

Tempest's Progeny

The fabulous Highlander 25

The Tempest on Steroids

When Tempest was released, the yachting media around the world celebrated the exciting performance and versatility of the new design. It's speed in fresh conditions was the subject of many articles, and much talk in the yacht club bars wherever it appeared. In one boat test in an Australian magazine, the Editor quipped that "it flew around the course like the beer was off in ten minutes". The full potential of the Tempest design wasn't fully realized until Doug Chalmers, in 1968, redesigned and reworked the Tempest concept into a 25 foot, triple trapezed powered up sports yacht with overnight accommodation for four.

I recall the day the first Highlander, Skye, was launched. It was a Wednesday afternoon in late October 1968, and I was a 13 year old High School student. I used to sail the Wednesday afternoon races in an Endeavour 24 owned by a local surgeon instead of doing school sport. The usual fare was a few Endeavours, a Yachting World Keelboat or two (now known as the "Diamond": 30 foot multi chine plywood, light displacement, bulb keel and downwind/reaching planing performance in over 20 knots of breeze), a couple of 5.5s., a Derwent Class sloop, a small fleet of Dragons and various production fiberglass yachts between 23 and 30 feet. We usually had 10 to 15 boats lining up for the start, and the race was one lap around Botany Bay and back to the Club- about 15 n.miles.

Doug Chalmers had been a top Flying Dutchman builder and sailor. He announced that he had built a 25 foot cruising version of the Flying Dutchman when he released the Highlander. However, one only has to look at the Tempest's lines to see a remarkable similarity of form. There are some detail differences - the Highlander has perhaps marginally more rocker, and the slight vee in the aft sections has been rounded at the centerline- this is most noticeable when viewed from behind the transom. The freeboard was increased, but the boat has not suffered at all in performance.

On that overcast Wednesday, Skye was rolled down into Kogarah Bay on the trolley on which she was built, from inside a huge covered shed with an opening roof. The Highlander was initially designed to use a Soling mast, Soling mainsail and Dragon No 1 genoa with an Endeavour 24 350sq foot parachute spinnaker. No-one could believe the speed of that machine- it simply disappeared into the distance in a fresh 20 knot nor-easter. The first 5 miles was a work, and the Highlander steadily pulled away from the 5.5's. The run back to the yacht club for the finish traversed the breadth of Botany Bay and about 3 miles of the Georges River. It varied from square to shy, and we only got glimpses of Skye as she literally flew with 3 big men on trapeze to keep her flat. She was home and out of the water on her trolley before the next boat finished.

20 years after that October day in 1968, I bought my first Highlander, **Rough Red**, the second last Highlander built. It was built in 1976. The workmanship was meticulous. In all those years, only 14 boats had been built and sold. People knew of them, and everyone had a tale to tell about their performance- but in the 1970's in Australia, the move was away from performance yachts towards what I call "caravan boats". Highlanders- as performance boats- were not popular with the 1970's market. Internationally, the IOR rewarded fat cumbersome and inefficient designs ,and this had a profound influence on production yacht design. No-one seemed interested in designing or building- or buying- boats which were exciting, fast and beautiful to sail. The exceptions were the Olympic classes- Tempests, Solings , but these boats appealed only to a very small market. Only 15 Tempests sold in Australia, and about 160 Solings up to the 2000 Olympics. Most new yacht sales in Australia were large volume hulls which were accommodation oriented. This held true for trailer sailers also. By the late 70's the Blazer unsuccessfully tried to break into the Australian market. Only a handful of Blazers were sold, although now they command higher than new prices and are in great demand! Interestingly, even the Blazer was modified into a high-topsided 6 berth cruising boat in Oz!!!

The Highlander did not go in for high hull volume. Topsides were increased only marginally to allow sitting headroom, and remained much lower than other boats of the time. The result was beautiful and graceful: to borrow the famous advertising phrase of the immortal Sir William Lyons (creator of Jaguars) : Highlanders had "grace, space and pace...".



Rough Red as purchased in 1988

The Highlander takes Tempest sailing to a new dimension. The boat feels in every way like a Tempest, and has all of the characteristics we know make the Tempest such a great design. The boat has (in its modern incarnation) 320 sq ft of working sail, unlimited spinnaker, triple trapezes and a crew of 3 (all on the wire) or 4 (with one person inboard trimming). In over 20 knots of breeze, a 4th person is a definite advantage, as things can get pretty hectic when you are doing 25 knots with a monster size broach developing and you need to uncleat a sheet or line you have dropped or can't reach! I have been independently speed checked (by the Sydney Water Police) at 23 knots (in a 5 knot zone!) and in fact the boats are capable of planing (NOT SURFING, but properly sailing) at 25 knots in moderately flat water subject to being able to keep flow attached to the foils. This is a problem which starts developing at 17-18 knots, and really becomes a headache over 23 knots. Sometimes you just have to slow down to get the water to re-attach to the foils!. The transition onto the plane is just like a Tempest- moderate and smooth. Many modern sports boats "jump" onto the plane, but the thing that I have noticed when sailing against them is that I will be planing well before they get onto the plane. The real difference is that the Highlander's terminal velocity (at about 25 knots) is way quicker than the Tempest's.

Highlanders are thriving cult boats. They are much sought after, lovingly restored, and raced hard and always successfully. Highlanders feature a removeable sugar scoop on the transom to extend the boat by 18". These just clamp on to the transom outboard well, and have an effect like a supercharger to windward, although they detract from downwind performance a bit by delaying planing marginally. They are great in non planing conditions, really smoothing out the lines. The Highlander is unique as the only boat in the world with an optional clamp-on hull extension to suit the conditions. If you want to use the outboard, just unclamp the hull extension and clamp on the outboard.

Where they are raced, they will invariably be the scratch boat in the fleet. Not surprisingly, some Highlander owners are also Tempest enthusiasts, and really with those two boats in your fleet, there is nowhere to go to improve. When I bought my first Highlander, **Rough Red** in 1988, the broker told me "This boat will ruin you for other boats. After you've sailed it, nothing else will ever be as good again". Well, that's right, but he obviously had never sailed a Tempest. I could not even consider existence without both, as they are totally complementary.

Rigs on Highlanders are not one design. So long as your max working sail area is no more than 320 sq feet, it doesn't matter how it is deployed. I favour the Soling mast, a fully battened 160 sq ft loose foot main and a 160sq ft genoa, with the ability to change down to smaller headsails as the wind increases. In reality in a blow, I just sail on the genoa and let the main backwind when going to windward, and then use the lot reaching and running (but then, I'm greedy.)

Others go for an Etchells mast and main, a smaller genoa and they use the Etchells blade in anything over 15 knots. That works extremely well, and is probably the fastest way to

go. I stick with the Soling rig because I always have and still do love and sail Solings, but that may be prejudice speaking rather than reason.

As you can see from the recent photo of Skye out of the water (the deck has been repainted a different colour – it is now beige rather than grey) the underwater is pure Tempest, as is the hull profile. The trunk cabin gives good sitting headroom for four adults- but you would want to be on pretty friendly terms if you all planned to sleep in it for any more than a week-end! The standard modern layout is two 7 foot quarter-berths, two 6'6 saloon berths and a big 8' vee berth area up forward . The bunks are all 3/16" ply glassed in as structural wing girders and box section members, which give the hull tremendous rigidity and strength for little added weight. The arrangement of berths shown in the photos in the accompanying boat test it now superseded by the "wing girder" set-up. No-one has the galley, table or sink any more.



Skye out of the water in 1999 showing strong influence of Tempest's lines

The keel has an aerodynamic shape (not restricted in profile) which actually gives lift to windward (if only the Tempest had an aerodynamic keel!) and like Tempest, it planes happily to windward when properly sorted. Incidentally, the enclosed boat test of Skye from 1969 showed the boat before it had any real development work done on it. It had a flat steel plate keel which was fat and stubby. Skye got faster and faster throughout the 1969 and 1970 seasons. The steel keel plate was replaced with a narrower, deeper Nasa 6% turbulent flow section timber keel and the weight of the bulb was pared down . Existing Highlanders have a draft of 4'6" and a keel weight of 800 lb, with a total weight of about 1800 lbs. The dimensions quoted in the article were of the prototype version.

Unlike the Tempest, the keel was fixed in the Highlander. One on Lake Macquarie, "Madge", has been converted to a lifting keel, to allow the owner to get the boat up on his waterfront ramp. He has modified it with an 8' deep telescopic stainless steel centerboard with only 400lbs of lead in the bulb. As he is nearly 80 years of age, and he sails with his wife and a friend (all about the same age), they do not use trapezes or any hiking devices. Instead, he has installed an 18 foot skiff mast (4' round section) which is very controllable and gives immediate gust response. The rig is virtually "automatically" self de-powering, and he is very fast in all conditions, including over 25 knots. They have an asymmetrical spinnaker of about 350 sq ft, which is very easy to handle.

After reading all this, if anybody wants a Highlander - just give me a call. I've just found the moulds, after 15 years of searching...

Now, if I can just find those lost Tempest moulds.....!!!!

Keith Manion
Australian International Tempest Association

PS The Highlander is resuming production next year with a modern foam-sandwich hull and deck and a modern cockpit and cabin arrangement for 2006. The boat will be much lighter and stiffer. Any Tempest sailors who visit Sydney are welcome to try out a Highlander on historic Botany Bay. Just contact me via the Australian Tempest Association at [Tempest.Oz @ gmail.com.au](mailto:Tempest.Oz@gmail.com)