

MIRROR



PHOTO: JEREMY EVANS

The MK3 Mirror has a Bermudan rig in place of traditional gaff, new deck layout designed by Phil Morrison, and epoxy foam sandwich construction for the best possible mix of longevity and stiffness in the hull. **Jeremy Evans** assesses a totally modern Mirror which has made a complete transition from 'stitch-and-glue'...

Y&Y TEST

Jack Holt is a legend. His great designs – including the Cadet in 1947, GP14 in 1949, Enterprise in 1955 and Solo in 1956 – were created to make dinghy sailing accessible for the maximum number of people, during the austere decade which followed the Second World War. The formula was straightforward: hulls and decks were shaped from big sheets of marine grade plywood, making home boatbuilding as easy and economic as possible. In those days most folk didn't buy a boat – they built one!

The Mirror followed a few years later, along with mini skirts, flower power and The Beatles. Post-war austerity was a fading memory and do-it-yourself home improvements were all the rage. Barry

Bucknell, who was the BBC's guru of DIY, came up with an idea for a new family dinghy for sailors of all ages. He also adapted 'stitch-and-glue' construction for building the hull. Plywood panels were loosely 'stitched' with copper ties, then 'glued' together with fibreglass ribbon and resin.

The Daily Mirror's publicity department decided to champion this new family dinghy and Jack Holt was called in to refine the concept. He produced a totally new design to the same criteria – *The Daily Mirror* wanted it to be 100 per cent foolproof for their readers – using the innovative stitch-and-glue construction method. The final touch was Viking red sails to match the *Mirror's* red logo.

The Mirror was launched at the 1963 London

Boat Show. Later that year, the first Mirror national championship at Burnham-on-Crouch attracted 28 entries. A frenzy of home building, backed by Mirror kits and complete boats produced by Bell Woodworking, ensured that red sails became a common sight on the water.

Forty-five years since the Mirror first appeared, there are still plenty of red sails to be seen, but some things have changed. Having been the must-have dinghy for a generation, the popularity of the Mirror took a dive. The idea of building your own boat didn't seem so attractive, when money was more plentiful and supposedly 'maintenance-free' glassfibre was all the rage. So the Mirror reinvented itself as a racing class for junior sailors. It was a curious change for a multi-purpose family dinghy that had been enthusiastically raced by adult helms – often with a child as crew – and could be rowed or even pushed along by a small outboard motor. But the Mirror has found a new life as an RYA Junior Pathway Class, helping to provide young sailors up to the age of 16 with a year-round mixture of top-level training and regatta sailing.

21st Century updates

The latest tweaks to Mirror history are a new rig and deck layout. It must have been very difficult for the class to say 'yes' to a Bermudan rig. Surely, the gaff holding that red mainsail was what Mirror sailing was all about? But the wooden gaff looked a bit weird paired with the aluminium mast which had become standard issue for all junior racers. In addition, the wood to make the gaff had become way more expensive than aluminium, was heavy to drop (normally by mistake) on a crew's head, needed regular varnishing and was prone to break when tuned with high loads for racing. What's more, the mainsail is tricky to tune with a gaff and lacing the sail to the mast seems a bit old school – as well as being impossible if you're too short. So along came the Bermudan rig, with a choice of one or two-part aluminium mast, which ISAF approved for international adoption in 2006, followed a year later by approval for the new fangled centre mainsheet.

To bring the Mirror totally up to date, Phil Morrison was asked to design a Mk3 deck layout suitable for epoxy foam sandwich construction. Various Mirrors had been built in fibreglass for three decades, but never in oven-baked, vacuum-bagged epoxy sandwich which is widely considered to be the number one system for super-light, super-stiff, long-lasting dinghy hulls, which, unlike their owners, should not put on weight. The team at Winder Boats started building the Mk3 in August 2007, using the same materials and techniques as his '07 world championship-winning Fireball and '07 national championship-winning Merlin Rocket and Solo. Combined with the design tickling skills of Phil Morrison, the provenance of the Mirror Mk3 is just great.

On test

Our Mk3 test boat was 'Wind Whisper', the latest of an illustrious line owned by Jeremy Pudney. In times gone by, Jeremy rescued and revitalised the International 14 class with a 'no holds barred' update including unlimited spinnaker area. The Mirror update is not quite so extreme, but is



intended to provide junior racers – including Jeremy's second round of children – with a truly modern sailing experience in a classic class. We sailed the new boat at Itchenor SC, which boasts a strong Mirror fleet in Chichester Harbour, plus an older boat with the gaff rig for comparison and two teams of junior sailors. Tara Bottomley, Charlotte Fitzgerald and Hugo Sloper are all from the RYA National Squad with many years experience of Mirror racing, alongside Felix Irwin-Brown who was more accustomed to old wooden Mirrors with a gaff – like so many sailors of all ages. Simon Lovesey, who has taught two sons to sail in a Mirror, provided a dad's perspective on fitting into an 11ft long boat.

The Winder Boats Mk3 (blue boat) looks beautifully finished with a cockpit that is open, comfortable and designed to make things as easy as possible for the crew to sail it fast. It's not a major change from the previous deck layout, but has clearly been tweaked. The gunwales have lost their lips and the decks have been gently dished, instead of the 'flat as a plywood plank' appearance of the older decks. However, not everything is perfect. Charlotte pointed out that unlike older Mirrors, the Mk3 has no cubby holes to stow drinks, sponges, bailers or even sandwiches, which seem likely to get lost in a capsized. ▶

Above and below The new Bermudan rig (above) is far easier to rig, tune and maintain compared to the traditional Mirror rig with its heavy wooden gaff.





Above and left The cockpit of the new Mk3 Mirror (above) – compared to the earlier model (left) – incorporating a curved foredeck and raised mast foot on the Mk3, plus calf-friendly angled sidetank edges.



Rigging the two boats was rather as expected – the Bermudan rig was quick and easy, while the gaff rig was more of a hassle. That wooden gaff looks nice, but it sure is clumsy to attach and pull up the mast! Out on the water there was no chance of the Mk3 shooting ahead. The Mirror class has taken care not to commit mass suicide by allowing the Mk3 to be a lighter or quicker boat. Tara and Charlotte were markedly quicker than the boys when they sailed their own gaff rigged boat but maintained a similar advantage when they swapped to the new Mk3. You might not expect a boat with a new deck layout to be quicker – although small improvements to boat handling can make a difference round the course – but it was surprising to find no obvious performance advantage between the gaff and Bermudan rigs. In theory, the gaff should suffer from more windage and weight at the top, but it doesn't appear to matter much at all.

With the kite up, you can see that a totally modern Mirror is nicely powered up for two teenagers in a Force 3-4. But what's it like to sail and who is it really for? Just like a 1960s Mirror, there is plenty of room for an adult to sail singlehanded (it also sails nicely without the jib) or with a child. Having the optional gnaw fitted to 'Wind Whisper' looked like a definite bonus for a dad playing crew – while teaching son/daughter how to helm – but was also a big hit with the girls who reckoned it freed up the cockpit for better racing performance.

There is no doubt that a lot of things have changed. My old Mirror – bought and sold for £250 – was beautifully built for the 1970 London Boat Show and had original everything. It was cheap to own and lots of fun for mucking about on the water, but felt floppy rather than formidable to sail. The first big difference with the Mk3 is no rowlocks – unlike the classic Mirror, there's no room for oars to clog up the cockpit! That's of no interest to junior racers. What is of interest is overall stiffness and rig tension. Step into the cockpit, and at first glance the Mk3 seems similar to the original boat. But sheet in the centre mainsheet and everything

changes. The boat is powered up and taut. It feels extremely precise with sail, rudder and crew trim dictating what will happen next. Even my old Mirror was quite sprightly in a breeze, but wouldn't hold a candle to the acceleration and response of the youngest generation. But at the same time, the Mk3 retains the Mirror's extraordinary stability. Unless conditions are really difficult with wind and waves, the Mirror is not an easy boat to capsize. A bit like Mr Blobby, it goes over so far and then rolls back upright. The girls did capsize, but only under duress. In doing so, they demonstrated that the new cockpit layout and revised buoyancy distribution make the boat much less inclined to turn turtle, and therefore a lot quicker (and safer) to pull back up from a capsize.

The verdict

We still love the Mirror; it ranks with Jack Holt's great designs and those red sails are still a cheerful sight at any sailing venue. The new Mk3 takes a step forward. It looks good, appears beautifully built and is rewarding to sail. This boat is primarily or even exclusively targeted at crews and helms in the RYA Junior Racing Scheme where it appears to go head-to-head with the Cadet. Which class the sailors (or their parents) go for tends to come down to where they sail. Both boats have a symmetrical spinnaker. This is perceived as being monumentally old fashioned compared to a stylish, funky asymmetric kite, but has two big plus points in its favour. First, a symmetrical spinnaker is tricky to master, keeping the crew busy and giving him/her lots to learn. Second, it provides a direct pathway to classic 420/470 progression. Both boats encourage a tweakable and technical style of sailing through experimenting with rig and sail settings, distancing them from the Feva which offers a complete one-design solution aimed at windward-leeward (gybing downwind) racing.

And of course the Mirror is a very popular boat. Sail numbers are closing on 71,000 and although growth is nothing like the early days, 50 new



boats were sold in the UK last year. The second-hand market for competitive racing boats is strong, thanks to the Mirror's role as an RYA junior class, and there is a vibrant UK competition circuit at all levels – including adults who are still allowed to compete! Last year's week-long national championship at Brightlingsea attracted 72 Mirrors, but the big news came from the world championship in South Africa at the start of the year. Anna Mackenzie and Holly Scott from Windermere beat 79 teams, including Australian, South African, Irish and other British in the top 10. It was not only the first time a British boat had won the worlds for a decade, but also the first win by an all-girl team. ■

Above Still room for an adult – plus the symmetric spinnaker teaches newcomers there's more to dinghy sailing that just zig-zagging downwind with an asymmetric kite.

ANSWER BACK

from David Winder at Winder Boats



The Mirror class has been steadily updating the boat over the last two to three years, with a new one-piece alloy mast and boom, centre main and improved kicker system or a gnaw.

The Mirror has become a technical boat to sail and a rig that creates new challenges to get the best out of. This is proving to be a good all-round training boat for our future Olympic representatives. The Mirror also has a thriving older generation that sail the boat singlehanded to good effect, or sail with their children bringing them into our sport at a top level – for example, the current Mirror national champion.

The design and layout of the Mk3 Mirror has taken 18 months with input from key Mirror sailors, Winder Boats and the main re-design of the deck by Phil Morrison.

There has been structural improvements too, epoxy construction, thicker foam in the bottom panel and stiffer side decks. Using the same building techniques that we use for our world champion Fireball and national championship-winning Merlin Rocket and Solo, the new Winder Mirror should have a long and successful competitive life with no corners cut as far as performance.

A more basic version of our Mirror is available and provision for rowlocks, outboard engines' and storage cuddies will all be available.

Hopefully the MK3 Mirror and all the improvements that have been made will increase and strengthen what is already a top class, fun, all-round dinghy.

Mirror Mk3 specifications

DESIGN: Jack Holt 1963/
New Deck Phil Morrison 2007
LENGTH: 3.3m
BEAM: 1.39m
HULL WEIGHT: 45.5kg
IDEAL CREW WEIGHT: 80-120kg
SAIL AREA: Mainsail 4.6sq m
Jib 1.9sq m
Spinnaker 4.4sq m
LATEST PN: 1386
PRICE: Bare hull **£2,650**
Club spec including sails **£3,997**
Championship spec including sails **£4,800**

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COMPARISONS... Where does the Mirror fit in? Here are some alternatives...



■ **Cadet**
Jack Holt's classic junior racing class was designed in 1947. The Cadet is strongly established as an RYA Junior Pathway Class, with older wooden boats as popular as GRP and a strong second-hand market.

LOA: 3.22m
BEAM: 1.27m
HULL WEIGHT: 54kg
IDEAL CREW WEIGHT: 85-105kg
SAIL AREA: Upwind 5.16sq m
Symmetric spinnaker 4.25sq m
LATEST PN: 1432
GUIDE PRICE: **£5,000***



■ **RS Feva**
Rotomoulded construction maximises durability and low cost, with an asymmetric kite provides an introduction to skiff-style racing. The Feva has enjoyed rapid growth as a junior racing class.

LOA: 3.64m
BEAM: 1.42m
HULL WEIGHT: 63kg
CREW WEIGHT: 80-115kg
SAIL AREA: Upwind 8.6sq m
Asymmetric spinnaker 7sq m
LATEST PN: 1189
GUIDE PRICE: **£3,295***

*Guide prices are approximate