

INTERNATIONAL FEDERATION OF MODEL AUTO RACING



# IFMAR 1/8th I.C. TRACK RACING AND TECHNICAL RULES

AMENDED APRIL 2010

AMENDED DECEMBER 2012

AMENDED MARCH 2014

AMENDED JANUARY 2017

AMENDED APRIL 2018

AMENDED NOVEMBER 2020

AMENDED JANUARY 2011

AMENDED MAY 2013

AMENDED MARCH 2015

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AMENDED NOVEMBER 2019

**AMENDED March 2023**

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## IFMAR 1/8th SCALE IC TRACK RACING AND TECHNICAL RULES

To be read in conjunction with GENERAL Rules for IFMAR World Championships.

### 2. RACING FORMAT

#### 2.0 PARTICIPANTS

The World Championship will consist of a maximum of one hundred and fifty (150) competitors. A special waiver can be granted by the IC Executive to increase that limit up to one hundred and eighty (180) if lap times are over 20 seconds and rest of facilities can accommodate that superior figure.

#### 2.1 SCHEDULE

The World Championship will be run over a period of eleven (11) days excluding a spare day.

#### 2.2 EVENT SCHEDULE.

Schedule and number of heat/rounds for practice can be changed, depending on number of drivers after or with consultation from IFMAR. 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.

-----	Track open
Tuesday	Track open till 1800 hours
Wednesday/Thursday	The track will be closed to prepare for WC event. Track owner may decide to close longer, but the minimum is 2 days.
Thursday	Track closed, registration 16.00-20.00 hours
Friday	(IPD) Registration from 08.00 till 19.00
	Track open from 08.00-18.00 heats of max 15 registered drivers.
	Saturday, (IPD) Track open from 0800-1800 heats of max 15 registered drivers.
	Sunday Controlled practice, all drivers 10 heats/15 drivers x 6, partly seeding end of the day based on 3 consecutive laps
	Monday, Controlled practice, all drivers 10 heats/15 drivers x 6, partly seeding end of the days based on 3 consecutive laps. Opening Ceremony.
	Tuesday, Timed practice, up to 15 heats/10 drivers x 4, seeding based on 3 best consecutive laps. Heat length may vary depending on number of drivers between 5 and 10 minutes. For each round you get points (0 for 1 <sup>st</sup> place, etc.) 2 out of 4 to count for seeding for Qualifying. IFMAR has the right to make adjustments to the seeding if they feel that this is needed due to unforeseen.
Wednesday	3 rounds of qualifying, qualifying is between 4-7/8 minutes
Thursday	3 rounds of qualifying, qualifying is between 4-7/8 minutes
Friday	Lower finals
Saturday	1/8 ¼ ½ final, prize giving top 3 + banquet/prize giving top 24
Sunday	Spare Day due to special circumstances on Saturday + prize giving

#### Definition for International Practice Day (IPD).

Drivers who have not driven on the track for 12 Months prior, this may include out of town drivers from the host country who have not driven on the track  
The host track has the ability to run events as they wish open to all drivers up to 6 days before registration day. Any drivers who have run on the track either during an event or attending a private practice session cannot use the international practice sessions.  
The host track must keep a register of all drivers who use the track for preceding year, they need only register once.

The punishment for drivers found to be contravening the rule or the spirit of the rule will be determined by IFMAR and the host bloc of the person in question.

This is due to the possibility we may find out long after the event that there has been a contravening of the rule and may need to be addressed retrospectively.

IPD will be open practice, unless the number of drivers is too high and controlling is needed. IFMAR has the right to implement controls or restrict track time if it deems controls are necessary for the benefit of all drivers.

This is due to the possibility we may find out long after the event that there has been a contravening of the rule and may need to be addressed retrospectively.

## **2.3 REGISTRATION**

- Thursday 16.00-20.00.
- Friday from 08.00-18.00.
- Saturday and Sunday from 08.00 to 18.00.

Final deadline for registration: Sunday 18.00. IFMAR may authorize later registration at its discretion. Registration is mandatory to be able to practice. When registration of drivers is carried out, each driver will sign a form which states that he accepts, and will abide by, the published rules of the event.

## **2.4 DRIVERS'/TEAM MANAGERS' MEETINGS**

- 2.4.1. Any drivers' briefings are to be held at the Organiser's discretion where all drivers must attend.
- 2.4.2 A Team Managers' Meeting before the start of the first round of qualifying heats is compulsory. All Team Managers must attend.
- 2.4.3 Further Team Managers' Meetings are recommended but are called at the Organiser's discretion.

## **2.5 TECHNICAL INSPECTION.**

Initial Inspection will be on Saturday, Sunday and Monday from 08.00 until 18.30. A Schedule will be used for checking cars. Drivers or mechanics have to present their cars with bodies and empty tanks. All cars to be inspected and chassis marked before Tuesday.

## **2.6 CONTROLLED / TIMED PRACTICE.**

All drivers will have the chance to participate in frequency-controlled practice on Sunday and Monday. There will be a timed practice for drivers in heats on Tuesday, heats will start at 08.30 and time may vary between 5 and 10 minutes depending on drivers' number. Rolling start can be used in case of 3 lap Qualifying systems.

## **2.7 OPENING CEREMONY.**

An opening ceremony will take place on Monday at 18.30. Competitors will participate in a welcoming procession. Each national team is asked to wear similar shirts. A flag and sign bearing the name of each country will be provided by the organiser for each team. At the opening ceremony a Concourse d' Elegance will be held in one category. The category will be the best "paint job". There will be one (1) trophy for the winner.

## **2.8 QUALIFYING HEATS.**

There will be six (6) qualifying rounds. The length of the Heat may vary between four (4) and seven/eight (7/8) minutes and will depend on number of drivers and time available between sunrise and sun-set. For each round drivers will get points, based on number of laps and time of finishing lap.

Six (6) rounds of qualifying heats will be run as follows:

Wednesday approx. 08.00- 18.00, depending on sun-rise: Rounds 1, 2 and 3

Thursday, Rounds 4,5 and 6

Schedule every day is heat 1-15, 1-15, 1-15. IFMAR reserve the right to change the order.

The heat order must be made clear at drivers briefing.

Wed. day	Wed. day	Wed. day
heat 1	heat 1	heat 1
heat 2	heat 2	heat 2
heat 3	heat 3	heat 3
heat 4	heat 4	heat 4
heat 5	heat 5	heat 5
heat 6	heat 6	heat 6
heat 7	heat 7	heat 7
heat 8	heat 8	heat 8
heat 9	heat 9	heat 9
heat 10	heat 10	heat 10
heat 11	heat 11	heat 11
heat 12	heat 12	heat 12
heat 13	heat 13	heat 13
heat 14	heat 14	heat 14
heat 15	heat 15	heat 15

Thursday	Thursday	Thursday
heat 1	heat 1	heat 1
heat 2	heat 2	heat 2
heat 3	heat 3	heat 3
heat 4	heat 4	heat 4
heat 5	heat 5	heat 5
heat 6	heat 6	heat 6
heat 7	heat 7	heat 7
heat 8	heat 8	heat 8
heat 9	heat 9	heat 9
heat 10	heat 10	heat 10
heat 11	heat 11	heat 11
heat 12	heat 12	heat 12
heat 13	heat 13	heat 13
heat 14	heat 14	heat 14
heat 15	heat 15	heat 15

In each round, drivers will score points based on the laps and times achieved. The number of points awarded to the best driver will be equal to 0, second position 2, points, 3rd position 3 points etc. *Up to last position one by one.*

In every round, in case of a tie, the points will be equally awarded to each driver, and the first driver not to tie, will receive points according to their position in the qualifying list.

For example:

- 1st driver will score 0 points
- 2nd driver will score 2 points
- 3rd driver will score 3 points
- 4th driver will score 4 points
- 5th driver 7 laps, 10:01:00 will score 5 points TIE
- 6th driver 7 laps, 10:01:00 will score 5 points TIE
- 7th driver 7 laps, 10:01:00 will score 5 points TIE
- 8th driver 7 laps, 10:10:00 will score 8 points

In the event of a tied position for the final Qualifying positions when 'best' scores are added together, only the scores (and laps/times) from counting Rounds added will be used to decide the tie. The discarded Round scores (and laps/times) will not be used to decide any tie.

The driver with the lowest individual points within the round scores added will be awarded the tie: (eg. 1+2+3=6 beats 2+2+2=6).

If the tie continues, the next best individual points will be considered: (eg. 1+1+4=6 beats 1+2+3=6).

If a comparison of points fails to break the tie, then the laps & times from each driver's lowest point scoring Round will be compared. The driver with the fastest laps & time from their lowest point scoring **Round will be** awarded the tie. In the unlikely event of these times being equal, then the second-best points scoring round times will be used.

If a driver does not score a time (or has his time disqualified) in any Round, the driver scores points equal to 500.

Overall Qualifying Positions:

Out of six (6) Qualifying Rounds: each drivers best three (3) point scores (lowest) will be added to count for the Overall Ranking.

Out of five (5) Qualifying Rounds: each drivers best three (3) point scores (lowest) will be added to count for the Overall Ranking.

Out of four or three (4/3) Qualifying Rounds: each drivers best two (2) point scores (lowest) will be added to count for the Overall Ranking.

Out of two or one (2/1) Qualifying Rounds: each drivers best one (1) point score (lowest) will be used to count for the Overall Ranking.

All drivers will be entitled to a sub-final.

### 2.8.1 With the points received:

TQ direct into the main final. The Super Pole winner also direct into final starting at No 2 on the final grid.

Super Pole consists of the drivers of Position 2 till 5 in the final ranking after the last Qualifying Round. Each driver will drive the 'super-pole' individually on the track.

**Procedure for Superpole:**

5 minutes warm up for all participants together to get tires down and set.

Everybody back to the pitlane / staging area

Then, one by one 3 minutes warm up for each driver with flying start system, followed by 6 consecutive laps.

(Remark: when warm up time is over and driver cross the starting line, he can only enter in the pits for adjustment of the engine). If any mistake stops or brake the car, this driver lost the rest of time or laps.

The 'superpole' running order will be 5, 4, 3, 2. The driver that scores the fastest lap will also move up straight to the 'Main' Final and take the second position on the starting grid.

All Super Pole drivers to use controlled tires, used or a new set from your bag/box. This is a condition of entry to Super-Pole

Track conditions must be the same for all drivers, if necessary, track must be swept clean.

The 'super-pole' running order will be 5, 4, 3, 2.

The other drivers from the 'super-pole' will start in the semi-finals as per qualifying ranking.

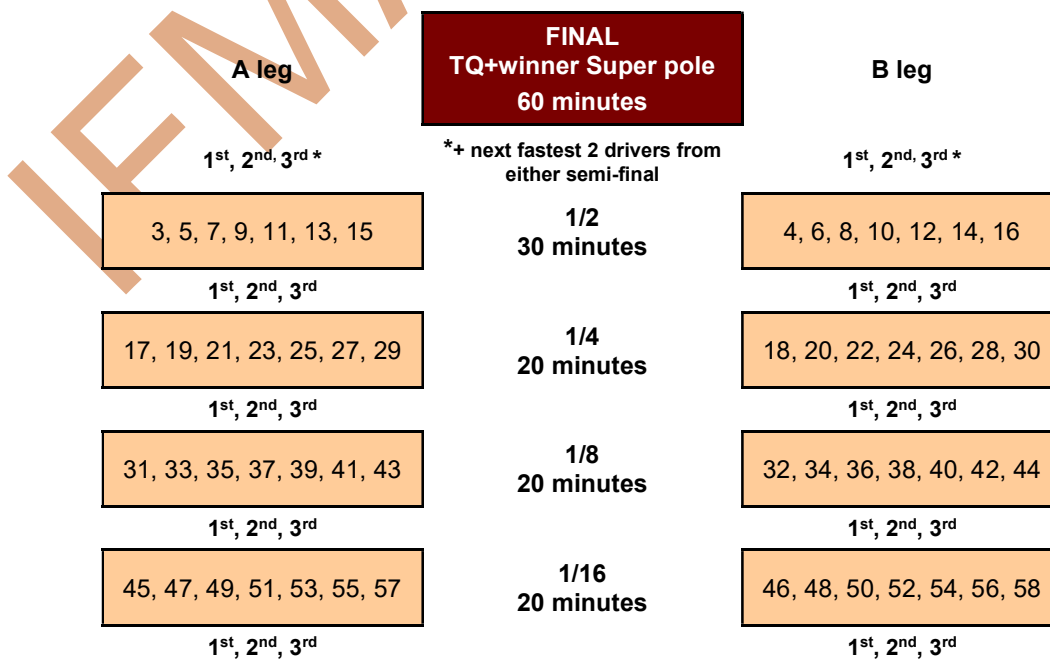
For the remaining 8 places in the final top 3 of the semis and 2 remaining best times. Grid positions 3 till 10 based on lap/times from both semis. TQ and Super pole winner will get track time after the quarter finals, 20 minutes total.

When racing conditions are different (WEATHER...), (see also 2.10.9) in the two semi-finals, the best 4 of each semi-final move up to the main final. In different weather or racing circumstances it will be number 1 from the A semi-final who gets the number 3 and the number 1 from the B semi-final who gets the number 4 etc. *After the practice from the TQ and winner from the Superpole both cars will go into Parc Ferme at technical inspection.*

After the first semi-final all cars will be put in Parc Fermé in technical inspection and they will be released after completion of the technical inspection of the 2nd semi-final. This will give all drivers that proceed to the final equal time for preparation.

## 2.9 FINALS

All sub-finals and final consist of ten (10) drivers, with exception of the last final (max 12 drivers). "Christmas Tree" System for 150 entries.



59, 61, 63, 65, 67, 69, 71 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup>	1/32 20 minutes	60, 62, 64, 66, 68, 70, 72 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup>
73, 75, 77, 79, 81, 83, 85 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup>	1/64 20 minutes	74, 76, 78, 80, 82, 84, 86 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup>
87, 89, 91, 93, 95, 97, 99 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup>	1/128 20 minutes	88, 90, 92, 94, 96, 98, 100 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup>
101, 103, 105, 107, 109, 111, 113 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup>	1/256 20 minutes	102, 104, 106, 108, 110, 112, 114 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup>
115, 117, 119, 121, 123, 125, 127 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup>	1/512 20 minutes	116, 118, 120, 122, 124, 126, 128 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup>
129, 131, 133, 135, 137, 139, 141, 143, 145, 147, 149	1/1024 20 minutes	130, 132, 134, 136, 138, 140, 142, 144, 146, 148, 150

The car numbers for the eight (8) drivers who move up from the semi-finals to the main final are based on the results achieved out of both semi-finals, taking into account the laps and times only.

Friday finals from 09:00 till 17:00 for 1024<sup>th</sup> till 1/16<sup>th</sup> finals and Saturday start at 09:00 hours with 1/8th finals

#### Timetable Friday:

Lower finals from 1/1024 to 1/8 to be run over 20 minutes.

Start time	B leg Finals	Start time	A leg Finals
09:00	1/1024 B	09:30	1/1024 A
10:00	1/512 B	10:30	1/512 A
11:00	1/256 B	11:30	1/256 A
12:00	1/128 B	12:30	1/128 A
<b>13:00 – 14:00 LUNCHBREAK</b>			
14:00	1/64 B	14:30	1/64 A
15:00	1/32 B	15:30	1/32 A
16:00	1/16 B	16:30	1/16 A

#### Timetable Saturday

Saturday: 1/8 & 1/4 finals to be run over 20 minutes.

Start time	B leg Final	Start time	A leg Final
09:00	1/8 B	09:30	1/8 A
10:00	1/4 B	10:30	1/4 A

11:00 – 11:30 Practice for the TQ+super pole winner, 20 minutes max. **After practice both cars go into Parc Ferme.**

11:30 – 12:00 Mandatory press conference or media presentation TQ/Super pole

12:00 - 13:00 Lunchbreak

1/2 finals to be run over maximum 30 minutes.

Start time	B leg Final		Start time	A leg Final
13:00	1/2 B		13:45	1/2 A

### CHAMPIONSHIP FINAL TO BE RUN OVER ONE (1) HOUR

- 15.30 Drivers presentation to the public
- 15.45 Warm-up Practice
- 16.00 Start
- 17.00 End of the race
- 17.10 Unofficial publication of result
- 17.30 End of protest time
- 17.40 Prize ceremony on the track

For the breaks from 1200-13.00 and from 14.30-15.30 the organizer is requested to fill in the program, for instance during lunch break run a 20-30 minutes race for the top ten 40+ drivers that have been eliminated from the competition prior to Saturday.

The press conference and 1 hours lunch break will be utilized to compensate for any delay's encountered during the 1/8 or 1/4 Finals to ensure the start of the semifinals is on time at 13.00 hours.

#### Timetable Sunday:

To be used as spare day to allow for any delay in schedule. Banquet and Awards' presentation to be held on **Sunday night or on Saturday** if the event is held indoors or after approval from IFMAR. At the conclusion of the Banquet and Awards' presentation,

Team Managers will be given a result folder showing the qualification results and the final positions, as a closing report. In case the spare day is not needed to finalize the Final(s), it can be used for a team race between countries, format is up to the race organizer.

### 2.10 RAIN SITUATION

The Race Director will stop the racing if it rains. If there are delays due to weather, re-arrangements will be made as follows:

#### QUALIFYING HEATS

- 1 In case of the interruption of a heat, the entire heat will be re-run.
- 2 In the event of rain, the track must return to similar dry conditions as existed prior to any stoppage before racing can re-commence.

The race director in consultation with the Jury will determine if conditions are suitable and fair to prior to re-commencement of racing.

- 3 If a round of heats is started, it must be completed under the same conditions. If a round is halted due to rain or unforeseen circumstances and cannot be completed, this round will not be counted until the remaining heats in the round can be completed.
- 4 If weather and time permit and there is no time restriction on track use, every endeavour should be made by the Race Director to run as many of the maximum six (6) rounds of heats as possible.
- 5 A minimum of two (2) of the total of six (6) rounds must be completed.

#### CHRISTMAS TREE FINALS

- 1 The lower finals up to the 1/4 finals will not be interrupted due to a wet track or rain.
- 2 In the event of rain during the 1/4 finals, if 50% of the race has been run before the rain, the race is declared. If rain falls before 50% of the race has been run, the results will be kept from the moment of stopping which will be the previous lap when the leading car crosses the finishing line. The new start will be given for the time which remains to complete the final. The two results will be added to give the final and definite placing. If the second start cannot be given for any reason, the results from the first part will be used as the final and definite placing.



- 3 In the semi-finals, if 75% of the race has been run before rain commences, the race is declared. If rain falls in the first 25% of the race, a total re-run will take place. If rain falls between the 25% and 75% mark, the total of the two (2) combined legs will be added together.
- 4 In the event of a semi-final being interrupted in this way, the top four (4) from each semi-final will advance to the final.
- 5 In the event of rain falling before the 25% mark where a complete re-start is required, drivers will be allowed to undertake maintenance on their cars.
- 6 MAIN FINAL - If 75% of the main final has been run before rain commences, the race is declared. In the event of the main final being interrupted by rain where the two results will be added together (i.e. after the 25% mark), drivers may make repairs, re-fuel and change tyres before the re-commencement of the main final.
- 7 If weather will cause the spare day to be used for the quarter finals, semifinals, or the final then the final must commence prior to 15h00 on the spare day. If any final cannot be run safely, as determined by the International Jury, then the qualifying results will be used to determine the finishing positions for that final.

## 2.11 MATERIAL PROVIDED

### 2.11.1 RACE PACKAGE

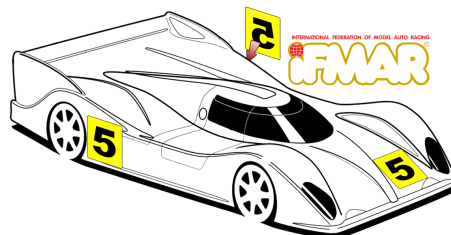
During registration, every driver will be given an envelope which includes: A detailed schedule including starting times of each heat, 3 sets of numbers for the car, 3 sets of numbers for the wing, 1 number for the transmitter, 1 badge for the driver which allows him/her pit access and 1 badge for the mechanic, Furthermore must 1 badge for the country's Team Manager also be issued. Also included in the package there must be a sketch showing the correct positioning of the car numbers on the body shell.

### 2.11.2 NUMBERING OF CARS

Cars will be numbered 1 to 10/12 in each heat. Only the numbers supplied by the organizer will be used on the cars. They may not be cut out.

The car must have 3 numbers: - one on the front, one on the right side, one on the left side. See drawing.

The number on each decal has to be 50 mm high minimum (for instance Arial bold 200), see picture, with a stroke of minimum 9.52mm.



These numbers will change during the qualifying heats (after re-seeding).

The organiser will provide other numbers for altered heats and for sub-finals and final.

Number decals may not be trimmed to eliminate the background.

### 2.11.3 NUMBERING OF THE BODY/WING

The registration number (1-150/180, with number 1 being the reigning world champion) is put on the body/wing. It is the same for the entire competition.

The numbers provided by the organiser must be attached to the right side of the body/wing, the other side being reserved for the competitor's national flag. Every competitor may have his national flag on the left side of the body/wing of his car (when looking from the rear).

### 2.11.4 NUMBERING OF TRANSMITTERS

Every transmitter will have the competitor's number on it. (The same number as on the wing.)

## 2.12 BADGES

### 2.12.1 DRIVERS/MECHANICS/TEAM MANAGERS

Two badges will be given to each competitor, blue for the driver, yellow for the mechanic. The driver's badge must show his passport-size photograph. The designated Team Manager from each country will receive an orange badge upon registration of his drivers (see Rule 4.18).

### 2.12.2 ACCESS TO PITS AND TRACK

Orange badges/team managers:	pits, staging area, special viewing area
Blue badges/drivers:	drivers' stand, pits, staging area
Yellow badges/mechanics:	pits, staging area
Green badges/Press:	pits, staging area, special viewing area
Red badges/race officials:	all areas
Grey badges/IFMAR officials:	all areas

## 2.13 PITS

Places are allocated for the duration of the World Championship. Places are grouped by country and marked by sign plates. Pits are covered. Every competitor will have a 60 x 120 cm (2 x 4 feet) table space.

Pits are equipped with either: 120 V/60 or 220 V/50 AC.

12 V DC (limited) in starting area

## 2.14 TRANSMITTERS

### 2.14.1 TRANSMITTER IMPOUND

With 99% of the drivers using 2.4GHz DSM/DSS systems, NO radio impound needed: HOWEVER, Radio's may only be switched on for drivers that have to run their heat or final and the group that warms-up the engine and is to run the next heat or final. All other Radios must remain switched off in the paddock area, except when maintenance or adjustments are required. All radio maintenance must be carried out in area designated "radio maintenance area". The designated area should be as far away as practical from the drivers' rostrum should be identified during the team managers meeting. At any time, the race director can change this decision to implement a radio impound if they receive complaints about radio problems from at least 3 countries and they feels the request is valid and is required for safety. No delays or protests will be accepted due to radios not being impounded. Drivers who come from the rostrum must give their radio to their mechanics before going to their Marshall position. Not obeying these simple rules can cause a penalty.

### 2.14.2 TRANSMITTER INSPECTION

All transmitters must be marked with a driver identification number and only these transmitters, thus identified, may be used in the event. Transmitters are limited to the manufacturers' recommended voltage. External transmitter battery packs are not permitted.

**2.14.3** Use of 2.4GHz DSM/DSS systems. These systems can be used, if permitted in the organising country. However, due to the way they operate, a driver using such a system cannot ask for any delay in case of radio problems.

## 2.15 LAP COUNTING AND TIMING

See General WC rules

## 2.16 DISPLAY/DISTRIBUTION RESULTS

The display of the positions in a specific heat or final will be done in the pits and in the Team Managers'/Press stand.

At the end of each heat (every 15 minutes) or of the finals, a copy of each competitor's lap sheet will be available for checking and information. Copies of the time-lap sheets of

all cars of the heat or the final will be displayed with the result. At the end of each round, after the 15th heat, results of the general classification will be available. The organizer may decide to use an electronic way to distribute results to ALL team managers

### **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 of the track is 250 meters (820 feet). Advised is 250 - 350 meters (820 – 1148 feet).

#### **3.3 WIDTH**

The minimum width of the track is 4.5 meters (15 feet) between marking lines. The maximum width is 6.5 meters (21 feet).

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

#### **3.4 PODIUM**

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

Minimum height of the drivers' podium is 2.5 meters/8 feet from track level and the podium is at least 10 meters/33 feet long.

#### **3.5 VISION**

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

#### **3.6 MARKING**

A broken line may be painted in the middle of the straight to increase the 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 drivers' podium.

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

#### **3.8 DESIGN**

Track design must include both right and left turns and must have a straight of minimum 60 meters/197 feet.

#### **3.9 OUTSIDE BARRIERS**

Outside barriers must provide positive means of stopping a car when missing a corner or out of driver's control. The consideration at selection of the outside barriers shall be the protection of the spectators and not the cars, 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.

#### **3.10 INSIDE BARRIERS**

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

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

Inside barriers must be smooth and must be 20 centimetres/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 must have grass or other suitable materials, such as concrete. The object of these surroundings is to slow down the car that leaves the track. The car must be able to leave the infield or outfield on its own to minimise marshal assistance.

### 3.13 MARSHAL POSTS

Marshal posts must be available for every 30 meters/100 feet of the track length.

They may not obstruct the vision of the drivers. The posts must be numbered. When a post is located on a dangerous part of the track (i.e. the straight or a fast corner), this post must provide protection for the marshal (wall, tyres, gate, fence etc.).

### 3.14 STARTING LINE

A start-finish line is to be painted across the track indicating the position of lap counting pickup loop; this must be in easy view of the timekeepers. The vision of the starting line may not be obstructed by the mechanics holding the cars or by the starter and starting equipment. The starting line must be located more than 10 metres/33 feet away from the first corner. Ten numbered boxes of 70-100 centimetres/27-40 inches long are painted with the starting line forming the front of all the boxes. The hold line for the mechanics is located 1 metre/3.3 feet behind the boxes.

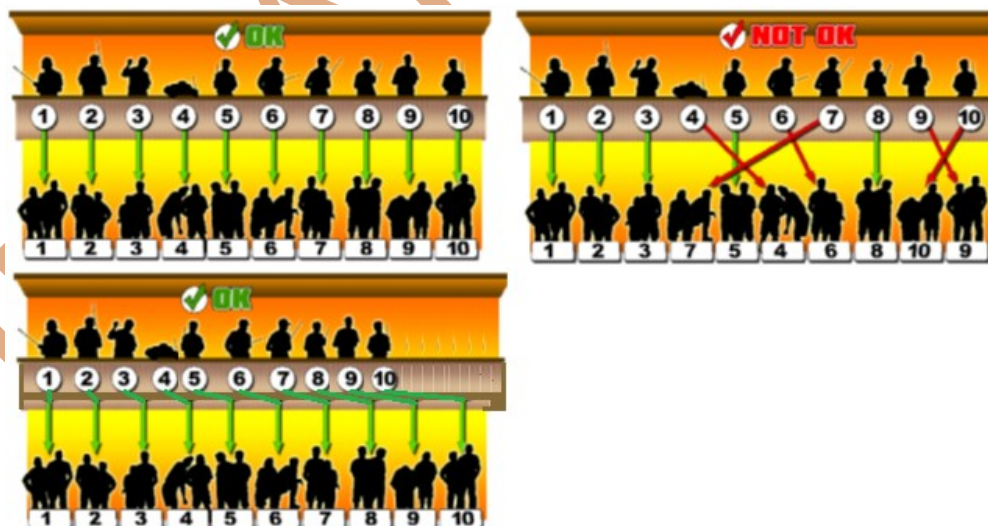
### 3.15 LE MANS START

For the "Le Mans" type starts, 10 numbered boxes are located on the side of the track at an angle of 20-45 degrees with the track, at a minimum of 2 metres/7 feet and maximum 4 metres/14 feet apart. The boxes must measure 70-100 centimetres/27-40 inches long and 30-40 centimetres/12-16 inches wide.

## 4. RACE PROCEDURES

### 4.1 POSITIONING

Mechanics must at all times pit in the position corresponding to the driver. i.e. mechanics of # (1) on the stand must use pit position 1. See drawing.



During finals, the position on the drivers stand will be selected by drivers in order of qualifying position, i.e. No. 1 qualifier has first choice, No. 2 qualifier has second choice, etc.

For all heats and Finals two (2) mechanics are allowed per car. That can be the Mechanic and a team manager or 2 mechanics but a maximum of 2 people.

The only exception to this is an interpreter may be allowed only if there is sufficient space available and neither the driver nor their pit assistants speak enough English as to be able to understand the referee(s) or race control. This person may not assist in any other way, and must seek approval pre-approval from the race director.

#### 4.1.1 RADIO COMMUNICATION IS ALLOWED BETWEEN 1 DRIVER AND 1 MECHANIC.

- a: Only designated public service bands with a maximum power output of 500 mW are allowed.
- b: Radio communication can only be used by the driver and their pit crew, only while their driver is on the drivers' rostrum for the duration of the race or when the driver and mechanics are in the warm-up area.
- c: A single ear piece or one-sided head set type that is not audible to others and does not reduce the ability to hear the referees' calls must be used.
- d: All equipment must comply with the local & country radio communications rules.
- e: Not allowed, any 2.4 GHz radio equipment.
- f: Radio equipment cannot be used at any other time within or around the complex.
- g: Race management has the right to test, decline or withdraw the use of any and all equipment without question.

Note: Rules, b, c & f, do not apply to race management.

#### 4.2 GENERAL STARTING PROCEDURE

4.2.1 HEATS – There must be a 2-minute gap between the end of one heat and the start of the next heat' warming-up.

4.2.2 An audible warning will be given in English language at 1 minute and at 30 seconds

4.2.3 A staggered start timing system will be used during qualifying. The cars will leave the starting boxes or pit lane after the starting signal in the following order (example for 10 cars):

ROUND 1:	1 2 3 4 5 6 7 8 9 10
ROUND 2:	3 4 5 6 7 8 9 10 1 2
ROUND 3:	5 6 7 8 9 10 1 2 3 4
ROUND 4:	7 8 9 10 1 2 3 4 5 6
ROUND 5:	9 10 1 2 3 4 5 6 7 8
ROUND 6:	10 9 8 7 6 5 4 3 2 1

Each car's individual official time will start when the car passes the timing system for the first time. When the first car completes the first lap, all official timing not yet activated will be started.

#### SUB-FINALS and FINALS.

4.2.4 An audible warning will be given in English language at 1 minute and at 30 seconds.

4.2.5 From 30 seconds until 3 seconds the cars may be placed in the starting boxes. If a car is not in the starting box at the 3 second mark, it must start from the pitlane after all cars have started officially.

4.2.6 From 10 seconds until 3 seconds, time is counted down in English language, second by second.

4.2.7 At 5 seconds, the starter will lower the starting flag and at 3 seconds. the flag will be down, touching the ground. At this time, cars must be released by the mechanics who will all step back behind the hold line. The cars must remain entirely within the start boxes with no part of the car touching or overlapping any part of the lines forming the box.

4.2.8 From 3 seconds, the counting stops and the start signal will be given by the starter between 0 and 5 seconds. If the grid is not to the satisfaction of the starter, he may command a re-start, beginning the count down from 30 seconds

4.2.9 The official starting signal will be audible by means of a horn operated by the starter. This signal will also start the timing systems.

4.2.10 Early starts - **ALL FINALS ONLY.**

Early starts (i.e. any car touching the starting line) will be penalised with a stop and go penalty. The duration of this stop and go penalty has to be determined at the Team Managers' Meeting and depends on the lap times. This penalty is issued by the starting official or the time-keeping official and has to be announced immediately after the start. The penalty will be marked on the result sheet.

**4.2.11** Under no circumstances will the race be stopped due to a jumped start.

**4.2.12** Only the Race Director may interrupt the race and order a restart in the event that he considers the starting procedures or the start were not carried out correctly.

**4.2.13** DELAYED START - A ten (10) minute delay can be called only prior to the starter calling the cars to the starting line at the 30-second countdown announcement. Only participants of the quarter-finals, semi-finals or final may request a delay. One only delay will be granted for each final. The track shall be closed to all cars and all engines will be shut off for the duration of the delay period. The driver requesting the delay for whatever reason, except an error in frequencies by Race Control, must start off the back of the grid as directed by race control. The start position will be up to but not more than six (6) meters/19.68 feet behind the last official grid position.

A 10-minute delay period can be reduced only if all drivers competing in the race are in full agreement.

The race schedule start will resume from the two (2) minutes warm up countdown sequence.

### **4.3 MARSHALLING**

- The Organizer is required to supply marshals for all finals. If the organizer cannot supply marshals for qualifying then the drivers will perform the marshalling.
- If the drivers are required to marshal then they will marshal the heat following their racing heat. Drivers in the final heat of a group will marshal the first heat of that group. Substitutes are not allowed except if the driver is physically unable and authorized by the race director.
- Marshals who are not in position prior to the start of the heat will be penalized by the loss of their best qualifying time.
- The organizer must provide marshals for vacant positions for which there are no available drivers.
- The organizer must supply gloves and reflective safety jackets for use by the marshals at their discretion. All marshals must wear close-toe shoes.
- The organizer must provide running marshals to allow the proper marshals to remain at their positions. Running marshals must return disabled cars to the pit area. Only marshals and authorized personnel are allowed on the track while racing is in progress.

### **4.4 TECHNICAL INSPECTION/INFRINGEMENTS**

Only vehicles which conform to all regulations will be accepted for racing. Technical inspection will be done on Saturday, Sunday and Monday. The cars will be examined and, if the car conforms to the rules, the chassis will be marked. At any time, the Race Director may ask the competitors to present their cars to the Technical Inspector.

Random inspection will occur on the start line for numbers, tires, wings and chassis.

No race will be delayed because of non-compliance by a competitor. At the completion of each heat all cars in that heat, whether they finished or not, must be presented for technical inspection. Cars which are not presented for technical inspection at the end of a heat will be disqualified from that heat. Any race damage will be taken into account. At the end of finals, all cars will be impounded and may be inspected for engine size, fuel tank capacity, etc

The use of a non-homologated, modified homologated muffler will constitute disqualification from the event. The disqualified driver will be placed on the last position of the final qualifying results and/or the last position of the final positions' results and he will be noted as a disqualification.

Any technical infringement, other than those concerning engine, fuel tank, weight and muffler will cause disqualification from that heat or final and the disqualified driver's position will be shown as the last position in that heat or final.

All cars must be fitted with a clutch, a braking system and a homologated exhaust pipe.

The engine and fuel tank may be checked at any time.

The volume of the fuel tank will include all fuel piping and filters up to the carburetor.

Following method of measurement will be used:

- take off pressure lines
- fill the fuel tank completely
- remove fuel pipe from the carburetor inlet and make sure fuel line is full.
- connect an air pump to the pressure nipple and measure fuel amount with a calibrated glass. The amount of fuel pressed into the glass will be considered as the total content of the fuel system.
- \* Only one car per driver will be accepted.
- \* The chassis plate of each car will be marked with the competitor's number.
- \* Only one chassis may be used for all qualifying heats and finals. The only exception to this rule will be in the case of a broken or bent chassis which may be changed with the Race Director's approval. The new chassis must be presented to technical inspection for marking before re-building the car.

#### **4.5 FREQUENCIES**

In the case of two drivers using the same frequency and qualifying for the same final, the higher placed driver may keep his frequency and the lower placed driver must change. The time allowed for frequency change will be 10 minutes. The lower placed driver who cannot or will not change his frequency may not take part in the final for which he qualified.

If a driver must change his frequency before the start of a semi-final or a final, due to an organiser's error, he will be allowed 10 minutes. If a driver finds his radio defective or has made an error in the selection of his frequency at the start of a final, the race will not be delayed. For the entire duration of the event, the frequencies in use by all drivers will be known only by the Race Director and each individual driver. All frequency changes must be authorised by the Race Director before the change is made.

The organiser shall not display any driver's transmitter frequency on any heat sheets, result sheet or race schedule to preserve the security of the frequency control systems. Each driver in the main final shall be permitted to change his frequency before the start of the race. Only the Race Director is permitted to know the frequency used by the main finalists.

#### **4.6 CAR NUMBERS AND LAP COUNTING TRANSPONDERS**

Only the numbers supplied by the organizer will be used on the cars. Each participant is responsible for attaching the lap counting transponder to his car. During qualifying, any car starting without a lap counting transponder will not be counted. If a lap counting transponder fails or falls off during the heats, the vehicle will be timed and counted manually, if possible. In this case, the Race Director will verify the results and his decision will be final. During the final, any car without a lap counting transponder will be counted manually by a manual back-up system. Under no circumstances will a heat or a final be re-run due to a car not having a lap counting transponder or failure of the same. This also applies to a car not having the correct numbers and placement of these numbers.

#### **4.7 FLAGS**

- |               |  |
|---------------|--|
| Start         | – green flag or national flag  |
| Finish        | – chequered flag for final only  |
| Blue          | – The car which is blue flagged must allow the car behind him to pass. |
| Yellow        | – Danger on the track - slow down                                      |
| Black & white | – Official warning to the car which is flagged (diagonal)              |

- |       |   |
|-------|---|
| Black | – The car in question must stop immediately in the pits |
| Green | – Track open  |
| Red   | – Track closed. All cars must stop immediately.         |

The black and white diagonal and the blue flags are recommended but are not compulsory.

All flags are under the direction of the Race Director who can delegate and authorise their use.

#### **4.7.1 USE OF THE BLACK FLAG**

- Drivers who impede the progress of other participants
- Unsportsmanlike racing
- Participants driving in a manner deemed to be dangerous by the Race Director
- Cars judged by the Race Director to be in an undriveable or dangerous condition. These cars, after the repairs have been carried out, may be allowed to resume.
- Cars which lose their bodies or silencers must immediately stop and carry out the necessary repairs after which they may restart
- Cars which have been black flagged may re-enter only with permission from a Race Official.

### **4.8 RACING REGULATIONS**

#### **4.8.1 PROTEST AGAINST A COMPETITOR**

Protest must be entered by the Team Manager, in writing, in English language, within 10 minutes after the display of the result or after the incident it concerns, with a deposit of \$50 U.S. or equivalent. The time of display of the result will be written 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 IFMAR Official. Protests are processed by the Race Director and, if necessary, by the Jury. Appeal to IFMAR may be made. IFMAR is not obliged to handle such appeal. Deposit returned if protest is upheld.

#### **4.8.2 REQUESTS FOR LAP COUNTING CHECKING**

Requests do not need to be written and need no deposit. The Team Manager will show to the Race Director the time-lap sheet in question (the one given or displayed by the organiser) 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. The audio/video tape may be used as a last resort, if necessary, for the final result. If the request is justified, the result will be modified immediately and the Race Director will advise the Team Manager, in writing, of the result. After checking, if the Team Manager persists with his request, he will have to present a written protest within 10 minutes, including a \$50 U.S. deposit.

### **4.9 PENALTIES AND SANCTIONS**

During finals, participants will be allowed to change the bodies of the car without the authorisation of the Race Director, providing the bodies are of the same type. In the event of a different body being fitted to the car, the Race Director must give his permission before the participant re-enters the race.

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

EXCEPTIONS:

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 (the spoiler does not count as part of the body)
- loss of the silencer or its ability to silence the engine
- a car which becomes dangerous or undriveable.



The car in question may re-start after the repairs have been affected.

Any car which, by the fault of another driver, is damaged or obstructed during a heat or final cannot, under any circumstances, be allowed to re-run in another heat.

All participants must strictly observe the instructions given by the Race Director, Jury and Referees. 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.

#### 4.10 OFFICIAL ANNOUNCEMENTS

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

#### 4.11 RACE OFFICIALS, REFEREES & TEAM MANAGERS.

As per IFMAR General rules.

### 5. TECHNICAL SPECIFICATIONS

The official measurements in these Technical Specifications are the metric measurements.

#### 5.1 ENGINE

The engine may have a total capacity of not more than 3.5 cubic centimetres/0.214 cubic inches. No tolerance allowed

#### 5.2 TANK

The fuel tank, including filter and fuel pipes up to the carburettor may hold a maximum of 125.00 millilitres. No loose inserts allowed. Any tank found to be illegal (over 125.00 millilitres) after a heat or final shall be removed from the car and inspected for a second time after an initial 'cool down' period of fifteen (15) minutes. This 'cool down' period is only necessary in the case of temperatures above 20 degrees C/68 degrees F.

#### 5.3 DIMENSIONS

Overall dimensions:

Wheel base	270 - 330 mm/11-13 in.
Maximum overall width	267 mm/10.5 in.
Maximum overall height	180 mm/7.5 in. (except aerial, incl. Gurney strip)

#### 5.4 TIRES

For IFMAR World Championships a controlled tire must be used.

In General foam and/or rubber tires may be used. (See also the appendix on the last page). For all official racing under dry circumstances a controlled rim and foam tire from a single brand is mandatory. **One brand, 1 diameter front, 1 diameter rear, 1 shore for front and 1 shore for rear.**

The pre-determined hardness and diameters for the front and the rear will be fixed and the same during the whole event. The tire diameter and hardness must be enough to run a sub final of 20 minutes on a single set.

One type of rim must be used, no special rims with a possibility to change the softness (or hardness). The rim must be used as it comes out of the molding, no extra milling to make it lighter or softer is permitted.

The only addition allowed is the use of a disc to close a rim, however that disc must be mounted by means of a screw to avoid it comes off.

Whenever one set is referred to, this means 2 front and 2 rear tires = 1 set.

The general measurements and hardness for 1/8th IC track tires are described in appendix 1. The final values are made by the IFMAR IC Executive in consultation with the organizer and can depend on the track surface.

Before official racing starts the tires will be checked for shore rate (shore A) and diameter by IFMAR or the organizer to make sure equal tires will be handed out.

Tires will be handed out in the controlled staging area where you also get your fuel.

When tires are handed out and have any visible defects (bad gluing, visible damage to tire or rim) only when returned immediately the effected tire(s) can be exchanged. Production tolerance (including shore hardness) will not be considered as a defect. Tires must be marked with the driver's registration number.

Tires must be used as they are supplied and will be given out and fitted in the controlled area. (No modifications to the rims, except the hole for the axle, no shore meters can be used to select tires). No tire truing allowed. Every driver must buy a minimum of 8 sets of tires. The maximum number of sets to buy is 14 sets (+1 extra set for those who make the main final).

Every time you go racing you come without tires and you will receive your box or bag with their tires. Extra sets for those who brake tires or move up due to the Christmas tree finals must be paid extra to the manufacturer/organizer; All tire movements to be done by means of a ticketing system and administration.

During their race time, drivers can use tires from their box in the controlled area. It is not allowed to exchange tires with another driver

After finishing their race time, drivers must leave their tires on the car, bring car and box to technical inspection and decide to put their tires back in their box after technical inspection. Any tire that leaves the controlled pit, cannot be used in the Official race anymore.

When drivers finish their participation in the event, they can collect their box with used or unused tires from the controlled area and keep them. For free practice, drivers have free choice of tires used, but no treatment is allowed.

From the start of the controlled timed practice, drivers have to use the controlled tires.

Apart from the 8 sets there are also tires needed for the practice, these can be ordered on the entry form. The bag or box supplied by the organizer for the tires must be large enough for maximum 8 sets.

Drivers in Super Pole can use a new set of tires or used sets from their bag in the controlled area. If needed they can buy a new set.

All the "race" tires (first 8 sets) must be paid in advance or during registration (up to the organizer). No payment means no racing. In case of rain or a wet track the race director together with IFMAR officials can allow the use of another tire as the allowed controlled tire. In that occasion the following rule will apply. The use of tire treatment is forbidden. This means that it is forbidden to put any product on your tire with the aim to change the "grip" of the tire. IFMAR has the right to employ any testing methods and or procedures it sees fit to test for treatments. Suspect tires will be confiscated, but approved replacements may be used.

The start of a heat or final will not be delayed due to additional inspection of tires.

Confiscated tires may be held for future testing. IFMAR's decision for inspecting tires is final. If upon further independent lab testing tires are found to contain illegal treatments further action may be taken.

Choosing the brand of tire will be done by the organizer in consultation with IFMAR. The mandatory use of a controlled tire may not be used by the organizer to gain money. A "small" profit is allowed due to the extra costs to use a controlled tire.

Tire performance, Tire wear, Price, Payment conditions (50/50%) and the possibility to send back un-used tires are part of the process to choose a brand.

## 5.5 RIMS

Rims: The rim's diameter must not exceed 54 mm/2.1259 in. An edge to reinforce the rim of 2 mm/0.0787 in. thickness and 3 mm/0.1181 in. height on the inside (car side) is allowed. Flange diameter maximum 60 mm/2.3622 in. Any fixing bolts or other equipment installed in the wheel rim must not extend beyond the exterior of the wheel

rim. The wheel rim must not extend more than 1.5 mm/0.059 in. from the exterior of the tyre.

The use of wheel discs on an open rim is only allowed when they are mechanically secured.

## **5.6 BRAKES**

All cars will be equipped with brakes and a clutch in such a manner that the car may be held stationary with the engine running.

### **5.7.1 MUFFLER**

Homologated mufflers and homologated inlet noise silencer boxes (INS box) must be used.

The maximum noise level for a muffler with INS box is 85 dB's, measured at ten (10) meters distance and one (1) meter high.

IFMAR's definition of a noise level is always final.

The muffler must be of a 3-chamber type minimum.

The shape of the exhaust pipe has to be of a straight circular rotated type. Any other shape like oval, bent or any other form that is not reproducible by a lathe is not allowed.

**5.7.2** The mufflers have to bear their homologation numbers during the entire competition. The mufflers' and INS boxes' measurements (both internally and externally) have to conform with those on the homologation sheet issued by IFMAR.

**5.7.3** Mufflers can be checked and may be cut open at the completion of a qualifying heat and/or final and checked for compliance with homologation drawings

**5.7.4** Mufflers and inlet noise silencer boxes (INS box) may be homologated by ROAR, EFRA, FEMCA or FAMAR up to four (4) months before the event. Mufflers and INS boxes homologated in the four (4) month period before the event will not be included on the IFMAR Muffler and Inlet Noise Silencer Box Lists for that event.

**5.7.5** The IFMAR Muffler List and IFMAR Inlet Noise Silencer Box List will be supplied to each participant with the rule book two (2) months prior to the event. The IFMAR Muffler and Inlet Noise Silencer Box Lists, with detailed drawings, must be available in Technical Control. Additional copies of the IFMAR Muffler and INS Box Lists must be available to each participant, if requested.

**5.7.6** The outlet or tailpipe of the muffler must project horizontally or downward. No upward or vertical exhaust outlets are allowed. The outlet pipe may have a minus tolerance of 2mm/0.078 in. (length).

## **5.8 BUMPER**

The front of the car must be equipped with a bumper in such a manner that it will minimise a wound in the case of it entering into contact with other participants or members of the public. The bumper must be made from a flexible material with all corners and sharp edges rounded off. The contour of the bumper will follow the contour of the body with which it is being used. At no point may the bumper protrude more than 5 mm/0.20 in. in front of the body.

## **5.9 REAR BUMPER**

If a rear bumper is fitted, it must finish no more than 10 mm/0.40 in. behind the rear wheels.

## **5.10 ROLL-BAR**

If a roll-over bar is built in, it must be placed behind the driver or just behind the imaginary driver's position.

## **5.11 AERIAL**

The aerial must be made from a flexible material in such a manner that it will bend completely under the weight of an inverted car. Metallic aerials must have the free end protected.

## 5.12 BODIES

Bodies must be a one-eighth scale reproduction of sports cars or prototype cars in full scale racing participating in FISA's, IMSA's or CANAM's official sport classes.

**5.13** Only bodies that are recognized and approved by IFMAR will be allowed. Bodies may be homologated by ROAR, EFRA, FEMCA or FAMAR up to four (4) months before the event. The combined list from the blocs will be valid for the WC event.

**5.14** The body must be made from a flexible material and painted properly. **The body must have a minimum weight of 145 grams. This includes the gurney strip, ready to race, painted and with stickers. It is not allowed to use extra weight.**

**The use of heat resistant tape or similar inside the body is allowed. Glue or similar adhesives are allowed to strengthen the body. Not allowed is adding weight by means of metal plates or similar.**

**5.15** A realistic PAINTED driver's figure (minimum helmet and shoulders) made to 1/8th scale must be fixed at the normal place in the body. The head may not be amputated to make way for the fuel filler cap or any other element. The driver need not be fitted under a closed body.

**5.16** All bodies must have the front and rear sides cut out for the wheels if the original was so designed. The radius of the cut-out must not exceed the tyre by more than 13 mm/0.5 in

## 5.17 WINDSCREEN

The windscreen must not be cut out. In closed bodies, a hole of maximum 6.5 square centimetres/1 square inches for cooling is allowed to be cut out in the front of the windscreen. The windscreen may be painted in a realistic transparent colour.

**5.18** Side windows and rear window may be opened.

**5.19** No wheels, tyres or rims of the car may extend outside the body shell, as viewed from above.

## 5.20 CUT-OUTS

Cut-outs in the body that were not in the original full-scale version will be allowed for the following:

- 1 The cylinder head and air filter must follow their contour and have a maximum of 20 mm/0.787 in. clearance on all sides.
- 2 The aerial hole will be no larger than 20 mm/0.787 in. in diameter
- 3 The radio switch hole will be no larger than 25 mm/0.984 in. in diameter
- 4 Cut-out for the fuel filler cap will follow the contour of the above piece with a maximum of 20 mm/ 0.787 in. in gap between the body and the filler cap, as viewed from above.
- 5 The hole for the exhaust pipe must follow the contour of the above piece with a maximum of 25 mm/0.984 inch in gap, in any direction, between the body and the exhaust outlet
- 6 The slot for the roll-over bar should be no more than 20 mm/0.787 in. in width. The roll-over bar should not protrude more than 50 mm/1.968 in. above the cylinder head.

## 5.21 SPOILER

A gurney flap which conforms to IFMAR regulations may be fitted.

## 5.22 SPOILER SIZE

Spoiler/wing sizes for sports cars/prototypes:

Overall width of body and spoiler max 267mm (measured on top).

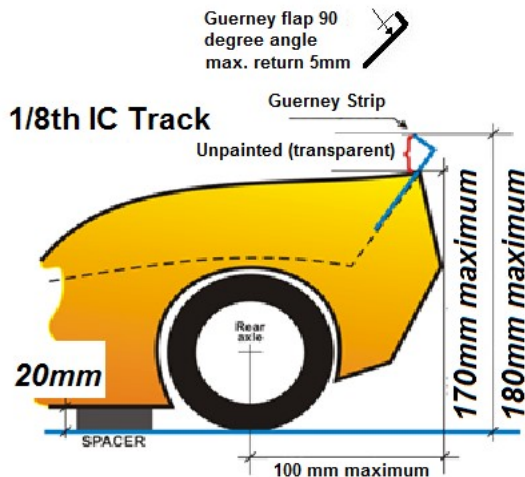
Separate Wings or spoilers are not allowed. Only a Gurney strip directly mounted on the rear of the body is allowed.

No additional items may be fastened to the body exterior other than a rear Gurney strip. All measurements for the wing height will be taken with the chassis placed on 20mm blocks. The Gurney strip return should not be greater than 5mm with a 90 degrees angle.

Maximum height for the body, side and rear wing is 170 mm, with the chassis placed on 20 mm spacer blocs. The maximum overall height including the Gurney strip is 180 mm, the Gurney strip, must be attached directly to the body. No independently mounted wings are allowed.

The maximum overhang behind the rear axle measured from the rear axle centre point is 100mm

If body stiffeners are used, they cannot cause the body to be wider than 277mm at any point.



### 5.23 Fuel:

The Event is organized with controlled fuel. *Fuel or fuels must be commercially available.* Fuel may only contain methanol (methyl alcohol) CAS number 67-56-1, and/or Ethanol (Ethyl Alcohol) CAS number 64-17-5, lubricating oil, a small content of anti-corrosion chemicals and maximum 25% of nitro methane (Cas number 75-52-5) in volume. The specific gravity of the mixture may not be heavier than 0.91 grams/cc at 20°C and standard atmospheric pressure. Measurement will be done with a nitromax 25% in the pit lane and/or anywhere inside the venue. Any fuel detected heavier than 0.91 or containing more nitro as specified will mean that the driver will have the result deleted from the heat or final where the fuel was found to be illegal.

The following additives are strictly prohibited; Hydrazine, Hydrogen Peroxide, Toluene, Propylene Oxide, *but not restricted to other harmful/dangerous products.* IFMAR has the right to take samples for analyzing and penalties can be given to manufacturers that have used other ingredients or more nitro as mentioned in the rules.

*Fuel suppliers are invited to make a submission to the event host for supply.* Each supplier must send a (safety)datasheet with the complete ingredients to IFMAR 2 months before the event

5.23.1 More than one brand of fuels, up to a maximum of 3 brands will be allowed to sponsor an IFMAR 1/8th I.C. On-road World Championship event. If more than one brand of fuel is used, competitors must state their preferences on a selection form at least 6 weeks before the event. Switching to another brand during the event is only possible when there is enough fuel available. Switching is only possible during Qualifying. Every fuel manufacturer that is willing to sponsor an event must be able to supply fuel for the number of drivers that choose that brand + 15%.

**No fuel brand/manufacturer can ask or claim for exclusivity. The organizer should try everything possible to supply at least 2 different brands.**

Safety storage for the different Official fuel suppliers must be secured. The different brands of official fuel must be available within the controlled area in cans of no more than 10 liters per brand. Fuel bottles must be supplied by the fuel manufacturers.

5.23.2 In case no manufacturer is willing to sponsor an event than **two** brands of fuel will be chosen by the IFMAR I.C. Executive together with the race organizer.

As for any fuel in general: A full safety data information sheet must be supplied on request with a breakdown of components, (Not necessarily brand names, i.e. type of oil

castor, not the brand.) IFMAR has the right to check and test fuels for compliance by any method deemed appropriate and may require samples prior to event for analysis.

Suppliers are responsible for the shipping and delivery to the event in accordance with the local laws pertaining to the shipping and handling of such goods.

The event organizer is responsible for all aspects of the safe storage, handling and distribution of the fuel at the event.

Race organizer recommends three (3) types of fuel in order of preference. The race organizer has to forward the recommendations to the IFMAR I.C. Section Chairman six (6) months before the event. The final decision will be made three (3) months before the event by a majority vote of the IFMAR I.C. Executive and all Blocs will be notified of the decision.

**5.23.3** The recommended types of fuel must be commercially available at the time of the organizer's recommendations, (six (6) months prior to the event and remain available up until the commencement of the event

**5.23.4** An amount of up to **\$US60 must be paid** to the organizer to cover for official event fuel or fuels in case the fuel is not sponsored.

**5.23.5** Practice: For practice and pit running purposes only, all competitors must be able to purchase at the event can's from either 2.5/4 or 5 liters or one gallon) of the official fuel at standard commercial rates.

**5.23.6** Racing: At the commencement of official qualifying, the controlled fuel must be used for running on the track. This fuel is to be maintained by the organiser, in association with the IFMAR representative, within the controlled pitlane area. This controlled fuel must be identical to the fuel sold to the competitors for the practice period

**5.23.7** All mechanics, team managers and cars will be checked for compliance to the rules when entering the controlled pit area, i.e. no fuel, no fuel bottles and empty fuel guns may be brought into the pit area and cars must have empty tanks when entering.

Each driver and mechanic have to wear closed toe shoes in the "hot pit-area", refuelling pit and on the track.

Upon entering the pit area, it is the mechanics responsibility to collect a designated fuel brand bottle and fill the bottles from the fuel containers provided in the pit area if they have not been filled by the organisers for both heats and finals.

**5.23.8** At the completion of the heat/final, all fuel bottles must stay in the controlled area.

**5.23.9** At no time may fuel bottles, fuel guns or containers of fuel be removed from the controlled pit area once official racing has commenced.

**5.23.10** Any infringement of these rules by a mechanic/team manager/driver or any associated person will cause that driver to be excluded from the event. Further punishment to be determined by IFMAR, such as a ban from future international racing.

**5.23.11** Controlled Pit Lane Area: It is suggested that the organiser build this area in a way that eliminates opportunities for contact with persons outside the controlled pit lane area.

**5.24** The minimum weight limit of the cars is **2350 grams/5,181 pounds**. The weight limit will be checked with the car being ready to race but with empty fuel tank and with timing transponder installed. The weight will be checked by a set of digital electronic scales and can be done at any time during the meeting, i.e. before the start of a heat, sub-final or final or after the end of either. An approved test weight must be provided for checking calibration of the digital electronic scales.

**5.25** The car shall be measured for the width by placing it on a baseboard equipped with two side rails of 25.4 mm/1 in. in height spaced 267 mm/10.5 in. apart, constructed in such a way that the car can roll freely between them. Base board and rails must be constructed of high-quality material, suitably stiffened to prevent distortion. The car must roll freely between the rails with any steerable wheel set in the straight-ahead position, irrespective of the compression or extension of the suspension.

The car shall be measured for length and height in a similarly constructed box of internal dimensions 637 x 267 mm/25 x 10.5 in. which includes provision for checking the

maximum height. Measurement of the wheel base may be made by simple measurement of axle centre distance but the Race Director should be prepared to make more exact checks in case of doubt or protests. It is suggested that the wheels are removed and the wheel spindles firmly placed on V-blocks whilst accurate measurements are made.

It is the responsibility of the driver to ensure that his car complies with the regulations at all times it is on the track and the organiser may check any car, at any time during the championship, for compliance with the regulations. On checking immediately after a race, if a car is found to be under the minimum weight or has incorrect dimensions, positive proof of race damage may prevent disqualification.

**5.26** The maximum carburettor size will be 9.00 mm/0.35 in.

**5.27** Technical restrictions:

**Not allowed:**

4-wheel brakes (no independently controlled braking on the front wheels is allowed)  
liquid cooled engines  
hydraulic systems  
more than 2 servos  
no more than 3-speed transmissions.

**5.28** Driver Aids – The use of traction control devices, active suspension devices and any steering control aided by gyroscopes/G'-force sensors is strictly forbidden. The use of on-board data recording sensors or data transmission devices is not permitted. It is the object of this rule to ensure that the IFMAR 1/8th I.C. Circuit World Championship be a test of driver skill.

**NEW**

**APPENDIX 1 (see 5.4 tires)**

The diameter and hardness of the controlled tire is in General:

Front, diameter 69mm, 32 shore

Rear, diameter 76mm, 35 shore

The above dimensions and harness are the recommended starting reference point only. The final diameter and hardness of the controlled tire will be determined consultation with the organizer, after testing under local conditions have been taken into consideration.

**FINISH.**

**6. IFMAR ASSOCIATED PLATINUM MEMBERS.**

IFMAR would like to thank its Platinum members for their membership.

SURPASS HOBBY / ROCKET-RC



**ROCKET-RC**

