

**EUROPEAN FEDERATION OF  
RADIO OPERATED  
MODEL**  
*Automobiles*



**Appendix 7  
HANDBOOK  
2012**

## APPENDIX 7

### 1/10TH 200 MM SCALE IGNITION TRACK CARS

#### 1 ALLOCATIONS FOR THE EUROPEAN CHAMPIONSHIPS

- 1.1. The allocation for the European Championship 1/10th 200 mm I.C. scale will be established by the section meeting and published in the minutes.
- 1.2. The first 20 drivers from the section ranking have automatically a allocated place for the next A European Championship and World Championship if there is a WC in that year. (Exception on General rule 6.2)  
For allocation and re-allocation procedures (see general 6.2.). Allocations will only be offered for EC and WC events to those countries that have written to quest places.
- 1.3. All countries receive re-allocations place in the order of the allocation-list, unless stated otherwise in this list.
- 1.4. The number of entries for EFRA EUROPEAN CHAMPIONSHIPS is 120 maximum of 150. Accommodations for at least 120 drivers must be sufficient for all participants.

#### 2 RACING FORMAT EFRA EUROPEAN CHAMPIONSHIPS AND GRAND PRIX

- 2.1. European Championships are held in the following class:
  - a) The European Championship Touring Car Sedan bodies will be held on the 3rd weekend of August. In the year there is an IFMAR world championship. Than dates must be separated with at least 4 free weekends between the finals. It will be open to EFRA licensed drivers. One special EFRA medal will be awarded to the fastest driver under 17 years of age, so that everybody of 16 years during the race dates, or younger, can compete for this medal. One trophee must be awarded by the Organizer.
  - b) The allocated dates of the EC may be exchanged by simple majority vote at the AGM in the years that a world championship is being held. Allocations and re-allocations procedure will be fixed at the AGM's section meeting. The format of EFRA GP's could be the same as for the EC, but may be shortened up depending on the number of entrants.
  - c) If there is a world championship 1/10th 200mm IC Track in Europe then there is not a European Championship A organised during that year.
  - d) A European Championship for 1/10th IC 200mm B drivers may be organised each year.  
To be run if possible the first weekend of May.  
Entries will not be allowed for 1/8 scale A licensed drivers, 1/10th 200mm scale A licensed drivers, for the finalists from the EC of the following classes 1/8 Scale IC Track, Electric 200mm touring cars, large scale, Electric Buggy, 1/8 Buggy A of the preceding year. Winner B-EC will retain A-license for 3 years. Other finalists from B-EC are excluded for 1 year to run the next B-EC. Winner B-EC will retain A-license for 3 years. Other finalists from B-EC are excluded for 1 year to run the next B-EC.
  - e) European Championship 1/10th track 200mm 40+ EC 40+ 1/10th 200mm open to all drivers of 40 years, including those who become 40 that year and older. Race is organised together with the 1/8 track 40+
  - f) A & B LICENCE  
To qualify for an "A" licence, a driver must be placed 1-30 in the EFRA ranking system. All other applicants will be classified EFRA "B" licensed. These drivers must be approved by their own National Association as having sufficient

experience and skill to take part in an International competition.

World Champion will retain "A" licence for the next 5 years.

European Champion will retain "A" licence for the next 4 years.

The EFRA ranking list for 1/10th IC 200mm is based on the last 2 EC's, the last WC and the best result of one GP in the past year. An EC result is the result of the A EC from August. The total result of this list will decide upon A (start in 2006) and B licence at the end of the season. For all the races involved in this ranking, points can be achieved for the result after the finals (see General rules points table section 3.3.6) . and 50 % of those points for the result after the qualifications. Both results will be added together for the racing. During qualification A and B licensed drivers must be separated in different heats.

- 2.2. Free practice for EC is only allowed from Monday preceding the race. However pit lane refuelling may be forbidden during free practice at EC.
- 2.3. Free practice for Grand Prix events must be allowed at least from Friday preceding the event (see general 8.2.).
- 2.4. General qualifying format for EC and GP's minimum 4 and maximum 6 series of 7 minutes heats depending on the number of drivers. If there are 60 drivers or less, 6 rounds. If there are > 60 < 80 drivers, 5 rounds. If there are more than 80 drivers, 4 rounds. With everybody qualifying for Christmas tree sub finals and NO drivers qualifying directly to the main final, depending on time available at Saturday all finals higher than 1/64 will be shorter than 20 minutes (for instances 10 minutes). Duration of finals higher than 1/64 to be set at team managers meeting.
  - 2.4a From 01/01/2013 General qualifying format for EC and GP's minimum 5 and maximum 6 series of 5 minutes heats Refuelling during heats is not allowed. depending on the number of drivers. If there are 60 drivers or less, 6 rounds. If there are > 60 < 80 drivers, 5 rounds. If there are more than 80 drivers, 4 rounds. With everybody qualifying for Christmas tree sub finals and NO drivers qualifying directly to the main final, depending on time available at Saturday all finals higher than 1/64 will be shorter than 20 minutes (for instances 10 minutes). Duration of finals higher than 1/64 to be set at team managers meeting.
- 2.5. Time schedule.
 

Monday-Wednesday	From Monday - Wednesday Free or controlled practice. All cars must past technical inspection before controlled timed practice
Thursday	controlled practice Thursday: 1 controlled timed practice and 2 rounds of qualifying in the afternoon
Friday	Round 3 till 5, lower finals till 1/64
Saturday	1/64. Saturday: 1/32 upwards, 1/8 and 1/4 final, 1/2 final, final.

The race director should configure the Controlled practice heats, controlled timed practice heat based on the EC form last year. The heats shall contain a maximum of 10 drivers. These Controlled practice heats will be of 10 minutes duration. The controlled timed practice heat will be of 5 minutes duration. The ranking from controlled timed practice will be use to make the heats for the qualification heats one exception A and B drivers stay in separate heats.
- 2.6. General sub-finals and final formats for EC and GP: the sub-finals are 20 minutes up till 1/64 finals. Time for all finals higher than 1/64th to be set at team managers meeting. The duration of the final is 45 minutes.  
Sub-finals: The best 3 of each sub-final move up to the next final.

Semi-finals, the best 4 of each semi-final move up to the main final, plus the best 2 remaining drivers from the 2 semi-finals combined. When racing conditions are wet in the 2 semi-finals, the best 5 of each semi-final move up to the final. Starting order for the drivers who moved up to the final is based on number of laps and time. In different circumstances it will be number 1 from the A-final who gets the number 1 and the number 1 from the B-final who gets the number 2 etc. Sub-final B even is the first final to start on the Saturday afternoon.

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.

2.7. Frequencies for semi-finals and finals are not published and must remain secret. The race director will allocate frequencies to the drivers personally after they have proposed to them 2 or 3 frequencies. A radio check must be made before the start of the final.

2.8. During the race 2 (two) mechanics are allowed in the pitlane.

### **3 TRACK SPECIFICATIONS**

3.1. Track surface should be unsealed or coarse finish with any joints smoothed.

3.2. Minimum length must be 200 meters (advised 240-300 m).

3.3. Minimum width of the track will be 4 meter between marking lines. The maximum width is 6,5 meter. The marking lines must be 8-10 cm wide and either white or yellow. They must be approximately 20 cm away from the edge of the racing surface.

3.4. Maximum distance from the middle of the drivers rostrum to any point of the track must be 60 meters.

3.5. Vision, no obstacles may interrupt the vision from the drivers rostrum to any part of the track.

3.6. A broken line may be drawn in the middle of the straight to aid vision. No lines may be drawn in corners other than the marking line.

3.8. Track design must include both right and left hand turns, and must have a straight of minimum length of 45 meters.

3.9. Outside barriers must provide a positive means of stopping a car which misses a corner or runs out of control. The primary consideration for selection of the outside barriers shall be the protection of the spectators and not the cars.

3.10. Inside barriers must deter corner cutting and prevent cars reaching other parts of the track. Inside barriers must be positioned and dimensioned to prevent cars from flying over the outside barrier into the public enclosures. The barriers must be smooth. When cones or dots are used, they should not be higher than 5 cm.

3.11. Barriers must be a minimum of 20 cm away from the marking lines on the track.

3.12. The inner and outer surrounds to the track must be of grass or other suitable materials such as concrete. The object of these surrounds is to slow down any car that leaves the racing surface. The car must be able to leave the infield or outfield on their own to minimize the need for marshals assistance.

3.13. Marshal posts must be positioned at 30 mtr. intervals around the track. They may not obstruct vision of the drivers. The post must be numbered. When a post is located at a dangerous part of the track (i.e. the straight of a fast corner) this post must also provide protection for the marshal (a wall, tyres, a gate, etc.)

3.14. A start/finish line must be painted across the track, preferably in front of the time keeping position. The first start line box must be painted more than 10 mtr. away from the following corner.

- 3.15. For Lemans type of starts, 10 numbered boxes will be located on the edge of the track, at an angle of 20-45 degrees to the track, minimum 2 mtr. And max. 4 mtr. apart. The boxes must be 70-100 cm long and 30-40 cm wide (see 3.14.).
- 3.16. Race directors must use the staggered starting system (see general rules 9). Race directors involved in EFRA sanctioned events may be invited to a briefing meeting, covering interpretation of the rules and management of international races, so that they feel confident to manage a good race.

#### **4 RACE PROCEDURES 1/10 200MM**

- 4.1. ((See also general race procedures chapter 8). The arrangements of the heats and the numbering is left to the discretion of the organizer. The drivers must stand adjacent to their numbers on the rostrum; the mechanics must remain in their boxes along the pit lane. For all finals, drivers with the lowest starting numbers may choose their position on the rostrum and the mechanics must stand under the driver where this is possible.
- a There must be a 3 min. gap between the end of one heat and the start of the next heat. Also a minimum of 2 minutes must be allowed between the issuance of the transmitters and the start of the heat.
  - b An audible warning will be given at 1 minute and again at 30 seconds prior to the official start, in English and other languages as appropriate.
  - c From 30 seconds till 3 seconds, the cars must be hold at the starting boxes. If a car is not at the starting box at 3 seconds due to unforeseen problems, the car may start from the pit lane after other cars have officially started. The race director and referees will monitor for the abuse of this facility.
  - d From 10 seconds until 3 seconds prior to the start, a second by second countdown will be made in English.
  - e For Lemans starts at 5 seconds prior to the start, the starter will lower the starting flag and at 3 seconds the flag will be fully down. Mechanics will all step back 1 mtr. The cars must remain in the boxes, no part of the car touching the start line.
  - f From 3 seconds the verbal countdown stops and the actual start signal will be given by the starter after a period o between 0 and 5 seconds has elapsed. If the grid is not tot the satisfaction of the starter, he may require a re-start, re-commencing the countdown from 30 seconds.
  - g The official start signal will be audible by means of a hooter, operated by the starter. This signal will also start the timing systems.
  - h Early starts (i.e. any part of the car touching the starting line) will be penalised with a "stop and go" penalty. The time for this "stop and go" has to be set at the team managers meeting before the actual race starts and will have a maximum of 10 seconds. This penalty is issued by the starting official or the time keeping official and must be announced immediately after the start. The penalty will be marked on the result sheet.
  - i Under no circumstances will the race be stopped due to a jump start. The starter may only interrupt the race and make a re-start in the event that he considers the starting procedure or the start was not carried out correctly.
  - j Delayed start. As long as the starter has not called 30 seconds (the trial lap, see 4.3. is part of the procedure after 30 seconds), any participant of the semi-finals and final may request a delay of 10 minutes to carry out repairs on his car. This delay can be granted only once for each semi-final and final.
    - The track is closed, if the delay is requested as a result of frequency of radio problems.

- The track is open, if the delay is requested for mechanical repairs or problems. Any driver asking for a delay will start from the end of the grid (11th position to be painted on the track) or from the pit lane in case he is not in time at the grid.
- 4.2. Starting procedure of heats. Starting for qualifying heats will be from the start line using staggered start one by one in the following order:  
Round 1: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10  
Round 2: 4, 5, 6, 7, 8, 9, 10, 1, 2, 3  
Round 3: 7, 8, 9, 10, 1, 2, 3, 4, 5, 6  
Round 4: 10, 9, 8, 7, 6, 5, 4, 3, 2, 1  
Round 5: 8, 7, 6, 5, 4, 3, 2, 1, 9, 10
- 4.3. Starting for sub-finals and final will be on a Lemans type grid or a formula 1 grid, depending on the track layout, with the faster qualifier starting in front of the slower. During sub-finals and final, a trial lap is driven to avoid frequency problems and to check the transponders. Cars will be released one by one by starter.
- 4.4. 1. All qualifying runs and finals are ran by "time plus next lap" system. Qualifying heats are 7 minutes duration, lower finals and semi-finals 20 minutes and final 45 minutes.  
2. When the time is over, an audible signal is given. A car finishes when it passes the finish line after the finish signal is given. The car must immediately return to the pits and may not hinder other cars still racing.  
3. In case of doubt (on the finish line when time is over), a car may race one more lap and finish. Whether he finishes or not when time was completed, is up to the time keepers and cannot be disputed.  
4. After returning to the pits, the engine must be stopped immediately and the transmitter turned off and impounded.
- 4.4 From 01/01/2013
1. All qualifying runs and finals are ran by "time plus next lap" system. Qualifying heats are 5 minutes duration, lower finals and semi-finals 20 minutes and final 45 minutes.  
2. When the time is over, an audible signal is given. A car finishes when it passes the finish line after the finish signal is given. The car must immediately return to the pits and may not hinder other cars still racing.  
3. In case of doubt (on the finish line when time is over), a car may race one more lap and finish. Whether he finishes or not when time was completed, is up to the time keepers and cannot be disputed.  
4. After returning to the pits, the engine must be stopped immediately and the transmitter turned off and impounded.
- 4.5. Qualification order and finals.
- a After all series have been completed, the qualification order is established by taking the best result of each driver.
  - b In case of more than one driver recording identical best results of qualifications, the next best result is taken.
  - c In the case of more than one driver recording identical results in a final, the driver starting with the higher start number is classified as the faster, e.g. if numbers 5 and 5 have equal times, 5 is deemed to have higher final placing.
  - d The sub-finals and final are run according to the schedule printed in the official race program, which may only be changed by team managers majority vote.

- e After all sub-finals and final are completed, a final result list is prepared based on laps and time, bearing in mind the sub-final order. In case of rain see 4.6.
- 4.6. Rain situation. In case of different weather conditions during sub-finals, the final classification will be as follows: place 4 of sub-final A and place 4 of sub-final B will both be awarded place 11th equal in the general classification. Place 5 of sub-final A and place 5 of sub-final B will both be awarded place 13th equal in the general classification. And so on...
- 4.7. Race interruptions.
1. In the case of a race which is interrupted for more than 60 minutes for reasons beyond the control of the organisers (bad weather conditions with safety risks for all persons at the meeting), the referees together with the Race-director will decide whether to cancel or continue the meeting.
  2. In the case of an interruption of a heat the entire heat will be re-run.
  3. In the case of an interruption of sub-final of a final, the following procedure will be used:
    - A. If less than 10 minutes of the final have been run, the results will be cancelled and a new start given for the total time of the final. Vehicles may be repaired before the new start.
    - B. If more than 10 minutes of the final have been run, the results at the moment of the interruption will be kept. 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 definitive placing. If the second start cannot be made for any reason, the results from the first part will be used as the final and definitive placing.
    - C. When the interruption takes place after 75% or more of the race is past, the results as at the time of the interruption becomes the final result. At the moment of the interruption of the race, the drivers will leave their vehicles on the start line under the control of the race director. They may switch off the radio and stop the engine. There will be no repairs carried out. Who does not observe this rule will be immediately disqualified.
- 4.8. Rain procedure during qualifying.
1. The race director and the referees are jointly responsible for the decision to stop a race in the event of rain.
  2. On the result sheets the race director or the appointed official must mark a heat "wet" when the heat was raced under wet conditions. On the corresponding record sheets, this must also be marked. The race director together with the referees will decide in case of doubt. Heats are generally considered to be "wet" when there is any rain or moisture on the track and it is obvious to the race director that the cars cannot perform to their maximum capability. The race director may decide to postpone qualifying if it is likely that qualifying can be resumed within reasonable time.
  3. When all drivers have had at least one dry heat, all results will be counted.
  4. When weather and time permits, the race director may decide to offer an extra heat to those drivers who did not have a chance to drive a dry heat. (i.e. when most drivers had 2 resp. 3 dry runs, a 2nd resp. 3rd run may be offered to those who had only 1 resp. 2 dry runs.
  5. When not all drivers have had a chance to run a dry heat, only the wet results will be counted.
  6. When continuation is judged to be senseless or when other drivers should be offered a fair chance to drive under dry conditions, the race director

together with the referees may decide to end a heat or cancel a complete heat (4.8.1).

7. When all drivers have had at least 1 dry heat, the race director will postpone the qualifying until the track is declared fully dry again. If it is likely that this will interrupt the qualifying for more than 1 hour, the race director may decide to open up the track for controlled practice.
8. The use of a personal transponder is mandatory during the whole event ( starting from free practice till the main final)

**5 TECHNICAL SPECIFICATIONS**

All measurements referred in this appendix are minimum of maximum values. All measurements for the motor dimensions to be considered with 2 digits behind the comma, all other measurements 1 digit behind the comma. Measurements must be respected within their maximum or minimum values under all circumstances.

- 5.1. 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 e maximum of four (4) ports in the liner, including the exhaust port, seen with the piston at lowest position. No form of forced induction is allowed. No form of variable port timing.

Only glow plug ignition is allowed. One additional gap in the bottom (skirt) of the piston is allowed. No additional holes in the piston are allowed. Additional slits or holes in the liner for cooling purposes are allowed as long as they do not reach the top of the piston at lowest position.

Standard and conical glow plugs allowed.

Where ever we say hole in this rule we mean a hole that is surrounded completely by material.

- 5.2. Engine internal modifications are allowed as long as they are within parameters of rule 5.1.

- 5.3. A maximum carburettor diameter of 5,50 mm.

- 5.4. The fuel tank including filter and fuel pipes up to the carburettor, may hold a maximum of 75,00 ml. No loose inserts allowed.

Any tank found illegal (>75.00ml) after a heat ore final shall be removed from the car and inspected for a second time after an initial "cool down period" of 15 minutes. This period of 15 minutes is only necessary in case the temperatures are above 20° C.

- 5.5. Overall 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 incl. body & wing	360,00	460,00
Height of the top of the roof (measured with a 10 mm spacer under the chassis plate level)	120,00	175,00
Wing width incl. side dams	125,00	200,00
Wing		55,00
Side dams		35,00 x 50,00
Wing overhang (at rear)		10,00
Wheel dia. (excl. tyre bead)	46,00	50,00
Wheel width (incl. tyre bead) and tyre width (across side walls):		
Front:		31,00
Rear:		31,00



- 5.6. Tyres/Rims. Tyres must be black, except for writing on the side walls. Foam and/or rubber tyres can be used. Tires must pass the test with the Mini Rae sniffer in the controlled pit area. When you are checked with a positive result of the sniffer the tires are confiscated and you are allowed to put new tires on your car. The start will not be delayed due to such an event. EFRA will provide information about track preparation what will be mandatory for the event.  
Wheels must be fixed by a screw or nut. The screw or nut installed in the wheel rims may not extend beyond the exterior of the wheel rim. Quick change wheel systems are not allowed. No automatic system to change the wheels allowed (just manpower).
- 5.7. All vehicles must be equipped with brakes and a clutch in such a manner, that the vehicle may be held stationary with the engine running.
- 5.8. Muffler EFRA homologated muffler of approved double chamber design, including silencer chamber, must be fitted.  
The tail pipe must be oriented on or below the horizontal. The EFRA homologation number must be engraved into the muffler.  
EFRA's definition of a noise is always final.  
Each motor must be equipped with an exhaust system and inlet silencer to reduce the amount of noise generated by the car.  
A Homologated INS-BOX is mandatory  
Any modification on the homologated muffler and INS Box is forbidden.
- 5.9. The front bumper must follow the body contour and must be constructed so as to minimum injury that may result from being hit by a car. The bumper must be made from foam rubber or a flexible plastic material.
- 5.10. The aerial must be flexible. Carbon, metal, etc. is not allowed.
- 5.11. Bodies. Bodies must be a 1:10 scale touring car in character reproduction of vehicles that exist or have exist. And must be comply to the GLOBAL BODY SPEC 1/10th IC Track. Bodies will be send to the Bodyshell Homologation Officer for approval. This EFRA Number has to be embossed in the body at a edge of the front window.
- 5.12. List of approved equipment. All lists of approved equipment (i.e. bodies, mufflers and batteries) must be available on EFRA's webpage from the 1st of March every year. This is the final list for that year and no changes will be made before the next year. Equipment homologized during the year will not be put on the list until the 1st of March next year.
- 5.13. The body and spoiler must be made of a flexible material and be painted properly. All windows must remain clear or be semi-transparent.
- 5.14. The rear of the body may not be cut higher than 50,00 mm measured with a 10,00 mm spacer under the chassis plate on level.
- 5.15. Details of all front and rear lights, grills, air intakes and windows must be clearly contrasted from the surrounded paintwork. No parts of the car except the muffler outlet, may protrude outside of the body shell, when viewed from above. No parts of the car except the antenna, body posts, transponder, may protrude outside the body shell, when viewed from the side wall. No additions or reshaping to the original molded bodyshell (no body stiffeners allowed).
- 5.16. Cuts outs. Only the following holes and sizes are permitted in the body shells/ One (1) cooling hole may be cut in the front windscreen with a maximum diameter of 60,00 mm. Re-fuelling hole: maximum diameter 50,00 mm, the centre of this hole must be the centre of the fuel filler cap, viewed from above. Note: cooling hole

front windscreen and re-fuelling hole may not be combined. Minimum distance between the holes: 5,00 mm. A hole with maximum diameter of 35,00 mm is allowed just above the engine cooling head for easy glow plug access, and can not be combined with any other hole, minimum distance: 5,00 mm. Both front side windows and the rear window can be removed for ventilation, except for the side rear windows, which must remain intact. Small holes can be made for the body posts, transponder, carburettor adjustment and radio antenna (maximum diameter of 10,00 mm). The hole for the exhaust pipe must be of reasonable size. No other holes are permitted. If the re-fuelling hole is part of the front windscreen, then that hole is to be considered also as the cooling hole with a maximum diameter of 50 mm.

- 5.17. Wings and spoilers. One wing and one 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 and be painted. Wing and spoiler may not be fixed to body with piano wire. Basically they must be mounted to the body directly. Wing and spoiler must not protrude outside the maximum height and width of the body (incl. 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 mm at the furthest point, to be measured from the most rear point of the body. Side dams may be fitted but must be a reasonable representation of those fitted to the original car, fit in a rectangle with the measurements defined, and must not project above the height of the roofline. The height of the wing may be adjusted but the wing, incl. side dams must not extend higher than the roofline. Wings (excl. side dams) are to be of single moulded construction (no flat packs/bend your own).
- 5.18. Checks at technical inspection.
- a) Before the race, all cars will be checked and during the heats the following random checks will be made:
- weight limit
  - muffler
  - motor
  - body and wing, spoiler
  - overall dimensions
- The chassis is to be indelibly marked before the race, and if a driver wants to change it, he must present the new and old to the technical inspection officer.
- b) During sub-finals all cars moving up to the next final plus the next one are to be checked. In addition to the above mentioned checks, the following are to be done during sub-finals:
- weight limit
  - muffler
  - body and wing, spoiler
  - overall dimensions
  - marking of the chassis
  - fuel tank capacity
- c) The same checks must be done after the final for the top 4 places.
- 5.19. Fuel may only contain nitro methane, methanol (methyl alcohol) lubricating oil, a small content of anti corrosion chemicals.
- The specific gravity of the mixture may not be heavier than 0,87. An EFRA approved fuel tester, e.g. Nitromax 16 will be available to verify fuel's conformity to the rules at technical inspection. Any violation with fuel which means any proof

of the use of other additives as mentioned will mean 5 years of disqualification from any EFRA and IFMAR event.

- 5.20. 4WD and 2WD cars can be used without any technical restriction except those listed in section 5. The use of separate front wheel brakes, except through transmission is also not allowed (locking of one way bearing is allowed).
- 5.21. The minimum weight without fuel and including a transponder: 1700 grams, from 01/01/2013: 1550 grams. The weight limit will be checked with the cars ready to race but with empty fuel tanks. The weight will be checked on a digital scale balance and can be done before the start of the heat, sub-final, final or after the end of either. If the weight is found to be under the minimum weight, the driver should be disqualified from the heat, sub-final or final.
- 5.22. The cars shall be measured for width by placing it on a baseboard equipped with two side rails of 20 mm height spaced 200 mm apart, constructed in such a way, that the car can roll freely between them. Baseboard and rails must be constructed of high quality board suitably stiffened to prevent distortion. The car must roll freely between the side rails with any steerable wheel set in straight ahead position without any part of the wheels, bumper, body shell or any other part of the car touching the side rails irrespective of the compression or extension of the suspension. The car shall be measured for length and height in a similar constructed box of internal dimensions 460,00 x 175,00 (incl. 10 mm spacer). Measurement of the wheel base may be made by simple measurement of axle centre distance, but race directors 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, that it is on the track and the organizer may check any car for compliance with the regulations at any time during the race meeting. If a car is found to exceed the limits of dimensions on checking immediately after a race, positive proof of race damage may prevent disqualification.
- 5.23. Roll bars (roll over bars) must be kept under the body.
- 5.24. Only two (2) servos are allowed.
- 5.25. It is not allowed to use any electronic parts for traction control and braking control with ABS which can control the power by means of a feedback system. It is not allowed to use any form of telemetry with active transmission.
- 5.26. All measurement referred to these rules are maximum or minimum values.

## **6 PENALTIES**

- 6.1. Referees must issue a verbal blue flag warning to slower drivers or to make drivers that are not within the same lap as the car that is about to pass him, to make way and not to obstruct the passing car. This warning must be announced "attention driver (name)".
- 6.2. Failure to respond to the verbal blue flag will result in an official warning and the driver must make a mandatory pit stop for 10 seconds. During this mandatory stop, the referee will administer the official warning directly to the driver. In the case that there is no possibility to call a driver for a stop and go penalty, the referee and/or race director will announce a time penalty of 10 seconds.
- 6.3. Any driver who is given two (2) official warnings will be immediately disqualified from the entire race.
- 6.4. Deliberate waiting for other cars will be treated as a verbal blue flag offence, a stop and go penalty issued. The referee will advise the driver that this behaviour has been noted and that he should race normally. Failure to follow the referees

instructions will result in immediate disqualification. In the case that there is no possibility to call a driver for a stop and go penalty, the referee and/or race director will announce a time penalty of 10 seconds.

- 6.5. Deliberate obstruction of other cars in an attempt to influence the results of a race, will lead to immediate disqualification and loss of his/her international license until after the next event of the same kind (e.g. GP/EC/WC).