



# INTERNATIONAL BIKE CHALLENGE

## Rule Book 2017

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# TRACK RACING AND TECHNICAL RULES

## INDEX

|  |          |  |           |
|--|----------|--|-----------|
| <b>1. Racing Format</b>                  | <b>3</b> | <b>4.4 Accidents / Crashes</b>                     | <b>10</b> |
| 1.1 Races                                | 3        | 4.5 Technical Inspection                           | 10        |
| 1.2 Categories                           | 3        | 4.6 Lap Counting and Timing                        | 11        |
| 1.3 Final Overall Standings              | 3        | 4.7 Racing Regulations and Protests                | 11        |
| <b>2. Event</b>                          | <b>4</b> | 4.8 Penalties and Sanctions                        | 12        |
| 2.1 Event Schedule                       | 4        | 4.9 Official Announcements                         | 12        |
| 2.2 Registration                         | 4        | 4.10 Guidelines regarding Offences                 | 12        |
| 2.3 Competitors' Meeting                 | 4        | 4.11 Time Keeping                                  | 12        |
| 2.4 Free & Timed Practise                | 4        | 4.12 Race Director                                 | 13        |
| 2.5 Qualifying                           | 4        | 4.13 Assistant Race Director                       | 13        |
| 2.6 Finals                               | 5        | <b>5. General Technical Specifications</b>         | <b>14</b> |
| 2.7 Race Interruptions                   | 5        | 5.1 Dimensions                                     | 14        |
| 2.8 Rain Procedure                       | 5        | 5.2 Rider  | 16        |
| 2.9 Material Provided                    | 5        | 5.3 Chassis  | 16        |
| 2.10 Radio Systems                       | 5        | 5.4 Brakes   | 16        |
| 2.11 Lap Counting and Timing System      | 6        | 5.5 Gearbox  | 16        |
| 2.12 Display and Distribution of Results | 6        | 5.6 Tires and Wheels                               | 16        |
| 2.13 Safety                              | 6        | 5.7 Tire Additive / Traction improving Treatments  | 17        |
| <b>3. Track Specifications</b>           | <b>7</b> | 5.8 Transmission                                   | 17        |
| 3.1 Surface                              | 7        | 5.9 Aerodynamics                                   | 17        |
| 3.2 Length                               | 7        | 5.10 Exhaust                                       | 17        |
| 3.3 Width                                | 7        | 5.11 Batteries                                     | 17        |
| 3.4 Podium                               | 7        | 5.12 Fuel  | 17        |
| 3.5 Vision                               | 7        | 5.13 Crash Bars                                    | 18        |
| 3.6 Marking                              | 7        | <b>6. Particular Regulations for each Category</b> | <b>18</b> |
| 3.7 Pits                                 | 7        | 6.1 SuperNitroBike                                 | 18        |
| 3.8 Design                               | 7        | 6.2 SuperBike                                      | 18        |
| 3.9 Outside Barriers                     | 7        | 6.3 CAYABike                                       | 18        |
| 3.10 Inside Barriers                     | 7        |  |           |
| 3.11 Dots                                | 8        |  |           |
| 3.12 Surroundings                        | 8        |  |           |
| <b>4. Race Procedure</b>                 | <b>9</b> |  |           |
| 4.1 Positioning                          | 9        |  |           |
| 4.2 General Starting Procedure           | 9        |  |           |
| 4.3 Marshalling                          | 9        |  |           |

## 1. Racing Format

The International Bike Challenge (IBC), organized by the “IBC Organization Committee (IBCOC)”, is a series of 1/5 scale RC-bike races located in Europe. Competitors from all other continents are also welcome.

### 1.1 Races

For 2017 the following races are planned (final days are shown):

- 2017-03-05 Valencia (ESP)
- 2017-04-09 Verona (ITA)
- 2017-05-28 Kematen (AUT)
- 2017-06-11 Macon (FRA)
- 2017-07-30 Saarbrücken (DEU)
- 2017-08-27 Luxembourg (LUX)
- 2017-09-24 Lostallo (CHE)
- 2017-10-15 Athens (GRC)

### 1.2 Categories

The following categories can participate at the IBC:

- 1/5 Scale “SuperNitroBike”
- 1/5 Scale “SuperBike”
- 1/5 Scale “CAYABike (Come As You Are)” [replaces FutureStock]

If there are less than five (5) competitors in one category, categories might be combined (e.g Caya and SuperNitroBike) with separate rankings for each category. If categories are combined the rules giving less restrictions are usually to be used. An exception is if SuperNitroBike is run together with CAYA. In this case the lean angle limitation and tire restrictions apply to both categories.

If the combination of two (2) categories gives not the minimum number of five (5) competitors all three (3) categories might be combined.

### 1.3 Final Overall Standings

For the final overall standings in each category, the best five (5) races of each competitor out of the eight (8) races are taken into account. The results of each competitor will be added by a point system.

The winner (1<sup>st</sup>) of a race gets one point, the second (2<sup>nd</sup>) gets two points and so on. The point system is based on a maximum of 50 competitors per category. A competitor not starting at a particular race gets 51 points.

After each race the current IBC standings will be published by the IBCOC.

In case of a tie between two competitors at the end of the season, the direct comparison between these competitors is considered regarding the points of the events where both competitors participated. If this leads again to a tie, both competitors will be awarded the same place and the next place remains empty.

## **2. Event**

### **2.1 Event Schedule**

The track surface should be prepared so that good quality practice will be obtained when practice commences. This may be achieved by a spraying and/or cleaning of the track surface, as required. If the track is surrounded by grass, it shall be mowed.

The schedule for each heat of the IBC will be as follows:

|                                |                    |
|--------------------------------|--------------------|
| 1 <sup>st</sup> day (Thursday) | Free Practice      |
| 2 <sup>nd</sup> day (Friday)   | Timed Practice     |
| 3 <sup>rd</sup> day (Saturday) | Qualification runs |
| 4 <sup>th</sup> day (Sunday)   | All final runs     |

If the schedule allows it is recommended to have one last qualification run in each category on Sunday to allow participation at the finals for late arrivals.

### **2.2 Registration**

Final deadline for registration: Saturday 10am. IBCOC may authorise later registration at its discretion, if it can be ensured that each competitor is able to drive at least one qualification run.

### **2.3 Competitors' Meeting**

On each day of the event there is a competitors' meeting at 9am (9:00). The meeting is held by the race director or the IBCOC. If necessary, there will be an additional meeting at 1pm (13:00). The meetings are in English language. The speaker should speak slowly and pause at some times to allow competitors to translate for others competitors who hardly understand English.

### **2.4 Free & Timed Practise**

Thursdays and Fridays the track is open for practice and timed practice respectively.

The duration of all "Practise" runs is twelve (12) or fifteen (15) minutes depending on count of competitors allowing to hold five (5) or four (4) runs per hour.

#### **2.4.1 Free Practise**

It is recommended that each competitor marshals after his free practise run voluntarily for a fair amount of time. The three (3) fastest consecutive laps of any free practise run of a competitor determine the group of the competitors timed practise run.

#### **2.4.2 Timed Practise**

Timed practise will be held in groups where each group marshals the following group. The three (3) fastest consecutive laps of any timed practise run of a competitor determine the group of the competitors qualifying run.

### **2.5 Qualifying**

The Qualifying will be held as "Free Qualifying". The three (3) fastest consecutive laps of any "Free Qualifying" run will determine the start position of any competitor for the finals. There is no need to drive the full duration of the qualification run.

Minimum of four (4) up to eight (8) "Free Qualifying" heats will be run depending on the count of competitors.

The duration of all "Free Qualifying" runs is twelve (12) or fifteen (15) minutes depending on count of competitors allowing to hold five (5) or four (4) runs per hour. A duration of 12 minutes gives one (1) minute preparation and one (1) minute extra time, a duration of 15 minutes gives three (3) minutes preparation and two (2) minutes extra time.

All "Free Qualifying" runs consist of ten (10) competitors up to a maximum of twelve (12) if the track and facilities permit.

## 2.6 Finals

All finals consist of ten (10) competitors. In exceptional cases (for example: eleven (11) competitors in a Category etc.) the race director and the IBCOC are allowed to raise the number of competitors up to twelve (12) if the track and the facilities permit. If there would be less than five (5) competitors in a final run, the finals are evenly extended to up to a maximum of twelve (12) competitors.

Example:      34 competitors  
                  12 competitors      A-Final  
                  11 competitors      B- & C-Final

The duration of each final run is ten (10) minutes with three (3) minutes preparation time and two (2) minutes extra time to finish the run, to return the bike to technical inspection and to reach the marshal position. This allows to run four (4) final runs per hour.

Each final will be held 3 times and the 2 best results count.

The points system will be used for the finals. The winner of a final gets one (1) point, the second gets two (2) points and so on up to ten (10) points for the 10<sup>th</sup> competitor. In the event of a tie regarding laps and overtime in a final, the points will be equally awarded to each competitor and the next competitor not tying will be two points more.

## 2.7 Race Interruptions

In the case of a race which is interrupted for more than sixty (60) minutes for reasons beyond the control of the organizer, the IBCOC will decide whether to cancel or continue the meeting.

In the case of an interruption of a heat the entire heat will be re-run after the "RAIN- BREAK".

In case of a complete cancelling of the Championship the last full driven heat, onwards the first "free Qualifying", of each category is the final result.

## 2.8 Rain Procedure

The Race Director and the IBCOC are jointly responsible for the decision to stop a race in the event of rain.

The Race Director has to announce, for everyone to hear, a thirty (30) Minute "RAIN- BREAK" for all competitors to prepare a rain-bike.

If a heat starts in dry conditions and cannot be completed in dry conditions the Race Director has to stop the heat immediately– see 2.7

On the result sheets the Race Director must mark a heat "WET" when the heat was raced under wet conditions. The Race Director together with the IBCOC will decide in case of doubt.

When weather, time and possibilities permit, the Race Director and the IBCOC may decide to schedule or re-schedule qualification heats to allow those affected by wet conditions to participate in dry conditions.

## 2.9 Material Provided

Bikes will be numbered 1 to 10 (at times up to 12) in each heat. Each bike must have 3 numbers: - one in front, one on the right side, one on the left side. They must be well seen when the bike is in an upright position. These numbers may change after each "Free Qualifying" (re-seeding). The organiser will provide new numbers for a run if needed. Competitors must use numbers provided by the organiser with no modifications.

High-visibility jackets and gloves will be provided by the organization and are available for marshalling at each marshalling point.

## 2.10 Radio Systems

Transmitters and receivers must bear proper CE marking (Europe) or FCC-ID (USA). The declaration of conformity (DoC) must be shown by the competitor on request of the Race Director.

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Transmitter must not be impounded but must be switched off if not in use. There will be random inspections. A switched-on transmitter at the paddocks will give a noted warning.

Any modifications of the transmitter, which are not authorized by the manufacturer, are strictly forbidden. This includes antennas and batteries. Modifications, even when authorized by the manufacturer, shall not void the CE marking (Europe) or the FCC filing (USA).

The use of 27/40/75 MHz AM & FM radio systems may be still used, if the frequency is permitted in the organising country. However, due to the way they operate, a competitor has to report his frequencies to the race director to allow for proper frequency control by the organization.

### **2.11 Lap Counting and Timing System**

Automatic lap counting will be in place for each bike.

Competitors are required to install their own personal MYLAPS transponder into their bikes per the organiser's instructions.

The competitor must ensure that his personal transponder is the right transponder for the lap counting system.

MYLAPS RC4 lap counting system or IFMAR approved equivalent must be used.

A suitable working computer with proper race proven software must be provided to sort lap times, print results from heats and sort final positions from each round of heats within 15 minutes of the completion of the round of heats.

Chronometers must give time to 1/100th of a second, in all cases, the hundreds will be utilised.

In the case of equal results, the following best heat will separate the competitors.

If both the primary and support lap counting systems fail during a qualifying heat or final, the heat or final will be re-run as soon as practicable.

Under no circumstances will any lap score or time, other than those from the official time keeping equipment, be accepted for any purpose to do with the running of the IBC race.

### **2.12 Display and Distribution of Results**

The display of the ranking and lap times of any run (finals, qualification, timed & free practise) will be done in the pits shortly after the run before the next one is finished

Competitors must be given copies of the time lap sheets of their run on request.

At the end of each round results of the general classification will be available.

### **2.13 Safety**

The safety of the spectators is of prime importance and must be considered when laying out track and spectator areas.

The safety of officials, helpers, competitors and accompanying people are of equal importance, but it is assumed that they are more aware of any potential danger.

Track markers must be shaped and placed in a way that prevents bikes from being projected into the public when hit at full speed.

Technical inspection must always include the safety aspects of the bikes. No sharp edges or other protruding parts of bikes that may cause serious injuries in case of an accident are permitted.

First Aid supplies must be available throughout the event (including practice) in case of necessity.

Police and emergency services must have access to all areas, both public and restricted.

An insurance against accidents and legal liability is compulsory. A copy of the insurance certificate must be enclosed with the contract for the event.

### **3. Track Specifications**

#### **3.1 Surface**

Track surface should be unsealed asphalt or coarse finished concrete with smooth joints, if any.

#### **3.2 Length**

The minimum length is 250 metres/820 feet race line. Advised is 300-350 metres/984 feet- 1148 feet.

#### **3.3 Width**

The minimum width of the track is 4.5 metres/15 feet between marking lines.

The maximum width is 6.5 metres/ 21 feet.

The marking lines must be 8-10 centimetres/3-4 inches wide.

#### **3.4 Podium**

Maximum distance from the middle of the competitors' podium to the furthest point of the track is 60 meters/197 feet.

Minimum height of the competitors' podium is 3 metres/9 feet from track level

The podium is at least 10 metres/33 feet long. (10 Competitors)

#### **3.5 Vision**

No obstacles may interrupt the vision from the competitors' podium to all parts of the track.

#### **3.6 Marking**

A broken line may be painted in the middle of the straight to increase vision.

#### **3.7 Pits**

The refuelling and pit area should be clearly distinct and separated from the main track and as close as possible to the competitors' podium.

A fire-extinguisher is mandatory.

Exit from and entrance to the main track is advised to be on a slow section of the track.

Competitors must reduce speed while entering the pit area.

#### **3.8 Design**

Track design must include both right and left turns and must have a straight of minimum 60 metres / 164 feet.

#### **3.9 Outside Barriers**

Outside barriers must provide positive means of stopping a bike when missing a corner or getting out of competitor's control.

The consideration at selection of the outside barriers shall be the protection of the spectators and not the bikes, although, if both can be obtained, it is ideal.

The outside barriers must be at least 40 centimetres/16 inches away from the marking lines of the track.

A solid fence of one (1) meters/3.30 feet in height must be placed behind the outside barriers made from a material to stop an out of control bike.

#### **3.10 Inside Barriers**

Inside barriers must avoid short-cutting of corners or bikes getting on other parts of the track.

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Inside barriers must be positioned and dimensioned to avoid bikes flying over the outside barriers into the public.

Inside barriers must be smooth and must be 20 cm/8 inches away from the marking lines on the track.

### **3.11 Dots**

No dots will be used on high speed sections.

### **3.12 Surroundings**

The inner and outer surroundings of the track should be made of grass or other suitable materials, which slow the bikes down after leaving the track. If materials like concrete are used, the material should be covered with a surface (e.g. paint) giving no traction to prevent short cutting.



## **4. Race Procedure**

It is not allowed to drive a model bike on any other place than the track and the marked pit lane.

### **4.1 Positioning**

During finals, positions will be selected by competitors in order of qualifying position, i.e. No. 1 qualifier has first choice, No. 2 qualifier has second choice, etc. Only one (1) mechanic is allowed per bike.

Mechanic must be positioned under his competitor's position.

The use of all electronic communication devices between competitors and mechanics is forbidden.

### **4.2 General Starting Procedure**

#### **4.2.1 Timed practise**

An audible warning will be given in English language at 1 minute and at 30 seconds during the warm up period. At the starting time an audible and visible signal will be given for a rolling start.

#### **4.2.2 Qualifying**

There must be a 10-minute gap between the end of one round of qualification runs and the start of the next.

An audible warning will be given in English language at 1 minute and at 30 seconds during the warm up period. At the starting time an audible and visible signal will be given for a rolling start.

#### **4.2.3 FINALS**

There must be a 10-minute gap between the end of one round of final runs and the start of the next.

No refuelling allowed on the track only at the pits.

One (1) minute before the start of the final all bikes are called to the start/finish line. From this point onwards no extra laps are allowed. The starter sorts all bikes starting from #1 to #10/11/12 and places them behind the start/finish line one next to another.

From 3 seconds, the counting stops and the start signal must be given by the time keeping between 0 and 5 seconds. The official starting signal will be audible by means of a horn operated by the starter. This signal will also start the timing systems. At the horn the starter begins to push the bikes on the track one after the other starting at #1.

#### **4.2.4 Delayed Start**

As long as the race director has not called the bikes to the starting positions, every participant of a final may request a delay of ten (10) minutes for repairs on his bike. The delay will be granted only once for each final.

The competitor requesting the delay for whatever reason, except an error in frequencies by Race Control, must start from the back of the grid (last position). His starting position is left free.

The track shall be closed to all bikes during the delay period.

When the frequency problem was created by Race Control, the competitor keeps his starting position.

## **4.3 Marshalling**

The marshalling is part of every competitor's heat. Therefore, the competitor's heat will not be counted, if a competitor fails to marshal. After his heat the competitor leaves the podium and deposits his bike and transmitter in the pit lane or if called for technical inspection at the technical inspection. Without leaving the track the competitor occupies his marshal position (Competitor number equals marshal position number. If there are more competitors than marshal positions, competitors without a marshal position shall leave the track or are directed by the race director to special marshal positions.



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In the qualifying the competitors of the running group are the marshals of the following group respect less of a competitor participating in his heat or not. The last group of the day is the first marshal group for the next day. For not marshalling during a qualification run the competitor's best qualification heat is deleted. If a competitor fails to marshal for a second run, the second-best result is deleted as well and so on.

Marshal technique, duties and etiquette will be specified at the competitors briefing at which attendance is mandatory for all entrants.

The marshal has to be on her/his numbered place two (2) minutes before start of the next heat until Race Control indicates that the race is over and all bikes have finished.

Marshals must wear high visibility jackets. Security gloves should be used but they are in personal responsibility of each marshal.

Marshals must recover and launch the machines as instructed at Competitors Briefing. Usually bikes are pushed gently on the track at a certain speed. Bikes must not be dropped or thrown on the track.

Under no circumstances, the marshal is allowed to touch the Bike anywhere other than on the rider. In case that a push in, handled at the rider, is not possible, he must place the bike beside the track and the mechanic has to take care of it.

Marshals are not allowed to repair the bikes beside the track.

**No heat will start before every marshal is in place.**

In the perimeter of the detection loop the marshal should take care that the bike is set in in front of the loop.

Marshals may be penalized for misconduct or late appearing

Closed shoes are mandatory for all marshals. The marshal shall not smoke or/and use his mobile phone during marshalling.

### 4.3.1 CAYA

During a CAYA race marshals must not alter the position of the crash bars and pay special attention to not picking up a bike by the crash bars.

## 4.4 Accidents / Crashes

The Race Director has to inform the competitors if an accident occurs. (This must be a yellow flash-light combined with an audible signal (for example "attention on the straight"), that can be operated by the time-keeping official or the Race Director). Bikes are required to slow down in this section so that they are able to dodge if it's necessary.

Racing will recommence at racing speed following display of a green flag or the official announcement "track is clear". Signals given by flags have to be visible for all competitors.

One mechanic for each competitor or the competitor himself is allowed to enter the track to save the bike. Neither mechanic nor competitor nor marshal are allowed to repair the bike beside the track. The mechanic or competitor may not disturb the racing of the other bikes in the run.

Mechanics or spectators entering the track from outside the pit lane to save a bike will produce a penalty for that particular bike. (Penalties will be given as one lap penalty.). If a spectator intervenes then this bike should remain stationary until touched by the mechanic or a marshal to prevent a penalty.

Closed shoes are mandatory for all mechanics. The mechanic shall not smoke or/and use his mobile phone during a race in the pits.

## 4.5 Technical Inspection

Only Bikes which conform to all regulations will be accepted for racing.

Under all circumstances, it is the responsibility of the competitor that her/his bike is within the IBC

International Bike Challenge Rule Book  
rules during a race meeting.

Technical inspections are carried out randomly or by suspect.

From “free Qualifications” onwards, each competitor leaves the competitors' stand has to bring their bike to the Technical Inspection if its Number is shown at the Blackboard.

At any time, the Race Director may ask the competitors to present their bikes to the Technical Inspector.

A voluntary technical inspection will be done on Thursday during the free practice.

Random inspections will occur on the start line for correct numbering.

No race will be delayed because of non-compliance by a competitor.

Technical inspection may take place when you finish your heat.

Any race damage will be considered.

At the end of finals, all bikes will be impounded and may be inspected.

Any infringement will cause disqualification from that heat.

A second infringement will cause total and immediate disqualification from the entire event. The disqualified competitor will be placed on the last position of the final positions' results and he will be noted as a disqualification.

If a bike is found illegal during Qualifying, semi-finals or final, its result will be made void and the bike must stay in technical inspection until the result is published and the protest time is over.

The number of bikes is not limited (for example Rain-Bike). All bikes used by a single competitor a subject to technical inspection.

#### **4.5.1 CAYA**

After any CAYA run any bike must not be picked up by any competitor or any mechanic. The staff of the technical inspection will pick up the bike carefully by the rider and put it in the measurement device. If a bike's lean angle is out of tolerance, the run will not be counted.

Any bike is subject to technical inspection for the lean angle after each run.

## **4.6 Lap Counting and Timing**

The timekeeping will announce a missing transponder during the warmup laps.

During qualifying or during the final, any bike starting without a lap counting transponder will not be counted.

If a lap counting transponder fails or falls off during a final, the vehicle will not be timed and counted.

Under no circumstances will a heat or a final be re-run due to a bike not having a lap counting transponder or failure of the same. This also applies to a bike not having the correct numbers and placement of these numbers.

## **4.7 Racing Regulations and Protests**

### **4.7.1 Protest against a Competitor or the Organiser**

Protest must be entered by a competitor, in writing, in English language, within ten (10) minutes after the display of the result or after the incident it concerns, with a deposit of 50€ or equivalent.

The moment of protest will be displayed on the result sheet.

The deposit is forfeited if the protest is not upheld and the deposit is returned if protest is justified.

Protests may be handed to the Race Director or an IBC Official.

Protests are processed by the Race Director and, if necessary, by the IBCOC. Protests must be decided immediately.

#### 4.7.2 Requests for Lap Counting Checking

Requests do not need to be written and need no deposit. The competitor will show the time-lap sheet in question (the one given or displayed by the organizer) to the Race Director and will indicate where he thinks an error has been made.

The Race Director will resolve the problem by checking with the second lap counter and, if necessary, with the manual record of stops.

If the request is justified, the result will be modified immediately and the Race Director will advise the competitor in writing, of the result. After checking, if the competitor persists with his request, he will have to present a written protest within ten (10) minutes, including a 50€ deposit.

### 4.8 Penalties and Sanctions

During finals and qualifying's, participants will be allowed to change the bikes providing the bodies are painted in the same color scheme and are right numbered.

Any illegal modification or change made to the bikes which is found during the technical inspection will automatically entail disqualification of the participant.

**EXCEPTIONS:** Tolerances allowed in technical inspection dimensions +-1%.

Any damage incurred during a heat or final will not entail a forced stop or disqualification of the participant except in the following cases:

- loss of a body
- loss of the silencer or its ability to silence the engine
- a bike which becomes dangerous or un-driveable.

The bike in question may re-start after the repairs have been carried out.

All participants must strictly observe the instructions given by the Race Director and IBCOC. The bad sportsmanship and behaviour of any competitor, even outside the official race meeting, which could injure the image and promotion of the sport, may become the object of an official, national or international sanction.

### 4.9 Official Announcements

All official announcements concerning the race must be made in the English language in the pit area, competitors' stand and mechanics' area.

### 4.10 Guidelines regarding Offences

Bad sportsmanship during racing, i.e. impeding progress of other participants, contact with a driving Bike during "stand up rotation" on the track, deliberate short-cutting of corners and reckless driving in general.

Unsportsmanlike behaviour of competitors, mechanics or marshals involved in the racing.

Not doing the Marshalling in right time.

Incorrect use of entry and exit of the pits.

Repairs outside the appointed pit area.

Any combination of three warnings will cause disqualification.

All warnings will be announced in the English language with the words: "*Warning bike number X*".

Each competitor must be able to understand English words and statements.

### 4.11 Time Keeping

The Time-Keeping is responsible for recording all the individual lap times and total laps plus finishing time of all competitors during all heats and finals. She/He is responsible for the classification of the results and for selecting of the finals. The Race Director must verify this classification and selection.

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After the finish of any heat or final, the results of the first and second time-keeping systems are compared by the Time-Keeping and, in case of difference between the two systems, the Time-Keeping investigates both results and makes the decision of the final result.

In case of a request for checking of the results, the Time-Keeping, together with the Race Director, will check on the questioned result and will make the decision.

### **4.12 Race Director**

The Race Director is responsible to follow the schedule of the event.

The Race Director ensures that various tasks under his responsibility are well done, including:

- Time-keeping
- Starts
- Marshalling
- Display of results
- Comments to the public
- Comments to the competitors
- Technical inspection
- Frequency control

He takes urgent decisions or stops a race for safety, rain or any other unforeseen situation.

He is under the authority of IBCOC.

### **4.13 Assistant Race Director**

The Assistant Race Director will represent the host country or organisation and will assist the Race Director to co-ordinate all race matters with host organisation officials.

## 5. General Technical Specifications

The official dimensions in the Technical Specifications are metric.

The IBC is based on the 1:1 scale series:

### „MotoGP“

The optic of the motorcycle must be nearly realistic to a MotoGP bike. The body shell (including rider with legs, arms and helmet) has to be painted or wrapped with realistic decals (wind shield, excluding)

Fairing, body shell and rider parts must be 1/5th scale size.

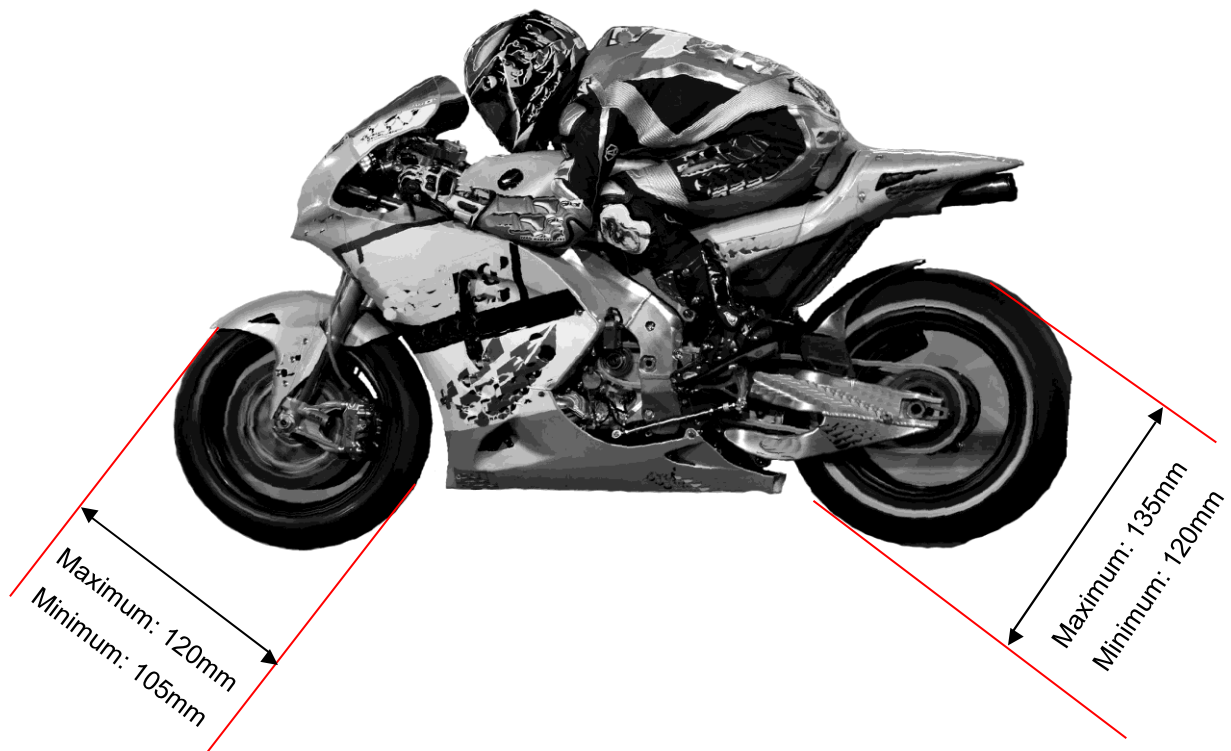
During the championship, the rider appearance must be complete for each race start.

### 5.1 Dimensions

#### 5.1.1 Wheel diameter

Front max: 120mm, min: 105mm

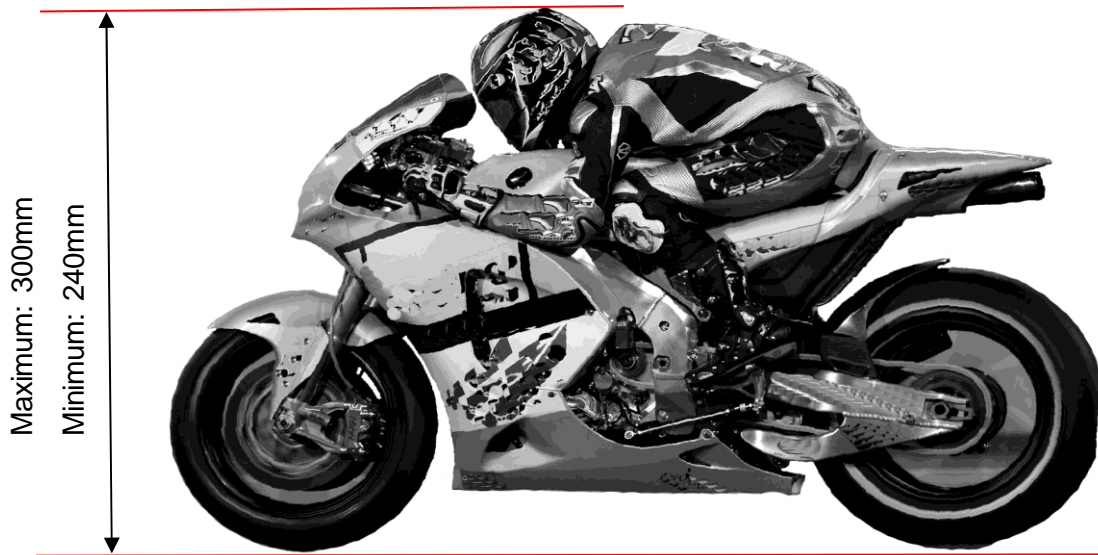
Rear max: 135mm, min: 120mm



#### 5.1.2 Height including rider:

Maximum height: 300mm

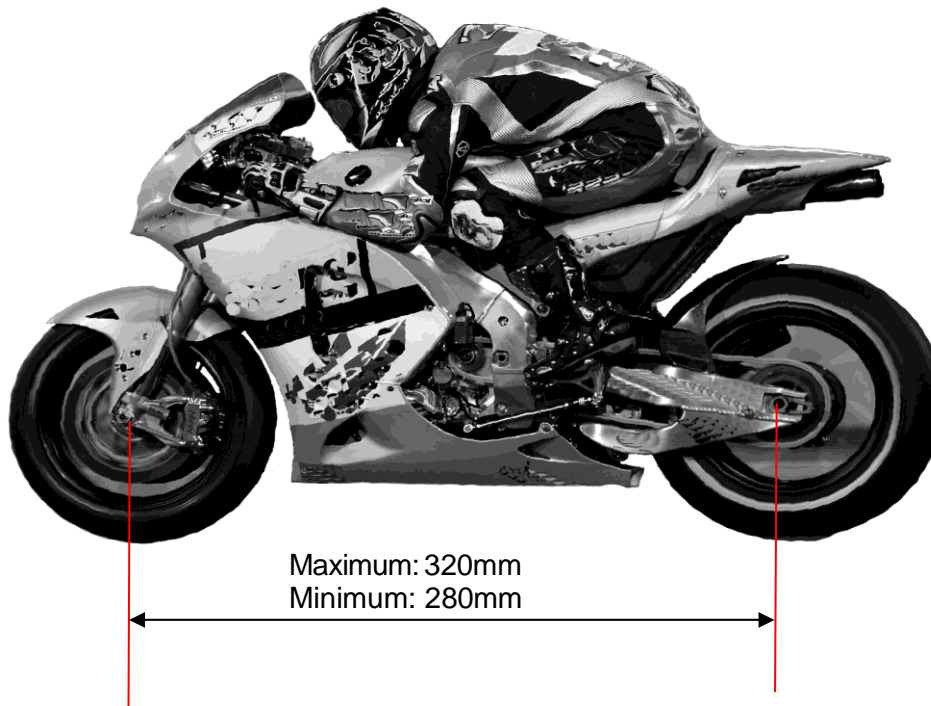
Minimum height: 240mm



**5.1.3 Wheelbase:**

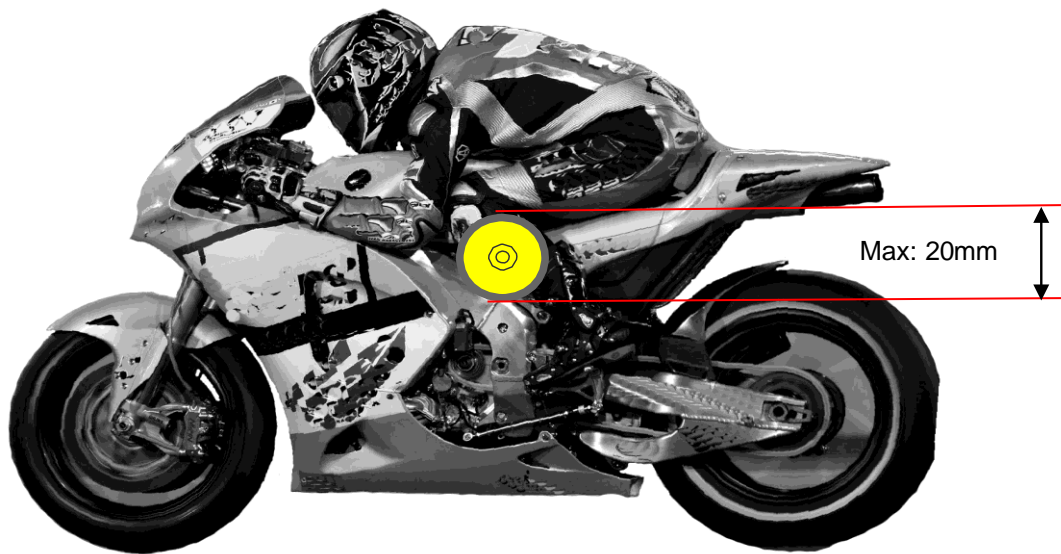
Maximum distance: 320mm

Minimum distance: 280mm



**5.1.4 Crash-bar wheel based system:**

Maximum wheel diameter: 20mm



## 5.2 Rider

It is mandatory to mount the Rider fixed to the rest of the Bike that you can lift it only at the Rider.

The material is basically free but it must be so designed that it does not become unstable when being pushed in.

## 5.3 Chassis

Any type of chassis is welcome if it complies to 5.1.

## 5.4 Brakes

Each bike regardless of category has to be fitted with at least one brake front or rear which can be mechanic or electronic.

## 5.5 Gearbox

Every kind of gear shift innovations posing no safety risks are allowed.

## 5.6 Tires and Wheels

The tires must be specifically designed for 1/5th scale motorcycle use, made from rubber and commercially available. Tires must feature an embossed manufacturer ID on the sidewall. Every type of tire insert is allowed. Foam tires are prohibited. Tire warmers and coolers are allowed for all racing categories.

### 5.6.1 Tire Marking (All categories / All conditions)

Starting at the first qualification run, every competitor has to use marked tires. Tires are marked after their first use in a run where marked tires are mandatory.

### 5.6.2 Superbike and SuperNitroBike

In Superbike and SuperNitroBike categories the use of two (2) sets of front and rear tires is allowed in dry conditions.

### 5.6.3 CAYA

In the CAYA category the use of only (1) set of front and rear tires is allowed in dry conditions.

### 5.6.4 Rain tires

In all categories the use of one (1) set of front and rear tires is allowed in wet conditions. Rain tires are only allowed if the officials call out "rain race".



### 5.6.5 Spare tires

In all categories one (1) spare set of front and rear tires is allowed for dry conditions. One (1) spare tire must only be used to replace the damaged wheel if the officials or technical inspection determine a wheel or tire damage which was not caused intentionally.

## 5.7 Tire Additive / Traction improving Treatments

All tire additives are allowed except if prohibited by regulations of the track.

It is recommended that the chemical components of these products must be harmless for people, environment and cause no track damage.

Liability for the use of tire additives lies only at the user.

## 5.8 Transmission

Chain, belt, shaft or direct drive is allowed.

## 5.9 Aerodynamics

Any aerodynamic spoiler is prohibited.

## 5.10 Exhaust

Each SuperNitroBike must be equipped with an exhaust system and an air filter to reduce the amount of noise generated by the motor.

The maximum noise level for a muffler is 83 dB's, measured at ten (10) meters distance and one (1) meters high for a single bike.

The exhaust system must be fixed under the body shell of the motorcycle to prevent burns of mechanics and track marshals.

## 5.11 Batteries

Every kind of NiMh, NiCd, LiPo and LiFe batteries up to 7.4V nominal Voltage is allowed.

Additional battery packs are allowed to power the receiver, servo or transponder, but must not supply power to the electric motor.

Modification to the original battery case by removal of material or any modification that could be deemed to affect the safety is not allowed.

All LiPo/LiFe packs must be charged with a LiPo/LiFe-capable charger using the industry standard Constant Current/Constant Voltage (CC/CV.) charge profile.

Any competitor found to be charging Lithium based cells using a charger that is not specifically designed for LiPo/LiFe cells or using a charge profile other than the industry standard CC/CV, will be disqualified from the event.

LiPo/LiFe drive batteries MUST be charged in a closed 'LiPo sack' or a comparable box at all times. LiPo sack is defined as a receptacle designed for charging LiPo/LiFe batteries and of a suitable construction to contain a LiPo/LiFe fire. Any competitor found to be contravening this ruling will get a noted warning.

2S LiPo/LiFe batteries may be charged to a maximum of 8.40v (LiPo) resp. 7.40v (LiFe). Any competitor found to have overcharged his LiPo/LiFe batteries compared to above voltages may be disqualified from the event.

Overcharging is a safety hazard and will not be tolerated.

## 5.12 Fuel

Fuel may contain a maximum of 25% of Nitro methane. The specific gravity of the fuel may not be higher a 0.91 grams/cc at 20 degrees Celsius. Measurement will be done with a nitro max 25% in the

## International Bike Challenge Rule Book

pit lane and/or anywhere inside the venue. Any fuel detected heavier than 0.91 will mean that the competitor will have the result deleted from the heat or final where the fuel was found to be too heavy.

The following additives are strictly prohibited; Hydrazine, Hydrogen Peroxide, Toluene, Propylene Oxide.

Random fuel tests will be made at any time during the Championship. Samples and counter samples will be collected for analysis and any competitor found to be using any of the above additives will be disqualified and any race result obtained will be null and void.

### **5.13 Crash Bars**

The crash bars must not be dangerous for the marshals.

The crash bars must be rigidly fixed to the chassis. The use of hinges, springs or dampers is prohibited.

Allowed systems:

- Standards bars (nylon, steel, etc...) with one or two fixing points on each side.
- Wheel based system.  
The material of the wheels must not have grip on the track:
  - **Allowed:**  
wood, steel, hard plastic etc.
  - **Not allowed**  
foam, O-rings, rubber etc.

## **6. Particular Regulations for each Category**

### **6.1 SuperNitroBike**

The bike must be powered by a combustion engine.

### **6.2 SuperBike**

The bike must be powered by an electric motor.

### **6.3 CAYABike**

The bike must be powered by an electric motor.

The lean angle of the bike is limited to 25°. The competitor can check before the race.

For CAYA specific rules, please also refer to: 4.3.1, 4.5.1, 5.6.3.