

## **Designer's statement of purpose – the Maverick 440**

Following on the success of the Maverick 400, the Maverick 440 was the natural progression to a larger boat with larger transoms which are fantastic swim platforms, incorporating storage and increasing the waterline length which results in faster speeds and a smoother ride. The Maverick was originally intended to replace the ageing Island Spirit cruising catamaran. This cat, conceived in the late 80's, was one of the first to boast an open transom and wide hulls. Before the Island Spirit all cats had high aft cross-arms that you had to climb over to access the cockpit. Since then nearly all new cats have opened up the cockpits, giving better access to the sea and dock. Streamlining the aft cross-arm also forced the main-sheet track onto the coach roof or bimini. Getting that out of the cockpit area improved safety and reduced clutter. At the same time it allowed the deck to extend further aft.

Attempting to enhance the architecture of a catamaran still further, we looked at improving the space and flow of the interior of a cat. The first order of business was to remove the artificial barrier between the saloon and aft deck. Incorporating the largest possible sliding doors and windows in the aft bulkhead brought the outside in and made one sociable area out of the entire above-decks. Then extending the coach-roof forward of the mast bought an extra double berth in the saloon, perfect for gear stowage on shorter trips, a protected play area for kids and watch-keeping hot-bunk for night watches. In the galley we have a scullery area and stowage for large items.

While the spacious and sociable deck and saloon area of cats is a big draw-card, down below things aren't normally so rosy. Tight spaces and lack of good visibility make the cabins into caves, berths into bunks and heads into cupboards with no foot-room. Having found that wider waterlines only impacted boat speed marginally in light airs, but improved heavy air sailing, surfing and load-carrying whilst reducing spray, bow-burying and tacking times; the next step was to study the impact of significantly wider hulls below and above the waterline.

Architecturally, wider hulls are a game-changer. More hull curvature increases panel stiffness and allows internal structures without dividing up the space (less a series of short corridor sections and more well-proportioned rooms). For a given overall beam the distance between hull centrelines is less, reducing torsional loads. Surface areas do not increase significantly, giving much greater living space for minimal extra structural weight.

What the space, bought so cheaply, does allow:

- island berths aft -and the pleasure of not having to climb over one-another
- separate shower cubicles – using that new floor-space
- decent locker space – we know you're going to need it
- lots of tankage – now that the load carrying capacity is close to double
- generous engine rooms

Two main concerns that we had about further increasing the beam went unfounded; hull slamming does not become an issue – the hulls are still very narrow; light air performance is compromised but we increased the rig sizes slightly to compensate. Surprisingly the wider shallower hulls allowed us to fit deeper keels for the same draft and by moving these back further we achieved easier tacking, very light helms and good downwind tracking - with autopilots hardly working

The Maverick was designed from the outset for a low production environment. This and the abundance of skilled GRP craftsmen mean there are no visible mould joins anywhere, I think these look terrible and cheapen the final product. The standard of finish can be maintained with hand-faired interior surfaces, great wood-work and well laid out systems. In designing the production line we made sure workers never had to stand on resin areas, that all laminating was within arm's reach – particularly important in a vacuum-bagged laminate such as this, and that modules could be aligned easily without using heavy and inaccurate lifting rigs. We have dozens of possible arrangements and have slowly settled on the more popular arrangements. The cats are built extra strong to suit our conditions in South Africa.

I sailed my own Maverick (hull no. 5) to the USA and enjoyed a trouble free and comfortable voyage with between one and five other crew. Long voyages are great for improving designs but ultimately the boat combines liveability, sailing performance and class in about the right proportions. And, because the cat is light and airy, combining the features of a good apartment with go-anywhere credentials, it makes a good boat for less experienced sailors who want to experience the great sailing lifestyle. I rate the design a great success.

Phil Southwell