



iMBRA is an international, worldwide, and non-profit making association dedicated to supporting the development and quality of model boat racing, iMBRA's main objective is "To promote internationally, the highest standards in racing and co-operation to achieve common goals."

# Competition Rules

Hydro - H

Offshore - O

Endurance - E

Issued by the iMBRA Committee

General Rules

**January 2024**

*Amendments, additions, and proposals for improvements must be submitted to the President of iMBRA via the countries representative at least one month before a World Championship.*

*English will be used as the leading language; any translations are secondary.  
The English version of the rules is the only version that will be used when discussing matters within the rules.*

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Section 8 - Endurance Class General Rules

Section 9 - Hydro Class General Rules

Section 10 - Offshore Class General Rules

**Section 11 - Stock Zenoah 26 Regulations**

**Section 12 - iMBRA League Rules, World Ranking Rules**

# COMPETITION RULES

## 1. Definition of models

Models permitted to compete within iMBRA are controlled by the competitor using a radio control. The model boats are of free design, which conform to the race requirements, however should in both form and design look like a boat.

## 2. Categories

### 2.1. Endurance class

The Endurance Class can be divided into the following:

**Endurance 3.5** Free build racing models for endurance races (20-30 min) with internal combustion motor up to 3.5cc and below waterline propulsion.

**Endurance 7.5** Free build racing models for endurance races (20-30 min) with internal combustion motors above 3.5cc up to 7.5cc and below waterline propulsion.

**Endurance 15** Free build racing models for endurance races (20-30 min) with internal combustion motors above 7.5cc up to 15cc and below waterline propulsion.

**Endurance 27** Free build racing models for endurance races (20-30 min) with internal combustion motors (petrol-motors with sparkplug ignition) above 15cc up to 27cc and below waterline propulsion.

**Endurance 35** Free build racing models for endurance races (20-30 min) with internal combustion motors (petrol-motors with sparkplug ignition) above 27cc up to 35cc and below waterline propulsion.

#### **Endurance Stock Zenoah 26**

Free build racing models for endurance races (20-30 min) with Zenoah G260PUM water cooled motors (25.4 cc internal combustion petrol-motors with sparkplug ignition), direct drive and below waterline propulsion.

## 2.2. Hydro class

The Hydro Class can be divided into the following:

- Hydro 3.5** Free build HYDRO – planes\* with internal combustion motor up to 3.5cc and with surface drive propulsion.
- Hydro 7.5** Free build HYDRO – planes\* with internal combustion motors above 3.5cc up to 7.5cc and with surface drive propulsion.
- Hydro 15** Free build HYDRO – planes\* with internal combustion motors above 7.5cc up to 15cc and with surface drive propulsion.
- Hydro 27** Free build HYDRO – planes\* with internal combustion motors (petrol-motor with sparkplug ignition) above 15cc up to 27cc and with surface propulsion.

**Remark:** \* HYDRO – planes (A free build model with three or more planing surfaces)

## 2.3. Offshore class

The Offshore Class can be divided into the following:

- Offshore 3.5** Free build OFFSHORE boats with internal combustion motor up to 3.5cc and with surface drive propulsion.
- Offshore 7.5** Free build OFFSHORE boats with internal combustion motors above 3.5cc up to 7.5cc and with surface drive propulsion.
- Offshore 15** Free build OFFSHORE boats with internal combustion motors above 7.5cc up to 15cc and with surface drive propulsion.
- Offshore 27** Free build OFFSHORE boats with internal combustion motors (petrol-motors with sparkplug ignition) above 15cc up to 27cc and with surface drive propulsion.
- Offshore 35** Free build OFFSHORE boats with internal combustion motors (petrol-motors with sparkplug ignition) above 27cc up to 35cc and with surface drive propulsion

### **Offshore Stock Zenoah 26**

Free build OFFSHORE boats with Zenoah G260PUM water cooled motors (25.4 cc internal combustion petrol-motors with sparkplug ignition), direct drive with surface propulsion.

### 3. Principal and general rules

#### 3.1. Principal rules

##### 3.1.1. Competitions where the rules apply

- 1) These general rules are designed to be used at all domestic or international competitions.
- 2) Supplementary rules for World Championships will be indicated with a '(W)' and are only compulsory at World Championships. However, domestic or international competitions are also free to use any of the '(W)' supplementary rules.
- 3) The year of the competition commences on the 1<sup>st</sup> of March each year. Any rule amendments made after this date will only be applicable from the next year onwards.

##### 3.1.2. (W) Entry fee and payment

Entry Fees for the iMBRA World Championships are as follows:

- 1) Seniors 35.00 Euro per class. Juniors 20.00 Euro per class.  
*All entry fees received will go directly to the organisers.*
- 2) The organisation must provide food and refreshments for any volunteers or officials who assist for a period of 5 hours or longer.

*\*Entry fees will be reviewed by the committee after the championship to ensure that they are appropriate, with possible increases/decreases if required for the following competition. The amount allocated to iMBRA will also be reviewed to ensure that only what is needed is taken from the total entry fees.*

##### 3.1.3. Protest fees

The protest fee at all official iMBRA competitions is 20.00 Euros.

#### 3.2. Competitor rules

##### 3.2.1. Age groups

(W) At iMBRA events the competitors are divided into two age groups: Juniors and Seniors.

- 1) A Junior is someone who did not have his/her 19<sup>th</sup> birthday before the start of the event.
- 2) For safety reasons any junior wishing to compete in the 15cc or Stock Zenoah 26cc engine classes must be at least 12 years old.
- 3) Juniors are not allowed to take part in the 27cc and 35cc classes.

### **3.2.2. (W) Competitor registration**

- 1) In order to compete in a championship, the individual must be a member of their countries federation that is affiliated to iMBRA.
- 2) To race for a country the competitor must be resident in that country and must not have tried to qualify for any other country.
- 3) The application must be submitted by the countries representative in line with published deadlines for specific events. Any application can be refused if received after the set deadline.
- 4) An association is only allowed to enter competitors if their countries membership subscriptions, as set by iMBRA, have been paid.
- 5) By entering the competition, the competitor accepts the rules that apply.

### **3.2.3. (W) Maximum number of competitors**

- 1) At the World Championships each country is allowed to enter the following number of competitors in Senior classes:
  - a) In all classes 3 competitors
  - b) The title defendant from the last European and World Championship. (Senior and Junior if applicable)
  - c) The Eastern/Western European League winner from the last two League Championships
  - d) Up to a maximum of 2 x additional places as a result of people gaining a place in the previous World Championship Finals  
*(The maximum potential number of competitors is 9)*
- 2) The host country (organisers of the world championship) can enter the following number of competitors in Senior classes:
  - a) In all classes 5 competitors
  - b) The title defendant from the last European and World Championship. (Senior and Junior if applicable)
  - c) The Eastern/Western European League winner from the last two League Championship
  - d) Up to a maximum of 2 x additional places as a result of people gaining a place in the previous World Championship Finals.  
*(The maximum potential number of competitors is 11)*
- 3) For all junior classes the number of entries will be open. A limit on the number of entries can be implemented again if the number of competitors is too high.
- 4) Every junior who was a world champion and will be a senior at the following World Championship will be granted automatic participation in the senior class in which they became junior world champion.

### **3.2.4. Mechanic/assistant and substitution of the competitor**

- 1) In each class a competitor must have a mechanic/assistant to help them throughout the duration of the race.

- 2) The mechanic can help the competitor during the preparations for the start of the race and until the finish of the race.
- 3) The mechanic must remain in the designated pit area, with the driver, at all times while the boat is running on the water.
- 4) Substitution of the competitor is NOT allowed during the race.

### **3.2.5. Unsportsmanlike behavior**

- 1) The following will be punishable via a red card (immediate disqualification) - interference (shouting) at other competitors, judges, spectators. Not following the rules, deliberately interfering with a fellow competitor's race, or deliberately taking out/crashing with a fellow competitor. The model has to be taken out of the water. There is no possibility of an appeal against the decision.
- 2) The red card can be issued to the driver, the mechanic or both. Should the mechanic receive a red card, the driver will have to bring their boat off the water because they cannot race without a mechanic.
- 3) The red card will apply throughout all classes for the duration of the competition.
- 4) When a driver and/or mechanic gets a red card (as specified above) in between two World Championships, the driver and/or mechanic will be banned from the next World and European Championships. The person who has received two red cards will be banned from attending the events as both a competitor and a mechanic. This rule will incorporate any red cards relating to the above received during 2019 and beyond.

## **3.3. Technical rules**

### **3.3.1. General construction rules and regulations**

- 1) The models are of free design. The model however should in both form and design look like a boat.
- 2) The overall length of the model must not exceed 2500 mm.
- 3) The steering of the model must be through radio control.
- 4) Only internal combustion motors are allowed. Jet engines and other forms of non-standardised propulsion are not permitted.
- 5) One or more internal combustion engines can be used. However, their total cylinder capacity must not exceed the respective class.
- 6) The engine must have full throttle control; a switch or button is not allowed.
- 7) Every model must be coloured on both the hull and deck to ensure visibility when stopped on the water. Plain glass fibre, unpainted carbon/Kevlar and plain black paint is not permitted.



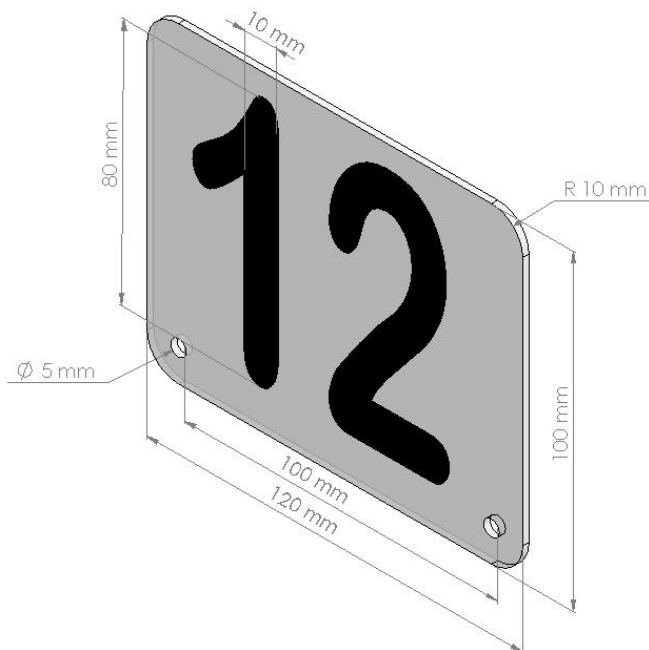
- 8) Every model must have on the deck a longitudinal mount for attaching a number plate which can be provided by the organisation or the competitor. The number plate must be made out of flexible and durable material, which does not cause damage to the model when run over. The plate must be white and the numbers from 1 to 12 must be black. The number plate must be attached to the model with two connections.

The number plate for Endurance must be mounted on the right hand side.  
The number plate for Hydro and Offshore must be mounted on the left hand side.

- 9) The dimensions of the number plates are as follows (see image 1):

Height	100 mm
Width	120 mm
Thickness approx.	2 mm
Distance between the holes	100 mm
Distance of hole from the bottom of plate	10 mm
Diameter of hole	5 mm

The corners must be rounded off



**Image 1: Number plate**

### 3.3.2. Fuel

- 1) Fuel regulation for classes 3.5, 7.5 and 15ccm<sup>3</sup>:

- a) The fuel mixture may only contain methanol, lubricating oil (including anti-corrosion additives) and a maximum of 16% nitromethane, measured IN WEIGHT (m/m).  
For basic orientation and the avoidance of doubt: 16% nitromethane in weight (m/m) equals approx. 12% nitromethane in volume (V/V).

- b) The specific gravity of the mixture may not be heavier than 0.87 g/cm<sup>3</sup> at 20°C and standard atmospheric pressure. The testing device needs to be calibrated according to the temperature of the tested fuel.
- c) For the avoidance of doubt: the fuel must comply with both point a) (contained additives) and point b) (specific gravity) to be regular

2) Fuel testing for classes 3.5, 7.5 and 15ccm<sup>3</sup>:

- a) As a primary control device for quick testing, the official 'iMBRA 16 Float' (in short: Float) will be used, available commercially from 2024. The Float comes with a special test liquid to calibrate the device.
- b) The Float measures the density of the fuel mixture, calibrated according to the temperature of the tested fuel and controlled by the test liquid.
- c) The temperature of the tested fuel is measured by commercially available handheld thermometer devices. The testing needs to take place between 10 and 50 °C of fuel temperature. In case the fuel sample is outside this temperature range, it needs to be cooled down, or warmed up accordingly.
- d) The tolerance on the measurement is a maximum of +0.5%, also indicated on the Float.
- e) At World Championships an electronic density meter can also be used to control the specific gravity of the fuel, as primary, or secondary testing device, according to the decision of the chief judge.

f) **Testing in Endurance and Offshore classes** at official iMBRA competitions (World or European Championships):

- Places 1 to 3 from the finals will be officially tested by judges after the race. All 12 boats that participated in the final need to remain untouched in the testing area until testing is over. In case of a failed test in the top 3, the next (e.g. 4th placed) competitor's boat will be tested.
- The judges also have the right to request random tests from any boat after any of the qualifying heats.
- All boats must have enough fuel left in the tank after each heat for potential testing, the minimum amount being 100 ml
- The fuel sample is taken by the judges from where they decide is best (generally from the point of entering the carburettor). In case the boat has a float chamber that is smaller than 100ml capacity, the float chamber can be re-filled during the test by blowing through the exhaust pipe.
- In all cases it is the competitor's responsibility to prevent water entering the fuel tank. Judges will not accept any explanations or protests about water in the tank raising the density of the fuel mixture above the regular level.

g) **Testing in Hydro classes** at official iMBRA competitions (World or European Championships):

- All boats in the finals will be officially tested by judges before each of the heats, in the pit area. The judges also have the right to request random tests from any boat before any of the qualifying heats.
- The fuel sample is taken by the judges from where they decide is best (generally from the point of entering the carburettor). In case the boat has a float chamber that is smaller than

100ml capacity, the float chamber can be re-filled during the test by blowing through the exhaust pipe.

- The tested fuel can be filled back to the tank immediately before the start of the race.
- There will be NO possibility to adjust irregular fuel after an official test in the pit area

h) At official iMBRA competitions the participants will have the possibility to check their own fuel for density with an official device provided by the organizers. These 'self-checks' will generally take place during practice sessions and the competitors can make adjustments to their fuel accordingly, if needed.

i) For competitions not regarded as official iMBRA events, but running under the iMBRA regulations (e.g. club races, national championship races, smaller international races), the chief judge holds the right to implement the above testing rules, or not.

3) Violation of fuel regulations at official iMBRA competitions:

a) failing to provide enough fuel (100 ml) for an official test (not enough fuel left in the tank)

b) failing to pass an official fuel test

c) the use of additives not listed in point 3.3.2 / 1) / a)

4) Penalties for the violation of fuel regulations at official iMBRA competitions:

a) Failing to pass an official fuel test for the 1st time in a given class at a competition will result in disqualification from the heat or final where the test was taken.

b) Failing an official fuel test for the 2nd time in a given class at a competition will result in disqualification from that class from the whole competition.

c) Failing an official fuel test for the 3rd time at a competition (regardless of which class) will result in disqualification from the whole competition in all classes.

d) Continuous breaches of this rule (resulting in multiple disqualifications of a competitor during a racing season) will be investigated and judged by the iMBRA Committee, case-by-case.

5) Fuel regulations for classes Stock Zenoah 26, 27 and 35cc:

a) Fuel must be a petrol-oil mixture.

b) Petrol can be of any octane level.

c) The use of Methanol mixtures is prohibited.

d) The use of power additives (e.g. nitromethane) is prohibited.

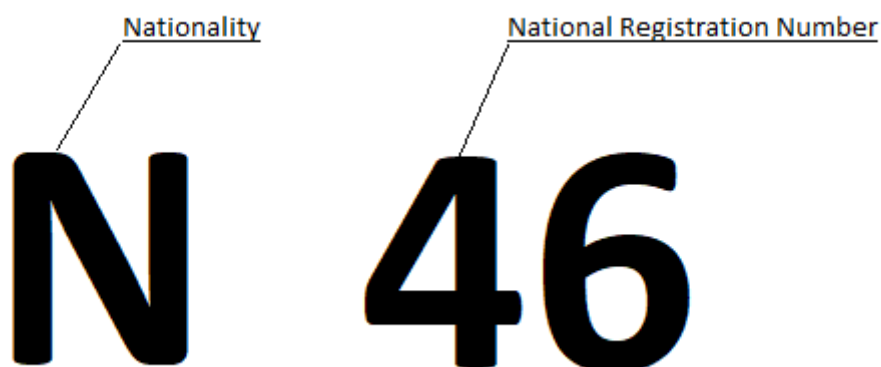
6) The size of the tank is not restricted for any of the classes.

### 3.3.3. Registration numbers and other indications on the boat

1) At all iMBRA events all models must have fixed registration numbers.

- 2) The registration numbers are given out by the respective country. If the nationality is not part of the registration number, it must be attached to the models. Registration numbers and nationality must not be changed and must remain fixed on the hull.
- 3) The race and spare model must show an identical registration number.
- 4) Boat-upper deck

N = Nationality  
46 = National Registration Number



**Image 2: Boat registration number**

- 5) Transponder numbers need to be written on the outside of the boat, giving a possibility for the lapcounting and the judges to check it anytime.

#### **3.3.4. Noise reduction, noise level measurement and rules**

- 1) Noise levels must not exceed 85 dB (A).
- 2) Internal combustion engines must be equipped with a device to reduce noise levels
- 3) (W) The equipment used to assess the noise level shall not exceed approx. 0.3 dB and must be in accordance with EEC and analogue rules. A noise level indicator, issued by a recognised authority must be readily available.
- 4) (W) If for noise level measurements self-registration equipment is used, these should reflect the measurements of the noise level indicator without too many differences. It is therefore recommended that a comparison between the equipment in use should take place. The comparison has to be checked by the Organisers at the start of the event/race and maintained throughout.
- 5) (W) Noise level readings should be taken by individuals who have been trained appropriately and have practical experience.
- 6) (W) The noise meter should be set on " SLOW ".

#### **3.3.5. (W) Methods for measuring noise levels**

- 1) The Noise meter should be positioned at the judge's discretion.

- 2) At least three noise level measurements must be taken for each model during the race, under the following conditions:
  - a) There should be no other boat within 15 meters of the model being measured.
  - b) The noise measurement must be taken when the boat is on the base line, at least 15 meters away from the microphone.
  - c) The measurements must be evenly spaced during the race.
- 3)
  - a) During Endurance and Offshore races the competitor must be advised immediately if their boat exceeds 85 dB (A). If the second measurement also exceeds the noise level they will receive a warning and if the third measurement exceeds the noise level they will be immediately disqualified from that heat. If the driver received warnings in their first heat and continues to exceed the noise limit in any further heats or the final, they will be immediately disqualified.
  - b) During Hydro races the competitor must be advised if their boat exceeds 85 dB (A) at the end of their first heat. A second reading will be taken during the second heat. Any competitor exceeding the limit in the second heat will receive a warning. Exceeding the limit in any subsequent heats will lead to disqualification from that heat. For the purposes of noise a heat includes the preparation time, milling time and race duration, including finals.

#### **3.3.6. Application and use of radio control equipment and frequency control**

- 1) During official iMBRA events only digital and proportional operated radio control equipment is allowed. The radio control must be capable of working within 10 kHz (the use of any other frequency bands may be possible).
- 2) Competitors using MHz radios must be able to change frequency at short notice. Each competitor must have four different pairs of crystals.
- 3) The use of the radio control equipment is subject to the regulations of the country where the iMBRA event is held. Organisers must list the available frequencies in the entry form.
- 4) The re-run of a race due to radio problems can be refused by the race officials, if the planned finishing time of a race or championship is seriously endangered.
- 5) MHz radios may not be switched on within 1000 meters of the competition area. Competitors who disobey the rules may be disqualified from the whole competition.
- 6) There are no restrictions for competitors using 2.4 GHz radios.

#### **3.3.7. Buoys dimensions, construction and anchorage**

- 1) The race course has to be marked by buoys. Each buoy must consist of two colours and have good visible coloured stripes. The buoys must be anchored securely.
- 2) The buoys must be cylindrical and a minimum of 20 cm and maximum 50 cm above the water surface. The buoys must be 40 cm to 50 cm in diameter.
- 3) The buoys must be made of materials such as polystyrene or natural fibres.

### **3.3.8. Starting pontoon, construction and materials**

- 1) Starting pontoons have to provide adequate space for the competitors, their model, mechanic and judges. Any obstructions which could endanger the safety of the competitor and models should be avoided.
- 2) The starting pontoon must be a minimum of 20 meters long and 1.5 meters wide.
- 3) Access to the starting pontoon should be clear. The surface of the pontoon must be non slip even when wet.
- 4) The starting pontoon should when occupied not move, roll or in any way change position. Floating starting pontoons are only allowed when the anchoring and stability are sufficient to prevent rolling caused by waves or movement of people.
- 5) The surface of the starting pontoon must not be higher than 50 cm above the water surface.

### **3.3.9. Lap counting**

- 1) A computerised transponder system must be used; however manual lap counting can be used as a back up during unforeseen circumstances.

### **3.3.10. Transponder mounting**

- 1) The transponder must be within 25 cm of the back of the boat.

### **3.3.11. Transponder counting**

- 1) A minimum of 2 people are required to run the transponder system at any one time.
- 2) Lap counters will only do the lap counting. Any lap deductions will be the responsibility of the assistant pontoon judges and will be deducted at the end of the heat.
- 3) There is only one finish line for all classes. The finish line is located on the left hand side of the pontoon. The lap counters will be located in line with the finish line.
- 4) If a boat stops before the end of the final, the highest number of laps in the shortest time will be placed higher than a boat on the same lap with more seconds. For example:

1<sup>st</sup> = Boat 1 - 68 Laps 30.12 seconds

2<sup>nd</sup> = Boat 2 - 66 Laps 28.36 seconds

3<sup>rd</sup> = Boat 3 - 66 Laps 29.12 seconds

The time should be measured to 0.01 of a second.

### **3.4. Sport rules**

#### **3.4.1. The competition area**

- 1) The race lake must be large enough to accommodate a full size course and allow sufficient run off to enable safe and competitive racing.
- 2) The area surrounding the race lake must provide sufficient room to accommodate competitors equipment and where possible the stalls of model boat suppliers.
- 3) The organisers must ensure that adequate safety measures are in place to protect competitors, officials and spectators from possible dangers.
- 4) (W) The competition site, the racing water and surrounding area must be photographed and documented fully, prior to any potential competitions, to enable the committee to make an informed decision as to the suitability of the facilities. Where possible a committee member will visit the venue in person to assess.
- 5) The competition site and the water must not be contaminated by mineral oils, grease and other poisonous substances.

#### **3.4.2. Starting area, preparation area and access permission**

- 1) The starting area is the enclosed area directly adjacent to the racing water from where the competitors will race their boats.
- 2) The preparation area is an enclosed area, where all competitors convene to prepare their models and equipment and to wait to be called onto the pontoon.
- 3) The preparation area should be located as close as possible to the starting area. It should provide shelter and protection from weather conditions for the models. Only officials, competitors and mechanics engaged in the event are allowed in the preparation area.
- 4) The minimum requirements for a starting area are:  
A starting pontoon; minimum 20 meters long and 1.5 meters wide.  
Numbered starting positions:  
Endurance Class places 1 through to 12.  
Hydro Class places 1 through to 8.  
Offshore Class places 1 through to 10.
- 5) (W) General equipment required, but not limited to, includes:  
Chairs for the judges, where possible protected from the weather.  
Table and chairs for the lap counters, where possible protected from the weather.  
Table and chairs for the preparation area officials, where possible protected from the weather.  
Table and chairs for the noise control officials, where possible protected from the weather.  
1 Noise meter.  
3 Yellow cards one with the number 1, one with the number 2, one with S (safety) on it.  
1 Red card.  
1 Signal device to indicate the Start/Finish of the heat.  
Stop watch to time the race.  
1 Computer and printer

A photocopier is recommended but not essential.  
Printer paper and ink.  
1 Public address system.  
2 Sets of number plates with the numbers 1 to 12.  
1 Board for the results and important information to be displayed.  
Head set for the rescue crew.

- 6) On the starting pontoon it is prohibited to use umbrellas during the race.
- 7) The organiser has to provide 2 rescue boats, 1 main rescue boat and 1 spare rescue boat.
- 8) The rescue boat must be positioned so that it does not obstruct the drivers view and is easily accessible without causing interference to competitors still racing. During endurance races the model must be rescued in the shortest time possible whilst causing minimum disturbance to the models still racing. The rescue boat must be used slowly, so that the bow waves have no adverse influence on the race. Only 1 rescue boat can be used during a race.
- 9) Inflatable boats, and other boats which could be damaged on impact and endanger the crew are not permitted. The crew of the rescue boat must wear life jackets and safety helmets at all times whilst in the rescue boat.
- 10) (W) At World Championships the organizer has to provide powered rescue boats, operated by the central rescue crew. An official on the pontoon is responsible for providing the rescue crew with instructions.
- 11) Endurance boats must have a proper lifting point, in order to ensure a quick rescue.
- 12) Endurance and Offshore 35cc boats must have a towing hook on the front for rescue purposes. A towing hook is not required in the 27cc classes.
- 13) In Hydro and Offshore classes the rescue of models is only performed after completion of the race.
- 14) If a boat starts to sink its rescue must be made a priority in all classes.
- 15) The starting pontoon has to be divided into approximately 1.5 meter sections for each competitor. The starting positions must be numbered and allocated prior to the race. Starting pontoons must have a board in front to prevent boats landing on the pontoon.
- 16) (W) There must be a 0.5 meter high platform as part of the starting pontoon for the competitors to drive from. The raised platform must also be divided into sections.
- 17) Safety nets or other safety barriers must be positioned around the competition site to avoid endangering spectators. This should take into consideration models that might collide or come off course.
- 18) During the race nobody is allowed in the water. Competitors not obeying this rule will be disqualified. If anybody, spectator or competitor is in the water the race must be stopped immediately.
- 19) It is prohibited to run engines within 100 meters of the starting pontoon during race preparation and start time.



- 20) Junior competitors below 160cm height are allowed to drive from their own raised platform (e.g. a stool, or box) with a maximum of 25cm added height, in order to provide a better sight of the base line. This equipment can also be placed on the raised platform of the starting pontoon (as described in point 16). Competitors can use these equipments on their own risk and need to make sure they are not interfering with other racers while doing so. Senior competitors are NOT allowed to drive from their own raised platforms (e.g. stools or boxes). For the avoidance of doubt: all competitors are allowed to use the raised part of the starting pontoon, as described in point 16).

#### **3.4.3. Allowed number, entries and condition of model**

- 1) Entry of a boat in another class is not permitted. For example a 27cc boat cannot be used in the 35cc class, or an endurance boat cannot compete in an offshore class.
- 2) Each competitor can register two models per class. Only one model can be taken onto the starting pontoon. The competitor cannot change model during a race.

#### **3.4.4. (W) Registration of competitors and models**

- 1) All transponders must be checked at registration. This includes the transponder number and the signal strength. The transponder number has to be written on the outside of the boat.
- 2) Experienced judges/officials should be appointed by the organisers to carry out the registration.
- 3) Sufficient time and enough officials must be allocated to registration to ensure that racing starts on time as planned.
- 4) The following items must be included in the registration list:
  - a) Surname and Christian name of the competitor and their nationality
  - b) Class
  - c) Registration number
  - d) Specification of the radio equipment (frequency, modulation, working frequency, spare crystals, if required)
- 5) A marking (sticker or similar) must be fixed to the hull of each registered model. The marking should not leave permanent stains on the outside of the model. Maximum dimensions of the sticker are 20mm x 20mm.
- 6) The competitor and mechanic passes must be issued by the organiser at the time of registration. Passes in addition to competitors/mechanics will be issued at the organisers discretion.

#### **3.4.5. Opening ceremony**

- 1) Following registration an opening ceremony must take place to officially welcome all competitors to the event and to introduce the main organisers and officials.

#### **3.4.6. (W) Heat list and timetable**

- 1) The official heat lists and timetable (finalised following registration) must be made available to all team leaders the day before racing commences. A copy must also be displayed for all competitors to see, in the vicinity of the race preparation area, the day prior to racing. Heat lists must not be published until after registration.
- 2) Time allowing, B finals are to be included. This will be decided jointly between the organisers and the iMBRA committee at least 2 months prior to the event, enabling competitors to plan accordingly for potential fuel consumption.

#### **3.4.7. Time frames**

- 1) The competitor must be in the vicinity of the preparation area 60 minutes before the start of their heat.
- 2) (W) The competitor must be called to the preparation area approximately 5 minutes before their heat. If the competitor is not within the preparation area when they are called to go onto the pontoon, they will not be able to race.

#### **3.4.8. General rules regarding the start and termination of a race or heat**

- 1) During the competition the competitor is free to move within the clearly marked area allocated by the organiser on the starting pontoon.
- 2) After completion of the race or heat the model must be taken out of the water immediately and radio control switched off.

#### **3.4.9. Cancelling/re-running a race**

- 1) A race may only be re-run at the discretion of the chief judge and/or a voting member of the iMBRA committee. Situations where this may occur include:
  - a) if the safety of a competitor or a member of the public are compromised
  - b) adverse weather conditions impact on the racing
  - c) issues with the lap counting that cannot be resolved

#### **3.4.10. (W) Scoring and announcement of the results**

- 1) Heat results must be displayed by the preparation area within 1 hour of the heat ending.
- 2) At the end of a final the top 4 results should be announced before any competitors leave the pontoon. The verbal announcement is regarded as a provisional result.
- 3) After the completion of the final the results must be displayed within one hour. This is a preliminary result list.
- 4) After the completion of the final the results must be checked, signed by the chief judge and made public within two hours.
- 5) Once the results have been signed by the chief judge and displayed it is no longer possible to make a protest.
- 6) Competitors with a zero result will be recorded at the end of the result list in alphabetical order.

### **3.4.11. (W) Checking the first three placed models**

- 1) As soon as the final is complete all drivers must return their models to the pontoon. It is not permitted to touch the models other than to stop the engine and switch off the radio. Once the results have been announced the top four placed models will be escorted by a judge to the scrutineering area. The first three placed models will undergo thorough scrutineering to ensure they conform to the construction regulations and the engines will be measured for their true capacity.  
Models may be taken to one side and scrutineered at any point throughout the duration of the competition.
- 2) In all classes, with the exception of the 27cc and 35cc classes, preliminary checks after the finals can be done to assess the exact capacity of the engines.
- 3) In the 27cc and 35cc classes the measurement of the cylinder capacity of the first three placed models is done on the basis of the construction particulars after the completion of the finals.
- 4) With internal combustion engines the measurement of the capacity must be done when the engine is cold. A tolerance of + 1% is allowed.
- 5) Cylinder capacity measurements are done as follows:  
The measurement of the cylinder is done with a depth indicator through the glow/spark plug hole. Only after this is the engine opened. The measurement of the bore is done with an inside measurement indicator in the region between the upper level of the exhaust opening and the top dead centre. Two measurements must be taken (approx. 90 degrees opposite each other) and the results averaged.

Calibrators for the measurement instruments must be kept at the competition site.

The checking of the capacity measurements is done from tables or computer print outs. During the qualification heats the start leader can, if they feel appropriate, select three models for capacity checks. The measurement will be taken after the heat when the engines have cooled down. Exceeding the allowed capacity means disqualification from that heat.

After completion of the finals the models placed 1 to 4 will be placed to one side. If no cylinder capacity discrepancies are found within the first three placed models, further checks are not necessary.

- 6) The competitors must make their model available to the appointed judge. The competitors have to open the engine, failure to do so will result in disqualification.
- 7) In the event that the measurement results are not in accordance with the regulations, the respective model will be disqualified. In that case the placing of the following models will improve and they will have to be inspected.

### **3.4.12. (W) Awarding of titles**

- 1) For seniors the World Championship title will be awarded, if a minimum of 10 competitors from 5 different countries have raced in the respective class.

- 2) In case a World Championship for a certain class is held with fewer competitors than described in paragraph (1) and (2), no titles and medals will be awarded in those classes. The achievements of the competitors will be acknowledged by certificates.

#### **3.4.13. (W) Award ceremonies**

- 1) At World Championships the first three placed competitors in each class of juniors and seniors receive a gold, silver or bronze medal and a certificate, which are provided by iMBRA.
- 2) In addition to the first three placed competitors the competitors placed 4<sup>th</sup> – 6<sup>th</sup> will receive a certificate.
- 3) The title, medals and certificates must be presented at a public ceremony. If the organiser is adding sponsored gifts to the awards, care is to be taken to ensure fairness; in particular, in relation to junior competitors.
- 4) The team leader is responsible for providing the organisation with 3 of their countries flags and their countries national anthem to be used within the opening and closing/award ceremonies.

#### **3.4.14. (W) Result list**

- 1) The organiser of the event must, after the completion of the event (ceremony), give one complete result list to each of the participating countries.
- 2) The result list must include the signature of the chief judge.

### **4. Competition requirements**

#### **4.1. (W) Judges**

*The aim of all judges should be to prevent incidents from occurring and to educate drivers with the intention of improving racing for all. Judges may issue multiple warnings for minor driving errors (considered to be infringements of the rules) prior to issuing lap deductions as per the section rules.*

- 1) There must be one chief judge and two assistant judges on the pontoon throughout each race.
- 2) Each judge must have at least 5 years experience as either a competitor or mechanic at international races.
- 3) A person wishing to become a judge can either put themselves forward or be recommended by a fellow racer.
- 4) With regards to the endurance class, whenever possible the judges must only judge one class per day. For example; one set of judges for the 3.5cc class and a different set of judges for the 7.5cc class. The same judges can judge both the 27cc and 35cc classes due to the reduced number of heats. This will help to ensure consistency between races and shorter periods on the pontoon will enable the judges to remain focused and judge to a high standard.

- 5) For the Offshore and Hydro classes the judges should remain on the pontoon for either the morning or the afternoon racing, not both. A full day on the pontoon should be avoided as it is too long and can lead to errors.
- 6) The judges will be responsible for judging and judging alone. A pontoon official will be responsible for starting the race, calling dead boats etc.

#### **4.2. (W) Organisation and officials**

The following roles will need to be fulfilled:

- 1) Pontoon official – to start the race, call dead boats, oversee the rescue boat crew, announce time remaining during the race and announce when the race has ended.
- 2) Noise meter officials x 2. For the endurance classes it is recommended that the officials remain the same throughout the duration of a class. This will ensure consistency throughout. For Offshore and Hydro it is advised that the officials are responsible for either the morning or the afternoon racing, not both.
- 3) Lap scorers, where possible, will only work for the morning or afternoon racing, not both. A minimum of 2 lap scores are required.
- 4) Preparation area officials x 2 - responsible for calling the competitors to the race preparation area, checking competitor numbers, displaying heat lists and race results and keeping competitors up to date with important information.
- 5) Rescue boat crew x 2 - Each country participating in the event must assist with providing rescue boat crews. Depending on the number of registered competitors each country will be allocated a full day, half a day or specific races. The team leader will be informed of their countries allocation following registration and it will be their responsibility to ensure the allocated races are covered.

#### **5. General rules regarding the layout of the course**

- 1) (W) Two different courses will be used:

For the Endurance Class see image 3

For the Hydro and Offshore Classes see image 4

- 2) The competition courses are to be placed, preferably in water sheltered from the wind and clear of debris, including weed, leaves, rubbish etc.

Image 3 – Endurance course

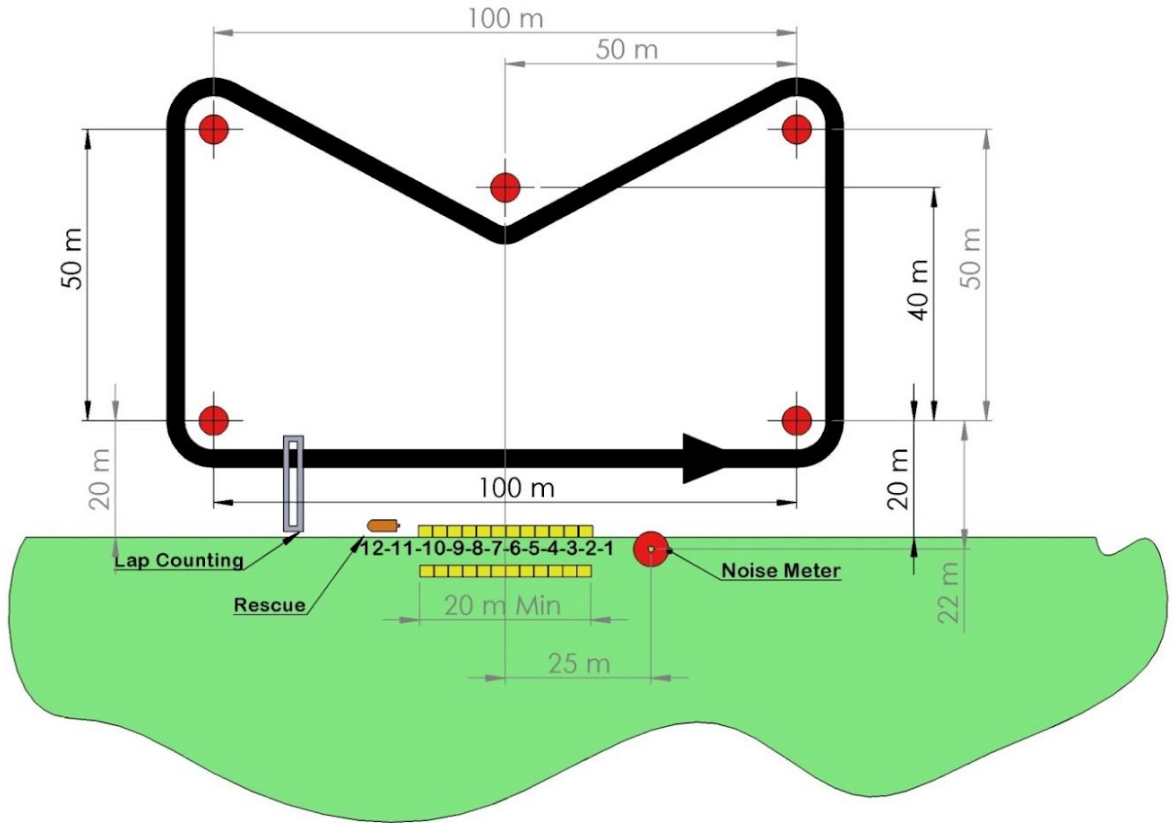
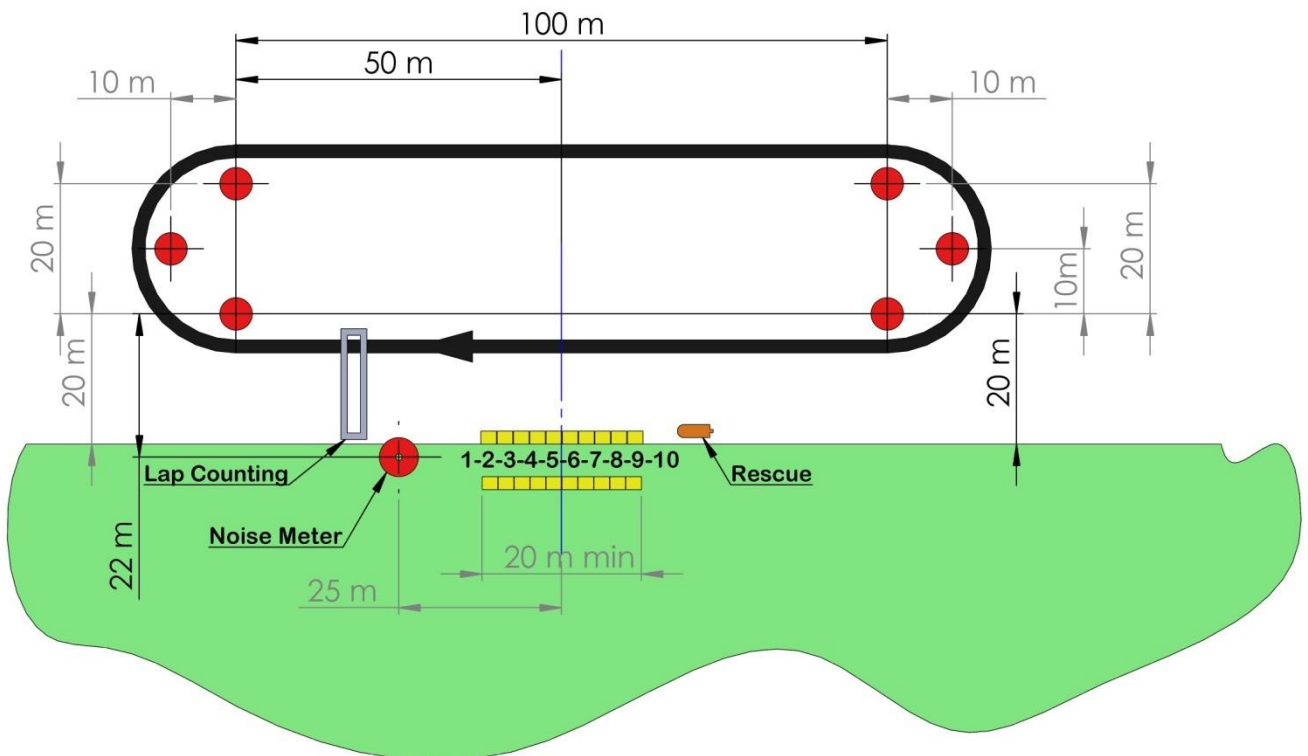


Image 4 – Hydro & Offshore course



## **6. (W) Test lake**

- 1) A test lake must be made available within a 30 minute drive of the competition lake.
- 2) If a separate test lake is not available, adequate time must be allocated on the competition lake.
- 3) A rescue boat with either an outboard or 2 oars must be available.
- 4) Two life jackets must be made available and must be worn by any competitor or mechanic using the rescue boat.

## **7. iMBRA - Protest Policy**

### **7.1. Principal rules**

- 1) A protest can only be lodged, if a competitor is convinced that their race result has been affected by a decision, act or omission made by the members of the competition management, the organiser or by unfair acts of other competitors or teams.
- 2) The final results and awarding of titles and medals can only take place after all lodged protests have been resolved.
- 3) The decision of the chief judge is final. Appeals are not accepted.

#### **7.1.1. Lodging a protest**

- 1) Each protest must be verbally reported to the starting official immediately upon observation of the alleged discrepancy. Within one hour after completion of the race in which the incident occurred, the protest must be lodged in writing to the competition management/organiser. The protest must be written in English.
- 2) The lodging of a protest does not exclude the competitor from further participation in the competition. If the competitor withdraws from further competition on grounds of a lodged protest, they will be disqualified from the whole event. In this case their lodged protest will be rejected.
- 3) If after a verbally lodged protest measures are being taken to correct the situation a written protest will not be necessary. The competitor must be advised prior to the acceptance of the written protest and the protest fee.
- 4) The written protest must contain the following:  
Grounds of protest (respective rules, regulations, acts and where to find them),  
Time and which class the incident occurred in.  
A precise description of the incident, including drawings if appropriate, and the reason for the protest.  
A statement from and names of witnesses involved in the incident who are willing to truthfully answer questions regarding the protest may be submitted.  
The name of the start official with whom the verbal protest was lodged must be included.

- 5) The protest must be signed by the competitor and the team leader of the respective country.
- 6) The protest fee must be paid when the written protest is lodged, or the protest will be null and void.

#### **7.1.2. Handling of protest**

- 1) The jury has to consider an officially lodged protest, from which the protest fee has been paid and give a decision. During the protest negotiation the team leader of the country whose competitor lodged a protest has no voting rights.  
For the purpose of clarification “the jury” consists of the relevant officials in line with the nature of the protest. This may include the judges, lap counting crew, start official, iMBRA committee members and/or race organisers.  
The protest will be discussed, and all evidence analysed by the relevant officials as stated above. Following a thorough investigation, a decision will be made. The chief judge of the race under review will have the final say.
- 2) If during a protest a competitor is deemed to have breached the rules, the jury has to carry out the protest procedure against the accused competitor.
- 3) The competitor who has lodged the protest and the person, against whom the protest negotiations are conducted, have the right to attend the hearing without voting rights. For the protest negotiations the jury can call further witnesses involved in the incident who must provide a truthful account.
- 4) If the protest is successful the protest fee has to be returned to the competitor.
- 5) If the protest fails, the protest fee will remain with the organiser.