



# QUADROLUTION

The Quadrolution is a board like no other. It wears its trucks on its head and its body swings beneath them like a snowboard with training wheels. And that's how it feels! Whether you like mellow cruising, all out speed or lightwind boardwalk antics, the Quadrolution seems to have a little of something for everyone. The board has been around a couple of years and was maybe before its time. But with the progression of landboarding, a new interest has emerged. So let's talk to the designer – Mark 'Spike' Daniels...



## *Tell us about your background.*

I have been in engineering since I left school. Started as an apprentice toolmaker, then moved into pattern making. Computers now play a very big part in engineering, so about ten years ago I moved to a company starting to explore the CAD/CAM side of things. If I need to make a prototype, I can model it up in a software program, then export it to a machine that makes the part in a very short space of time. Using the same experience, I can also design and make the tooling for mass production. I was always modifying fast bikes, cars and things which was easy in the engineering trade. I get a kick out of making and fitting stuff, knowing I made it with my own hands.

## *How did you come up with the concept for Quadrolution?*

It started when a friend, Dave Morris, was telling me how he saw guys being pulled along on a board with a powerkite. They seemed to be struggling to get going, and we thought they could cruise along a lot easier with bigger wheels. This sounded an easy solution, so we took a trip to the local kiteshop, had a look at the

boards and decided we could come up with something a bit different and bigger, just right for us older guys to cruise up and down the beach. I fired up the PC and let my imagination run wild. First obstacle was ride height. I had a few ideas but they did not look right, so thought "What if I put the deck below the axle?" Sorted! That was the way forward and I came up with the first prototype 'Evolution.'

## *Were there many prototypes before it all came together?*

We started with carbon fibre and realised we could not make our board this way for a reasonable price. So it was back to the PC. New plan – the truck would be hollow cast aluminium with the axle cast in situ and the deck would be made of wood. Quadrolution was born!

The first wooden board started with a flat plywood deck, aluminium trucks with springs and 300 mm wheels. Each beech laminate was dyed a different colour, which looked fantastic but was far too heavy and expensive. Next step was to try a solid wood called Iroko that is used for speedsail boards. We came up with the idea of moulding a foot on the truck with an elastomer

underneath to give the necessary resistance. Another prototype was made and tested. It worked well so we got the tooling modified, manufactured elastomers in varying hardness and were ready for testing.

We were still not happy with the deck, so designed a new shape with a concave to raise it in the centre. Now the search was on to source a manufacturer. I found a company in Canada that made skateboard decks using the maple that surrounded them. I sent my design over and the new deck eventually arrived. We bolted all the bits on and stood back. It looked great – at last we were happy!

## *What wheels and tyres did you try?*

We thought about big foot tyres on buggies and figured that was the way to go – wide tyres on soft sand. But it became impractical as far as weight and traction were concerned. I even remember following this couple pushing a pram, looking at the wheels to see if they would suit what we wanted – I was getting strange looks! Now we are using 8.5 inch Skyway wheels with 12 inch tyres which are lighter and thinner, with less rolling resistance and a smoother allround ride. ▶



*What has Design-Extreme been working on?*  
 Trampa wanted a new 'egg shock' to put in their channel trucks with more progression and a better fit, so I came up with the 'Trampa Dampa' which I produce and helps fund my new project. This will be the first freestyle board I have designed, where truck and deck are generic to each other. By doing this you can save a lot of weight. The truck ended up superlight but the main weight saving was in the deck, because it was around 150 mm shorter – less deck means less weight. I have since redesigned truck and deck to be more suited to this application and saved a little more weight – the whole package looks stunning!

There are a lot of things I would like to do. Deck technology has come on leaps and bounds since Jim Cambello came on the scene over a year ago and I have a few exciting ideas myself. A freestyle buggy is high on the list and a brand new truck design aimed directly at the downhill guys is in the pipeline. Time is my enemy!

*Anything you would like to add in closing?*  
 Seeing guys and girls on stuff I designed gives me a real buzz. What would put the icing on the cake is seeing the Quad – which has already been past 40 mph – set the first official Kiteboard Speed Record. ▶

*Apart from its size, how does it stand apart from other board designs?*

The thing most folk notice is that the deck is underslung. You're suspended below the axle, so when you step on you come to rest at the bottom – like sitting in a swing. You're not fighting for balance as much as on other boards. It helps give that chilled out feeling when you're cruising a nice long stretch of beach. When your powered up and leaning right back, the deck is skimming across the sand, a fantastic feeling.

*There's a lot of talk of sandboard racing. Is the Quad suited to this sort of application?*

With the deck so low to the ground, wide axle base and big, thin 12 inch tyres it's perfect for speed, so it would be great to see Quads racing on sand. If you look at what speedsailors are using, the Quad is not too dissimilar. Those guys are getting up to 50-60 mph. With the right kite and wind conditions in the right hands, I'm sure the Quadrolution would be formidable.

*You have elastomers instead of springs on the trucks. Do you think elastomer technology is the way forward in truck design?*

Elastomers make life so easy from a designer and user point of view. There are no limits to the shape you can use as long as you can make a mould. Performance wise, it's excellent in this sort of application, plus lighter and interchange-friendly.

*What other kite related designs have you been involved with?*

I had a truck system floating around in my head that would suit kiteboarding, based around the humble Void bush found on car suspension. I sat down with a piece of paper, making simple sketches until I was happy with the way it would work. I designed a shape I knew I could manufacture, took the information to the PC and modelled it up. I made a set of trucks and knew the best deck would be a Trampa. I bolted my trucks and wheels to the board, then jumped on to see how the trucks would react to my input – it was spot on with a very smooth feeling. I took it to Kitedeck who gave the thumbs up, finalised the design and got the trucks looking like a finished product, helping take Revos and the Reflex to where they are today. Kitedeck weren't able to pursue any more design and developments, so at that point I started my own Design-Extreme for extreme board sport industries.



## QUADROLUTION OWNERS

Glen Butcher  
Newmarket, Suffolk.

'I've had my baby for two years. In light winds I use my Quad as a sort of freestyle longboard, with a 3rd footstrap in the middle so I can steer it from there with one foot. That allows things like board walks, Hang 5 and 10, foot-out stuff and different combos of stances. It's wicked and loads of fun when not windy enough to get airborne and the underslung deck makes everything so stable and smooth.

When the wind picks up to 25 mph or more, out she comes with a completely new game face as a super slick speed machine! I put hard elastomers in the trucks – so hard it doesn't even turn. I like it that way because at speed the sensation is like riding a snowboard. It grips wickedly when you're hammering along, then slides out smoothly and solidly for turns and transitions. It never gets speed wobble and just keeps on asking for more. My PB is 42.8mph on the Quadrolution with a 7.5 m Ozone Frenzy. The board is capable of a lot more with the right engine. I'll keep ya' posted!

Mark Parker  
*Kitemarket.com* – Richmond Park, London.

'I've been using the Quadrolution for a month now and everybody who has stepped on has been knocked sideways by its smooth ride. Stable isn't the word. When the speed comes on (this board fires up really quick) there's not even a hint of wobble due to its low centre of gravity. I started kiteboarding on a carveboard and the Quad is like coming home. Not a board for jumping due to its weight (leave that to Butch), but the Quad scythes through traffic and going upwind is a synch, even in the lightest winds. Carving is what this board's built for and it delivers in spades. It asks very little from me by way of input and the handling is subtle. That said, if you want to see rooster tails spitting out of the back of your board then the Quad's worth a definite look. Not the only board you'd buy, but potentially the second.'

Freddie Batt  
Uphill Sands, Weston Super Mare.

'I have owned my Quad for nearly a year. It's a hoot at first! Rode it without bindings and was shocked when I put it into a slide and it just stayed there until we stopped. For a cruising and speed board it's simply awesome. I have never experienced speed wobble, though I have caught a toe edge at speed – which is not pretty! The increased weight of the Quad just highlights all aspects of kiteboarding. In many ways it would suit an absolute beginner. I have also ridden it without the elastomer, so the deck swings low like a sweet chariot! How good is that? I can't really describe it – centrifugal force or some science – but once you're going it rides a bit like a Dirtsurfer. Rotations are awesome! It takes so much effort, but with that effort comes momentum and immense satisfaction – like playing with fire!

### QUADROLUTION SPECS

Deck: Canadian Maple 9 Ply, 1182 mm x 300 mm.

Axle width: 616 mm.

Camber: 30 mm rise at centre.

Ground clearance: 86 mm.

Overall length: 1396 mm.

Wheel base: 1076 mm.

Axle body: Hollow cast aluminium with stainless steel axle.

Wheels: Skyway 3 spoke 320 mm diameter 50 mm wide.

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*Report & Interview: Glen Butcher.*

