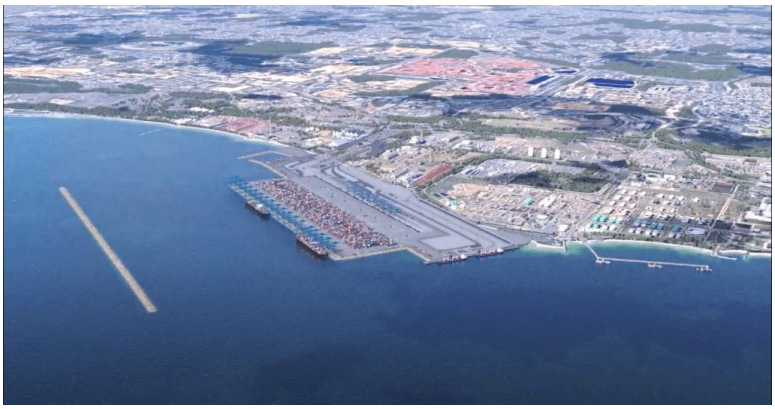
Guy Leyland, Recfishwest

Following the State Government's announcement on the design and location for its Westport container port planned to be built in Kwinana in 2032, Recfishwest Operations Manager Leyland Campbell takes a closer look at the implications for Cockburn Sound.

In August 2020, the WA Labor Government endorsed a land-backed port adjacent to Anketell Road as the preferred location for a new container port in Cockburn Sound. The Government even allocated $400 million in the 2020/21 budget for strategic land acquisition and upgrades to Thomas and Anketell Roads as part of this new port.

Part of the reason Kwinana was recommended as the preferred port location was because dredging costs and marine environmental impacts were estimated to be lower than most other options. This was partly based on expert advice made to Westport that the location did not need to include a breakwater which can have serious environmental consequences.

Just look at the million abalone that have been killed and the 12.5 ha of pristine nearshore reef habitat that had been destroyed thanks to the new breakwater at the new Ocean Reef Marina. The ability to avoid a breakwater was a definite bonus of the preferred port option, however there were certainly several other environmental concerns that remained unanswered.



An Artist's impression of what the new port will look like
(including a 2km-long breakwater that was supposedly not going to be part of the plans.)

Show us the science

To address these concerns and inform a preferred design the Government invested $13.5 million into a marine science program in Cockburn Sound. The $13.5 million investment in understanding the Cockburn Sound environment was designed to inform a sustainable design, ensure a robust environmental impact assessment process, and improve long-term management of the area. Fast forward a few years and not a single final report on any of the projects in the science program is publicly available, which begs the question as to how these projects have informed the Government's announcement.

Despite earlier advice to the contrary, the port design announced includes a 2km-long breakwater, again bringing into question whether Cockburn Sound is indeed the best place for a new port. However, given the Government's investments to date they are unlikely to consider any other option or perhaps they never intended for the port to be built anywhere else.

In choosing a land -backed port adjacent to Anketell Road, the Government only realistically had a few design options. A northern option would impact on the desalination plant and Synergy, while a southern option would impact on BP and the bulk terminal. The southern option would cost more but would have less environmental impact and would not impact on the community's drinking water supply or the Kwinana "big battery" that the Government recently spent more than half a billion dollars on. So all up, it was hardly a tough choice to make for the Government.

The questions that Westport still must answer.

The upside of the announcement is that with a preferred design announced there is nothing stopping the government from finally answering some long-standing questions about the impact of the new port.

What impact will the dredging have on seagrass meadows?

What impact will the port have on fish stocks?

What impact will the port have on fishing experiences?
What impact will the port have on access and fishing amenity?
What impact will the port have on safety?
How will these impacts be avoided, minimised, mitigated or offset?

It is time the Government answered these long-standing questions and makes the advice on which it made its decision publicly available so the community can understand the decision-making process.

It is also time the Government finally offset the impact of the Ocean Reef Marina because if they can't be trusted to build a marina in the northern suburbs how can the community have any faith they are able to construct an international container port in an area as sensitive and special as Cockburn Sound?

Editor: There are still many other questions that need to be answered. However, this government won't make its processes open or transparent and soon there will be no wharf area available in Fremantle as we get the brewery, movie studio and markets that we so desperately need to replace the wharves.

Another question - What do the Department of Defence think of having a port so close to a new nuclear submarine base and what impact will the port have on ship movements in and out of the naval base?

WHICH KNOT TO USE?

Without doubt, one of the most important skills if you are to further yourself as a fisherman is developing the ability to tie reliable knots. Many can find this a daunting challenge, but it doesn't need to be.

Knots are generally accepted as the weak link between you and a hooked fish, and it pays to know a bit about them and have confidence in them. It doesn't matter how many rods and reels you own, they are useless without being able to attach 'things that catch fish' to the line that can be thrown into the water. By attach, I mean attaching in a way that maximises your chances of staying connected and not having heart-in-mouth experiences while hoping your handywork holds out.

Even the bare basics will hold you in good stead. I can handle losing a fish due to gear failure or a fish cutting the line over structure, but losing a fish due to knot failure is devastating. Why? Well, how you attach your leaders, rigs and lures is something the angler can control. Be it small herring or large samsonfish, tying appropriate knots with appropriate gear certainly tips the odds in your favour and instils confidence in your ability to land fish.

There are thousands of different knots at our disposal for all different scenarios, with countless tutorials on YouTube, differing opinions on Facebook and forum sites, and all levels of difficulty - sometimes for the same knot!

It can be relatively overwhelming to know what is best practice. Nobody needs all that clutter and complication, so I like to employ the KISS principle (Keep It Simple and Straightforward), especially when helping people.

Why do we need to talk about the importance of knots? Because the vast majority of fishermen I meet around the traps have a misconception about the difficulty associated with common fishing knots. This is probably due to an overload of information, creating a perception of it being all too complicated. To be as helpful as possible, I have decided to put this article together in an attempt to simplify the process and use simple terminology, rather than being a technical purist.

I learnt the art and importance of tying knots as a kid. I started out basically, making herring and garfish rigs and tying on squid jigs. Then came rigs for yellowfin whiting along the metropolitan beaches, as well as working out how to deceive bream in the river.

Where I fully learnt how important it is to tie appropriate and strong knots was during my forays into land-based game fishing and surf fishing - to this day my two favourite forms of fishing, although targeting salmon and tailor off the beach would have to be up there too.

This had me in good shape once I became a casual deckie on a local chater boat, where my knots have been subjected to quizzical, curious and sceptical stares by customers. I, along with my knots, have to withstand the pressure. I never worry about whether a knot will hold these days, and I'm fully confident that certain knots tied correctly will never fail you. This is a good position to be in for any angler chasing dream fish.

There are many other ways and methods to acheive a connection between lure or rig and your rod and reel combination of choice apart from those described here. Much of the information here should be generally reflective of a large portion of the more serious angling community. I am not going to describe how to tie

knots here, as there is already plenty of that information on line, in magazines like this and knot books. Instead, I'll discuss the merits of certain knots in various situations.
Tying knots is an art form, and when they come together it can be quite impressive. However, rather than feeling all these knots need learning to be successful, as many media forms and super experienced anglers would have you think, stick with a few proven performers and understand them well.
Tying knots in your lounge room is one thing. Tying them while on a beach, in low light conditions, in windy, rainy conditions with cold hands and under pressure from a hot bite is another thing. More complex knot variations are achievable, if so desired, once a good base of effective, relatively simple knots is already there.
The knots I use most often include the hook snell, the Centauri knot, the uni knot, the figure-eight loop knot, the Rapala knot, the bimini twist, the FG knot, the albright knot and the locked half blood knot. Really not many! There are several variations of these knots, but the underlying principles of each and their general strengths make them both very effective and reliable.
There is a plethora of other knots to try, and many of them are effective and well worth learning. However, it is the knots mentioned above I will further explore here, as they are very popular, they are extensively tried and tested, and I find myself using them and demonstrating them the most. There are probably some readers out there who are already arguing with me on what are the best and worst knots, so I stress again this is about helping those who want to further understand knots and their purposes rather than changing experienced opinions.

Snelling hooks

Snelling hooks encompasses a variety of ways of attaching a hook to a length of monofilament along the hook shank without just tying onto the eye. If you Google 'snelling hooks', plenty of different methods present themselves. I do it one way only, and that is where both the tag end and the mainline run under the loops on the shank.
I have seen people attach hooks in all sorts of weird and wonderful ways, some of which work and others result in the dreaded 'curly bits', which is a sure fire indication of the knot pulling. The heartbreak and devastation of people becoming disconnected from their dream fish through their own actions lead to classic examples of anger and much cursing - and wry smiles from the fisherman who does the right thing, which is further infuriating.
Snelling your hooks to monofilament or flurocarbon trace properly is relatively easy to learn and definitely works; there can be no doubt it is the best way. A handy tip when snelling hooks and pulling them tight is to wet the line by either applying some saliva to the knot or wetting the line. This stops abrasion and line burring, which weakens the overall breaking strain when you slide the knot tight. You can snell hooks on quality line up to a maximum of 150 pounds breaking strain, but butterfly crimping is the best method after that.
When snelling hooks that have a turned back eye, the line can be run through the eye. However, if you were to snell a couple of where the eye of the hook is straight, do not run the line through the eye, as it will kick the hooks out on a weird angle and make bait presentation more difficult.

The Uni Knot

The humble and ubiquitous uni knot is basically a glorified slip knot. The beauty of this knot is that it can be used on both braid and mono and retains almost all the quoted breaking strain of the line. It has superseded the blood knot, mainly due to its strength of over 85 cent of original breaking strain. This knot can be used to tie basically anything to the end of a length of line, be it a lure, jig head, swivel, sinker or even hook (instead of snelling when whiting or gar fishing).
Many use a double uni to tie braid to mono to create a casting leader. I would avoid this, however, as braid will cut through mono; one strand of braid pulling against one strand of mono can sometimes give way for this very reason. I extensively use the uni knot in smaller line classes (under 80 pound), and usually only tie to a swivel. If you only ever fish for 'bread and butter' species and mainly use bait rigs and occasional squid jig, you would probably only ever need to know the uni knot and the figure-eight loop knot, as you can tie to anything with these.

Centauri knot:

This knot is not actually a knot but a hitch. The beauty of this knot is that it can be tied in any line class, the only variation being the number of turns used in the knot. For lines under 4 kg I use 6 turns, from 4 – 8 kg I use 4 turns, 8 – 10kg I use 3 turns and for lines over 10kg I use 2 turns. When using this knot in braid I add

a couple of extra turns and have yet to have a knot failure. The knot is used to tie terminal tackle, lures, leaders and to tie line onto a reel spool.

Figure-eight loop

This is a really simple knot, which is basically a double `granny' with line doubled up to create a loop of any desired size. It is a strong knot when using nylon, but I would avoid using it with braid. It can be used both in line and at the end of a length of line. I use it to attach hook droppers and looping a sinker on so I can easily change sinker weights. This knot would only usually be used on bait rigs and hook droppers, and works well for line classes up to about 100 pound breaking strain.

Rapala knot

The Rapala knot and its variations, including the no-name knot and non-slip loop knot, are very similar to each other. They serve the same purpose and all are equally effective. This knot is a 'must know' for the lure fisherman, as it is extensively used for attaching hard-body lures, micro jigs, soft plastic jig heads and squid jigs to the leader- probably why it became known as the Rapala knot.

Why not use the uni knot? Well, the uni is great, but the Rapala knot has an advantage in that it adds to the action of a lure by allowing for more play, which this is very important when using artificial baits as the fisherman imparts the action on the lure. This knot is effective only on mono and up to line class of about 100 pounds - again after which crimping is the preferable method.

FG knot

The FG knot is perhaps the most misunderstood knot out there, with a general perception of being time consuming and difficult. It connects your braid to leader in a way that is streamlined and able to be wound and cast through the guides on a rod. It is by far the best knot to tie braid to nylon leader. Upon demonstration, most people I show it to are pleasantly surprised how simple and quick it is to make; I don't know where the unnecessary confusion and misconceptions about the FG have been generated.

This knot is right up there with the PR knot, which is largely used in New Zealand, only you do not need to invest in a bobbin to form it. The NZ-based TV show "Big Angry Fish" has the best YouTube video on how to tie this knot effectively, and I suggest it is definitely worth checking out, but I do a couple things a bit differently.

I can't rate this knot highly enough, having tied probably a thousand over the past year without one letting go.

I never use a lighter to melt the leader tag, which is dangerous practice as just the heat can damage the braid. For peace of mind sometimes I will just use the tiniest dollop of Superglue on the half hitches so the top few do not loosen. Do not worry about the corrosive properties of Superglue; before it's going to become a problem, another FG will be tied.

The beauty of this knot is the more pressure exerted on it, the more the braid grabs the stretching mono, effectively making it strong and tighter. Like the old timber hitch, the harder you pull, the tighter it gets! You won't lose many fish to this knot in a lifetime.

Bimini twist

The Bimini twist is one of only a rare few knots that does not weaken the line in which it is tied. Its purpose is to double up line and/or create a loop to which a wind-on leader can be attached and be wound and cast through the guides on a rod effortlessly. It can be used in both nylon monofilament and braid, where monofilament needs at least 20-30 initial twists and braid at least 40-60 initial twists.

The Bimini is commonly used in game fishing on monofilament to create a loop to which a wind-on leader is attached where club anglers fish line class for points. However, it is just as good, if not better to tie in braid, and this is much more common practice these days. It is a `must know' knot if you use wind-on leaders or attach a swivel straight to braid or if you are drycasting.

The Bimini twist is a very impressive knot, with fishermen employing many crazy techniques to achieve it. I personally do the twists, sit down with the loop under my foot and tighten the twist over my knee, then use my foot as a pedal to draw the twist back over itself before locking it off with the ever faithful half hitches. It truly is a great knot and a 'must have' in the arsenal of any serious fisho!

Albright knot

The albright is another great knot for attaching braid to monofilament leader and is comparable to the FG knot. It is best achieved by first doing a bimini twist and doubling up the braid before completing. The albright is a little easier than the FG to master, but is also bulkier, as the monofilament is folded on itself, doubling the diameter of the knot. However, it is still quite streamlined and can be wound and cast through most guides. I would also say it is less reliable than the FG knot, as it has to be locked off perfectly before

use to ensure it will not slip. I have had some Albrights slip on me, usually because I am rushing and have not locked them off properly, so bear this in mind. I am still not afraid of backing this knot in against big, prized fish, as it holds firm almost always.

Locked half blood knot

The locked half blood knot is one of the most famous old school fishing knots and is always worth a mention. It is great for tying almost anything to the end of a length of nylon monofilament in your general day-to-day fishing. It hardly needs describing. The reason why I feel like mentioning the locked half blood is to say **NEVER** use it with braid, as it will slip more often than not. It staggers me to see so many fishermen still reverting to this knot in braid; fish will be lost and, more often than not, the biggest of the day. I have seen it all too often. Do yourself a favour and shelve the locked half blood when it comes to braid; tie a uni knot instead. I also suggest that it is never tied in mono greater than 10 kg as it will slip.

You cannot discuss all these knots without at least touching on the products used in tying them. Here in WA we pretty much exclusively use nylon monofilament and braid and their variants – topics for discussion on their own, so that will be saved for another day. Nylon monofilaments have differing degrees of stretch, however braid has zero stretch, and it is properties like this that, when a well tied mono leader is essential when using braid main line understood, explain why certain knots are better than others.

Nylon stretches, absorbs shock, is kind to you rod and reel, has great abrasion resistance and slides over structure. Braid does not stretch at all, does not absorb shock as well (thereby putting greater pressure on your rod and reel), offers minimal abrasion resistance and tends to snap indiscriminately as it catches on structure. One might now think braid is useless after all that, but you could not be further from the truth. Braid has way more advantages than mono when spooling up a reel; it casts infinitely better, you feel more connected with your lure or bait, it floats and it catches less wind and current, just to name a few.

Mono leaders, long or short, on the business end of the line is where the real advantage of nylon lies. Reels of all types can be spooled up with either braid or mono, but leaders, traces and rigs should always be mono or fluorocarbon (a special type of mono). It is the connections that need to be made via knots that are important in ensuring the whole process is smooth, reliable and effective while maximising the strength of these joins.

Finally, with regards to brands of braid and monofilament, there are many choices on the market, and I have certain opinions formed over time about what is best to use and tie reliable knots with. I will just mention that it is hard to go past Platypus as a braid to use, both as value for money and reliability, and with monofilament leader, Jinkai and Black Magic are right up there.

MARINATED FISH

Ingredients:

500g fresh firm white fish flesh, cut into small cubes.
½ cup lemon juice
2 Tbsp white wine vinegar
1 small finely chopped onion
1 clove of crushed garlic
2 Tbsp chopped chives
1 tsp sweet chilli sauce
¼ tsp ginger or ½ tsp grated ginger
1 Tbsp oil
Pepper
4 small tomatoes cut into little strips

Method:

In a bowl mix the lemon juice and vinegar and stir in fish. Cover and marinate in refrigerator for at least 4 hours (even overnight if time allows) When the fish is completely white through it is ready to eat. Drain off and discard liquid.

Thoroughly mix rest of ingredients except tomatoes and stir in drained fish. Gently mix in tomatoes.

Season to taste and serve with crusty bread.

TOP 10 MISTAKES PEOPLE MAKE WHEN MODIFYING A 4X4

By Wes Whitworth; Downloaded from Unsealed 4x4

Getting a new (or even your first) four-wheel drive is an exciting time. Dreams of the mods, the build, epic locations to take the new whip all come flooding to the forefront of our minds. But and take it from someone who's made all these mistakes, there are a few things you'll want to watch out for as you go about modifying your dream four-wheel drive into the adventure machine you've always wanted. Let's talk about the mistakes, cough, er, we've heard about, yep, that's it, heard about, let's go with that, and see if we can stop you making them too.

1. Buying the wrong four-wheel drive

Yep, many of us have purchased the wrong four-wheel drive straight off the bat. And it's an easy trap to fall in to. You'll want to sit back before you jump on your first 4X4 and decide what you want to do with it. Read articles, watch videos, work out exactly what you want out of your four-wheel drive. If you're going to go rock crawling, then a brand spanking new $100,000 fourby is probably not the best choice. Unless of course you're going to drop another $60,000 into it and don't care if it gets beat up, then go nuts (and send us videos!). Same too if you want a reliable long-distance tourer to head around Australia in, a $2000 TB42 powered petrol GQ is probably not the best option (that said, people have absolutely done it). But there are specific rigs for specific jobs; nothing's impossible, but some choices make life a lot easier.

2. Get the order right

There's no point in going and ordering 35-inch tyres for your Ranger if you've not done a lift yet. They simply won't fit. Or getting the world's greatest awning, without anything up top to bolt it to. Think about what accompanying mods you'll need to be able to use that bit of kit, and whether you need them at the same time as the mod you're dreaming of. Some things can be done close to one another, in the wrong order, like getting a fridge first, then a dual battery system to run it, but you'll work out pretty quickly that a flat starter battery every morning is less than ideal.

3. Get the right accompanying mod

Most things you'll do, especially so with suspension, will need an accompanying mod to make it work right. If you're going to do a suspension lift in an Independent Front Suspension (IFS) 4X4, chances are you're going to need a diff-drop kit. Maybe even Upper Control Arms (UCAs) and extended brake lines. Putting a big lift in, without the right

accompanying mods will see you bust a CV first time out, or tear a brake line in half first time you lift a wheel and get all of the down-travel.

4. Bigger is better… sometimes

Eight-inch lifts, 40-inch boggers, super-flex arms and flexy-coils look great and give you some amazing articulation, but they're not going to be ideal if you live in the guts of Sydney and use your 4X4 as a daily. Aside from the local constabulary trying to sell you tickets to the Policeman's Ball every time you get behind the wheel, there have been times where too big has been a hindrance. That's why you'll see most blokes that do serious off-roading have four-inch lift kits instead of six or eight-inch lifts.

5. Have an endgame in mind

Don't get me wrong; no four-wheel drive is ever completely finished. Many have come close, but no-one's ever gotten there. With this in mind, you'll want to have an endgame floating around your head. Think about all of the mods you'll want, and then put them in order of importance to you. As you go about modifying your rig, this list will change, and have things added and removed. Keep in mind your accompanying mods, and what you'll need to do each, and then start doing them as time and funds allow. But start the build with a solid idea of where you want to end up.

6. Buying the cheapest stuff you can find on eBay

Just don't do it. 90% of the junk you'll find on eBay is exactly that, and cheap for a reason. If it's not a knock off part (anyone remember HKS/GReddy catch cans back in the day?) it won't work as it should, won't do anything (think catch cans again), or will fail that spectacularly, it could kill you, or your new pride and joy, or someone else. There's a reason good gear usually attracts a price tag, but don't get swayed toward the most expensive, which leads us in to…

7. Buying the most expensive 'brand-name' gear

On the other side of the last point, don't just jump at something because it's got a 'brand-name' attached to it. Don't get me wrong, some bits of kit from some brand-names are absolutely worth their asking price. But sometimes, you're paying for a brand-name only, and there are better products out there for cheaper. As an example, have a look at the new 'winch-rings' getting around that work like a snatch block. Some 'brand-name' ones getting around are over $300 for a lump of aluminium. So long as the alloy used is decent, do you really need the pretty brand-name CNC machined in the side of it to show your mates for an extra $200?

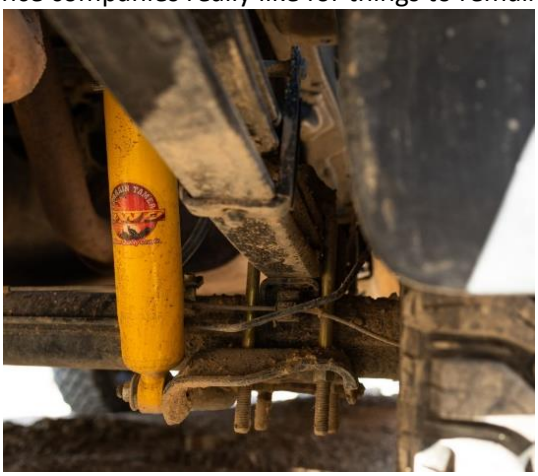
8. Understand how one mod can affect another

Like we said earlier, with getting the order right, and the right accompanying mod, try to get an understanding of what each mod will do, and whether it will upset the apple cart. Suspension is the big one here; screw with

suspension geometry at your peril. Tyres and final drive ratios are another one. If you're going to put bigger tyres on, it'll screw with your speedo and gearing. Know how this works, and how you can fix it.

9. Legalities

We have to run under the Australian Design Rules (ADRs). They mostly keep us safe out there on the road, and they're what's attached to the long arm of the law. There are certain things you can do to your four-wheel drive that will absolutely smash the ADRs, and others that just sort of bend them. If you want to go proper big with anything (think suspension, wheels and tyres), you'll most likely need to have an engineer sign off on it. So when you're going about modifying your rig, look around at who's done what, and what (if anything), they needed to do to keep it legal. Aside from the local smokies, insurance companies really like for things to remain legal on your four-wheel drive.



10. Weight

We're all watching our weight lately, and not because it's after Christmas. Every state across Australia has their police force and their transport agencies monitoring vehicle weights and towing weights. There are a few weight calculators out there that will help you get a solid idea of how much you're adding to your four-wheel drive. Just make sure you keep it under the GVM, or if you're going to go over, start thinking about a GVM upgrade.

One last thing to think about…

Modifying your 4X4 is a beautiful thing, and many a beer and family barbeque is to be had with mates on weekends when you're going about it. There are a few mistakes we've all fallen into, and despite this article, chances are you'll still make some of them. That's half the joy of building up or four-wheel drives; hell, my entire life in four-wheel drives has just about been an object lesson on what not to do, but hey, we're always learning. I just hope some of the things in this article can save you making the same mistakes I have, yes, alright, I was talking about me this whole time.

THE EVOLUTION OF SPINNING TACKLE

By Jim Hendricks, Downloaded from Sportfishing July 2024

Spinning tackle has come a long way. Here are some of the most important developments that have shaped its journey.

Spinning tackle is the go-to for many anglers fishing in shallow water.

The light-to-medium variety is ingrained in the pursuit shallow-water fish - perfect for casting a prawn, a small crab, a mulie, or a tiny jig. Great for battling samsonfish, various trevallies, large emperor, barramundi, mackerel and plenty more. Here, as we see it, are major milestone developments over the past 50 years that we believe helped make spinning tackle today's go-to gear for skinny water fishing.

Mid-1970's

The Daiwa Silver spinning reels integrated popular innovations like skirted spools that shed water and resisted corrosion, convertible handles to accommodate right-handers and southpaws, a nearly infallible bail-trip system, and

higher retrieve speeds to working lures more quickly than ever. The light models such as the 1500 were an instant success.

Late-1970's

Fenwick's contribution come in the form of graphite spinning rods. Eagle and HMG rod lines brought the advantages of light weight, quick recoil and lots of power - attributes that made them ideal for casting and battling species like tailor and mulloway. The early versions were slightly prone to breakage, but a solid warranty meant replacements were easy to come by.

Shimano's Baitrunner feature was soon adopted by other manufacturers.

1980's

Fishing big baits in the surf or skinny water sometimes means letting the fish run a bit before coming tight. The innovative Shimano "bait running" feature enabled anglers to do just this without opening the bail. When you're ready, turn the handle to engage the reel and go to work. The Shimano Baitrunner's introduction spawned a host of me-too models from other major brands.

Early 1990's

Spinning reels had trouble matching the drag pressure of conventional reels needed for powerful species such as big mulloway. Shimano's Stella series changed that with its dual-drag system with washers supporting the spool from both top and bottom. Other innovations: a heat sink to reduce drag fade and strengthened spool support to reduce flex, plus deliver consistent drag pressure.

1990's

SpiderWire's introduction of thin-diameter braided line, quickly followed by other brands, proved a game changer for spinning reels, exponentially increasing line capacity for spinning reels, making it possible endure sustained runs by species such as mackerel, sharks and trevally.

Early-2000's

Slowly oscillating spinning reel mechanisms such as that on the Shimano Stella spooled line on more uniformly to prevent piling up line, reducing tangles and increasing casting distance.

2000's

The subtle tap of a big whiting inhaling a prawn or a baldchin crushing a crab were enhanced with introduction of exposed black reel seats for light-tackle spinning rods such as Fuji.

Late-2000's

Braid line has a downside, especially with spinning gear. It sometimes results in wind knots that are nearly impossible to untangle. Fuji came to the rescue with its tangle-free guides to dramatically reduced wind knots when fishing braided line with spinning gear.

Penn was the first to offer IPX waterproofing on its spinning reels.

Mid-2010's

Many associate IPX waterproofing with Shimano spinning reels, but Penn was the first to offer this in its Slammer and Torque models. The IPX6 rating they enjoy means they protect against a high-pressure water stream from any angle.

Early 2020's

While major spinning reel brands have had power handles with large grips and longer handles for years, the early 2020s have seen company in the aftermarket offer these as retrofits. Power handles from companies such as Daiwa, Penn and Shimano provide extra leverage for battling giant trevally, sharks, and trevally that you might hook in shallow water.

Brilliance (N). . . . . The measure of how bright the light that shines out of my _ _ _ _ _

NURSERY RHYMES QUIZ

How is the memory?
Remember these?

1. Shepherdess lost her woolly friends.
2. Tiny sparkling 5-pointed figure.
3. Peeping Tom wants children in bed by 8 o'clock.
4. Small male child snoozing on the job.
5. Man imprisoned partner in vegetable.
6. Coagulated milk-eating girl afraid of an arachnid.
7. One more than 2 young cats in trouble over mittens.
8. Husband takes a wife and the cheese stands alone.
9. Male sovereign calls for his three remarkable violinists.
10. He goes to bed half dressed.
11. This feathered monarch sits in an old eucalyptus tree.
12. Opposite of white female chicken lays eggs for gentlemen.
13. The bowl ran away with some cutlery.
14. Why did Polly put the kettle on?
15. How much wool did the black sheep have?
16. Mary's garden grows silver bells and what else?
17. Who were the three men in the tub?
18. What is Mamma gonna buy if that mockingbird don't sing?
19. Where did the pussycat go and why?
20. Where did the spider go when the sun came out?

INTELLIGENT FISHING

This article first appeared in an early edition of Western Angler magazine.
Observation, common sense and logic are all important factors which contribute towards the successful angler.

The big fish was hungry! It had spent the day lying in a crevice in the rocks, waiting for the evening before venturing out to feed. In its sheltered hide the effects of the surf raging onto the rocks above was minimal. Dusk, and time to feed. The big fish moved out from its protected position and along the face of the rocks towards the adjacent beach. Here it hoped to find the small whiting, mullet and yellowtail that would form its meal, seeking the protection of the shallows.

The small bait fish moved in a solid ball and parted to let the predator through, reforming into a self preserving mass after it had passed. In the shallows the whiting and in mullet were waiting. Sensing the presence of the larger fish, they became agitated, and either darted to and fro, or clung to the bottom immobile, the only sign of life being the rapid movements of their gills.

Further along the beach sat a lonely, but patient angler. He had fished this spot for a number of years and had regularly caught small fish such as herring, skippy, whiting and the odd tailor in this sheltered bay. He had reasoned that with the constant supply of smaller fish there must be bigger fish around also

The mulloway had reached the beach now and had succeeded in catching a few of the smaller whiting trying to hide on the sandy bottom. Yellowtail fled from his path as he moved amongst them. Frustrated by their tactics and because his hunger pains had not diminished, the large fish became annoyed and chased a school of mullet towards the surface. They leapt out of his path and scattered across the water leaving a burst of white foam in their wake.

Instantly the somnolent angler was alert. What had caused that furious splashing? What fish was feeding just in front of the waves breaking over the sandbar a few yards from the beach?

The mulloway sensed the struggling of a fish in distress. The small sand whiting, captured just on dusk, and lightly impaled on a hook, sought shelter and found none. It struggled against the line and sinker and sent out a message loud and clear and the large fish homed in on them like a moth drawn to a bright light.

It swam on, and hunger overcame its natural caution and took an easy meal. The prick of the hook was just another minor discomfort caused by a fin ray as it swallowed the whiting. It would go as other small annoying fins had dislodged on previous occasions. Partially satisfied the fish swam on to seek another meal, trailing a length of nylon behind it.

The angler stooped and picked up his rod. The rapid movement of the line slopped and the line went slack. Had the bait managed to escape, or had a large fish taken the bait? Carefully he checked the drag setting on his reel, and pulled a short section of line free, watching it disappear into the water washing around his feet.

The fish had now moved off seeking another morsel for its meal. It required a lot of small fish of that size before its hunger would be satisfied. As it moved on, so that line followed, bringing an unnatural weight with it. To the patient angler this was the start of a run, even though only tentative.

Suddenly realising that all was not well with the weight of the line pulling through the water the big fish bolted for cover trying to avoid what was potential trouble. To the angler this was the time to strike and set the hook.

The hunter had become the hunted.

Four criteria are applicable in the preceding anecdote to the angler's approach to fishing. They are species, terrain, timing and bait.

Let's analyse the story and learn from it.

The species in this anecdote was mulloway, but it could have been anything. These fish are generally a schooling fish when smaller, but as they grow larger tend to become loners. I believe that it is simple deduction to see why as most areas can only support one or two large fish unless there is a plentiful food supply available. The only exception that is possible is when fish gather to spawn, and then there is fierce competition for the limited food.

Take as an example the lower reaches of the Swan River during the period October to November. There are many large mulloway caught during this period, and most of them are in roe. At other times of the year there are mulloway caught in the Swan but never in the same numbers as when the spawning run is on.

The terrain is also an important factor in fishing. Rocks grow algae and weed, small fish live on this and use them for shelter. Larger fish in turn prey on the smaller fish and on down the food chain it goes. Large fish also need shelter from predators and secure resting spots, hence the fish in the story hiding in a crevice.

The timing was important because, until dusk, the fish didn't move out to feed, but lay resting in its sheltered hole. Also the bait fish had moved inshore seeking some protection from predators. Until dusk the angler had only caught smaller fish which were located in the deeper water.

The last criteria was bait. The fish was looking for the food available, and the angler had caught and set the small whiting as bait. This is what the mulloway had expected to find along the inshore region of the beach and was possibly its last meal.

Learn what habits the fish you are chasing have and you should be able to anticipate in advance, where they will be feeding, and what they will be feeding on. By understanding the fish and its habits you should be able to increase your catch. Also be observant and style your fishing to the fish that you want to catch.

Ask yourself some of the following questions and see what answers you come up with?

When do they feed, is it predominantly day or night, morning or evening, or is it throughout the day?

Do they prefer a sandy bottom or a weed covered rocky bottom?

Do they object to suspended sand in the water or will they swim in it regardless of clarity.

What temperatures do they prefer?

Are they schooling fish or do they swim alone?

The list goes on.

There are several things that will only come to you through observation and concentration. Start to think like your quarry and you will increase your success rate. Get to know the area that you fish most frequently. Look at the gutters, channels and holes that are forming and eroding, and learn to look for the signs of changes along the beach.

The more you know about a particular section of beach you will then start to understand the ways of the fish that inhabit that section.
Check with other regular anglers who are fishing the same locations and see if they are having a greater scoring rate than you are. Swap ideas and observations with them; it is amazing just how much can be learned by casual conversation if you are listening with an open mind.
The most effective way of learning more about fish and locations is by the keeping of a fishing diary. This then becomes not only a record of your exploits, but an invaluable aid in fishing. It doesn't require a lot of effort to start and maintain and the rewards by constant observation will certainly improve your fishing.
Seasons play an important part in deciding what species of fish will be where. The seasons are not governed by a timetable of events as dictated by nature. The weather produced by the seasons will dictate the annual movements of fish. These movements can be recorded and accurately predicted by keeping an accurate set of records.
Record as much detail as you can in your diary, bad trips as well as good trips. What you will want to know is up to you. I would suggest that for starters things like: The state of the tide, was it rising or falling; what was the mean variation; only a few centimetres or was it metres? What was the wind speed and direction? Did it change while you were fishing? Did that change cause a change in the fish's feeding? What was the phase of the moon? What baits were used? What time did you start fishing and what time did you finish? What was the cloud cover? Was it heavy or light? Where did you fish and for what length of time? On and on it goes, but the more information that you are able to accumulate, the better the diary becomes.
If you decide to start a diary - stick with it. When you first begin you will have limited data to draw from, but as the diary grows the more valuable it will become. The longer it runs the better it becomes.
Mine is now over 50 years old and still collecting data!

ROCK AND REEF FISHING SAFETY

There are several simple rule to follow when fishing from the rocks.

Rule # 1 – Never fish alone. - Always Fish With a Friend

Rule # 2 – Tell some-one where you are going to fish.

Rule # 3 – Never take your eyes off of the water when fishing from the rocks.

Rock fishermen agree that, once in the water, it can almost be impossible to get out unaided, so **FISH WITH A FRIEND**. If you and your friend are to be useful in an emergency both of you should carry a lifeline, 25 to 30m of light braided rope attached to a lump of hard wood which will act as a throwing weight and a float. It can be secured to your belt

Choose a Fishing Spot Carefully

Prior to fishing, watch the sea for at least 20 minutes to find out how high, and how far, the bigger waves are reaching, and how much extra water they are leaving on the rocks or reef.
Check access for a safe retreat across the reef, and where you can safely leave the water if you are washed in. Be aware of oysters and barnacles on the reef. They are sharp and can inflict serious cuts if you are washed against them.

A poor fishing spot is easy to recognise:

It is backed by a low ledge or is a reef with a wall of rock behind it. Waves rebound from these spots and take your legs from under you. Small differences in water levels will make stability on the reefs and rocks vastly different, particularly when you are weighed down with tackle and your catch.

Always check tide times and heights prior to fishing.

Don't Take Your Eyes off the Sea

There is a phenomenon in WA waters known as the "King Wave" or "The Sneaker". It is a large wave that seemingly appears from nowhere. It occurs out at sea and near rocks and is the result of a series of wave patterns joining together and building into a monster wave.
"Sneakers" have taken the lives of a number of fishermen; so when fishing from the rocks

DO NOT TAKE YOUR EYES OFF THE SEA.

If you see a wave coming, either get out of the way or if that cannot be done quickly, brace yourself. There is every chance you could lose your footing and be washed into the sea. Even a wave just welling from a rock can be dangerous. Dry weed becomes very slippery when wet and offers no grip or stability.

Wear Suitable Clothing

The average angler wears chest-type waders, several jumpers and a jacket to protect himself from the cold. This can be a recipe for disaster. If you fall into the sea wearing this, it is almost a certainty you won't get out again.
Wear light clothing such as shorts and sandals, a spray jacket and a life jacket. A wet suit is a good way to keep warm and it will assist in keeping you afloat should you happen to fall in. If you must wear waders, also wear a pair of over-sandals with studs filled and think seriously about a buoyancy vest for additional flotation. It doesn't have to be inflated whilst you're fishing but if you do end up in the water, it will prove invaluable.

SAFETY CHECKLIST

1. Fish with a friend
2. Check the fishing spot thoroughly before fishing
3. Do not take your eyes off the sea
4. Wear light clothing including a manually inflated lifejacket.
5. Carry your tackle and bait in a bag looped over one shoulder with a quick release clip. It will be easier to drop in an emergency.
6. Use good non-skid shoes. Rock plates can be obtained from most tackle suppliers. Rubber-soled shoes are of no use on slippery rocks.
7. Always carry a safety line when fishing from the rocks

If someone is washed into the sea, it is vital that help is rendered immediately. Shock and fright will weaken them.

NEVER jump into the water to save them as we will end up recovering two bodies not just one.

FISH MARINADE

Ingredients:

Juice of 1 large lemon or 3 limes
50 mL olive oil
1 tsp (maximum) Tasmanian mountain pepper
2 – 3 cloves garlic, well crushed
Salt to taste

Method:

Put all ingredients in a well- sealed jar and shake vigorously, for at least a minute. Pour over fish fillets or cutlets and leave for 15 – 20 minutes, turning them at least once before grilling or frying.
Leftover marinade can be stored in the refrigerator for future use.
If the marinade separates during storage, a good shake will restore the original consistency.

Note: Tasmanian Mountain pepper berries 4 as normal pepper.

When you talk you only say something you already know
When you listen you learn what someone else knows
Zig Ziglar

EASY GUIDE TO BULL BARS – EVERYTHING YOU NEED TO KNOW

Your guide to bull bars

You want your vehicle to look good, right? Me too. But for the love of all things 4WD, do NOT base your bull bar buying decision solely on aesthetics! It's far more important to choose a bull bar for its intended usage.

The main purpose of a bull bar is to provide a layer of defence in a front-on collision. Skippy can do a hell of a lot of damage to your front end if he jumps in front of your vehicle. However, bull bars are also used to mount driving lights, winches and other necessities.

There is a range of important factors to consider when choosing your bull bar, from your intended type of driving to what you need to fit on the bar and your vehicle's existing safety system. To make things easy, we've compiled it all below. Read on to discover everything you need to consider when purchasing a new bull bar.

What to consider when getting a new bull bar

Materials: pros and cons

The majority of bull bars are made from steel, aluminium or plastic.

In general, steel is the superman of bull bars and is your best protection on outback roads against kangaroo collisions and other mishaps. The major downside to steel is that it's really heavy and can unduly affect your suspension and weight. This is where aluminium bull bars come in. Alloy is strong but is much lighter than steel, therefore providing less wear and tear on suspension and tyres. Plastic is another alternative but it doesn't have the clout of alloy and steel when it comes to a collision. The benefit of plastic bars is that they are corrosion-resistant and can often return to their original shape after a minor collision.

Steel bull bars

Pros

- Strongest bull bar material
- Offers the best protection against larger animals
- Reasonably priced
- Requires little maintenance

Cons

- May need to upgrade your suspension

Aluminium bull bars

Pros

- Lightweight so less wear and tear on your vehicle
- Doesn't rust
- Good strength

Cons

- Expensive
- Requires extra cleaning and polishing to look good

Plastic bull bars

Pros

- Light
- Cheap
- Can push it back into shape after a light impact

Cons

- Weakest of all the materials
- Good for debris and light brushing only
- Prone to sun damage

Which bull bar materials should you choose?

Well, ultimately this is a personal choice. Most 4WD enthusiasts still go for steel, with the advantage of strength and affordability outweighing the downside of increased weight. However, if you only venture onto rural roads every now and then or rarely manage to get off-road, an aluminium bar is a great option. Plastic is really only suited to city drivers.

Choosing the right style of bull bars

Although there are a few different bull bar styles, the same style can look vastly different when fitted on various vehicle models. In general, there are six different styles of bull bars: single hoop, triple hoop, bumper bar, nudge bar, competition bars and baja bars. Triple hoop and single hoop are the most popular with regular 4WD enthusiasts.

Single hoop

Single hoop bull bars provide a compromise between protection of your front-end and weight. They feature just a single hoop over the grill to protect your radiator.

Triple hoop

Triple hoop bars weigh the most but offer the maximum amount of protection. They are best suited for roads where animal collisions occur frequently.

Bumper bar

A bumper bar is a basic type of bull bar and although it's better than relying on your fender to save itself, it's not as useful as a triple or single hoop.

Nudge bar

A nudge bar is fairly useless when it comes to a substantial kangaroo hit. It's designed for light impact such as navigating through foliage and debris. They are also handy for bolting a set of LED driving lights on.

Competition bar

Competition bars are generally used for off-road competitions. They are easily removed but when it comes to animal protection, they lack protection.

Baja bar

Baja bars are similar to a bumper however, they have the added bonus of extra reinforcement in the chassis so they can be used with winches. They were designed for off-road competition and are not recommended for general road use.

What style should I get?

Well, again it's a personal choice depending on where you intend to drive your vehicle. If you plan to head off-road a lot then I recommend a single hoop. For long-distance driving, the triple hoop offers the best protection against animal collisions. If you plan to do crazy four-wheel-driving (up and down near-vertical drops), then a competition bar will probably be for you.

Regardless of which design you go for, make sure to get one that is specific to your vehicle model as this means the contours of the bull bar will match your vehicle.

Accessories and safety

Bull bar decisions don't end with material and style, you also need to think about winches, airbags, accessories and more. Here's what else you need to consider before committing to a bull bar.

Winch

Not all bull bars can have a winch mounted on them so you need to specifically ask for a winch bar. A winch bar has the strength to mount a winch but it doesn't rip it off when put to use. Many four-wheel drivers prefer steel when it comes to winch bars as it provides peace of mind that it will have all the strength required. However, it's important to note that not all steel bull bars are winch bars.

Airbags and other safety equipment

If your vehicle has airbags (which all new vehicles do) you will need to make sure your bull bar has a mounting system suitable for your airbags. Safety features that rely on sensors and cameras such as lane departure warnings, emergency braking and parking sensors can be adversely impacted by the wrong bull bar so you need to make sure it's compatible with them also.

Accessories

If you plan on adding driving lights, antennas, light bars and other accessories, you will need to make sure there is room for it. Many bull bars have holes pre-drilled specifically for driving lights.

Bull bar brands

Below is a list of some pf Australia's top-quality brands to shop from. Hamer, ARB,TJM and ECB all have great, easy-to-use websites. All you need to do is select your vehicle model and you'll be directed to the relevant products suited to your needs.

ARB; TJM; ECB; AFN; Hamer; ; Rival; Ironman 4×4; SmartBar; Uneek 4×4; XROX

VERSATILE SEAFOOD FRITTERS

Serves 11, Makes 22 fritters

For the Batter
3 eggs
1 cups S/R flour
4 Tbsp fish sauce
4 Tbsp grated palm sugar

Method:
Mix batter ingredients together, add a tablespoon of water if needed. It should be a thick paste.

Ingredients for the Fritter
200g of either diced WA scallops, raw prawns, raw lobster tail, a white flesh fish fillet or pearl meat
10g coriander leaves
100g thinly sliced spring onions
6 thinly sliced kaffir lime leaves
50g sliced green beans

Method
Combine all the ingredients. Add to the batter mix until desired consistency, add water if needed.
In a medium heat frying pan heat 50mls olive oil.
Cook 1 Tbsp of fritter mix (per fritter) and flip when golden brown
Dry on absorbent paper
Serve on salad

For the Salad
1 grapefruit segmented
385g mescalin lettuce
50g coriander rough chopped
50g mint rough chopped
½ red onion thinly sliced
Combine ingredients together

For the Salad Dressing
1 Tbsp sugar
2 Tbsp rice wine vinegar
1 Tbsp fish sauce
1 Tbsp water
½ chilli finely chopped
whisk together and dress salad gently.

Tip:
Try these fritters served with a good chilled West Australian Chardonnay

"REMEMBER

THERE'S A FINE LINE BETWEEN FISHING,
AND JUST STANDING ON THE BEACH LOOKING LIKE AN IDIOT..."

DON'T LET YOUR 4X4 BURN TO THE GROUND

By Wes Whitworth

I think it's time we sat down and talked about what is possibly the single most crucial component to keeping our four-wheel-drives safe - fuses.

Sure, putting in a UHF, installing some lights, or swapping out the plug on the back of our Travel Buddy 12-volt ovens or fridges from the cigarette plug to an Anderson plug is pretty straight forward. Red goes to positive, black goes to negative, and things light up and start working as they should. There is much more to it than that if you want to do things safely, and stop your rig from burning to the ground.

My old man was an electrical engineer, so he explained to me the value of how a fuse in the right spot could keep you from burning your vehicle to the ground when you're installing 12-volt bits and pieces. So with that in mind, I'm going to offer up some of these lessons and tips to hopefully stave off disaster for you.

Despite offering up some magic tips and tricks articles over the years, I want to re-iterate if you're not comfortable playing with your 12-volt system, *leave it to an expert*. Auto-electricians are a lot cheaper than having to replace your four-wheel drive.

A little bit of knowledge and a fuse will save your pride and joy burning to the ground, and it could save your life.

12-Volt Electrics: The Basics

The first thing we need to understand is how the electrics in our four-wheel-drive work which is a 12-volt Direct Current (DC) power system. That means power flows in one direction only (unidirectional) and we've only got to deal

with positive and negative; simpler than Active, Neutral and Earth in an Alternating Current (AC) system (like your house).
When your engine is running, it's also turning the alternator, and this generates AC power, that is then converted to DC power (by a bridge rectifier), which in turn charges your battery and provides additional power for the vehicle's electrical accessories; so far, so simple.
On your battery, you'll have a Positive (+) terminal, and a Negative (-) terminal. Negative is usually connected to the chassis, body and motor by way of earth cables or straps. All the positives end up back at the positive terminal of your battery.
When your alternator is generating power, it is earthed via the alternator housing to the engine, via an earth strap, back to the battery. In contrast, the positive is directly back to your battery by a rather heavy gauge wire to carry the current.
These are fused usually at the fuse box, or inline at the battery terminal with a fuse-able link in most cases, or sometimes with an 80+ Amp fuse at the battery.
That power is unidirectional, meaning it runs from the positive on your battery, through to an electrical item (such as your fridge), and then back to the negative on your battery (or to the chassis/body that's connected to your negative terminal).

A quick word on insurance

If you happen to decide to wire in an accessory, incorrectly, and do not include a fuse in it, and your four-wheel-drive burns to the ground, there's a 95 per cent chance the insurance assessor will work out how the fire started. From there, the assessor will work out you've installed wiring or an accessory without a fuse, and that by your ignorance (or stupidity?), your expensive four-wheel-drive is now a burnt mess. Chances are, they'll either write you off or settle a reduced claim, as directly through the owner's negligence there has been a loss – this is why auto-electricians have business insurance; if they screw up, their insurance covers your four-wheel-drive. If you screw up, you have to pay for the damage.

What Causes Electrical Fires

Next up, let's look at what causes electrical fires. In a nutshell, a contacting of positive and negative without an appropriate load on it will create a short circuit. Think, touching the positive wire to the chassis or body which will create a short circuit (and some impressive sparkly 'arclys'), whether on purpose or by accident. Also, if something goes drastically wrong inside an accessory you've wired into your four-wheel-drive they can internally short circuit, and achieve the same result.
The simple analogy is to think of your average halogen/incandescent light globe. Positive attaches to one side; negative attaches to the other. If there wasn't a resistance (load) on the circuit, everything would melt. The globe itself is an appropriate load, in that it is essentially a controlled short circuit – the filament within the globe is basically a resistor; it receives power from the positive and negative. It starts to heat up, the amount of energy it uses is controlled by its resistance, and it glows white-hot – creating light.
If you remove the globe and connect the positive to the negative wire, the wire in the system attempts to do the same thing - become a resistor, and it glows white-hot. As you may well have guessed, this isn't ideal.
When you have a short circuit across a wire, it will burn out whatever has the least ability to carry that current – namely a fuse. As an example, say you've got 25A wire and a 20A fuse. That is the perfect equation, as the 20A fuse will burn out before the 25A wire will. When a fuse blows, the burn is contained within a bit of plastic, and it happens (usually) pretty quickly (think microseconds); no time for everything to get hot over the space of a few seconds. When the same wire doesn't have a fuse, the wire will become red hot, and eventually blow out. Chances are it will have melted and set alight the wiring insulation that will continue to burn, and also burn anything flammable around it – think carpet, seats, other wire, etc.

Use A Fuse!

Repeat after me: **USE. A. FUSE**.
You'd be surprised how many folks start wiring things up and forget to put a fuse on the main power wire. We'll get into which fuse and amp rating a little later, but the most critical thing is to get a fuse on the positive.
If you're going to rewire your fridge or 12-volt oven, cigarette plug with an Anderson plug, something you may not know, is that the cigarette plug you're cutting off has a round glass fuse inside of it (sometimes they're plastic, but work the same way). So by cutting it off, you've just removed a fuse from that line. Next thing to think about, the cigarette socket you were plugging it into, also has a fuse at the fuse box (if it's a factory socket). If you run 50A wire directly from your battery to an Anderson plug, you've just removed the factory fuse too. So now you've got a lead from your battery to your fridge with no fuse(s) at all.
Before you jump on *Social Media* and yell at me that most fridges and accessories have a fuse inside them, that's just there to protect the accessory. If you have a short somewhere on the positive power wire between the battery and

accessory (let's say you've just crushed the power wire in your fridge slide, and the fridge slide is earthed), all of the cable from the battery to where the short is, will burn. This is why when you do add a fuse, put it as close to the battery as humanly possible – within a few inches of the positive terminal is perfect, and absolutely before you go through the firewall, or body, or anything that is earthed to the negative terminal on your battery – body, chassis, bull bar, tray, etc.

Essentially, by adding a fuse, it's making the fuse the sacrificial lamb, should something untoward happen. Better to blow a fuse, then melt your wire right? One you can replace in 30 seconds, the other may take your pride and joy with it.

Use The Right Fuse For The Job

Insofar as the wiring is concerned, know what wire you're putting in your 4X4. There's no point grabbing a bit of leftover wire, thinking it's 25A wire, and placing a 20A fuse in there. Especially so, when the cable is 10A, and your fuse is no longer the sacrificial lamb. If you happen to put a fuse with a larger amp draw rating than your wire, the wire will burn, and the fuse won't blow; making it useless. Know what wire you're putting in and make sure you have a fuse that is rated LOWER than your wire. If you're using 25A wire, and you're expecting to draw 25A, don't just put a 25A fuse in there. Go to 50A wire, and put a 30A fuse inline.

Don't Put A Bigger Fuse In The Line If It Blows

One critical mistake you can make is replacing a blown fuse with one that has a higher amp rating. Unless the fuse is older than Noah and it's just died from old age, replace the blown fuse with one that has the same amp rating; 20A to 20A, 5A to 5A and so on.

If once you've replaced a blown fuse, the fuse doesn't blow again, chances are it's died from old age, you've been pushing the limits of the fuse, or there's an intermittent short on the line somewhere. I would suggest investigating the wiring regardless, to see if you've got a cut or crushed wire that may be arcing out somewhere.

If it blows again as soon as you replace it, then you have a hard short somewhere on the line or the accessory you're using is toast (there's a good reason in there to buy quality electric accessories for your four-wheel-drive). If it does blow, you'll need to go on a fault-finding mission and see if you can find where it's blown. By putting a bigger fuse in there, chances are you'll put a fuse with a higher amp rating than your wire, and we're back at burning your 4X4 to the ground. Don't do it.

Firewall

This is the first one because it's the most common. If you're going to drill a hole in your firewall (or any piece of steel really) to run wire through, make sure you use a grommet. It adds a layer of rubber around the sharp steel edges and stops the steel rubbing through the insulation of your positively charged wire.

Fridge Slide / Drawer

There's a particular brand of drawer system getting around that has a steel frame, alloy capping, and is usually bolted into the body of your four-wheel-drive. As soon as it's bolted down, it's an earth / negative point. Have your fridge cable floating around in the back, and sooner or later, you're going to munch it up in the slide. I went through two cables before actually getting it properly out of the way and suspending it (my expensive lesson is yours for free). Some aftermarket slides can be mounted to the body, so they're the same – crush the cable, touch the exposed positive to the slide (or the chassis on some fridges), and instant short circuit.

Under Carpet

This one happens when you put an amp in the back of your rig; you'll run a power cable to run the amp usually under the carpet, down next to the door jam, and people getting in and out can kick it or stand on it. Put a bit of semi-sharp metal in there somewhere (or even plastic), and you can cut through the insulation exposing bare wire to short when it touches the floor pan.

Loose Wires

Our final common one is loose wires. Bouncing around as you drive the corrugations, any cable that knocks against a bit of steel long enough, will rub through the insulation and short out on whatever it can. There's a reason you'll see wires secured in pretty lines on top-notch 12-volt installs.

Common Places You'll Find Shorts

Every dad is right now saying out loud, "on your legs". Right, now that the required dad joke is out of the way (I'm an uncle, and still rip out the best dad jokes you'll ever hear), let's look at some places where you're going to get a short circuit in 12-volt systems.

Bonus Points - Dodgy Connectors / Terminals

This one is my pet hate - dodgy connectors. If you absolutely must use spade or bullet terminals to have something semi-removable, make sure you've got a quality set of ratchet crimpers. Those 5-in-1 crimp/striper/cutter jobbies you can get for $5 at automotive shops are rubbish. You'll most often not get a good connection, nor the leverage on them to get a good connection when using them with terminals. Scotch locks, screwdriver connectors, anything like

that, is a bad idea too. And that's because they're intended for 240-volt stuff, in your house. Those wires are always (earthquake aside) stationary, and once they're installed, they'll seldom get moved around.

How To Work Out Amp Draw For Your Accessories

Time for a bit of math that you'll actually use:

To work out Amp draw of a specific accessory you use the equation I = P / V - where I is current in Amps, P is power in Watts, and V is Voltage in, er, volts. That can also be written as Amps equals Watts divided by Volts (A=W/V). To make it simpler, turn the equation around, so it looks like this:

Watts / Volts = Amps

As an example, let's say we're installing an LED work light on our roof-cage. The LED work light has a quoted power of 120watts. We know it's a 12-volt work light, but need to know the amp draw. The equation will look like this: 120W / 12V = ??? (10A for those playing at home).

So now we know, at peak power draw, the LED work light will draw 10A. So to wire this up, we'll want to use 25A cable, with a 15A fuse on the positive, as close to the battery as possible.

"...a voice in my head keeps telling me to go fishing..."

QUESTIONS

WHAT	Do we have to do?
WHY	Are we doing it?
HOW	Long have we got to do it?
HOW	Are we expected to do it?
WHO	will be involved?
WHEN	Do we do it?
WHAT	Happens when we finish?
WHO	Owns what we produce?
WHAT	Resources do we have?

Fishing is the art of doing almost nothing

Good anglers limit their catch, rather than catch their limit.

FISHING REEL GEARS EXPLAINED

Reel manufacturers reveal what makes their gear components so strong.

Downloaded from Saltwater sportsman July 2024; By Sam Hudson

Inside every reel is a set of gears working just as hard as you.
Did you make the right choice?

Inside the toughest reels that anglers rely on for their most strenuous fights are key mechanisms that don't receive much attention: gears. Fishermen are quick to consider drag settings, bearings, line capacity and even gear ratios, but ignore details such as gear 0material and gear cut.

The toothy, circular components determine how strongly and smoothly a reel turns, especially under strain in drawn-out battles. Lesser gears can feel like a wind-up toy, while superior gearing feels and acts more like a winch.

A reel's price is a strong indicator of what to expect from the gearing, but I wanted to know more. I asked top reel manufacturers about tooth cut, material, longevity and gear size. Some top companies were quick to protect their proprietary manufacturing processes, but others divulged more, providing an informative dive into conventional and spinning gears.

Material Goods

Gear materials can range from brass, zinc and aluminium to stainless, but for maximum strength and durability in saltwater conditions, stainless-steel drive gears and pinion gears are often the top options. Penn uses stainless on all its higher-end conventional lever-drag reels, such as the Internationals and Torques, says Penn senior product manager Mike Rice. “In most cases we use stainless steel for the pinion main gears,” he says, “but we prefer to heat-treat the pinion gears to increase the hardness.”

Zebco Brands uses stainless steel in all heavy Fin Nor trolling reels, VS and VSB Van Staal reels, and Quantum Cabo offshore spinners because it is strong and durable, says Chris Littau, fishing manager of Zebco Brands. “But stainless is also expensive and difficult to make smooth,” he adds.

Different reel manufacturers utilize different types of stainless. For example, Accurate uses 303 stainless steel; Alutecnos, 316 stainless; and Okuma, 17-4 stainless. Manufacturers may use different stainless alloys, or combinations of metals, dependent on the reel, but they try to keep the same alloys inside a specific reel to prevent electrolysis caused by dissimilar metals.

Shimano’s cold-forged aluminium Hagane gear.

The different types of stainless can be confusing, but understand that each number helps explain the alloy’s unique makeup. “I think it’s important to point out that all engineered, industrial-grade metal materials are alloys,” says Littau. “I have heard people refer to an alloy as a cheap material, but in fact most pure materials are mostly useless without being alloyed.”

Stainless steel in the 300s, such as 303, 304 or 316, cannot be hardened by heat - hence the use of cold forging. Stainless 17-4 can be moulded via heat treatment. In the fishing community, stainless 304 is recognized for its corrosion resistance, while 17-4 is known for its hardness - still, most different types of steel can exhibit similar characteristics at different levels.

“The 17-4-grade stainless steel is known for its high strength and ability to withstand high temperatures far exceeding what a fishing reel can generate,” says John Bretza, director of product development at Okuma Fishing Tackle. “It gives us the strongest grade of material we can use and still have the corrosion resistance needed. It also gives us the ability to heat-treat, depending on our target application and desired hardness.”

For spinning reels, Shimano uses a cold-forged aluminium Hagane gear in its new Twin Power SW and Stradic models. “Aluminium is lighter than brass,” points out Chris Hess, a senior manager of product planning at Shimano. “The precision of our dies and expertise in the cold-forging process allow us to create a gear with incredible strength, durability and smoothness.”

In total, manufacturers utilize stainless and other alloys to create ideal shape, strength and durability in their gears to fit the exact needs of each reel.

The Cut and Process

Have lever-drag reels advanced past traditional gear teeth, often called straight-cut? Penn has used the same gear cut for decades, using a lower pitch (teeth-per-inch ratio) because of its strength. Manufacturers such as Accurate also believe standard gear cuts are still an invaluable option.

“Our gears are cut on CNC hobbers and shapers,” says Ben Secrest, vice president of sales and marketing at Accurate Fishing Products. “We believe this is the best way to achieve a consistent, smooth, precise gear; plus we’re able to control tolerances and accuracy. Our spur gears are designed for direct power and torque.”

Daiwa and Alutecnos are not as open about their gear manufacturing processes, but both divulged that they cut their own gears using proprietary methods. Daiwa calls its gear-cutting process Digigear, or Digital Gear Design. For Alutecnos, each gear is robotically lathed at the TMB (their parent company) Italian factory, which also machines gears for ZF (an automotive supplier) and other brands, says Alutecnos’ U.S. manager Mason Featherston.

“Van Staal gears are machine-cut spiral bevel gears, just like the rear end of a truck,” says Littau. “They are expensive to manufacture and make smooth, but will last a lifetime.”

Shimano spinning drive-gear teeth are not cut, but instead fashioned through the cold-forging process: Precision gear teeth are constructed down to a micron level with one stamp of the cold-forge press. Hess believes that machine-cut gears are initially smooth, but over time can wear down faster and become rough under heavy loads.

Accurate's BV-300 main gear (large), with the smaller pinion gear, centre.

"If you open most reels and look at the engagement between the pinion and drive gear, you will typically see two gear teeth engaged," says Hess. "While these teeth offer good durability, there can be some 'play' between them, which can create a rough feeling." To overcome this, Shimano has begun to use micro-module gear teeth. By making the gear-teeth module smaller, Shimano was able to eliminate a lot of the play and create a smoother-feeling gear through increased tooth engagement.

With the Makaira series, Okuma set out to create a silent-retrieve big-game reel, so the company opted for helical-cut gears. Helical-cut (or spiral-cut) gears have more teeth meshing at any given time, translating into greater load-bearing surface area and more gear-tooth engagement between the main gear and the pinion gear, says Bretza.

"Helical gears are so strong that they can create axial loads that overpower other components, which is why our reel was built from the ground up around this system, to make sure that all the strength and pressure loads work together," says Bretza. "It's why other companies don't simply retrofit their reels with helical-cut gears."

More Than One Size

Gear ratio has a meaningful impact on gear smoothness in fishing reels.

"Early on, anglers converting standard-gear-ratio reels to high speed would lose power," says Bretza. "The problem was that they kept the same-diameter gear and added more teeth to accomplish a higher gear ratio."

The gear teeth were smaller in size, which reduced pulling power, torque and overall durability. Today, modern reels often have drop-down gear boxes, offset from the frame to allow more room for larger gearing.

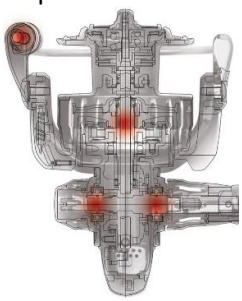
Helical-cut gears have increased tooth mesh compared to a straight cut,
creating more load-bearing surface and tooth engagement,

"In terms of size and strength, a thicker face width of the gear [creates] a stronger gear because you're able to distribute the load over a wider area," says Rice. "Unfortunately this adds weight, so there's always a necessary compromise."

The size of the gears greatly affects toughness, which is why many reel manufacturers utilize oversize gears for increased power, especially on higher-speed reels.

"Manufacturers today increase the overall diameter of their gears so they can create a high-speed reel with appropriate-size gear teeth to keep durability and muscle in the gears," says Bretza.

A lower gear ratio will always be the most durable when it comes to force and smoothness, but modern manufacturers are finding ways to develop higher-speed reels that still have good amounts of the same attributes.



Daiwa's Mag Seal technology uses a thin film of magnetic oil to keep salt water,
dust and grit from entering the reel's rotor bearing and gearing.

Reel Longevity

The best way to prolong the life of your reels is to do an annual check to see that your gears are properly lubed with the correct type and amount of grease. Taking them to a trusted tackle shop is a good option. The grease helps reduce friction and control heat build-up in your reel.

“Stainless-steel material gives gears longevity under normal fishing conditions,” says Accurate’s Ben Secrest. “The gears can last a lifetime. Softer metals can be warped when fished outside the intended design.”
Even still, corrosion is a constant struggle with saltwater gear. Daiwa figured out a new way to prevent salt intrusion in the bearings and gear box.
Daiwa’s Mag Seal technology uses a thin film of magnetic oil to keep salt water, dust and grit from entering the reel’s rotor bearing and gearing, says Curt Arakawa, Daiwa’s marketing manager. “Magnetic oil is one of a new generation of nanofluids that can change density and shape when a magnetic field is applied,” he says. “This method offers substantially less winding friction than would an ordinary rubber seal.”
Daiwa’s new Exist spinning reels feature Mag Sealed ball bearings on both sides of the drive gear, in addition to a Mag Sealed main shaft and line roller for trouble-free rotation and less maintenance in harsh saltwater conditions. Mag Seal is also used in the new Saltiga series to prevent water intrusion between the reel’s rotor and body.

Any frontal attack on ignorance is bound to fail because the masses are always ready to defend their most precious possession.
Their ignorance.

There's the story of the Kingdom of the Crustaceans, way, way down at the bottom of the deep blue sea, where the lovely Princess Prawn went to her father, King Prawn, and said: "Father, I have fallen in love. May I have your paternal blessing and royal permission to wed?" King Prawn was delighted. "Long have I waited for this happy day, my daughter," he said. "Which of the noble and handsome Prawn Princes has won your heart?" "Dear father and most noble king," Princess Prawn replied, "it is not one of the noble Prawn Princes to whom I have given my heart ... it is Kevin the Crab."
Well, the king flew into a right royal rage. "A crab?" he roared. "A bloody crab? One of those morons who can only walk sideways? Never!"
Poor Princess Prawn burst into tears and swam sobbing from the throne screaming that it was the crab or no-one.
Eventually, everybody calmed down, and, like all fathers of daughters, the king gave in and agreed to the marriage.
The big day came. Princess Prawn, looking absolutely stunning, stood at the altar beside her father, waiting for the arrival of Kevin the Crab. There was a fanfare of trumpets, and the crab appeared and walked down the aisle — straight as an arrow.
As he stood beside the princess, she turned to him, her eyes shining with pride and joy.
"Oh, my darling!" she murmured, "I'm so proud of you, you walked so straight."
The crab edged closer and whispered: "Shut up, you fool - I'm drunk."

QUALITY

Quality is like buying oats
If you want nice clean oats, you must pay a fair price.

If however, you can be satisfied with oats that have already been through the horse. . . .
Those come a little cheaper !

There is hardly anything in the world that some man cannot make a little worse,
sell a little cheaper,
and the people who consider price alone are this man’s lawful prey.

Ruskin