

Fresh look **Mirror**



The Mirror dinghy has gone through many changes over time, but the new MK3 is the most radical yet.

Simon Collyer reveals the new advanced composite version.

Above The 2007 nationals at Brightlingsea saw a fleet representing various stages of Mirror design, including GRP hulls, the recent Bermudan rig, and new MK3 version.

Right Famous designer Jack Holt created the class back in 1962.

Designed back in 1962 by the legendary Jack Holt, the Mirror has well over 70,000 boats sailing worldwide and the class has introduced literally hundreds of thousands of people into the sport of sailing. So any changes were always going to be a significant event.

The latest challenge to the class was to adapt the boat for the introduction of advanced GRP composite construction, updating the boat's look and feel to attract a new generation of Mirror sailors, without rendering existing boats obsolete overnight, or alienating existing class members.

Design stages

The Mirror was originally designed to be built in plywood. Jack Holt's design partner was the

charismatic Barry Bucknell. Bucknell is accredited as the inventor of the stitch and glue building method, and his DIY television programme was undoubtedly the forerunner of today's lifestyle shows featuring celebrity chefs and gardeners. Bucknell's programme *Bucknell Do-it-Yourself* played to an aspirational viewing audience of some seven million at its peak. Inspired by the show, fathers and sons – and the occasional daughter – scout groups and youth clubs around the country started building Mirror dinghies.

Plywood is no longer the cheap material it once was – its quality has declined as a production material, while in contrast GRP composite technology has advanced enormously. Inevitably, Mirror dinghies began being constructed from GRP instead, but were restricted to using a design template intended for home-build wooden boats.

As class secretary Simon Lovesey explains, 'It had become clear



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Featured in
FIRST FOR DINGHY AND KEEPCOAT SAILING
YACHTS & YACHTING
 Nov 30th 2007

quick boats. He worked closely with Winder Boats and helped ensure that other Mirror licensed builders can also make use of the new layout.

Winder Boats was started by Guy Winder – a man considered something of a genius when it comes to building racing dinghies – in 1976 after Guy, a De Havilland aircraft-trained production engineer, built a very successful Merlin Rocket in his garage. Soon fellow sailors wanted their own boat, and so Guy packed up the proverbial day job, eventually taking premises in Shipley, having out-grown the garage.

The company really started moving when they began production of wooden Fireballs in 1983-84, attracting customers like world champion Ian Pinnell. In 1989 they firmly stamped their mark on the class, with the first epoxy/composite boat in 1989. The next major development was the all-epoxy foam sandwich glass Fireball in 1995, followed in 1996-97 by a National 12 and an all-glass Merlin in 1998. In more recent years production of a glass Solo started in 2000.

The company's head man is now Guy's son David Winder, who has inherited his father's attention to detail. Winder Boats were granted a Mirror building licence in 2004-05 but it was two and a half years before the first customers, former 470 and Fireball sailor David Pannell and his daughter Helen (12), received their shiny new boat after a lengthy development process.

Making the change

The move to a MK3 boat gave the scope for many changes: it was felt the boat floated too high after capsizing and the design team briefly looked at the idea of making the boat self-draining. A lot of radical ideas were considered, but in the end the need to get the boat approved by the class committee reined in some of the more radical or exotic suggestions.

The foredeck was dished and a scooped transom was added. The cockpit sides were bevelled, which creates more room in the boat and makes it more comfortable. The skeg was filled in and, more radical yet, that safe home for the Thermos flask and sandwiches while fishing, the Mirror's twin lockers were dispensed with.

The new one-piece mast now stands proudly on its own tabernacle. Gone is lots of clutter, the trademark transom handles (Jack Holt put carrying handles on most of his boats), places for rowlocks and so on. The boat's new deck layout is simple and unthreatening to beginners, clean, fresh and unfussy, but decidedly racy.

The centreplate is not the maximum thickness, which surprised some people. But, as Dave points out, as it is not an aerofoil shape so by using modern materials you can make a thin board stiff enough. More thickness just adds drag.

Winder has flattened the rocker for maximum waterline length and made the boat narrow at the waterline for least resistance. Only at the bow is there more volume at the waterline, as lack of buoyancy here can cause the bow transom to dig upwind. Fewer tolerances at the front of the boat allow a lot of scope for development.

The hull is built of epoxy foam sandwich and E-glass, and Winder's have increased the hull bottom thickness to a whopping 10mm, from 8mm. Aside from creating a very stiff boat, the hulls have been¹⁰

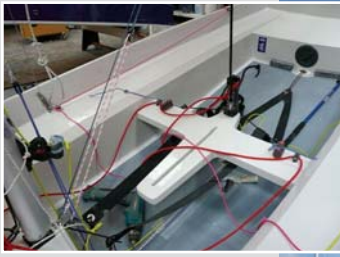
that the existing rules were making the construction of the GRP boat very complicated; basically the GRP Mirror was a replica of the wooden boat, with lots of fiddly components. The GRP Mirrors had proved competitive, winning the Europeans and second at the 2007 worlds, but needed to be more durable and cheaper to build.'

In the meantime the Mirror has also made some changes to overcome its common perception as an old fashioned boat with its gaff rig. The class introduced the Bermudan rig, and an optional centre mainsheet. Finally the MK3 production Mirror was brought in after international consultation.

Build and design team

Development of the MK3 Mirror involved a number of key members of the UK class association, including chairman Jeremy Pudney, of International 14 fame, technical secretary Martin Egan, and secretary Simon Lovesey.

Top dinghy designer Phil Morrison also played a key role helping the class realise its objectives. A champion sailor in his own right and arguably the UK's third most successful dinghy designer after Jack Holt and Ian Procter, Morrison has a great eye for aesthetic appeal beyond simply designing



PHOTOS: TIM BEES/FOTOBOAT

Above and right The new MK3 with angled sidetanks for more comfortable hiking, new dished foredeck design with raised maststep and integral chute, plus the new Bermudan rig incorporating center mainsheet and Gnav system giving the crew more space.

“ **That safe home for the Thermos flask and sandwiches, the Mirror’s twin lockers were dispensed with** ”

made strong enough to survive sailing school use, yet the hulls are very light and durable.

As Dave Winder explains, when you build one boat that becomes a plug you can afford to spend a lot of time making it very fair and accurate. Wooden Mirrors can also now be upgraded to look like the MK3 version. Winder shells can be purchased by other builders and decked professionally or at home. Winder have, however, so far resisted requests to make moulds for other builders in the Southern Hemisphere, as requested by ISAF, until they have repaid the large investment they have put into the MK3s development.

Below Class secretary **Simon Lovesey on the pace in one of the new Winder MK3 Mirrors (70500) at this year’s nationals.**

The verdict

The only major criticism of the new boat has been the price: around £4,800 for a full race spec boat and not under the £4K mark, as a few class members hoped. Winder Boats’ argument – which has worked in the Fireball class – is that well-built boats hold their second-hand value, and the boat can be used for top level racing longer before being replaced, thus lessening the overall cost.

Three new boats hit the water at the national championships in Brightlingsea this August, where they certainly created a great deal of admiration. Class secretary Simon Lovesey says, ‘Everyone has been very impressed by the build quality of the Winder Mirror and detailing that Phil Morrison has designed. Those of us who managed to sail the boat were taken with how it accelerated with ease but feeling immensely strong at the same time.

‘The MK3 and the other parts of the modernisation process will help to keep the Mirror at the forefront of entry-level sailing, there is still a massive following and affection for Mirrors, these changes simply make the class as relevant as ever. The class is also committed to making wooden boats easier and cheaper to build. There have been over 70,000 Mirrors built making it the world’s most popular doublehanded boat, in over 40 years many have tried but no one has come up with a better small boat that is light, roomy and a joy to sail.’

It seems it may be a while yet before we see those red sails heading for the sunset. n

