Team Racing Firefly Specification V2.4 May 2017

Written by Arthur Henderson, based on the Oxford specification of 2012 and information from Bruce Hebbert, plus Cambridge experience. Much of this is Rondar standard, but some is not.

Boats are to be supplied with Hulls, Spars, all ropes and rigging, sails (main and jib), foils and trolleys. Covers and bow fenders are **not** to be supplied. Boats will be numbered 1 to 6, with colour scheme such that 1, 2, 3 are red and 4, 5, 6 are blue.

Hull

1. Hull and deck to be standard white.
2. Deck edge flange to be 35 mm deep (as close as possible).
3. Thwarts (both forward and mid-ships) to be reinforced.
4. Thwarts to be glued and bolted to tanks using 2 x 6 mm bolts on either side.
5. Two 6" hatches to be in the forward bulkhead for access to front tank.
6. Centreboard casing top and thwarts to be laminated to minimum of 4 mm thick with extra bonding to case at aft end of centreboard.
7. Bow numbers to be large and coloured red for three boats and blue for three boats. To be placed on the boats no closer than (300 mm) to the bow.
8. Red or blue stripe across transom, and a small (anything around 70-100 mm tall) red or blue boat number on port side of transom, above the stripe.
9. Wooden rubbing strakes to be fitted to gunwales, extending from the bow to the after edge of the stern. Strakes to be rounded off so as to not cut into sailor's thighs while hiking.

Fittings

1. Bow plate to be bolted to foredeck (NOT riveted).
2. Aluminium mast gate assembly to be BOLTED to the foredeck.
3. All fittings piercing the hull to be sealed (silicon/ sikaflex or equivalent), in particular buoyancy hatches, bow plate and mast gate.
4. Toe strap HA 'Bullseye' fairleads (with metal insert reinforcement) to be fixed to deck moulding with hexagonal head bolts, with locknuts outside- bolts to be bonded in hull to allow locknut removal if necessary. Reinforced 'Bullseyes' to be fitted to all 4 toe strap positions (2 forward, 2 aft). Any Bullseyes to be fitted to bulkheads (eg toe strap elastic fairlead on rear buoyancy tank) to be bolted and have metal or marine spec. plywood backing plates, in addition to washers).
5. Toe strap holes in thwart to be rounded/smoothed so as to minimize wear on toe-strap ropes.
6. All toe strap ropes to be Excel Racing Pro (or equivalent, NOT 8-plait), and these ropes to be a different colour to the kicker control rope.
7. Kicker cleats to be bolted with locknuts to the aft side of the thwart.
8. Mainsheet: Fit 57mm Harken ratchet block (not auto) with spring to hold block upright.
9. Attach mainsheet strops to transom bar either side of the tiller with deck eyes bolted (NOT riveted) to the transom bar.

Centreboard Fitting

1. Use original Firefly system where plate control cleats are fitted near the shrouds.
2. Fit 30 mm solid (not hollow) doorstops to plate, with stainless steel bolt and fit stainless steel plates to top of casing where the doorstops rest when plate is in down position, so casing is not damaged by plate stops.
3. Rubber protection at the forward end of the centreboard slot to protect the case when the board is up (i.e. prevent both trailing edge cracking the aft end of the slot and the top edge of the plate cracking the front end of the slot).
4. Centreboard bolt to be 8mm stainless steel threaded with lock nut and rubber grommets to prevent leaking.

Mast and Rigging

1. Main halyard to exit port side to a cleat, with 20 mm block riveted to mast by a deck clip above the cleat (as standard).
2. Jib halyard to exit on a sheave at base of mast and up to centreboard casing so rig tension can be adjusted on centreboard case capping just behind mainsheet block (as standard). Jib halyard turning block on centreboard casing to be fitted with stainless eye on topside, bolted through with a second deck eye underneath.
3. Closed Vernier shroud adjuster plates rather than open adjusters.
4. D-ring on front of mast above gooseneck to be smaller Selden Art. No. 534-524-01, not larger 534-523-01, which is designed for spinnaker poles.

Rudder and Tiller

1. Tiller extension universal joint to be **bolted** (with lock nuts) not screwed to tiller, within 2 cm of end of tiller.
2. “Drop down” rudder blades and tiller to be supplied, identical to MIT fireflies in USA, and Cambridge flight of 2013.
3. Extra packing tape to be supplied, to allow a snug fit for the rudder blade as packing tape wears.
4. Long “drop” pins that go through both top and bottom gudgeons. Drop pin to be stainless and straight (no hook on top, just a stop at one end and thread for a nut at the other).
5. Top rudder gudgeon to be **bolted** not riveted, to transom bar.
6. Plastic tiller end stops to be glued (small amount of superglue/equivalent is fine) in to the tiller.

Boom

1. Large captive shackle to be fitted to the outboard end of outhaul.
2. Kicker block on boom to be Holt or Harken high tension 25 mm diameter sheave with pin attached to boom with a forged shackle.
3. All other blocks in system to be ball bearing.
4. Boom end mainsheet block to be 38 mm diameter (NOT 28 mm).
5. Booms to be supplied with 200mm long aluminium plate on either side where the boom rubs against the shroud, to prevent damage to the boom. Rivets attaching plate to boom to be placed at ends of plate.

(Remember to fit your own boom end protectors: thick hosepipe, then slice down the middle and attach to the end of the boom with rivets, which should be placed on the top of the boom so as to not bear the brunt of a collision.)

Trolleys

1. Trolleys to be configured so that self-bailer is behind the cross bar.

Sails

2. Hyde team racing spec sails with Red/Blue stripes on both jibs and mains. Numbers 1,2,3 = red, 4,5,6 = blue.
3. Jibs and mains both to have windows. Window material to be tougher one of the two that Hyde supply (**not standard**), known as the 2B-WINDOW (240BHTP).
4. Discuss possibility of extra strong thread for the jibs – thread failure is most common here.