

## **Section XII: Fast Electric (FE) Class**

Revised April 19, 2017

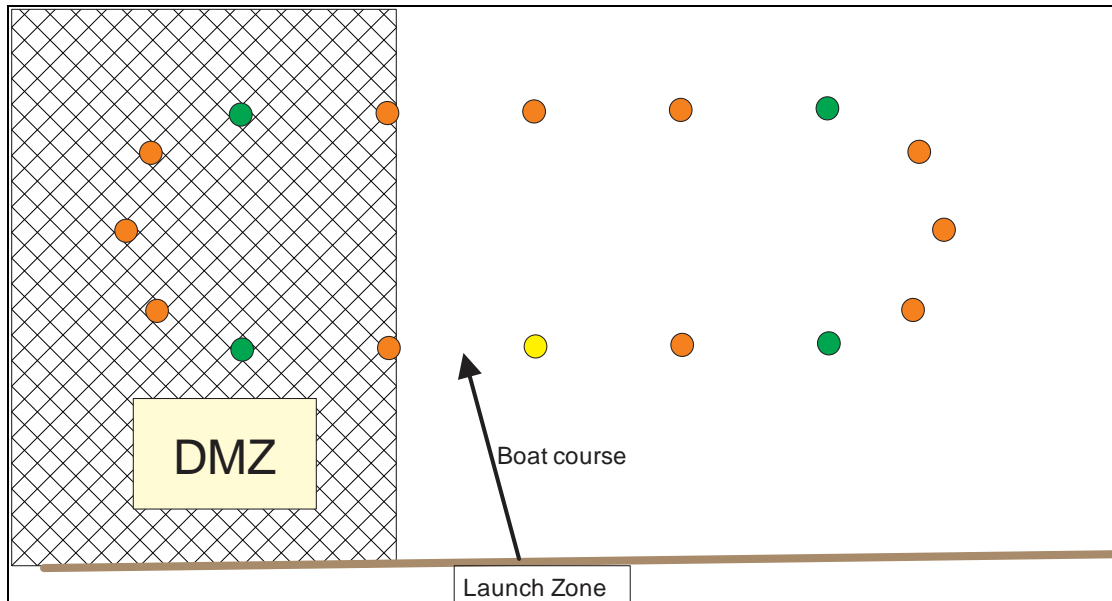


**Goal:** To establish a set of rules and specifications for electric power systems and racing formats that will allow FE scales to race and have fair and equal competition.

- A.** The Fast Electric (FE) class is established as an additional class in R/CU.
- B.** The Fast Electric class shall follow the overall rules for R/CU, and the additional rules established in Section XII. In case of conflict in rules between Section XII and other Sections, the Section XII rules shall apply in the FE Class.
- C.** The technical rules of the Fast Electric class will be reviewed on an annual basis by the R/CU Board. The technical rules review will take place after the yearly race season and before the end of the calendar year. The final decision on proposals will be issued no later than January 31st of the following calendar year. Technical proposals may be made to the Board at any time but will only be considered at the technical review meeting(s) during the above-specified time. Technical proposals may include modifications to the approved motor, battery or speed controller list or specifications.
- D. Technical Rules**
  - 1. Power and drivetrain**
    - a.** Approved motors
      - i.** NEU 1527 1.5Y 850KV
      - ii.** HET Typhoon 700-98 840KV
      - iii.** Turnigy SK3-3994 850KV
    - b.** Twin motors are not allowed
    - c.** Drive line: either cable or hard shafts may be used, no gear boxes allowed.
    - d.** Any propeller may be used up to maximum of 57MM in diameter.
  - 2. Electronic Speed Controls (ESC)**
    - a.** Any ESC may be used as long as it is rated to a minimum 130 Amps and rated to handle a minimum of 8s battery configuration.
    - b.** Anti-spark resistors are advised on all speed controllers.
  - 3. Batteries**
    - a.** A maximum capacity of 8S Lithium Polymer (LiPo) batteries are approved. The maximum total mAH capacity of the battery pack(s) will not exceed 6000 mAH. Only LiPo batteries with a cell rating of 4.20 or less volts per cell are approved.
    - b.** LiHV batteries with per cell capacities to 4.35 volts or higher are not approved.
    - c.** Manufacturer's minimum discharge of 30C constant but no higher than 65C constant shall be allowed.

## E. Racing Rules

### 1. Procedure for starting a race



- a. A starting clock of 1 minute and 40 seconds will be used for the FE class.
- b. All boats must be in constant forward motion by the 30 second mark and will remain in constant forward motion until the start of the race. A one lap penalty will be assessed for violations.
  - i. All FE boats must enter the course from the launch zone and proceed to the left of the Start/Finish buoy and to the right of the first straight away buoy after the Start/Finish buoy. Then, the boat must go directly to the back straight away, then all the way around the right turn and back to the start/finish line. This a legal mill start. Failure to enter the course correctly will result in a “full mill” requirement (definition of a FE full mill requirement is running the mill course with no cutting to the back straight away until passing the start/finish buoy).
  - ii. Entering the DMZ before the 30-second mark will result in a full mill requirement. Entering the DMZ after the 30 second mark will result in a one lap penalty.
  - iii. As the clock counts down to zero and the boats are heading to the starting line, as they come out of the right turn, each must stay in the lane they have chosen until they pass the start line, then a proper overlap must be established before any lane changes can occur.
  - iv. Any changes to the FE Milling Course will be announced at the Driver’s meeting.

### 2. Heat Racing

- a. Any FE boat that can continue to race after an incident may be allowed to, but only after it has given the right-of-way to all other boats in the vicinity and can do so without impeding a fellow racer. If the boat interferes with another boat, a one lap penalty will be assessed.
- b. Definition of a “called dead FE boat:” when it is apparent that the boat can no longer proceed to race, the Contest Director or the individual calling the heat can call the boat dead.
- c. For all other rules of racing, refer to R/C Unlimiteds Rule Book.

## **F. Safety Rules**

- 1.** Lipo battery packs shall be charged in a safe manner on a flameproof surface, or in a LiPo safe charging bag. A dry fire extinguisher or extinguishing agent, such as a bucket of sand, shall be kept near wherever batteries are being charged.
- 2.** Only FE racers shall be allowed to retrieve any dead FE boats after a heat or test session.