

THUNDER TIGER

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NAULANTIA

CHRIS JACKSON CHECKS OUT THE LATEST R/C SAILBOAT OFFERING FROM CHINA

It is always a pleasure to open the kit box for a Thunder Tiger product because the first item you come across is the excellent instruction manual. During my time as Editor of MMI I was able to see a number of these booklets and they were universally well laid out and clearly designed to suit all levels of experience. The same is true for their latest sailboat and this is very useful as this one metre long sailboat will require a fair amount of careful assembly with quite a few parts to place, glue and screw into their correct locations before you go sailing.



ABOVE: This photo shows just how many parts are included in this very comprehensive kit package



The boat comes without radio Tx/Rx, specified new Thunder Tiger sail winch servo, for which the boat has been designed, and will also need a 4.8 V battery pack of anything up to 3600 mAh capacity to give a long sailing time without a recharge. I took some time to carefully read the instructions before attempting to start work. The second page of the booklet identifies the tools you will require and the next two detail all the different parts with their identification numbers, a very useful reference as you proceed!

The kit box design is excellent with internal cardboard boxes holding different items such as sails, plastic parts and screws in separate plastic bags, the stand and of course the ballast keel. The design and styling of the boat is based on the last class of monohull America's Cup boats, with a clipper bow and long aft overhang to the hull lines, and plenty of scale style fittings to decorate the model. The sail decoration is very strong, which may not be to the taste of older modellers but will without doubt make it much more attractive to younger customers in shops.

LEFT: The Thunder Tiger Naulantia sailing in a moderate breeze

The hull has very attractive lines and comes with full décor applied



START WITH THE STAND!

As is now normal practice, the kit includes a good quality working boat stand and this is the obvious place to start. Not only does it provide a good base on which to place the hull whilst working on it, but it also introduces the builder to all aspects of the Thunder Tiger brand of assembly. This includes a mixture of timber and plastic parts, epoxy resin adhesives and screws which tap into predrilled holes. The general instructions mention both sandpaper to rough up the surface of the plastic before using the epoxy glue supplied in the kit and also rubbing alcohol as a cleaner for any overflows. As you will need some of the woodscrews for the stand this will be a good time to find a small plastic box, of the type sold for craft use, with different compartments into which to decant all the contents of any plastic bag you open. The manufacturers can be relied upon to include the right number of items but if you drop some and lose them sourcing identical items could be a problem.

KEEL AND BALLAST ASSEMBLY

Keeping to the order laid out in the instruction booklet this is the next item to assemble. There are relatively few parts and the key joint is on the bottom of the keel and the steel ballast bulb. The manufacturers recommend using some epoxy glue to add strength to the joint, but it is possible to locate the bulb using only the M4 locknut provided. There is a further option of either a blanking plate on the bottom of the bulb or an aileron style stabiliser, which is a model of one of the ideas used on actual AC Cup boats.

By the way, steel is used for the ballast in preference to lead to comply with international regulations on the sale of toys and models. It makes the ballast a tad bigger in volume than the equivalent in lead but the effect is the same.

If this is your first model build then I would leave the epoxy bond until you have used this on the internal structure in the hull as you have to be careful to wipe off an excess before it sets, and you do not want to spoil the superb finish of the bulb or keel blade which are crucial to sailing performance.

KEEL AND RUDDER TUBES AND BULKHEAD

The keel blade is located in a moulded slot in the bottom of the hull in the middle of which you need to fix a tube to take the steel

rod in the keel blade. The rudder also requires a tube so the shaft can transit the hull without leaking water. These are provided as plain tubes with end caps and have to be carefully installed using moderate amounts of epoxy glue to make the bond firm and watertight. Note that it is a good idea to fit the forward sheetline outlet BEFORE the mast tube so you easily access under the forward deck to fix it properly. This is mentioned in the instructions at this point. Once again the diagrams in the booklet will help you understand this requirement. In addition there is a timber bulkhead, which has to be fitted just behind the mast rod tube to add torsional strength to the hull and extra support to the mast heel when it is in place with the tension of the rig and sails bearing down on it. I would be tempted to apply a light coat of sanding sealer to this before fitting, rubbing it down with fine sandpaper to give a smooth and damp resistant surface. The instructions suggest standing the hull on its nose and flowing epoxy round the former/hull surface joint adjacent to the mast mount wall to ensure it is well supported. Once all these items have set it is possible to fix the keel and rudder in place. This will add a bit of weight to the boat and you may prefer to remove both fin keel and rudder whilst continuing the further work on the hull.

HATCH COVER

This item has a number of cosmetic features such as steering wheels, winches and grinders, all of which can be fitted into their indicated positions. However, most importantly, this is where you fix the long silicone tube, which you found in the bag with the instruction booklet and wondered why it was there! This will provide a seal when it is finally fixed just before you go sailing!

HULL FITTING OUT

The exact order of fitting out a model sailboat hull is never an exact science and will depend on the wishes of the builder where they have the required experience. In this case the fitting of both foresail and mainsail sheetline control line outlet tubes is critical to performance and needs to be done whilst you can get a hand under the deck easily. This is, I am sure, why the TT instructions suggest fitting the radio and servo tray AFTER you have fixed in place the vast majority of cosmetic hull fittings and the hatch cover mount.



The keel blade with rod for hull attachment, threaded rod for ballast bulb, and both alternative keel accessories, plain and the wing aileron

The position of the servo tray assembly is shown as central to the hatch opening at only 2 mm aft of the front edge, so clearly it is best to fit the hatch cover mount in place first. Now if you are like me and tend to get epoxy glue traces everywhere, you might prefer to mask off the flat deck in that area whilst inserting the made up servo tray on to a bed of epoxy glue inside the hatch area as directed by the kit instructions. Either way you then have to drill out a number of pre-identified holes to insert the tack plate, foredeck rails, chainplates, dummy winches and camera and aerial frame. I would strongly suggest keeping this last item in a safe place until you have set up the rig and trial sailed the boat.

MAINMAST AND BOOMS

Modern kits have advanced so far over earlier commercial products that even specialised builders of racing model sailboats covet some of the fixtures and fittings produced for even moderately priced kit boats.



The many screws and locknuts, and the two-part epoxy glue supplied in the kit



The deck has a well-moulded central access, which allows the builder to get to some of the fittings as they are secured before inserting the radio tray assembly

The Naulantia has excellent mast section and a proper fully adjustable gooseneck and kicker. The mast is supplied in two parts with a moulded joiner, which also acts as the foresail line attachment point and has a number of spreaders, which are linked by cord after fixing in place. These replicate the full size AC Cup boats which had similarly complex rigging to take the huge loads placed on the rig by the large sail area and pressure.

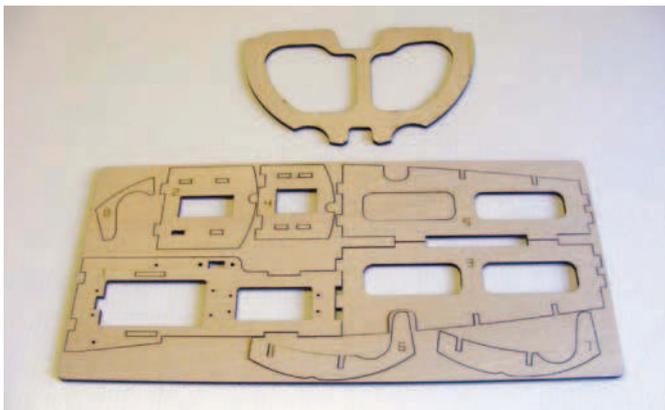
The foresail boom is much simpler to put together and has nicely adjustable moulded fittings including a jib tack locator placed about 15% back from the sail attachment point so it provides tension and help this sail set well when everything is in place.

SAIL PREPARATION

Both foresail and mainsail have been well produced in good material and the builder is invited to add light sail battens in the places indicated before attaching them to their places. The mast extrusion is of aerofoil section and has a built-in groove all



The main plastic parts are moulded on sprues much like a giant plastic kit

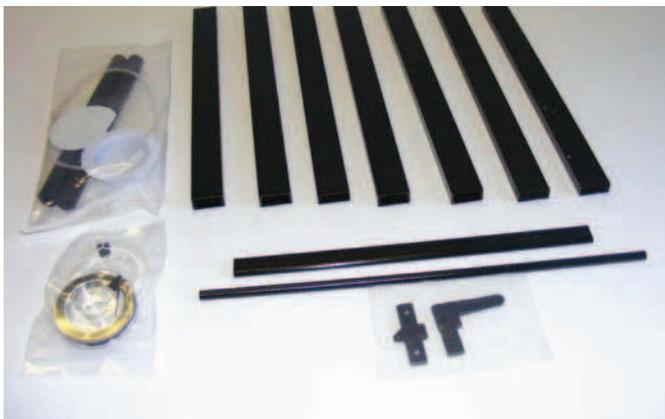


The timber hull former and radio tray parts are accurately CNC cut

down the aft part to accept the mainsail luff, which in turn has a cord run down inside the reinforcement to make sure it stays in place. Standard practice for many top racing radio sailboats and now available on a production kit, there is progress for you. The instructions are explicit and even detail the lengths of each line required and offer very well drawn diagrams of linkages, swivels, bowsies, knots and so on which should make it almost foolproof.

RADIO INSTALLATION

The placement of rudder servo and sail winch is dictated by the cut-out position in the timber servo tray plate and any modern 2.4 GHz receiver can be fitted conveniently by the use of Velcro tape. There is a position for a switch, which will not need to be waterproof and also a single high capacity 4.8 volt NiMH battery pack. This should allow ample sailing time without the need for lakeside recharging.



The stand legs and booms and cord for rigging

SETTING UP THE BOAT

With the keel in position the hull will sit more or less upright on the stand where it is then easy to place the mast and clip in the shrouds and backstay on to the chainplates, after which the foresail boom can be linked to the deck mounted chainplate. At this point the rig will stand up but needs tuning and once again this is well covered in the final pages of the instruction booklet. The controls will need adjusting so that the travel of the rudder is about 30 deg either side of central and the sails can pay out from almost on the centre line to about 80% angle from this. Finally make sure that the left-hand lever on the transmitter operates the sail winch in a forward and backwards action and the right-hand one the rudder, working from side to side. The standard convention is to have the winch stick at full down with the sails tight inboard, so that by moving the stick forward you let the sails out, and this is easily arranged via a 'servo-reverse' switch common on most modern radio transmitters.

SAILING PERFORMANCE

The use of the words 'one metre' as part of the product description of this design will invite comparison with the well-established IOM class designs in many UK model sailing fleets. The hull is of shorter waterline length but has overhangs both fore and aft which add to the sailing speed when the boat is heeled. The entire boat is lighter than an IOM, at 3.5 kg as compared to 4.00 kg, and it also has a shorter keel and less ballast weight. The sail area is almost the same as the 'working rig' of the IOM class boat which is used in moderate winds and this nicely balances the sail power available across a range of wind speeds against the stability derived from the hull resistance coupled to the righting moment as the boat heels and the fin angle helps the bulb weight to produce this effort.

The initial potential market for the boat in the UK and worldwide will be lone modellers who want a practical fun boat but we can imagine that a number of existing general interest model boat clubs will take a close look at this package for use as a club 'one-design' project. The all-in retail price is exceptional and the three different highlight colour combinations offer variations whilst remaining 'one-design' in character. With the established reputation of the slightly smaller Thunder Tiger Victoria for both performance and structural integrity as a recommendation we see a bright future for this newcomer to the radio sailboat market. Next month we will continue this review with the radio and winch installation plus on the water trials. **MMI**

KITBOX DATA

**Thunder Tiger Naulantia
America's Cup Racing Yacht**
Length: 39" (993 mm)
Beam: 6.75" (172 mm)
Sail Area: 744sq in (48 dm sq)
Mast Height: 51.4" (1306 mm)
Overall Height: 67" (1700 mm)
Overall Weight: 7.7 lb (3.5 kg)



The sails carry this extensive decoration