



Stop your dreaming now!

■ by MARK STEPHENS –
PACIFIC MULTIHULLS

The Pacific 40 is a result of many years of trying to get the price of catamarans down by taking advantage of the advances in technology. We have done this by producing a very efficient kit made from the latest high tech materials that is very quick to build for both the amateur and professional.

IT is accepted that the most costly commodity in the modern society is labour so reducing a boat's building time will reduce its final cost. Even when building your own boat a reduction of hours will result in a cheaper boat in the end. Of course there is a balance here. You could buy a ready-made factory boat and pay high profit margins for somebody else's hours or at the other end of the scale you can buy a set of plans and build from scratch. The latter may seem like the cheapest option, but is it really? How much do you value your time? Can you find a large shed to rent for many, many years; will the boat really get finished? When you finally launch your dreamboat will it still be your dreamboat?

The most cost efficient way to own a modern catamaran is somewhere in between, by building from a well thought out CNC cut kit. This is nothing new of



course; kit boats have been available for years. Most are still labour intensive with multi-chines that require difficult fairing, complex deck shapes, large curving seats and compound curves, which require strip planking and still more fairing. In other words they haven't carried the philosophy of saving time as far as it can be taken. Another approach is to build a kit which has large premoulded panels that glue together and although they do

save more time they also cost a lot more to buy, and you still have to finish the interior.

At Pacific Multihulls we feel we have found the best compromise between cost of kit and ease of building. The new generation kit. Most kits available today are based on the 8 x 4 balsa sandwich panel joined along their long edge with a thin tapered glass scarf joint. The average 40' kit will need around 150 panels, which need to be aligned very flat and glued together. That is well over 100 glue joints before you can even start building. The Pacific 40 kit has its parts CNC routed from large Polycore panels. The panels are around 5.8m x 2.25m, the biggest panel you can fit into a 20ft container. This significantly reduces the amount of pre-gluing along with the errors that can creep in when gluing many panels in a row. The longest panel in the kit, the topsides, has only two joints.

Talk to anyone who has built a boat and they will have many tales about the hassle and expense of dealing with couriers. It has been estimated that 5% of the building cost goes to transportation. With the ongoing concerns of fuel /transportation costs and CO₂ emissions ever rising, the kit was designed to fit into one 20ft container or two plus kits in one 40ft container or the equivalent space on one flat bed truck. To do this, the moulded hulls are split into three easily handled sections with tapping rebates at the joins to

make fairing the tapes easy. Imagine having everything you need to build a 40' catamaran arrive on one small truck!

Polycore, a high quality polypropylene cored product was chosen as we consider it to be far superior to balsa and foam. The use of balsa as a core in boats has always had to endure a reputation as suspect despite plenty of laboratory evidence to suggest it is perfectly okay. Unfortunately, every yachting enthusiast seems to know someone who had to cut rot out of their balsa cored boat. This may well be due to bad building but why use a core that can rot in the first place? Polycore cannot rot. Foam is the other alternative but its lower shear and peel strength and its very high cost makes Polycore a more attractive core. The Polycore panels, using quality pre-preg epoxy/glass are pre-glassed in the factory using heated presses producing a very good, consistent volume fraction resulting in the ultimate lightweight panel.

A catamaran designed around flat panels raises many challenges for the designer. In the early days of multihulls most boats were built from plywood an excellent material in its day, but they tended to look boxy and soon dated when methods such as cold moulding, strip planking and foam sandwich produced pretty curves. There are still a number of good honest designs around for plywood but they're not for everyone as they still look 'old fashioned' and are very labour

intensive. Alternatively the pretty flowing lines of the round bilge boats are expensive to build requiring techniques that involve many hours (hundreds) of fairing, an odious task that is purely cosmetic and adds plenty of weight. This left us with the difficult task of designing a boat with all the advantages of flat panels while keeping the look modern and good looking. The result is the Pacific 40.

The hull

As announced in the last issue of *Multihull World*, the Pacific 40 makes use of the wine glass shape hull. This allows us to achieve a good performance cruising waterline length/beam ratio of one in 12 while retaining a generous internal volume and good semi circular underwater profile with lower wetted surface area. Our hull shape also sheds water and spray and doesn't create as much drag when pressed hard. This shape is difficult to build so this part of the hull will be supplied as part of the kit. From 400mm above the waterline up to the gunwales a single flat panel runs from stem to stern. On the inboard side a single chamfer panel also runs all the way from the stem to the stern. What could be easier?

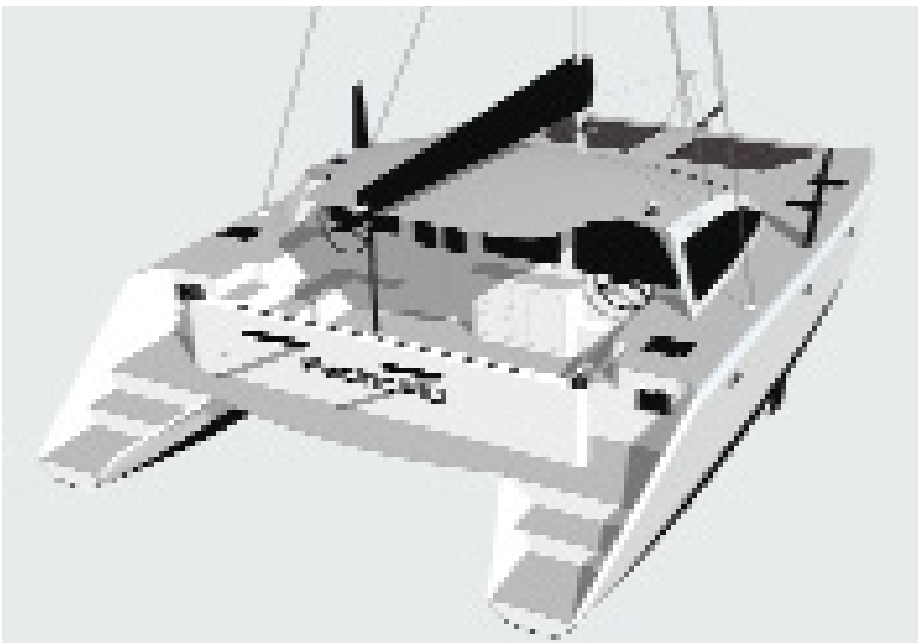
The Pacific 40 has avoided the slab sided 'kit boat' look. The soft knuckle above the waterline helps to break up what would otherwise be huge flat topsides giving her a modern sleek look.

The bows

The bows have sharp plum stems providing excellent wave piercing ability, plenty of reserve buoyancy and less spray and drag when pressing hard.

Flat decks

To simplify building, the decks are all made into one large uninterrupted flat panel, including the catwalk, front beam, side decks and rear cabin tops. There are no steps or slopes from the rear cabin to the front beam and the flat deck carries right out to a small radius at the gunwales. This is a significant safety feature at sea. The large flat decks are a pleasure to lounge around at anchor, will be a pleasure to use at sea and a pleasure to build.



Cockpit

The cockpit has been arranged to be simple, spacious and functional. The main cockpit seat has been kept straight as we estimate building a straight seat only takes half the time of a curved one. It is tempting to design in a long sweeping curve in the back seat as they do look nice but are they practical? Have you ever tried taking a nap on a curved seat? They take up a lot of valuable space and the back bulkhead usually ends up cutting across the under seat storage area. The seatback is carried out into the transom steps providing an excellent place to grind the shared mainsheet track/spinnaker winch while watching the sails.

Boarding the boat is made easy with large sure-footed steps up the transom with the top step being level with the bridgedeck so no clumsy clambering over the cockpit seats. A washboard can be used across the cockpit entrance if wandering children are a concern.

A swimming platform extends out from the back beam. The dinghy davits are simple, removable stainless steel or carbon tubes, which plug into the rear beam giving clear access to the platform while swimming.

Two wheels are used for steering with good visibility on either tack, the port wheel having access to the navigation table inside via a drop down window and a swing around plotter. A generous storage locker and a wet locker are provided along the bulkhead.

The saloon top extends back over the cockpit providing essential shade in our harsh climate.

Saloon

The saloon is large, light and airy divided up into a lounge/dining area, a galley up kitchen and navigation. This centralises all the daytime activity and keeps the sleeping quarters down below. Drop down windows and a double door in the main bulkhead allows plenty of

ventilation and a sense that the saloon and cockpit are one large area.

The saloon seating is comfortable and large, at the same time practical and easy to build. This seat is often used at sea by an off watch crewmember who can get some sleep but be ready if emergency help is required. Curving seats are not practical for this purpose. Aft of the dining table is the navigation table, which can also house a LCD TV for entertainment.

The galley is on the starboard side along the main bulkhead with a stove and sink and a generous work surface. Forward of this is a huge front opening refrigerator and separate top loading freezer. It has been found that front loading refrigerators are virtually as efficient as top loaders, are far more practical and the top can be used as a large work surface. Most people prefer the galley up to the galley down as it is more pleasant to use but in the past this configuration has usually been only considered for day sailing cats as it tends



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Model Pacific 40 cat



Model 48 Sport 12 seater



Model 18 & 12 seater catamaran

Early Bird Discounts Available on all boats & kits

Contact us for details

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steps. This keeps the engine out of the living space and allows easy access for installation and maintenance. Outboard engines were considered for their weight and initial cost advantage but in the spirit of keeping the boat quick and easy to build saildrives were chosen. Modern diesels also provide other advantages such as greater efficiency and they are less likely to cavitate when you least want them to, like crossing bars. The large capacity fuel tanks are located in a separate compartment forward of the engine. For performance sailing these are best not filled to the top but it is nice to know you have the range when crossing oceans.

Construction

Ease of building has been a top priority throughout the design of the Pacific 40 kit. We are determined to make the job of building a boat as pleasant and rewarding as possible by making it quick and problem free. We have been involved in the development of catamaran kits for longer than most in this country and experience as multihull builders puts us in the unique position to know where time can be saved and processes made easier. A full set of pictorial instructional plans will be supplied explaining each process.

All parts are pre-cut ready to go, even the interior fit out, so that means no tedious marking out and cutting. Everything is flat (except the saloon roof) so you don't have to fair any large areas saving a huge amount of time, sandpaper/consumables, energy and dust. Panels are light and kept to a manageable size for easy and safe handling.

The main backbone of the kit are the two factory made hull 'shoes' which the rest of the boat is built upon 'the right way up' (Remember all those nerve wracking photos of catamarans being suspended with two cranes while being turned over). Not only is the most difficult part taken care of, but also these hulls act like a strong back, another thing you don't have to build. Just sit them in the supplied CNC cut MDF frames and start adding the bulkheads, bridgedeck etc.

Fitting out can be done before the decks are put in place, in fact most can be done

before the topsides are added. This makes access easier and working more pleasant. Even the engine and rudder bearings are fitted before the transom steps are installed.

Deck and saloon rounds are simple to build using scarfed cut panels sections and CNC cut tooling, this will save the expense of a deck radius moulding that would still require joining, fairing and taping.

The cabin top is the only compound curve on the boat to be built but being a mild compound it can be stripped out of wide panels over supplied MDF mould frames in situ. It will require some fairing but you will be working downwards and being painted in non-skid it doesn't require a mirror finish. The saloon side panels are flat. Although it would have been good to not have any compounds to build we felt that this is one place where it is worth it as a flat panel top always results in an old fashioned boxy look and a compound is stronger over such a large unsupported area.

Pacific Multihulls are offering an Early Bird Discount for those who are interested in placing a plan deposit before the end of June 2008 (email us for details). By placing a plan deposit you will also be entitled to additional kit discounts, which will save you thousands. Study plans will be available by the time this article goes to print. Kits are expected to be available by the end of June 2008.

Pricing? Let's say you will be very, very surprised. Surprised enough to put a smile on your dial that could be seen from the moon ... your face is gonna ache!

Pacific Multihulls will be exhibiting at The Sanctuary Cove International Boat Show May 22-25, 2008 – Stand 184 Pavillion B. We will have study plans at our booth, plus have full plans available for viewing.

We look forward to seeing you there.

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PACIFIC 40 KIT SPECIFICATIONS

Length	12.2m
Beam	7.46m
Centre line to centre line	5.8m
Draft board up	500mm
Draft board down	1900mm (mini keel also as an option)
Sail area	
Performance cruiser	98sqm main and genoa
Mast height performance cruiser	17.0m
Displacement light ship	approx 3.5T
Displacement loaded	6T (payload 2.5T)
Engines	21-30hp sail drives
WL length/beam ratio	12:1
Headroom hulls	2m
Headroom saloon	2m
Bridgedeck clearance	750mm (fully loaded)
Fuel	300ltrs +
Water	400ltrs
Motor	7.5-10kts cruise
Sail	0-20+kts

Pacific 40 Kit Key Features

- Moulded hulls, simple build deck/saloon radius rounds
- Fine bows for excellent wave cutting ability
- Build right way up
- Modern technology and materials
- Epoxy composite for superior strength, longevity and excellent resale value
- Well thought out and detailed CNC cut kit
- Wine glass hulls with soft knuckle for better internal volume performance
- Twin or single Helm
- Motors isolated from cabins
- Berths : two queen cabins, one double cabin
- Galley up
- Flat decks for safety at sea
- Most lines run aft

Please note: The above specifications are subject to change without notice.