

COVID-19

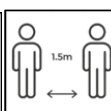
# March 2021 SARCC Newsletter

## SARCC RIDES ARE ACTIVE

All SARCC activities are operating within **Covid constraints** of Social distancing and hygiene!

### QR scanning for SARCC.

- Each SARCC ride group has a QR code.
  - You must QR scan and register your attendance at each ride or event. SARCC will no longer use the emailed ride card system.
  - If you are unable to QR scan, please notify the Ride Leader – the Leader will email [sarccexec@gmail.com](mailto:sarccexec@gmail.com) with the exceptions.
  - Only QR Exceptions are: **1. electricity or internet connection prevents its proper use** **2. the person does not have a smartphone.**
- A QR code will be at each ride to be scanned by all attendees. The QR scan is for the Health Department only and will be only used for your benefit by Health Dept Contact Tracing when the next outbreak occurs of Covid-19.



the total number of persons present at a place must not exceed 1 person per 2 square metres

### New Email reminder from SA Gov 19/02/2021, SARCC MUST:

- Ensure, to the extent possible in our circumstances, that all people check in on entry to SARCC Event!
- Ensure that manual contact tracing records are kept in a way that reduces the risk of them being copied, photographed, taken or used by any person other than an **authorised officer**.
- Ensure that no-one else copies, photographs, takes or uses these manual records (other than an **authorised officer**)
- Contact register records must be kept for 28 days and disposed of securely at the end of the 28 days.
- Blatant breaches may result in a fine of up to \$5060 for a business or \$1060 for an individual.

**Authorised officer** means an authorised officer appointed under the *Emergency Management Act 2004*, an authorised officer appointed under the *South Australian Public Health Act 2011* or an authorised person appointed under the *Local Government Act 1999*

## SARCC Newsletters are now archived on the SARCC web since October 2020

### Sunday Rides:

#### March 14<sup>th</sup> Ride to Beach.

Meet [Victoria Square](#) 10am. Easy ride to Brighton, BYO lunch and return. *Meryl S 0449 999 730*

March 28<sup>th</sup>... **Adelaide Hills ride** Meet at 10.00am at the [Aldgate Railway Station on Euston Road, Aldgate](#). Ride to Mt George, Balhannah & Hahndorf. Coffee at Mylor and return to Aldgate. Some hilly sections. Mountain or hybrid bikes recommended. Bring or buy lunch. 36km, 602m elevation gain *Allison C 0424 725 674*

#### Sunday rides need a leader for each of the following dates:

**1 July 4. 2 July 18. 3 August 1. 4 October 24.** (Starting from Victoria Square helps to balance the program.)

You can help by offering to lead a ride! Please contact *Peter Roodhouse mob 0418 844 963. Email [proodhou@bigpond.net.au](mailto:proodhou@bigpond.net.au)*

### Thursday Rides:

March 4 <sup>th</sup>	Damien	0422 004 544	10am at the carpark on <a href="#">Memorial Drive, Williamstown</a> , near the junction of Queen Street (the main street)	Some unsealed roads
March 11 <sup>th</sup>	TBA		10 a.m. <a href="#">Woodside Pool</a> car park	Some unsealed roads
March 18 <sup>th</sup>	TBA		10 a.m. <a href="#">Woodside Pool</a> car park	Some unsealed roads
March 25 <sup>th</sup>	TBA		10 a.m. <a href="#">Woodside Pool</a> car park	Some unsealed roads

### PERFECT Rides: Sunday March 21st Kapunda or Roseworthy (To be confirmed)

### South Coast Saturday Rides:

**Saturday Soar! SATURDAY 6<sup>th</sup> March 10am** Yep, we are soaring over Hindmarsh Bridge ... there is so much to see - first stop the Marina, with views over the Goolwa Channel, then it's klonking over the boardwalks of Coorong Quays before heading out to the Murray Mouth for good coffee! We'll check out the tranquil and scenic northern section before heading back to Goolwa for lunch. An optional side trip to the Goolwa Barrage (only an extra 5kms return) brings into focus the fascinating network of control mechanisms in place to separate salty ocean waters from the fresh waters of the Murray! Moderate gradients - bring lunch or BYO. *Helpful tips:* Goolwa cafes have great food. Allow an hour-and-a-half's drive if coming from central Adelaide. The Southern Freeway is quickest, with turn-off left for Goolwa just after passing through Mt Compass. Ros

Other club South Coast rides and be on Saturdays: ~~3<sup>rd</sup> April, 1<sup>st</sup> May~~, 29 May, 26 Jun, 24 Jul, 7 Aug, 4 Sep, 2 Oct, 30 Oct, 27 Nov,

~~Cancelled Easter, Cancelled Tour~~

### Tours 2021:

**Goolwa Wed 28<sup>th</sup> April to Fri 30<sup>th</sup> April.** Rides starting at 10am to allow for those who may join for the day from home in Adelaide – Book your own accommodation in Goolwa. Some rides starting in Goolwa, others you may need to drive to a starting point.

**Barossa Wed 12<sup>th</sup> to Fri 14<sup>th</sup> May.** Rides starting at 10am to allow for those who may join for the day from home in Adelaide – Book your own accommodation. Details of rides will be available later.

**Goldfields Victoria October**, depending on the success of COVID 19 vaccinations SARCC are considering a venture to Victoria for a fortnight of riding.

**Mini-Mawson trip** with Roger Polkinghorne (3<sup>rd</sup> to the 7<sup>th</sup> of May) **this tour is full.**

# BREAKING NEWS

## NEW ZEALAND TOUR 2022



**Tour starts Monday 14<sup>th</sup> February 2022 for 16 nights.**

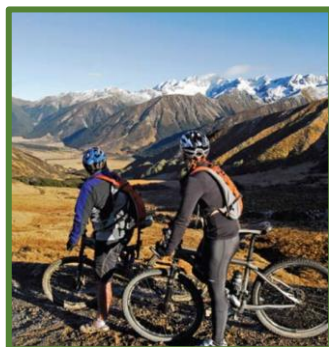
**All South Island, New Zealand      Te Wāhipounamu, Aotearoa.**

**Expressions of interest requested – email to** Denise at [sarcclub@gmail.com](mailto:sarcclub@gmail.com)

As per SARCC tradition a Cycling Trip to New Zealand is being planned for February/March 2022. Eric has handed the responsibility for the trip to Ron Battista, Kevin Dronfield and Denise Ryan, who are enthusiastically researching and planning an amazing series of rides.

We are anticipating that COVID vaccinations will have been administered and hoping that travel bubbles may operate between Australia and New Zealand and are certain that we will be ready for adventure.

We plan to focus on the upper and middle sections of the South Island to minimize time spent travelling and capitalize on time spent on the bike. Trails to be partially ridden include the [St James Cycle Trail](#), [Rainbow Trail](#), [Golden Downs Trail](#), [Great Taste Trail](#) and the choice of a section of the [Queen Charlotte Track](#) or the [Copper Mine Trail](#). We plan to ride the entire [West Coast Wilderness Trail](#) and the [Alps to Ocean Trail](#). The rides planned will be most suited to intermediate and experienced riders.



The **16-night** tour will begin in **Christchurch on Monday February 14<sup>th</sup>** and finish in Christchurch. Flights and bike hire are organized by the individual traveller. Accommodation, vehicles and trailer hire, and fuel costs are included in the tour price at an estimated cost of \$1400 per person. Some meals are provided, including breakfasts and lunches, and are funded by a kitty collected on a needs basis.

We plan to release a detailed itinerary in April and hope to collect deposits in May.

To assist with planning we are asking for expressions of interest by the end of March. This will assist with planning. As you can imagine realistic numbers are vital for booking accommodation, vehicles, and bike trailers.

Please email Denise at [sarcclub@gmail.com](mailto:sarcclub@gmail.com) if you are genuinely interested in the proposed trip.

### **CLUB MEMBERS MEETINGS**

Report: Wednesday 24<sup>th</sup> February 7.30am first Members meeting for twelve months due to Covid restrictions - we had 13 members attend, no new recruits. The new venue works well except for car parking and bicycle security. There was limited car parking at 7.30pm but ample at 9.00pm maybe a non-recurring glitch. Bicycle rail lockup is available but strangely no indoor parking allowed. The venue is a pleasant large hall with a good projector and sound system. Covid requirements mean more cleaning and don't forget to bring your own coffee mug. We had a great meeting discussing rides and tours, gave away a bicycle frame and lonely planet travel books. Free books still available next meeting is listed below.

**NEXT MEETING Wednesday 24<sup>th</sup> March 2021 7.30pm** at [The Minor Works Building](#), 22 Stamford Court, Adelaide (at the southern end of Stamford Court off Wright Street or behind *The Donburi House* restaurant on Sturt Street). During Covid conditions we will be restricted to 30 attendees, and we can boil the water and provide tea and coffee only, you bring your own mug. Please bring your mobile phone for QR scanning. Bikes must be left outside the building, where there is a bike rack.

## Riding in Large Groups (revisited)

A large group is not a challenge if we are riding on a safe shared path, cycleway, or quiet traffic road with a competent tailender and if needed a mid-group Leader. The biggest challenge comes at busy intersections that delay part of a ride group.

Recent observation revealed on average 15 riders negotiate a traffic light-controlled intersection on most rides, leaving the remainder to wait for the next light change. When a group of even 24 is focused and bunched all riders can cross on the same green light. There are some riders who prefer to ride at the rear of the group and they often miss the first green light crossing. SARCC accepts that not all riders desire to be in the lead bunch some prefer to ride to the rear of the group because that is more comfortable and enhances their recreational riding. Ride group sizes will not change that dynamic there will always be some riders with that pattern of riding.

SARCC accept that the ride group leader's management of the ride is less complicated in groups below 20 riders. In consideration of that group size SARCC accept that if ride participants exceed 15 the Ride Leader has the optional entitlement to split the ride into two. With that optional concession, there are 3 obligations:

- 1 The Ride Leader is responsible for ensuring a second competent Leader is available,
- 2 the two ride groups must remain in viable numbers. Recommend neither group is below 5 riders,
- 3 the Ride Leader does not have the privilege of selecting who rides on each ride that remains the rider's choice.

## Article: Transporting Ebikes: (inspired by Mini-Mawson trip above)

Mid-drive Ebikes are not as easy to transport as non-Ebikes. The primary reason is weight – after removing the battery an Ebike will still weigh >20kg. Lifting that up onto a trailer at 1.2 meter above ground is a 2-person or 3-person challenge. Mounting on a car roof rack is certainly not feasible. Hanging from a bike beak is not desirable, frequently because the main triangle is too small to fit the beak through, many Ebikes are step through frames requiring a bar adaptor 2 for a Car bike-beak.

Not all Ebikes are a challenge e.g., the rear hub motored, and DIY converted Ebikes often have conventional frames and rear carrier mounted batteries. Nevertheless, they still will weigh significantly more than a non-Ebike i.e., greater than 20kg versus less than 14kg.

Transporting on a tray type carrier attached to a tow ball or receiver allows for only two Ebikes (a few tray carriers are designed to take the weight of three Ebikes).

A tray style carrier 3 or 5 is by far the easiest to load the Ebike onto, some even provide a ramp to assist loading.

An Ebike often requires a different style of clamping of the down tube because it requires wide enough Jaws 7 to close around the battery enlarged down tube 4 of a mid-drive Ebike. Stabilising is managed by either binding to a pole (which has an undesirable rubbing of your bike frame) or preferably a seat post clamp 3 or top bar clamp 5.

This means SARCC Club Trailer with a rear three-bike tray can only readily carry one Ebike and two non-Ebikes on the tray, one Ebike and eight non-Ebikes on the trailer top a total of 12 bikes. Even then, some modifications are required to support the Ebike loaded front of trailer at a cost of \$200, the trailer requires fixing a tray beneath the draw bars to carry three 15L Gerry cans of water to ensure tow ball weight is adequate.

Recently I observed a Trailer designed for 8 Ebikes. The low loading was like a Trailer SARCC Hired at Arrowtown NZ. The trailer was approx. 10 X 5 plywood flat tray with two bike supports (like 5) at each end and 8 plastic half drainpipe tubes across the deck plus a low Luggage box over the wheel arches. There was a movable ramp to load Ebikes onto the deck about 50cm off the ground. Do SARCC need to raise a grant to build another trailer for our ever-growing Ebike fleet available across all clubs?

It has not gone unobserved that most of us who have acquired Ebikes have also purchased appropriate carrier racks for our vehicles some of you were fortunate and your existing carriers were trays with adequate loading capacity.

In the future we will all ride lighter Ebikes (like 6) but to reach 15kg in the example the distance covered by one battery charge is depleted, gears are disbanded, and dynamics are not as good as a mid-mount motor i.e., a lot of compromises.



Specialized Turbo Levo Ebike 17.5kg costs \$22,300

Ebikes are just like the conventional day to day bikes with a lot of add-ons. The add-ons include a battery, motor, display panel, wiring and frame changes. These components add a few kilos to the original bike weight but the advantages that they offer far outweigh the demerits of a slightly heavier structure. A non-electric bike may weigh 14 kg and an electric version of the same may weigh 21-24 kg. But with those extra kilos, the rider can travel for more than 100km and at a speed of 25 kph, which is commendable. The motor, battery, controllers, cables, and extra frame strength adds 7 to 10kg to an Ebike.



6 A light-weight commuter 15kg short range, belt, hub motor. [Roadster v2](#) | [Ride1UP](#) | [Best Lightweight Electric Bike](#)



## Article: [3D printed Bicycle Frames](#) research by Eric

Nowadays, lightweight carbon fibre is fast replacing steel/aluminium as raw material for making all bikes. By [labour intense manufacturing in carbon fibre](#), a small reduction of about 2-3 kg in weight of e-bikes is feasible. But wait there is more ... The latest technology will create a bicycle that is lighter and stronger. [The Superstrata: Custom 3D-printed carbon fiber e-bike - YouTube](#) Watch an engineer demonstrate where bicycle technology is going [3D Printing Carbon Fiber Bicycles for Production - YouTube](#). Soon we will buy bicycles we can afford that are even lighter definitely stronger, electric powered or manual pedalled. Removing inconsistently, intensely manual, layer built carbon fibre bikes i.e., built by robots and 3D printed – gleefully, if Australia is clever, we will not need cheap Chinese labour.

There is a plethora of technical data and information on 3D printing Carbon Fibre can one of our Scientists or Engineers research and write us an article in plain English about the process and materials – it will be interesting reading.

Soon the weight reduction will reach us recreational riders at prices that are reasonable. Bicycle development has short lead times unlike car manufacturing.

## Article: Quick Release skewers and Thru Axles by Allison C

There are two primary axle types for bike hubs. The first is “Quick Release” (QR) and the second is “Thru Axle.” (TA). In 1927, Italian bike racer Tullio Campagnolo invented the Quick Release (QR) skewer, which allowed quick changes of his wheels. The QR skewer is a thin rod, usually 5mm in diameter, which passes through the hub of the wheel and is designed for u-shaped fork dropouts. The skewer has a closing lever on one end and an adjuster nut on the other end. When the wheel is in place, closing the lever generates enough compression to keep the wheel locked onto the dropouts.



Quick Release axle failure became particularly common on mountain bikes with disc brakes and suspension forks. The fork legs were not moving in unison when the suspension compressed and also during braking. This resulted in poor brake rotor alignment, poor tracking in turns, and even detached wheels. MTB components were being fortified to withstand the demands of racing and beefy suspension forks called for a stiffer connection with the wheel. Disc brakes required smaller tolerances for the wheel to sit properly in the frame so the brakes did not rub. It became evident that a more robust axle design was needed.



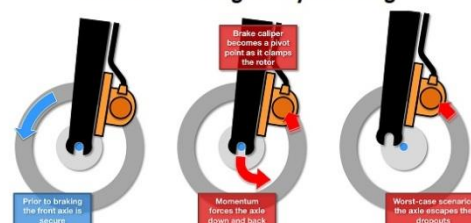
In the early 2000s, Thru Axles (TA) were invented. A thru axle resembles a large pin that is inserted through one side of the fork/frame, slides through the hub, and screws into the other side of the fork/frame. This leads to a stronger and more secure-fitting connection. Some TA have a lever built into them to tighten or loosen them, so the wheel can still be removed relatively quickly. Other thru axles use a hex bolt which requires an Allen key to remove. This system minimizes the chances of the lever getting knocked which could loosen the axle. There are no slots in the dropouts so a TA must be removed completely to release the wheel.

Thru Axles improve safety by making it nearly impossible for the front wheel to come out of the dropouts while the bike is moving. The dropouts can't be lifted out of the axles vertically because they have holes instead of u-shaped slots. TA also screw into the dropout, forming a more secure connection. This design prevents disc brakes from ejecting the axle under heavy braking force. The axles themselves are unlikely to break because they are thicker and stronger, and all of these features improve safety.

When standing up to pedal hard, the fork can flex. Sometimes it flexes enough that a disc brake pad rubs on the rotor as it is just a couple of millimetres away from the rotor. This creates drag that slows the bike and reduces efficiency. TA eliminate this problem by reducing fork flex. They create a rigid connection between the hub and fork legs, which makes the whole front end structurally stronger. As an added benefit, braking performance marginally improves because the brake rotor stays better aligned in the calliper. Thin QR axles can bend or break during a hard landing, after a jump or drop, particularly on bikes with suspension forks. The legs compress unevenly and bend or break the axle. TA, being 3-4 times thicker, greatly increases the axle's strength, improving safety, handling, and braking. This problem is the reason why thru axles were invented in the first place.

When disc brakes came into widespread use in mountain biking during the early 2000s, cyclists found that the braking force created by disc brakes could eject a QR axle out of a U-shaped dropout by pushing the wheel down and forward. After repeatedly braking, the QR axle can slowly loosen and the wheel may eject out of the dropout. (Wheel ejection isn't a problem on rim brake bikes because the braking force pushes the wheel back into the dropouts.) Thru axles completely solve the disc brake wheel ejection problem because the dropouts use holes instead of U-shaped slots and so the axle can't pull out vertically. For this reason, TA are a better choice for bikes with disc brakes.

### Vertical dropouts fail to capture the front axle during heavy braking



Thru Axles bolt both fork arms together and this makes the bike's front end structurally stronger. Fork flexing from powerful pedalling or torsional forces created by disc brakes is greatly reduced. The TA dropouts are also a bit beefier, which makes them more robust. When the front end is stiffer, steering is more accurate and precise. The front wheel also tracks better while cornering when it is more rigidly attached to the bike. This is the most significant performance enhancement.

On a bike with thru axles, the fork arms connect through the axle and both fork arms synchronize. Suspension forks absorb shocks better because they compress evenly. This improves stability and handling off-road. When the front disc brake is applied, the fork wants to twist and flex as disc brake callipers and rotors mount on one side of the wheel. Over time, this flexing may cause the fork to fatigue and eventually fail. As TA bolt the fork legs together, the fork is more resistant to torsion forces than a QR.

When a QR wheel is put in the u-shaped dropouts, the ridges on the quick release that bite into the frame to hold the hub can be in a slightly different position each time. The wheel can end up slightly misaligned which can lead to the brake rotor or rim not being properly aligned, causing the brake pads to rub. The cassette or freewheel can sit crooked if the rear wheel is misaligned which prevents the drive train from working smoothly. The QR might have to be undone and repositioned to get the wheel to sit properly. TA solve these issues because the hubs sit in the dropouts exactly the same every time.

However, even though TA are incredibly simple, they cost more than QR axles as they are a newer technology and are considered to be higher end. TA frames and forks also cost more than those designed for QR because they are more complicated and time consuming to build. The axle holes in the dropouts must be perfectly aligned and sized for the wheels to roll straight and so it takes more time and precision to build the frame. TAs are slightly heavier than QR skewers. Standard TA weigh 60-80 grams each depending on the size. QR skewers weigh around 40-50 grams each. There are indications that the industry is paying attention to weight concerns of TA. 12mm TA have already been introduced as an early refinement for road disc forks and the smaller diameter appears to be gaining favour for road use. There are lightweight TA available that are made of aluminium, titanium, or carbon fibre. These weigh about the same as QR skewers but cost more.

Thru Axle frames and forks are also slightly heavier but the weight penalty is so minor that it would really only matter for tourers or those who ride competitively. In much of the developing world, high-end bikes and components are not common. If a TA or new hub is needed, it may be hard to find a spare. Small town bike shops may not carry thru axles. For this reason, bicycle tourists usually stick with QR axles at this time.

TA as they stand now are slower to operate than QR but even that's changing. Focus recently introduced a thru-axle design called RAT (Rapid Axle Technology). The system requires just a flick of the lever and a quarter turn to engage and disengage. Even better, the system retains its adjustment with repeated use so at least in theory, it's roughly on par with a QR system in terms of speed while also offering the benefits of more repeatable wheel position and increased stiffness and security. This is really only a problem in racing. For recreational riders, having to spend a few extra seconds here and there doesn't really matter.

Many racks secure the bike by locking the front dropouts to a mechanism in the rack. These require u-shaped QR dropouts. Adapters are available for some racks. Of course, manufacturers have designed newer racks for compatibility with thru axles. These are extra expenses to consider. TA do require purpose-built dropouts and compatible hubs, making it difficult to retrofit TA to a bike. However Speed Release have developed a front thru axle like system that fits standard road bike forks.

<https://bikerumor.com/2015/05/18/speedrelease-puts-thru-axles-in-standard-dropouts-adds-mountain-bike-options/>

#### Final Thoughts about Quick Release Vs Thru Axles

There is nothing wrong with QR skewers. They are safe and secure enough for general riding when used correctly. Most riders rarely have to worry about breaking a QR skewer or having the skewer work its way loose. This kind of thing really only happens in racing or hardcore mountain biking where a considerable amount of stress is put on the bike. But thru axles are more secure, foolproof and stiffer. More and more touring and road bike manufacturers are switching to thru axles. RAT is an undeniably slick design and Focus has already announced that RAT will be included on its upcoming disc brake-equipped road bikes so the wave is already building.

If you're happy with your quick release axles on your bike, there is no reason to go out and buy a new bike just so you can have thru axles. If you're planning to upgrade anyway, thru axles are probably the better choice.

The great way to keep the sun off your head and ears and it fits under your Helmet:



Headband Bandana - Versatile Sports & Casual Headwear -Multi-functional Seamless Neck Gaiter, Headwrap, Balaclava, Helmet Liner, Face Mask for Camping, Running, Cycling, 100% premium Microfiber.25x48cm (Wide x Long) [Buy 9 at Amazon](#) \$50 and share. or search "headband" for less \$

Soft, stretchy, many colours/prints - it fits head circumference from 54 to 64cm. It is breathable, seamless, resulting in comfort and fewer bad hair days.

## Article: Book Review: by Eric

I just finished reading *Bicycle the History* by David Herlihy  
(loaned by Alan Marriage but available on Amazon)

**A comprehensive history of the bicycle written 2004.** Pleasantly illustrated, images spanning 2 centuries. During the nineteenth century, the bicycle evoked an exciting new world in which even a poor person could travel afar and at will. But was the “mechanical horse” truly destined to usher in a new era of road travel or would it remain merely a plaything for dandies and schoolboys? In *Bicycle: The History*, David Herlihy recounts the saga of this far-reaching invention and the passions it aroused. This lively and engrossing history retraces the extraordinary story of the bicycle—a history of disputed patents, brilliant inventions, and missed opportunities. Herlihy shows us why the bicycle captured the public’s imagination and the myriad ways in which it reshaped our world. Above is a precise of Amazons review – for me it was a treasure trove of the history of the marvellous inventions that contributed to the bicycle as we know it. It became the most efficient and sustainable means of transporting people. I found it interesting to read his view of the bicycle’s future from 2004 “Unfortunately, the plastic bicycles flopped.” ...“Nevertheless, with advances in material processing, monocoque frames could one day yield affordable, lightweight ... bicycles.” And *it has come to pass* with 3D printing of frames 17 years later in 2021. A great informative read and a book to treasure in your library. Now I must give it back to Alan Marriage with a big thank you. ☺



## Article: **Clever\*1 Bicycle Helmets:** by Eric

[SENA Company](#) has a passion for adventure and obsession with perfection. Has been since they started in 1998. They started out to make the best two-way intercom systems for motor bike helmets. SENa believe there is no such thing as a viable shortcut in the pursuit of a passion. When they develop new products, they go to great lengths to ensure the final version is everything it could be and everything our customers expect it should be. Especially wind noise suppression.

SENA Company have turned their attention to making a Bicycle helmet incorporating all the successful technology they perfected in Motorbike helmets.

SENA have created a premier cycling helmet with technological advancement Combined with safety features, the R1 EVO is an upgrade to [R1 Cycling Helmet](#). With a host of communication options, built-in audio functions, and a sleek design, this helmet is the right fit for any calibre of cyclist and includes: Mesh Intercom™, Voice command controls, A built-in taillight, microphone, speakers, Bluetooth connectivity, in White and Black with M 55~58cm and L 58~62cm sizes.



Mesh Intercom™ makes its debut in SENa’s cycling helmet R1 evo. You can communicate **hands-free** with other R1 EVO users within 900 metres and reconnect automatically when they catch up. [Multi-channel Open Mesh supports 9 channels](#), letting you switch between different groups on different frequencies. Now you can have [conversations with your family, friends, and between Leader and Tail-end Charlie!](#)

Because it is not a noise blocking/cancelling ear plug you can take/make phone calls, use voice commands, listen to directions, even listen to music all without removing your ability to hear that vehicle approaching or that call “*car back*” or “*passing right*” etc.

WHAT’s the catch? just price \$279 from Australian Agent 08 0478 4511 and Australian safety registration. Price in US\$159 ∴ buy in USA and ship, including post cost approximately \$215ea, Australian safety certification is expected by 30 March 2021.

\*1 A Smart Bicycle Helmet features built in Headlight, Taillight, Brake light and Turn signals, hence “Clever Bicycle Helmet”.

### REGULAR item “You Tube” Entertainment Segment (contributions please)

[10 most innovative electric bikes available in 2021 - youtube](#)

🔗 10 most innovative electric bikes available in 2021

[New Bike Inventions That Are At Another Level](#) 🔗9 - YouTube

🔗 New Bike Inventions That Are At Another Level

[America's Cup - PRADA Cup Semi-Final Race 4 - Bing video](#)

🔗 America's Cup - PRADA Cup Semi-Final Race 4 (A really different yacht racing)

[Tour Aotearoa 2016 on Vimeo](#) and [Tour Aotearoa 2016 - YouTube](#)

🔗 Many of you have been to NZ - spot the places you remember.

[The Evolution Of Mountain Bike Helmets | Retro Vs Modern MTB Helmet & Safety Tech - Bing video](#)

🔗 Evolution Of Bike Helmets - Describing the NFC and locator chips

[Aptera Has Launched - YouTube](#) & [2021 Aptera Electric Roadster: 1,000 Mile Range EV with Solar Charging - YouTube](#)

🔗 An Electric Car, 3 wheels APETRA promises much, not yet delivered– worth a look



Just in case the gentlemen get bored with tech Bumf  
⇌Click these Garments.