



# **Model Boat Association Dover**

## **Club 500 Construction & Racing Rules**

### **1. Objective**

- 1.1. To establish a low cost one class fun racing boat at club level.
- 1.2. To ensure that all boats comply with a standard specification, with the intention of ensuring close racing.

### **2. Construction Rules**

- 2.1. All standard kit parts must be used, except for the aerofoil and dummy motor, which are optional.
- 2.2. No modifications or additions to the outside of the hull are permitted.
- 2.3. The propeller tube bearings may only be replaced by the original replacement component available from the kit manufacturer. The bearings must not be altered in any way.
- 2.4. The propeller may only be replaced by the original 40mm M5 propeller, available from the kit manufacturer. The propeller may be cleaned up to remove any manufacturing rough edges. It must not be trimmed to make it a visibly smaller diameter. The use of any other size, such as the X40mm is strictly prohibited.
- 2.5. The battery box must be fitted in the position shown on the building instructions, either permanently or with Velcro tape. It is not permitted for the box to be lowered by cutting-down the plastic moulding. With the battery pack in place, the distance between the highest point of the battery pack and the top edge of the deck coming shall be a maximum of 50mm.
- 2.6. The motor may only be replaced with one of the identical specification available from the kit manufacturer. Motors are available of the same external appearance, but often have a different armature winding. These are not legal for Club 500 racing.
- 2.7. A 7.2 volt Sub C size Nicad or NiMH battery must be used. The battery pack may be constructed from single cells or purchased as a ready-made pack. The battery pack must be constructed in a straight line, either side by side or in two sticks of three cells placed together. Cells or packs that have been performance selected, designated as high voltage, matched, voltage/capacity enhanced in any way, are prohibited.



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- 2.8. A 'BEC' receiver may be powered from the main drive battery. Motor control can be either a servo/micro switch combination, or an electronic speed controller.
- 2.9. A self-adhesive foam rubber strip of at least 3mm thick must be attached to the bow of the boat.

### **3. Construction Recommendations – Optional allowed additions to construction rules**

- 3.1. It is strongly recommended that the access hatch in the deck moulding, is cut out in such a way that it is made as a removable cover, or a cover that can be taped down during a race to render the entire hull watertight. The water drain hole shown on the instructions is not required.
- 3.2. Internal reinforcement of the hull is recommended, particularly around the rudder tube and bow seams.
- 3.3. The addition of silicon and plain washers to the rudderpost will make the tube/post assembly watertight.
- 3.4. The addition of metal/PTFE thrust washers (or both) to the propeller shaft is permitted.
- 3.5. The propeller tube may have an oiling tube attached.
- 3.6. The motor/shaft coupling should have the brass components glued or pinned into the universal joint section.
- 3.7. The part of the motor mount in contact with the motor should be covered with strips of thin self-adhesive foam tape, such as wing seating tape used for model aircraft. This prevents motor slip.
- 3.8. Buoyancy should be added, i.e. airbags or foam.

### **4. Racing Rules**

- 4.1. Race duration shall be three minutes
- 4.2. The course shall be an 'M' shape, negotiated in an anti-clockwise direction
- 4.3. Minimum of three boats must cross the start line to constitute a "Race"



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- 4.4. A maximum of ten boats per heat is permitted
- 4.5. Each Event shall consist of six races (heats)
- 4.6. A boat shall only be run by more than one competitor if one is a Adult and the other a Junior member
- 4.7. Each boats skipper will keep a tally of laps completed and any penalty lap deductions (self-policing)
- 4.8. Starting procedure: Boats shall be placed in the starting gate. Drivers will be asked if they are ready. They will then be informed that the race will start within the next ten seconds. The race will start on the sound of a whistle/horn, or the word 'Go'. The first buoy to be negotiated is the centre of the 'M'. The race is over on the second blast of a whistle, or the words 'Race Over'.
- 4.9. Missed buoys will incur the following penalty. The first two offences, half lap deduction, for each offence. Following offences, full lap deduction for each offence. Re-rounding or circling of buoy's is banned to minimise damage to any of the boats and will lead to race disqualification
- 4.10. When the end of the race is signalled all boats must immediately stop. Final positions on different legs of the course will be established and added to each skipper's full lap count, in 0.2 increments for each leg of the course completed (see course diagram) to give the final race lap count.
- 4.11. Drivers of 'dead' boats must inform fellow competitors immediately of the position on the course where their boat has stopped, using the words 'Dead boat, top left' etc. Hitting a dead boat, once it has been called, also means immediate disqualification from that race.
- 4.12. "Dead" boats will be recovered once racing has finished.

## **5. Scoring**

- 5.1. Each boats lap count, from its best 5 races in the event, will be totalled to establish each event's final placings, in descending order of laps - highest lap count = 1<sup>st</sup> Place, second highest lap count = 2<sup>nd</sup> etc.
- 5.2. Event lap count ties will be broken in favour of the boat with the highest individual race lap count. If a tie remains then joint positions



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- will be given, skipping the following position(s) depending on the number of tied boats.
- 5.3. Series points will be awarded based on each competitor's final event position – 1<sup>st</sup> = 1 point, 2<sup>nd</sup> = 2 points, 3<sup>rd</sup> = 3 points etc.
  - 5.4. Boats retiring or not entered in an event will score one series point more than the last boat in the event.
  - 5.5. The overall winner of the Series will be the boat with the minimum total number of points after discarding their **worst** individual event score.
  - 5.6. If there is a tie for any series place (same number of points) it will be broken in favour of the boat with the most 1<sup>st</sup> places. If the tie remains subsequent descending, finishing places will be taken into account, until the tie is broken. If the series tie remains the result of the last event will be used.

## MBA Dover Club 500 Course

