FARR ONE TONNER

Described by Bruce Farr

One Ton racing saw *Mean Machine*, *Sagacious*, *Jameralia* and *Fram X* set the pace in 1987.

The Farr design office decided to enter all dimensions of Design 185 into their computer, generate the lines and see if the design could be tweeked, refaired, and – based on sailing experience of a tough season – generally clean up. That design is called 185/1.

A careful analysis of the design followed and the project that started as a slight modification ended as a new design that continues Bruce Farr and Russell Bowler's philosophy of designing a good all-round boat, balance upwind and down.

Wind, course and sea condition, compared with actual performance, were analysed in relation to our computer velocity prediction programs. We found that changes in mid-depth displacement resulting in decreased rating allowed us to tailor the boat for better performance in light to moderate conditions. In Europe that means more sail area; in the southern hemisphere we got a slight sail area increase and more bow up trim.

We undertook an extensive tank testing programme in 1987 and the result is a new generation of keel and rudders that yield significant downhill speed gains. Both foils are smaller in area for less drag, but their shapes have maintained Farr's trademark high upwind efficiency.

Steadfast, a second generation 185, showed how well these new shapes perform as she went head to head with Farr 185s *Rush (Jameralla)* and *Saucy* at the Key West race week. Through events like these, the Farr design office is in a unique position to use on-the-water experience to assess changes accurately and verify the accuracy of computer data and predictions.

In 1987, Russell Bowler implemented a thorough construction analysis program, resulting in changes from top to bottom. Material testing resulted in modified laminating schedules and new materials. Again the result is a strong, light boat.

The top end of the spar was reshaped for reduced windage and weight and to decrease sheeting angles through reduced twist at the jumpers and cap shrouds. A new deck layout combined with the other changes reduces weight in the ends for top speed to weather.

Watch for Design 1851 as on the race course in time for the One Ton Worlds this summer. Four were under construction in early March with four more on order and others in the negotiating stages. Contact Geoff Stagg, Farr International, 326 First Street, Suite 24, Annapolis, Maryland 21403. Call 301-268-1001.

