ELECTRIC COMPETITION

GENERAL RULES

1. Electric racing rules are intended as a supplement to the General Power Boat Rules of NAMBA. In the case of a conflict, the electric racing rules shall prevail.

2. A positive method of speed control must be used. On/Off micro or variable speed controls are allowed.

3. The maximum permissible battery size is Sub C or 1.2 volt battery of any chemistry.

4. Hull Measurement Guidelines

    a. When a hull minimum or maximum length measurement is specified for any class, that hull will be measured by placing two vertical straight edges at the furthest points fore and aft of the bow and transom of the hull. The distance between those 2 vertical straight edges will be measured. Hardware will not be included in the measurement.

    b. The hull will be placed between those two vertical edges and situated in the same horizontal position in which the hull would ride on the water. Any flanges, "shoebox" overhangs or other parts of the hull that are part of the original manufacturing process will be included in the measurement.

    c. A hull may be lengthened to comply, but material additions must become an integral part of the hull structure. If for instance, material is added to the transom, the entire transom must be lengthened and the addition must be blended in to the rest of the hull.

CLASS SPECIFICATIONS

1. The following motor and cell configurations will be considered official for electric racing in NAMBA:

    M-2 A single .05 motor with brushes, any endbell, ferrite magnets. 1-4 cells are permitted

    N-1 A stock class utilizing any ROAR approved motor as defined by current ROAR parameters. 1-6 cells are permitted.

    N-2 Any single motor, any endbell, bearings, and magnets. 1-6 cells are permitted.

O Any amount and/or size of motors, any endbell, bearings, and magnets. 7-8 cells are permitted.

P Any amount and/or size of motors, any endbell, bearings, and magnets. 9-12 cells are permitted.

Q Any amount and/or size of motors, any endbell, bearings, and magnets. 13-18 cells are permitted.

S Any amount and/or size of motors, any endbell, bearings, and magnets. 19-24 cells are permitted.

T Any amount and/or size of motors, any endbell, bearings, and magnets. 25-32 cells are permitted.

2. All of the above classes will be further divided into mono and hydro. For specifications on these hull types, see General Power Boat Rules of Competition, Section G. Other specialty classes may be added from time to time.

OFFICIAL COURSES

1. An oval course shall be defined as follows:

    a. A minimum of three to a maximum of five buoys will be used to define the turns on both ends of the course. The turn radius will be 30 feet, measured to the outside of the buoys, and the straightaway will be 170 feet from the exit buoy at one end of the course to the entrance buoy at the other end of the course. One lap total distance will be 528.5 feet.

    b. Total lap distance will be 4/10 of a mile for four laps and 1/2 mile for five laps.

    c. The Contest Director shall determine the number of laps which will be run for each class at a district event. The number of laps to be run for each class must be specified on all entry information which is disseminated about the event. All classes which are run at the annual Electric Nationals will be run on a five lap course.

    d. Separate NAMBA Electric Heat Racing records will be maintained for both the legal four lap course and the legal five lap course.

2. Straightline racing shall utilize the standard NAMBA 1/16 mile straightaway course.

RACE FORMAT

1. Launches - Hand launching or dead-in-the-water launching will be at the driver's discretion.

2. Starts - Two types of starts will be permissible for heat racing. The choice of start format is up to the individual district or contest director.

    a. Flying Clock Start

        1) The clock system used may be a visual clock or an audio tape type clock.

        2) An audible sound or statement will start the Pit Time. Pit Time will be one minute, and a horn or audible sound will signal the end of this time period.

        3) Clock Time (Mill Time) will commence immediately upon the expiration of Pit Time, and will last for 30 seconds. At 10 seconds, no more boats will be allowed to be launched. Any boat launched after this time will be ordered off the course and will receive a "Did Not Start" for that heat.

        4) All boats shall leave the launch area and shall go to the left of the start buoy and to the right of the buoys in the left end of the course. All boats will then utilize a 3/4 mill during Pit Time and during Clock Time.

        5) The start of the race will be at the end of Clock Time when the countdown reaches zero. All stop watches will be started at this point, and will be stopped when the driver finishes the required laps.

        6) All boats coming from the right turn at the start of the race will adhere to the five second rule. All boats jumping the start will proceed around the complete course to the start line for a legal start. No boat may be stopped on the course for the purpose of waiting in order to better time the start. A disqualification will be given for this infraction.

    b. LeMans Start

        1) The official start of the heat will be a signal from the Contest Director.

        2) All stop watches will be started at the signal, and will be stopped when the driver finishes the required laps.

        3) All boats will race toward buoy one and two on the left end of the course, and will continue around the course to the start/finish line. This will constitute the completion of the first lap under power.

SPECIALTY CLASSES

O SPORT SCALE HYDRO

1. General Rules

    a. Racing shall consist of four laps on the official NAMBA electric course.

2. Hull Specifications

    a. Hull designs shall follow those for Sport Hydro with the following exceptions:

        1) Hull length shall be a minimum of 20 inches and a maximum of 26 inches.

        2) The drive train is entirely at the modeler's discretion, including the location of the drive dog and strut, if used.

3. Motor Specifications

    a. Power parameters for this class shall comply with the class "O" specifications.

P SPORT SCALE HYDRO

1. General Rules

    a. This class will comply with the existing rules for 1/16th Sport Scale Hydro with the following exception:

        1) Section 1 of General Rules will be eliminated and either legal NAMBA electric course may be used.

2. Hull Specifications

    a. This class will comply with the existing rules for 1/16th Sport Scale Hydro with the following exception:

        1) Hull length shall be a minimum of 24 inches.

3. Motor Specifications

    a. Power parameters for this class shall comply with the class "P" specifications.

Q & S SPORT SCALE HYDRO

1. General Rules

    a. This class will comply with the existing rules for 1/16th Sport Scale Hydro except as specified in the specific rules that follow.

    b. This class is a combination class and “Q” and “S” will be run together.

    c. Because “Q” and “S” will be running together, heat racing records will be shown as “Q & S” Sport Hydro.

    d. Separate straightline records will be maintained for “Q” and “S” Sport Hydro.

2. Hull Specifications

    a. This class will comply with the exiting hull specification for O Sport Scale Hydro with the following exception: The Q hull length shall be a minimum of 29 inches and the S hull length shall be a minimum of 35 inches.

3. Motor Specifications

    a. Power parameters for this class will comply with class “Q” or “S” specifications.

4. Race Format

    a. Heat racing format will be used utilizing the NAMBA Electric five lap course.

LIMITED SPORT HYDRO

1. General Rules

    a. This class will comply with the existing rules for 1/12th Sport Scale Hydro except as specified in the specific rules that follow.

2. Hull Specifications

    a. This class will comply with the existing rules for 1/12th Sport Scale Hydro

3. Motor Specifications

    a. Power in this class will be limited to a single motor commonly referred to as a “Speed 700 class” motor. Specifications for these motors are as follows:

        1) Can Length: 66 to 67 mm (2.598 to 2.638 inches).

2) Can Diameter: 42.2 mm (1.661 inches). This excludes option torque ring.

3) Fixed endbell

4) Fixed brushes

5) Ball bearings and bushings are legal

6) No modifications may be made to the motor. Except for normal wear, it must be run as shipped from the manufacturer.

b. Current motors known to conform to these specifications include Graupner 6306, Graupner 6316, Fine Design FD-EM 775, Robbe power 700 9.6, MPI ACC373 Promax 700, Hopf Viper 700 QC 9.6 Volt Neodym-Race 66mm, Hopf Viper 700 QC 12 Volt Neodym-Race 66mm, Hopf Viper 700 XLG 9.6 Volt 66mm

c. Current motors known to be illegal because the can is too short include Hopf Viper 700 QC 9.6 Volt RS-Neodym 60mm and Hopf Viper 700 QC 12 Volt Neodym 60mm.

d. Power will conform to class "P" specifications with that the limitation that cells must be of Sub-C (no cells larger or smaller will be permitted). Sub-C shall be defined as 23mm diameter and 43 to 44 mm long.

4. Race Format

a. The standard NAMBA electric oval course will be used. In the absence of a legal course, any oval format may be used. However, records may not be set on such a course.

b. Heats will consist of 10 laps.

c. Experienced racers are strongly urged to consider the skill level of the opponents when running in this class, since the intent is to encourage less skilled racers to have success.

d. The contest director is urged to strongly consider the experience level of the individual contestants when judging the race and to make calls accordingly.

LIMITED SPEC OFFSHORE (LSO) RULES

1. General Guidelines

a. The intent of this rule is an attempt to create a fun and economical class in which participants of all skill levels have an enjoyable racing experience as well as a reasonable chance at success.

2. Hull Specifications

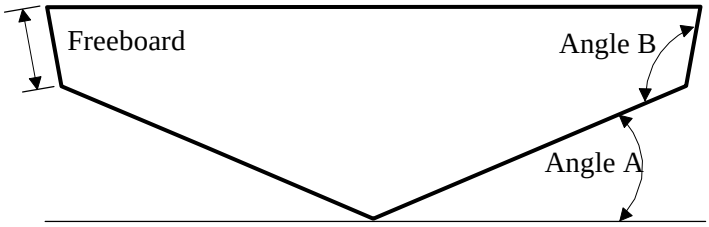
    a. LSO hulls must be a Deep-Vee or catamaran type hull.

        1) On a Deep Vee, the deadrise angle must be between 16 and 28 degrees as measured at the transom. (Angle A in hull drawing.)

            The intersection of the bottom and the side at the chine must not exceed 125 degrees as measured at the transom. (Angle B)

    b. Minimum hull length is 26 inches.

    c. Freeboard, as measured at the tallest point on the side of the hull, shall not be less than 1".



    d. Steps are allowed on both hull types.

    e. All efforts should be made to color and number hulls in the spirit of real offshore racing.

        However, this class is intended to be stand-off scale class. Fun and the inclusion of as many racers as possible are the primary objectives.

3. Motor Specifications

    a. Power in this class will be limited to a single motor commonly referred to as a "700 series" motor. Specifications for these motors are as follows:

        1) Can Length: 66 to 67 mm (2.598 to 2.638 inches).

        2) Can Diameter: 42.2 mm (1.661 inches). This excludes option torque ring.

        3) Fixed endbell

        4) Fixed brushes

        5) Ball bearings and bushings are legal

    b. No modifications may be made to the motor. Except for normal wear, it must be run as shipped from the manufacturer.

c. Current motors known to conform to these specifications include Graupner 6306, Graupner 6316, Fine Design SS1, Fine Design FD-EM 775, Robbe power 700 9.6, MPI ACC373 Promax 700, Hopf Viper 700 QC 9.6 Volt Neodym-Race 66mm, Hopf Viper 700 QC 12 Volt Neodym-Race 66mm, Hopf Viper 700 XLG 9.6 Volt 66mm

d. Current motors known to be illegal because the can is too short include Hopf Viper 700 QC 9.6 Volt RS-Neodym 60mm and Hopf Viper 700 QC 12 Volt Neodym 60mm.

e. Power will conform to class "P" specifications in that 9-12 sub C cells are allowed.

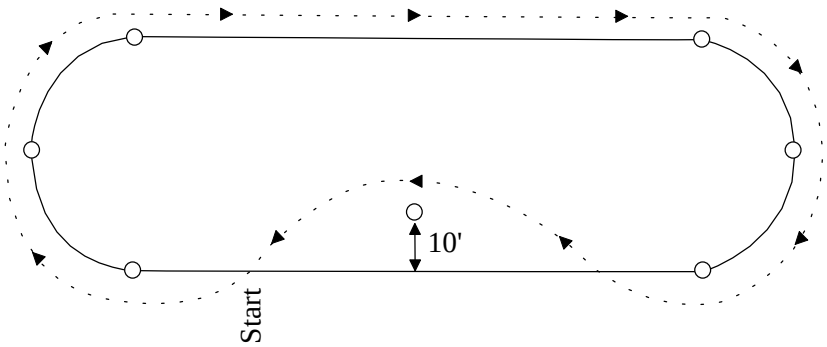
4. Race Courses

a. Clubs and events may choose between 3 race courses.

1) The standard NAMBA oval.

2) The second course will be the standard oval with a left turn buoy which will be placed halfway (85 ft.) down the middle of either the front or back straightaway and 10 feet inside the course (see diagram).

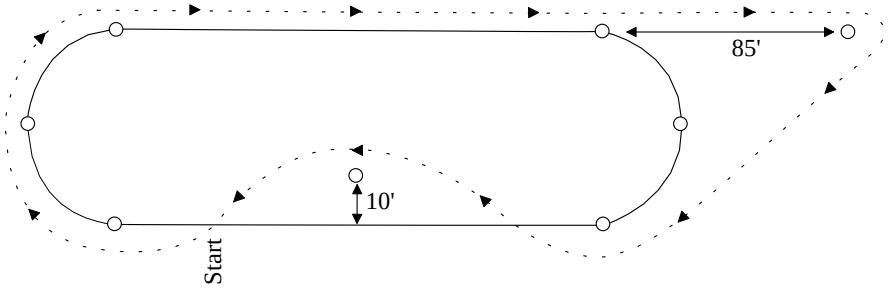
NAMBA "M" Offshore Course



3) The third (large) Offshore course is the same as the "M" course with the addition of an "Offset Buoy". The Offset Buoy shall be positioned in line with either the front or back straightaway, and 85 ft. from any of the course's 4 outside turn buoys.

This diagram is provided as example and illustrates the right rear offset with the left turn buoy in the front straightaway.

NAMBA Offset Offshore Course



5. Race Format

    a. The length of each heat shall be 10 laps for all 3 courses.

    b. Either a flying clock or Le Mans start, as described in the ELECTRIC COMPETITION, RACE FORMAT section of the rulebook may be used.

    c. Driving will be in accordance with all NAMBA Rules of Racing.

6. Penalties

    a. Jump starts will incur a one lap penalty.

7. Record Courses

    a. Records may be maintained for performances on all 3 courses.

8. Awards

    a. Should an event award a “High Points Offshore Champion” or “Offshore Team Points” award, this class should not be included in the calculation for those awards.

1/10th SCALE CRACKERBOX

1. Purpose - To duplicate in 1/10th scale the American Power Boat Association Crackerbox One Design Runabout.

2. Hull Specifications

    a. Hulls must be within 1/8th inch of the appropriate hull.

    b. The deck/hatch must resemble that of the full scale hull.

c. The boat must be pained in the spirit of a racing scale model. Each boat will have the driver's NAMBA number preceded by the letter "P".

d. Two drivers of scale-like appearance must be used in the driver/rider compartment. The driver must have orange colored helmets and live jackets.

e. The dead rise of the transom shall be 3/8ths of an inch in total (3/16th of an inch per side), with a transom width of 6 3/8th inches.

f. Drive Train

1) A single motor shall be coupled directly to a straight drive shaft. A flex shaft may be used in a straight tube.

2) The propeller may not extend beyond the back edge of the transom.

3) Steering shall be by a rudder mounted under the hull or attached to the transom.

3. Motor Specifications

a. Power parameters for this class shall comply with class "N-1" specifications.

4. Race Format

a. Heat racing format will be used.

b. The Contest Director shall determine the scoring format, i.e. total points or a "winner take all" final heat format.

P OPC TUNNEL

1. General Rules

a. Electric Outboard Racing Rules are intended as a supplement to the NAMBA General Powerboat Rules of Competition. In the case of conflict the Electric Outboard Racing Rules shall prevail. Electric Outboard Racing Rules are not intended as a supplement to the NAMBA Outboard Racing Rules and as such must not comply with any of the rules therein.

2. Hull Specifications

a. Hull must be an outboard motor tunnel hull type.

3. Motor Specifications

    a. This class will use the P class designation for power.

    b. All boats must have motor mounted outboard of the hull. No inboards will be allowed.

OFFSHORE

1. General Rules

    a. Electric Offshore racing rules are intended as a supplement to the NAMBA General Powerboat Rules of Competition. In case of a conflict the Electric Offshore Racing Rules shall prevail.

2. Hull Specifications

    a. Offshore hulls must be a Deep-Vee (16 to 28 degree "V" angle) or Offshore Catamaran type hull. The windshield or cockpit shall be positioned behind the mid-point of the deck (as measured from bow to stern).

    If a hull is not a Deep Vee or a Catamaran, then there must be proof that the hull type it resembles actually did race as a full scale offshore boat. The boat must look like an authentic Offshore APBA / SBI / UIM hull from a distance of 10 ft. (See paragraph 2.c below for guidelines.) Photographic proof will be the required as evidence that the hull complies with guidelines set forth in this paragraph.

    b. Stepped hulls and flat keel ride pads will be allowed on both Deep Vee and Catamaran type hulls.

    c. Closed cockpits must have windshields. Windshields can either be clear, tinted or colored. Open cockpits must have drivers. Boats are to be decorated with paint and or by graphic applications (decals) which must include at least two real or fictitious sponsors.

    All boats must have numbers printed or painted on the hulls above the waterline. They can be either fictitious race numbers or NAMBA membership numbers. They should be as clearly visible in relation to the size of the hull as they would be on a full-size race boat.

3. Engine Specifications

    a. Power parameters for the 5 Offshore classes shall be the same as those outlined in the N2, P, Q, S, and T CLASS SPECIFICATIONS section of the Rule Book.

4. Race Format

a. The length of each heat shall be in 2 minute increments. For NAMBA record purposes the standard length will be 4 minutes.

b. A flying clock start or Le Mans start as described in the ELECTRIC COMPETITION, RACE FORMAT section of the rulebook may be used.

If a Le Mans start is the chosen method, all boats in the heat are to be lined up in the water, at the shore, pointed at the first buoy. The Contest Director will insure that all boats are equally spaced parallel to each other so that no boat has an advantage over another.

Each driver's pit person will keep a minimum of one hand on the boat until the CD starts the heat with a short verbal or recorded countdown. (3, 2, 1, Start!, for example.) The pit person will keep the boat stationary and is not allowed to generate ANY forward motion either before or after the official start.

c. Driving will be in accordance with all NAMBA Rules of Racing.

5. Penalties

a. Jump starts will incur a one lap penalty. One lap will be deducted from the total lap count of the offending racer.

b. If a Le Mans start is used, any boat that is in forward motion and not manually restrained and kept stationary before the start will be accessed a 1 lap deduction from that boat's total lap count.

c. If a boat passes another boat after the official time has expired, the pass will not count. The includes passes caused by any movement including drifting, and or coasting

6. Race Courses

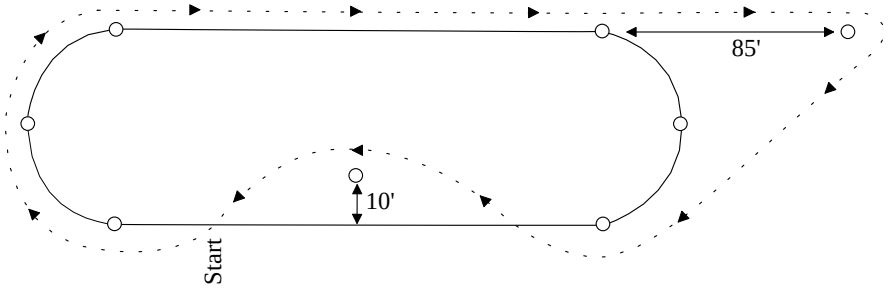
a. Clubs and events may choose between 2 Offshore courses.

1) The large Offshore course is a standard NAMBA oval with a left turn buoy which will be placed halfway (85 ft.) down the middle of either the front or back straightaway and 10 feet inside the course (see diagram).

A second buoy, the Offset Buoy, shall be positioned in line with either the front or back straightaway, and 85 ft. from any of the course's 4 outside turn buoys.

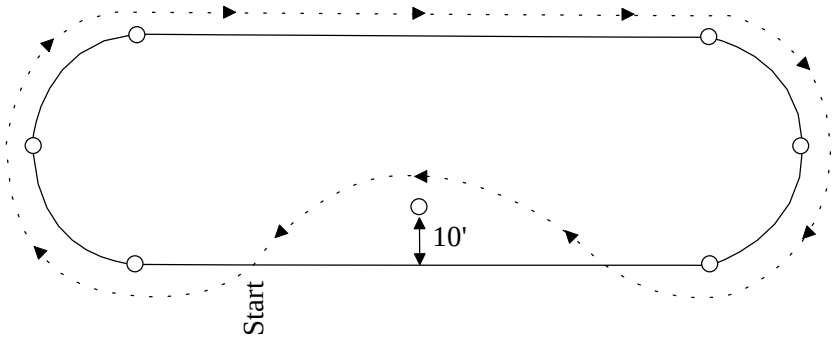
This diagram is provided as example and illustrates the right rear offset with the left turn buoy in the front straightaway.

NAMBA Offset Offshore Course



2) The second course will be the same as the first with the only difference being the elimination of the offset buoy. The left turn buoy may be set, at the host club's discretion, on either the front or back straightaway.

NAMBA "M" Offshore Course



b. Record Courses

1) Records shall be maintained for performances on both courses.

2) Records are awarded to the person with the lowest elapsed time after at the completion of the first 10 laps in a single 4 minute heat. The record setting boat must finish the full 4 minute heat for the record to be recognized.

c. Awards

1) Awards shall be presented in each class based on the total number of laps accumulated in 3 heats.

2) Offshore points may be used for team points and high points awards at the discretion of the host club.

3) At the hosting club's discretion, Offshore Team Points may be awarded as follows:

a) Boats will be awarded points based on where the boat is positioned on the course when the official time expires. Points schedule shall be as described in the HEAT RACING POINTS SECTION (page 38, section J.1) The lead boat will receive 400 points, 2nd 300, 3rd 225, etc.

4) Also at the hosting club's discretion, an "Offshore Champion" award may be awarded to the individual racer with the most accumulated laps over all Offshore classes run. In the event there is a tie then it shall be awarded based on point system for team points (C.1.c.).

ECO

1. Purpose - to provide an "economical" electric class utilizing affordable and readily available 05 motors and economical hardware.

2. General Rules

    a. These ECO Class electric racing rules are intended as a supplement to the General and Electric Power Boat Rules of NAMBA. In the case of a conflict, class rules shall prevail.

    b. This class will comply with the existing rules for electric Offshore with except as specified below.

3. Hull Specifications

    a. This class will comply with the existing rules NAVIGA ECO class.

    b. Boats must use a submerged drive with the rudder pivot forward of the transom.

    c. There is no minimum or maximum hull length.

4. Motor Specifications

    a. A Limited Modified class utilizing any NORCA approved motor as defined by current NORCA 19T Limited Modified rules. 1-6 cells are permitted.

    b. Any ROAR-approved stock motor as defined by current ROAR parameters. 1-6 cells are permitted.

    c. Motors must be in accordance with current NORCA rules for 19T Limited Modified Motors, or with ROAR motor rules for stock motors. From 1 to 6 Sub-C cells only are permitted; any battery chemistry is allowed.

5. Official Courses

    a. The course size for records shall be the standard electric Offshore course.

    b. In the absence of a legal Offshore course, the host club may use any oval format desired. Records may not be set on such a course.

    c. The host club may elect to use a NAVIGA Triangle course as defined in current NAVIGA rules.

    d. Straightline racing shall utilize the standard NAMBA 1/16 mile straightaway course. Straightline records must be set using cells described above.

    e. Record Courses

        1) Must be a NAMBA 1/10 mile electric course.

        2) The left turn entrance buoy is to be located 45 feet from each turn exit buoy.

        3) The left turn exit buoy is to be located 45 feet from the left turn entrance buoy.

6. Race Format

    a. The length of each heat shall be in 2 minute increments (i.e. 4,6,8 etc). When time is called, boats will race to the Start/Finnish to determine the final positions.

    b. A flying clock start or a Le Mans type start may be used.