

INTERNATIONAL FEDERATION OF MODEL AUTO RACING



IFMAR 1/10th I.C. TRACK RACING AND TECHNICAL RULES

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SECTION TWO - RACING FORMAT

To be read in conjunction with Section 1. GENERAL Rules for IFMAR World Championships

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 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 authorise 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.

2.3 EVENT SCHEDULE

Track open

Friday Track open

Saturday to Thursday The track will be closed.

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, seeding end of the day based on 3 consecutive laps

Monday Controlled practice, all drivers 10 heats/15 drivers x 6, 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 1st 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 5-10 minutes

Thursday 3 rounds of qualifying, qualifying is between 5-10 minutes

Friday Lower finals

Saturday 1/8 1/4 1/2 final, prize giving top 3 + banquet/prize giving top 24

Sunday Spare day for special circumstances on Saturday + prize giving

Definition: 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 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.

2.4 DRIVERS' AND TEAM MANAGERS' MEETINGS

- 2.4.1 Any drivers' briefings are to be held at the Organiser's discretion when 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

Will be on Sunday and Monday from 08.00 until 18.30. Drivers or mechanics have to present their cars with bodies, empty tanks, a bottle of fuel and transmitters.

2.6 CONTROLLED 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 Tuesday 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. Concours d'Elegance will be held at the Opening Ceremony and judged in two (2) categories, i.e. best paint job and best 1/10th scale replica. There will be one (1) trophy for each category.

2.8 QUALIFYING HEATS

There will be six (6) qualifying rounds. The length of the Heat may vary between five (5) and ten (10) minutes and will depend on number of drivers and time available between sunrise and sunset. 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 drivers 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. Position 2 till 5 go into a final ballot called "Super Pole", after the last round of Qualifying. Each driver will drive the 'super-pole' individually on the track, for 6 consecutive laps excluding a warm-up from approx. 2 minutes on controlled tires (from last round). IFMAR reserve the right to issue or demand replacement tires for any reason without notice. This is a condition of entry to Super-Pole

The 'super-pole' 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. 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 semies. TQ and Super pole winner will get track time after the semies, 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 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.

A leg	FINAL TQ+winner Super pole 60 minutes	B leg
1 st , 2 nd , 3 rd *	*+ next fastest 2 drivers from either semi-final	1 st , 2 nd , 3 rd *
3, 5, 7, 9, 11, 13, 15 1 st , 2 nd , 3 rd	1/2 30 minutes	4, 6, 8, 10, 12, 14, 16 1 st , 2 nd , 3 rd
17, 19, 21, 23, 25, 27, 29 1 st , 2 nd , 3 rd	1/4 20 minutes	18, 20, 22, 24, 26, 28, 30 1 st , 2 nd , 3 rd
31, 33, 35, 37, 39, 41, 43 1 st , 2 nd , 3 rd	1/8 20 minutes	32, 34, 36, 38, 40, 42, 44 1 st , 2 nd , 3 rd
45, 47, 49, 51, 53, 55, 57 1 st , 2 nd , 3 rd	1/16 20 minutes	46, 48, 50, 52, 54, 56, 58 1 st , 2 nd , 3 rd
59, 61, 63, 65, 67, 69, 71 1 st , 2 nd , 3 rd	1/32 20 minutes	60, 62, 64, 66, 68, 70, 72 1 st , 2 nd , 3 rd
73, 75, 77, 79, 81, 83, 85 1 st , 2 nd , 3 rd	1/64 20 minutes	74, 76, 78, 80, 82, 84, 86 1 st , 2 nd , 3 rd
87, 89, 91, 93, 95, 97, 99 1 st , 2 nd , 3 rd	1/128 20 minutes	88, 90, 92, 94, 96, 98, 100 1 st , 2 nd , 3 rd
101, 103, 105, 107, 109, 111, 113 1 st , 2 nd , 3 rd	1/256 20 minutes	102, 104, 106, 108, 110, 112, 114 1 st , 2 nd , 3 rd
115, 117, 119, 121, 123, 125, 127 1 st , 2 nd , 3 rd	1/512 20 minutes	116, 118, 120, 122, 124, 126, 128 1 st , 2 nd , 3 rd
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.

Timetable Friday:

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

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
13.00 – 14.00 LUNCHBREAK				
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.

11:30 – 12:00 Mandatory press conference or media presentation with 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 MAXIMUM (1) HOUR

15.30 Drivers presentation to the public

15.45 Warm-up Practice

15.58 Trial start

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 Age 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 semi finals is on time at 13.00 hours.

Timetable Sunday:

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 indoor's 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 teamrace 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.

2.10.1 In case of the interruption of a heat, the entire heat will be re-run.

2.10.2 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 Jury will determine if conditions are suitable and fair to prior to re-commencement of racing.

2.10.3 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.

2.10.4 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.

2.10.5 A minimum of two (2) of the total of six (6) rounds must be completed.

CHRISTMAS TREE FINALS

2.10.6 The lower finals up to the 1/4 finals will not be interrupted due to a wet track or rain.

2.10.7 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 placings. If the second start cannot be given for any reason, the results from the first part will be used as the final and definite placings.

2.10.8 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.

2.10.9 In the event of a semi-final being interrupted in this way, the top three (3) from each semi-final will advance to the final.

2.10.10 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.

MAIN FINAL

2.10.11 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.

2.10.12 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 (the number on each decal to measure not less than 57.15 mm/2.25in. high x 38.10 mm/1.5 in. wide with a stroke of 9.52 mm/.375 in.), 3 sets of numbers for the wing, 1 number for the transmitter, 1 badge for the driver, 1 badge for the mechanic and 1 badge for the country's Team Manager will be issued. Also included in the package there must be a sketch showing the correct positioning of the car numbers on the bodyshell.

2.11.2 NUMBERING OF CARS

Cars will be numbered 1 to 10 in each heat. Each car must have 3 numbers: - one on the front one on the right side one on the left side. These numbers will not change during the qualifying heats. The organiser will provide other numbers 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, 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 must 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 AND 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 4.22).

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. Limited quantity of transformers will be available, 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 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

Automatic lap counting, with cumulative and split lap times, will be in place for each car. Competitors are required to install a small transponder into their cars according to the organiser's instructions. An audio/video tape recording may be made for the purpose of future reference, disputes and or promotion.

Every competitor is allowed to use his own AMB/MyLaps compatible personal transponder if the lap counting officials are informed and agree.

The driver has to ensure that his personal private transponder belongs to the marked chassis and is fitted in a proper way.

Significant stops (refuelling, tyre changes, crashes, etc.) will be noted with times of stop and restart. This record might not include every incident, however, its intent is to verify incidents, whenever possible.

AMB lap counting system or IFMAR approved equivalent must be used in duplicate. A suitable working computer with proper race proven programmes 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 is 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 an IFMAR race.

2.16 DISPLAY AND DISTRIBUTION OF THE 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.

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 200 metres/656 feet. Advised is 240-300 metres/787 - 984 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 drivers' podium to the furthest point of the track is 60 metres/197 feet. Minimum height of the drivers' podium is 2.5 metres/8 feet from track level and the podium is at least 10 metres/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 metres/164 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 dangerous part of the track (i.e. the straight or a fast corner), this post must then provide protection for the marshal (wall, tyres, gate, 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 10.00 metres/33.00 feet away from the first corner. Ten numbered boxes of 70.00-100.00 centimetres/27.00-40.00 inches long are painted with the starting line forming the front of all the boxes. The hold line for the mechanics is located 1.00 metre/3.30 feet behind the boxes.

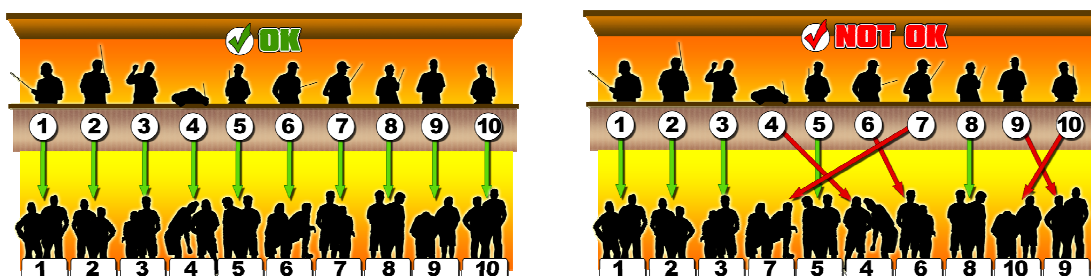
3.15 LE MANS START

For the "Le Mans" type starts, ten (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 2.00 metres/7.00 feet and maximum 4.00 metres/14.00 feet apart. The boxes must measure 70.00-100.00 centimetres/27.00-40.00 inches long and 30.00-40.00 centimetres/12.00-16.00 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, 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 from the race director.

Radio communication is allowed between Driver and Mechanic.

- Only designated public service bands with a maximum power output of 500 mW are allowed.
- Radio communication can only be used by the driver their pit crew, only while their driver is on the drivers' rostrum for the duration of the race.
- 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.
- 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 five (5) minute gap between the end of one heat and the start of the next. Also a minimum of three (3) minutes must be allowed between the issuance of the transmitters and the start of the heat.
- 4.2.2 An audible warning will be given in English language at one (1) minute and at thirty (30) seconds.
- 4.2.3 A staggered start timing system will be used during qualifying. The cars will leave the starting boxes after the starting signal in the following order:

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 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 one (1) minute and at thirty (30) seconds.
- 4.2.5 From thirty (30) seconds until three (3) seconds the cars may be placed in the starting boxes. If a car is not in the starting box at the three (3) second mark, it must start from the pitlane after all cars have started officially.
- 4.2.6 From ten (10) seconds until three (3) seconds, time is counted down in English language, second by second.
- 4.2.7 At five (5) seconds, the starter will lower the starting flag and at three (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 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 start (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 1/8th, 1/4th, semi-finals and/or final may request a delay. One only delay will be granted for each final. The track is 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 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) minute 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 one minute 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 was no available drivers.
- The organizer must supply gloves 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

Only vehicles which conform to all regulations will be accepted for racing. Technical inspection will be done on 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, tyres, 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 carburettor.

Following method of measurement will be used:

- take off pressure lines
 - fill the fuel tank completely
 - remove fuel pipe from the carburettor 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 and the fuel tank 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 ten (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 ten (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 organiser 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

For:

- 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 OR THE ORGANISER

Protest must be entered by the Team Manager, 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 U.S. or equivalent. The protest can only be made on behalf of a driver. 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 ten (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 with the authorisation of the Race Director, providing the bodies are of the same type and painted in the same colour scheme. 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:- Tolerances allowed in technical inspection for fuel tanks.

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 effected.

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 OFFICIALS - REFEREES

4.11.1 One IFMAR Referee will be appointed by IFMAR. Approved travel and accommodation expenses will be paid for by IFMAR, EFRA, ROAR, FEMCA and FAMAR equally. The IFMAR Referee will be supported by two (2) appointed deputy referees, one nominated and paid for by the host Bloc and one nominated and paid for by the host country's association (see General Rule 1.12). They must be experienced and unbiased people with a good knowledge of the English language and the current IFMAR rules and will have acted as a referee at least on national level before.

4.11.2 The main task of the Referees is to observe the racing and, in particular, the good sportsmanship during the racing. They will ensure that the current rules are observed by everyone.

4.11.3 Referees may be called for information by the International Jury when a meeting is called by the Race Director.

- 4.11.4 Referees must be provided with an area from where all parts of the track, the drivers' rostrum and refuelling area can be observed.

The place must be separated from the drivers' area to ensure a quiet and undisturbed working area. Protection (walls, roof, etc.) must be given against all weather conditions. The place must be equipped with a minimum of three (3) chairs, a table and a monitor connected to the lapcounting system to show the race order.

There must be a separate communication system with a microphone and speakers direct to the drivers' rostrum and the pitlane to enable Referees' instructions to be heard only by the drivers and the mechanics in the pitlane. N.B. This system is to be totally separate from any public address system used for announcements.

The organiser is responsible for providing the Referees with lunch, refreshments and a ticket to the Awards' Banquet.

4.12 REFEREES' DUTIES

- 4.12.1 At all time, during qualifying heats, two of the Referees present will be watching and observing the racing from start to finish.
- 4.12.2 During finals, all three Referees will observe the racing from start to finish.
- 4.12.3 During qualifying, the Referees work on an alternative relief schedule.
- 4.12.4 Only Referees on duty are authorise to make decisions and to issue warnings and instructions.
- 4.12.5 A Referee may take action after an initial warning but, in all cases, three (3) warnings means automatic disqualification from the event. Any appeal against the Referee's decision must be brought before the International Jury accompanied by a protest fee.

4.13 GUIDELINES REGARDING OFFENCES

- 4.13.1 Bad sportsmanship during racing, i.e. impeding progress of other participants, deliberate slowing down or walling of another car, deliberate short-cutting of corners and reckless driving in general.
- 4.13.2 Unsportsmanlike behaviour including language, actions or behaviour that is deemed unacceptable being exhibited by either the driver, their mechanics team managers or support persons.
- 4.13.3 Incorrect use of entry and exit of the pits.
- 4.13.4 Repairs and refuelling outside the appointed pit area.
- 4.13.5 Mechanics going onto the track during the race.
- 4.13.6 Any combination of three warnings will cause disqualification.
- 4.13.7 Instructions may also be given by the Referees but they do not constitute a warning. Sample of instructions follow under numbers 8 and 9.
- 4.13.8 Cars that do not conform to the regulations before the start is given or during the race, (i.e. loss of body-shell, exceeding noise rules due to loss or damage of the silencer).
- 4.13.9 Cars that are in an undriveable or dangerous condition due to damage or malfunctioning of the car (one instruction).
- 4.13.10 Starting procedure, i.e. writing down early starts and, if necessary, reporting to the Time Keeper. The Time Keeper and the Starter are first responsible to issue starting penalties (one lap penalty). In the event of an early start not being observed, it may be called and noted by the Referee.
- 4.13.11 It is not the duty or the responsibility of the Referees to check if the cars conform to the technical rules. This is always the responsibility of the Technical Inspector.
- 4.13.12 All warnings will be announced in the English language with the words: "Car number Warning". All instructions will be announced in the English language with the words: "Car number Stop". Each competitor must be able to recognise the above English words and statements.

4.14 REFEREES' AUTHORITY

- 4.14.1 The Referees has the right to use his discretion to issue a penalty instead of a warning for any infringement of the rules.

- 4.14.2 For pit lane infringements the referees have the right to issue penalties ranging from a stop go, to time in seconds to a one (1) lap penalty, taking into account the severity of the infringement or if there is a case of repeat offending.
- 4.14.3 The IFMAR Referee has the authority to withdraw a World Championship badge (pass) from any person contravening the World Championship Rules or spirit of the World Championship Rules.
- 4.14.4 The IFMAR Referee has the authority to instruct other Race Officials to take remedial action in any situation which might compromise the well running of the race meeting. Any serious situation will be referred to the most senior IFMAR official present before taking any action.
- 4.14.5 The Referee issues warnings in case of infringements of any point as described under Rule 4.13 and ultimately may even issue a black flag (disqualification) when there is no response to his warnings.
- 4.14.6 Warnings and instructions are announced by the Referee himself. He will keep a record of the warnings and instructions used (Referee's notes). Three successive warnings lead to disqualification (black flag).
- 4.14.7 Instructions issued by the Referee must be observed immediately. All announcements must be made in the English language. Warnings will be posted on the result sheet.
- 4.14.8 Reasons for warning or instruction will be announced in the English language at time of issue. Further explanation, if necessary, due to language difficulties, will be given to the driver or the Team Manager at the end of the race.
- 4.14.9 Under no circumstances may a warning or an instruction issued by the Referees lead to the interruption of the whole race.
- 4.14.10 During the event, only if all three Referees agree, they will have the authority to black flag a driver and/or a whole team, if one member of that team is positively interfering with the racing of another car in the event.
- 4.14.11 Driver Infringements during the final 2 laps of any heat or final will incur a 1 lap penalty or be deferred to the international jury to determine the penalty upon examination of the incident. Stop & go penalties that have not been performed within 3 laps of issuing the penalty will be resolved by a lap deduction or time penalty instead. This will be issued after the finish of that race.
- 4.14.12 Appeals to the decision of the Referee must be addressed to IFMAR in writing. IFMAR is not obliged to act on such a complaint.

4.15 REFEREES' REPORT

- 4.15.1 Referees make up a report to be sent to IFMAR within ten (10) days. The report contains information on the organisation, accommodation and the racing. The Referee's notes have to be included.
- 4.15.2 A copy of the report is sent to the Organiser of the race meeting. Copies may be obtained on application to IFMAR.

4.16 TIME-KEEPING SUPERVISOR

- 4.16.1 The Time-Keeping Supervisor is responsible for recording all the individual lap times and total laps plus finishing time of all drivers during all heats and finals. He is responsible for the classification of the results and for selecting of the finals. The Race Director must verify this classification and selection.
- 4.16.2 After the finish of any heat or final, the results of the first and second time-keeping systems are compared by the Time-Keeping Supervisor and, in case of difference between the two systems, the Time-Keeping Supervisor investigates both results and makes the decision of the final result.
- 4.16.3 In case of a request for checking of the results, the Time-Keeping Supervisor, together with the Race Director, will check on the questioned result and will make the decision.

4.17 INTERNATIONAL JURY

- 4.17.1 The International Jury consists of official representatives of each bloc, which will furnish a minimum of one representative and a maximum of three representatives to serve on the International Jury. Each Bloc will have a total of one (1) vote, regardless of the number of representatives it supplied.

- 4.17.2 The relevant IFMAR Section Chairman shall always act as Chairman during International Jury Meetings and exercise a casting vote, if necessary. In the absence of the relevant IFMAR Section Chairman, the highest ranking IFMAR official shall take the chair at any International Jury Meetings.
- 4.17.3 The Race Director and IFMAR President (see above) are members of the Jury but do not have a vote in the decisions. The Referees may be called by the Jury for opinions and explanations as deemed necessary. All decisions are taken by simple majority vote.
- 4.17.4 The International Jury may request evidence and/or presence of drivers involved or Team Managers.
- 4.17.5 Jury members must be approved by their organisation and a second person appointed to serve in the event of a temporary absence of the official representative.
- 4.17.6 Prior to the commencement of an International Jury Meeting, any mobile telephones in the meeting room must be turned off and placed on the meeting table until after the completion of the Meeting.

4.18 RESPONSIBILITIES OF THE INTERNATIONAL JURY

- 4.18.1 To decide in unforeseen situations.
- 4.18.2 To handle protests not covered by the Race Director's responsibility.
- 4.18.3 To make official by announcement any decisions voted on by the Team Managers' Committee providing the International Jury agrees with these decisions.
- 4.18.4 To check that the race is run according to the official rules.
- 4.18.5 The Chairman of the International Jury will make official the results of the World Championship through the ranking IFMAR Officer present at the event. When necessary, the Race Director calls the International Jury to meet. The International Jury may also be called by IFMAR.
- 4.18.6 The organiser will provide a room for the International Jury to meet where no-one can interfere with the meeting.
- 4.18.7 Jury members may not have dual duties or be a race official but may act as a Referee and IFMAR Delegate. The Race Director may appoint a stand-in Referee, if required.
- 4.18.8 Jury members may be participants in the event but must allow auxiliary jury representatives to serve and vote in any protest involving said jury member as a participant.

4.19 RACE DIRECTOR

- 4.19.1 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 drivers
 - Technical inspection
 - Frequency control
- 4.19.2 The Race Director receives the protests and decides if the International Jury has to meet. He takes urgent decisions or stops a race for safety, rain or any other unforeseen situation. He is under the authority of IFMAR.

4.20 ASSISTANT RACE DIRECTOR

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

4.21 IFMAR TECHNICAL INSPECTOR

- 4.21.1 A Technical Inspector will be appointed by IFMAR to supervise all technical inspection matters.

4.22 TEAM MANAGERS

- 4.22.1 The Country Team Manager, or a nominated deputy, must be present during all official racing.

4.22.2 Team Manager is appointed by his national association.

4.22.3 The responsibilities of the Team Manager are:

- To be present at the drivers' registration of his team.
- To be present at the Technical Control either before, during or after the end of the race in which his team members participate.
- To look after the welfare and behaviour of his team and take care that they all receive proper accommodation in the pit area.
- To attend the Team Managers' Meeting and any driver briefing/s that the Organiser may call.
- The Team Manager is the link between the national team and the race direction by receiving all information referring to timetable changes, frequency changes, results of heats, sub- finals and finals and all other information referring to the race.
- He is only allowed to stay in the pit area when a race has a participant from his team, who needs help with understanding the referees if there is room available.

4.23 TEAM MANAGERS' COMMITTEE

4.23.1 Each country will have a Team Manager who is responsible to pass on complaints, protests or suggestions from his team to the Race Director. The Race Director will then decide whether a Team Managers' Meeting should be called to discuss and vote on the matter raised. If the Race Director does call such a meeting and the majority of the Team Managers support the matter raised, the Race Director must then refer to the International Jury for final decision.

5 TECHNICAL SPECIFICATIONS

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

5.1 The class run will be the 200mm Nitro Touring Car which will be 4WD. Only one (1) brake, working on the central power transmission, is allowed. No second or individual brake system(s) for front and/or rear axles or single wheels is allowed.

5.2 Maximum 2-speed gearbox allowed.

5.3 All cars must have a de-clutching device and have an operating brake capable of stopping the car and holding the car motionless with the engine running.

5.4 The engine may have a total capacity of not more than 2.11 cc. They shall be air-cooled, with front rotary valve, two-stroke induction. They engines may have a maximum of four (4) ports in the liner, including the exhaust port, seen with the piston at its lowest position.

No form of forced induction is allowed. No form of variable port timing.

Only glow plug ignition is allowed. The piston skirt may only be relieved for clearance of the crankshaft counterweight.

No additional openings in the piston. Additional slits or openings in the liner are allowed as long as they do not reach the top of the piston at lowest position.

Standard or conical glow plugs allowed.

The carburettor size is to be 5.50mm maximum.

5.5 Engine capacity is to be maximum .12 (2.11cc) only.

5.6 Standard pull-start is optional.

5.7 Engine internal modifications are allowed as long as they are within the parameters of Rules 5.4 and 5.5.

5.8.1 Homologated mufflers of a double chamber design in conjunction with a homologated inlet noise silencer boxes (INS box) must be used.

For homologation purposes, each muffler will be tested with an engine at 40,000 rpm. The muffler may not produce more than eighty five (85) decibels measured at ten (10) metres distance and one (1) metre high. IFMAR's definition of a noise level is always final.

5.8.2 The muffler have to bear their homologation numbers during the entire competition.

The mufflers' measurements (both internally and externally) have to conform with those on the homologation sheet issued by IFMAR.

- 5.8.3 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 submitted to IFMAR.
- 5.8.4 Mufflers may be homologated by ROAR,EFRA, FEMCA or FAMAR up to four (4) months before the event. Mufflers homologated in the four (4) month period before the event will not be included on the IFMAR Muffler Lists for that event.
- 5.8.5 The IFMAR Muffler List will be published on the IFMAR website and Organizer's website two (2) months prior to the event.
- 5.8.6 The IFMAR Muffler list , with detailed drawings, must be available in Technical Control.
- 5.8.7 The outlet or tailpipe of the muffler must project horizontally or downward. No upward or vertical exhaust outlets are allowed.
Tail pipe maximum internal diameter* 5.20mm.
Tail pipe minimum length 10.00mm.
* This dimension includes a tolerance to account for manufacturing variations in commercially available tubing.
- 5.9 The minimum weight without fuel: **1650.00** grams (including transponder).
NOTE: The minimum weight of a 1/10th scale IC track 200 mm car will be reviewed every 2 years.
The minimum weight will be calculated by taking the average weight of 3 cars minimum in standard version, prepared ready to race, without any lightweight parts (light weight parts meaning titanium, special alloy or other high value weight saving items)
The outcome of the average weight will be rounded down by up to 10 grams to the closest round figure. IFMAR will determine if a kit contains light weight components that are deemed inappropriate for a standard kit, such kits cannot be included in determining the nominal weight.
- 5.10 Fuel tank capacity to be 75.00cc including all fuel tubing, filters, etc. No loose inserts allowed inside the tank.
- 5.11 Bodies must be a 1:10 scale in character reproduction of touring car (sedan) 2 and 4-door vehicles that exists ore have existed, and raced in an international Touring Car series.
For homologation purposes, the bodies dimensions will be checked according the Global Body Specifications.
Bodies must be made from polycarbonate. The weight of the body along with other dimentions submittet for approval will also be recorded for the purpose of identification and comparison for future reference.
Bodies may be homologated by ROAR,EFRA, FEMCA or FAMAR up to four (4) months before the event.
This combined list will be made available by IFMAR to the organiser for inclusion in the Stage II Report. For technical inspection it is necessary that all body shells on the list can be identified by means of a manufacturer's identification reference and/or homologation number issued by a Bloc.
The identification reference / number must be moulded in at the lower edge of the windscreen.
IFMAR approved bodies (complying with GBS) must also have the IFMAR Logo molded into the windscreen. The Ifmar logo is mandatory as from 2016.
- 5.12 The front bumper must follow the body contour and must be constructed so as to minimize injury that may result from being hit by a car. The bumper must be made from foam rubber or a flexible plastic material.
- 5.13 The body must be made from a flexible material and be painted properly. All windows must remain clear and not be painted over or be semi-transparent.
- 5.14 Bodies are not to be cut above the lower bumper line at the front or the back or above the bottom line of the doors. Rear of the body may not be cut away higher than 50.00 mm measured with a 10.00mm spacer under the chassis plate. Details of all front and rear lights, grills, air intakes and windows must be clearly contrasted from the surrounding paintwork.
- 5.15 Only the following openings and sizes are permitted in the body shells.

Only one opening may be made in the front screen with a maximum dimension of 60mm in any direction not intruding into the roof or bonnet.

An additional opening of 50 mm may be made above the fuel filler cap when viewed from above. The minimum distance between any openings is 5 mm.

An opening with a maximum diameter of 35mm is allowed just above the cooling head for easy glow plug access and cannot be combined with any other hole.

Additional non-mounting openings may be made for exhaust, transponder, radio antenna and carburettor access.

5.16 Roll-bars (roll-over bars) must be kept under the body.

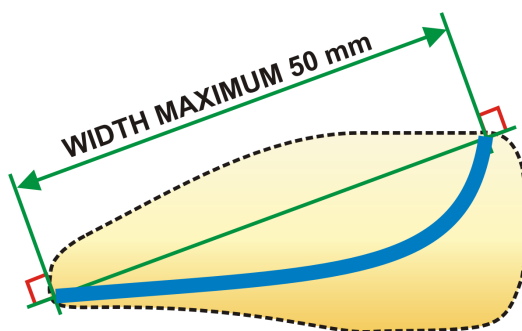
5.17 Only the muffler outlet, antenna and body posts may protrude outside the body shell.

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.

5.18 Under body/chassis aerodynamic aids of any nature are not allowed.

5.19 General Dimensions: -Minimum (mm) -Maximum (mm)

Wheelbase	230.00	270.00
Width (without body)	170.00	200.00
Width (with body)	175.00	205.00
Length (including body and wing)	360.00	460.00
Height (to top of roof measured with a 10.00mm spacer under the chassis plate on level)	120.00	175.00
Wing width inclusive	125.00	200.00
Wing width	-	50.00
Wing endplate 35.00mm x 50.00mm – equal size		
Wing overhang (at rear)		10.00
Wheel diameter (excluding tyre bead)	46.00	50.00
Wheel width (including bead)	-	30.00 + 1mm tolerance
Tyre width (across sidewalls)	-	31.00



5.20 One (1) wing and one (1) spoiler may be mounted to any car (if the original full-size car had more, it is allowed to do the same). Wing and spoiler must be made from a flexible material. Wing and spoiler must not be fixed to body with piano wire. Basically, they must be mounted to body directly. Wing and spoiler may not protrude outside the maximum height and width of the body (including the side dams). Rear wings must be mounted in the same place as was intended by the body manufacturer. The overhang must not exceed 10.00mm at the furthest point, to be measured from the bumper.

The height of the wing may be adjusted but the wing, including endplates must not extend higher than the roofline. Wings (excluding endplates) are to be of single moulded construction (no flat-packs/bend your own). Total chord of wing is 50.00mm.

5.21 In General foam and/or rubber tyres may be used. (See also the appendix on the last page)

For all official racing under dry circumstances a controlled tire from a single brand is mandatory.

Tires will be available in one hardness for the front and one hardness for the rear.

The diameters for front and 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.

One type of rim should 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, so no extra milling to make it lighter or softer.

The only thing 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.

Where ever we talk about a set of tires we mean 2 front and 2 rear tires = 1 set.

The general measurements and hardness for 1/10th 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.

It will not be allowed to check tires with a shore meter and refuse them. You get one set and you put them on your car. Only in case you chunk a tire in the warm-up you can get another tire from an official.

Every driver will need a minimum of 11 sets of tires (6 sets for Qualifying, 4 sets for timed practice and 1 set for the first final you are in). Every time you go racing you come without tires and you will receive a new set. Extra sets for those that move up due to the Christmas tree finals must be paid extra to the manufacturer/organizer; this can be done by means of a ticketing system.

For sub finals (20 minutes) you can only use 1 set of tires.

For Semifinals (30 minutes) you can use 2 sets of tires

For the main final (max 60 minutes) you can use maximum 3 sets of tires.

Apart from the 11 sets there are also tires needed for the practice, these can be ordered on the entry form.

All the "race" tires must be paid in advance.

In case of rain or a wet track the race director together with IFMAR officials can allow the use of another tire as the 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 IFMAR, who will send out a tender to various tire manufacturers. The choice will be determined by different values, including price, payments (50% at delivery and 50% after the event), possibilities to send back unused tires etc.

- 5.22.1 *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 16 of nitro methane (Cas number 75-52-5) in volume. The specific gravity of the mixture may not be heavier than 0.87 grams/cc at 20°C and standard atmospheric pressure. Measurement will be done with a nitromax 16% in the pit lane and/or anywhere inside the venue. Any fuel detected heavier than 0.87 will means that the driver will have the result deleted from the heat or final where the fuel was found too heavy. The following additives are strictly prohibited; Hydrazine, Hydrogen Peroxide, Toluene, Propylene Oxide.*

Fuel suppliers are invited to make a submission to the event host for supply.

More than one brand of fuel manufacturer up to a maximum of 3 brands will be allowed to sponsor an IFMAR 1/10th 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%. (The 15% extra is for drivers changing brand during the event). Safety storage for the different brands must be secured. The different brands of official fuel must be available within the controlled area in cans of no more than 10 litres per brand. Fuel bottles must be supplied by the fuel manufacturers

- 5.22.2 In case no manufacturer is willing to sponsor an event than one brand of fuel will be chosen by the IFMAR I.C. Executive together with the race organiser.

As for any fuel in general: A full safety data information sheet must be supplied on request with a break down 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 organiser has to forward the recommendations to the IFMAR I.C. Section Chairman eight (8) months before the event. The final decision will be made six (6) months before the event by a majority vote of the IFMAR I.C. Executive and all Blocs will be notified of the decision.

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

- 5.22.4 An amount of up to \$US40 for 1/10th may be added to each entry fee to cover for official event fuel or fuels in case the fuel is not sponsored.

- 5.22.5 Practice: For practice and pit running purposes only, all competitors must be able to purchase at the event (*minimum of five (5) litres*) one gallon of the official fuel at standard commercial rates in case the fuel is not sponsored.

- 5.22.6 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 pit lane area. This official fuel must be identical to the fuel sold to the competitors for the practice period

- 5.22.7 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 has 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.

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

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

- 5.22.10 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 The aerial support must be flexible. Carbon, GRP, steel, etc. are not allowed.

- 5.24 Only two (2) servos are allowed. Frequency must be legal as specified by Race Director. Drivers must have more than one (1) frequency available. Under no circumstances shall a transmitter be taken onto the track.

- 5.25 The use of electronic gyroscopes is not allowed.
- 5.26 All measurements referred to in these rules are maximum or minimum values.
- 5.27 Not allowed:
- "Pressurized" braking systems including pneumatic or hydraulic systems. Only mechanical, single braking units such as those already in use on the rear or midshaft axle.
 - Liquid cooled engines
 - Hydraulic systems
 - More than 2 servos
 - No more than 3-speed transmissions.
 - Quick-change wheel systems are not allowed. Wheels must be fixed by a screw or nut that must not extend beyond the exterior of the wheel rim.

5.28 TELEMETRY & DRIVERS' AIDS

- 5.28.1 It is not allowed to use any electronic devices with the exception of:
- Two radio channels of the receiver which will be used to operate steering, throttle and brakes.
- A passive data recording or information system to record functions of the car can only be used up to the end of controlled practice.
- 5.28.2 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 1/10th I.C. 200mm Nitro Touring Car Circuit World Championship be a test of driver skill.

APPENDIX 1

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

- Front, 62mm, 37 shore
- Rear, 64mm, 40 shore

Final measurements and shore after consultation with the organizer/tire manufacturer, changes are possible due to very high traction circumstances/ facilities.

FINISH