

## APPENDIX 1

### 1/8th, 1/10th and GT8 SCALE TRACK CARS Combined

#### 1. ALLOCATIONS FOR EUROPEAN CHAMPIONSHIPS.

- 1.1. The allocations for the EFRA European Championships 1/8th. and 1/10th. 200 mm scale and GT8 (E and IC) will be established by the section meeting and published in the minutes.
- 1.2. For allocation and re-allocation procedures see Gen. 3.6. and 6.2.  
For ALL CLASSES: Allocations will only be offered for EC and WC events to those member countries that have written to request places.
- 1.3. All countries receive re-allocated places in the order of the Allocation-list, unless stated otherwise in this list.
- 1.4. The number of entries for EFRA European Championships is 100 with a maximum of 120. Accommodations for at least 100 drivers must be available. If the number of entries exceed 100, the accommodation must be sufficient for all participants.
- 1.5. A Track Commission will be formed to evaluate tracks throughout Europe to recommend the most suitable venues depending on the class. The commission will be chaired by the EFRA Chairman and will consist of the member federations, organisers and manufacturer representatives. The aim of the commission will be to work closely with the member federations to develop proposals and a shortlist of venues for presentation at the AGM.

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

- 2.1. European Championships are held in following classes:
  - a) European Championship 1/8th IC. European Championship 1/10th Touring Car Sedan bodies. In the year there is an IFMAR World Championship outside the EFRA Bloc, dates between EC and WC must be separated with at least 4 free weekends between the finals. In the years there is an IFMAR WC in the EFRA Bloc, there will be no European Championship (see schedule IFMAR, [www.ifmar.org](http://www.ifmar.org)).  
One special EFRA medal will be awarded to the fastest driver under 17 year in each class. So everybody of 16 years old at 1st of January, or younger can compete for this medal. One trophy must be awarded by the Organizer for each class.
  - b) European Championship GT 8 E and IC. There will be a 40+ category awarded during the same event.
  - c) European Championship 1/8th Track 40+ and 1/10th 200 mm 40+. This will be one combined event. EC 40+: Open to all drivers of 40 years, including those who become 40 that year and older. Drivers who ranked within the A main finalists of age 40+ of the respective category EC of the previous year is not permitted to participate in the 40+ EC.
- 2.2. Unofficial Free practice for an EC track can be open from Monday. It will not be allowed for all competitors in the event to practice for 10 days before this Monday (see also Gen. 8.1.) This unofficial practice is under the discretion of the event organiser however it is recommended that these practice days are initially open track (no groups) but if deemed necessary it is possible for the practice to revert to groups.
- 2.4. General Qualifying format for EC's:  
5 Rounds of Qualifying will be run, irrespective of the number of drivers. Qualifying heats are 4 minutes duration for 1/8 and 1/10 + last lap and 7 minutes

+ last lap for GT8 - both E and IC. A point system will be used to establish the qualifying result.

The top 4 ranked drivers after completion of the qualifying heats will move up directly to the main final and take the top 4 positions on the starting grid. The other drivers will start in the finals as per qualifying ranking. Depending on time available all finals higher than 1/64th can be shorter than 20 minutes (for instance 10 minutes). See also 2.6. The number of Rounds to count is as follows:

1 Qualifying Round completed	1 by laps and total time.
2 Qualifying Rounds completed	1 best by laps and total time.
3 Qualifying Rounds completed	2 best point scores to count.
4 Qualifying Rounds completed	2 best point scores to count.
5 Qualifying Rounds completed	3 best point scores to count.

Any Qualifying Round has to be completed for any Heats in that Round to be awarded points that count. Fastest competitor (based on laps & time) in each Round will score zero (0) points, second place 2 points, third place 3 points, fourth place 4 points etc.

If two (or more) competitors achieve an equal time in any Round they will be awarded equal points. The next competitor not included in the tie will be awarded points corresponding to his position in the particular Round.

(NOTE: drivers not recording a time or having a time disqualified in any Round score points for last place in that Round)

Overall Qualifying positions are decided by each driver 'best' (lowest) points being added together, based on the number of Rounds to count as shown in above table. In the event of a tied position, the driver with the single highest finishing position in either of the best Rounds that counted will be awarded the tie (e.g. 1+3 = 4 beats 2+2 = 4). In the event of a continuing tie then the laps and times from the best points Round will be compared. The driver with the fastest laps and time will be awarded the tie. In the case of a continuing tie, then the times from the second best scores will be compared. Only counting Rounds will be used to decide Qualifying positions (or ties), all other Qualifying Round scores and times will be discarded.

If the intended maximum number of Rounds cannot be completed, due to weather or unforeseen circumstances, the number of Rounds to count will follow the same format as the table above.

**Rain procedure:** Only rounds ran under the same conditions will count. Same conditions means: no differences in average lap time by more than 20%. The Race director together with the referee will make the final decision.

- 2.5. Time Schedule: The time schedule should not be rigid but adapted to the number of entrants. As a guideline at EC's with 100 or more entrants the schedule should be as follows:

**Monday & Tuesday:** Refer to rule 2.2 above.

**Wednesday:** Controlled practice in groups.

**Wednesday & Thursday:** Technical inspection. All cars must pass technical inspection before Controlled Timed Practice.

**Thursday:** Controlled Practice, Controlled Timed Practice and Qualifying 1 & 2 in the afternoon.

**Friday:** Qualifying Rounds 3 to 5, lower finals

**Saturday:** remaining lower finals; Practice 4 direct Qualifiers, 1/2 final, Last Chance, Main Final.

The time schedule and the number of heats can be adjusted by the race director with agreement from the EFRA representative due to weather and unforeseen conditions and the number of total drivers at the event.

For EFRA European Championship, the race director should seed the Controlled Practice heats, Controlled Timed Practice heats based on the EC from last year. The practice heats shall contain a maximum of 12 drivers. These Controlled Practice heats will be of 10 minutes duration. The Controlled Timed Practice heat will be of 4 minutes duration. The ranking from controlled timed practice will be used to make the heats for the qualification heats. The schedule of all practice heats including each practice heat starting time will be carried out by the organisation of the event in consultation with the EFRA representative and it should be published on the notice board and if possible to an online platform.

2.6.1. General format for sub-finals and main final at EC:

The lower finals are 20 minutes up to 1/64 finals. Time for all finals higher than 1/64th to be set at team managers meeting. The duration of the main final is 45 minutes.

Sub-finals: The best 3 in each sub-final move up to the next final.

Semi-finals: The best 3 of each semi-final move up to the main final.

Starting order for the drivers who moved up to the main final is based on number of laps and time for positions 3 to 10. In different 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. Semi-final B is the first final to start on the Saturday afternoon.

After Practice direct Qualifiers cars (top 4 drivers), both cars must be kept in Parc Fermé. Additionally, 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.

**Last chance final:** A special final the top 6 drivers of each semi-final who did not bump up drivers of semi-finals who not bump up into the final (12 drivers in total). Duration will be 15 minutes and winner of the final will bump up into the final with number 11. The order of starting grid in the Last chance final will be according to the results in laps and time on both semi-finals combined.

NOTE: The LCF result will not be used to determine the final event rankings - the LCF is ONLY to decide the 11th qualifying position for the main final all other positions will be disregarded. Final event rankings will use the original finishing positions of the semi finals.

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

No starter boxes are allowed on the track at the start of any finals. Starter boxes taken to the grid will result in the concerned driver receiving a stop and go penalty. A car which cuts on the starting grid is required to be returned to the pit lane and will start the race from the pit lane after all other cars have started.

2.8. When the Qualification has been completed, the top 4 qualifiers must do a press interview with the cars (not only with the body) in a place that the organiser must prepare on the track. This place must be equipped with a table with an EFRA MEMBERS banner and chairs for the drivers. The EFRA official media partner will have preference for the first 5 questions. When the main final has been finished, we will have the same procedure for the 3 first drivers in the final, when the result has been declared official for the race director.

### 3. TRACK SPECIFICATIONS

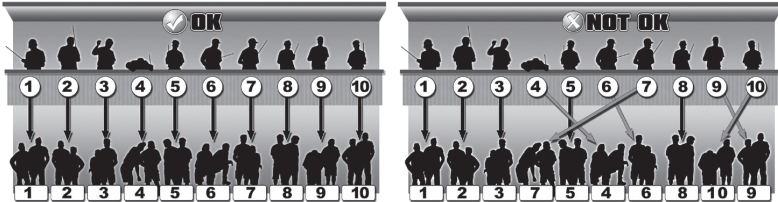
3.1. Track surface should be unsealed asphalt or coarse finish with any joints smoothed.

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

3.3. Minimum width of the track will be 4 m. between marking lines. (advised for

- new tracks 4 m between the marking lines). The maximum width is 6.50 m. 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 the furthestmost point of the track must be 60 metres.
  - 3.5. Vision: no obstacles may interrupt the vision from the driver's 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 outer marking lines.
  - 3.7. The refuelling and pit area should be clearly distinguishable from the main track and as close as possible to the drivers' rostrum. Exit from and entrance to the main track is advised to be on a slow part of the track.
  - 3.8. Track design must include both right and left hand turns and must have a straight of minimum length 45 metres.
  - 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 unassisted to minimise the need for Marshall's assistance. Marshal posts must be positioned at 30 m 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 or a fast corner) this post must have protection for the marshal (a wall, tyres, a gate, etc.).
  - 3.13. 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 located more than 2 metre. away from the following corner. The timing loop must be located in a position before the pit entry up to one quarter of the track length before pit entry.
  - 3.14. Only a Le Mans type of start will be used. For Le Mans type of starts, 12 numbered boxes will be located on the edge of the track, at an angle of 20-45 degrees to the track, min. 4m apart. Starting position can be approved by highest EFRA official at race in discussion with Race director and Organiser. The boxes must be 70-100 cm long and 30-40 cm wide.
  - 3.15. The track must have a special area cordoned off to be used for the application of the tyre control procedures , with a ONE-WAY system in place to ensure that the tyre control procedures are complied with.
- 4. RACE PROCEDURES 1:8, 1:10 and GT8:**
- 4.1: The rostrum should be divided into 12 equal spaces by means of a clear marking. Drivers can stand anywhere within the marked spaces on the rostrum on a first come first served basis and mechanics MUST stand directly underneath their driver in the pit lane wherever possible or in the same order. In the event of disagreement of the drivers during qualification and lower finals at the discretion of the EFRA referee the drivers who have the disagreement will be arranged by the lowest car number. For the semi-finals and main final, drivers

with the lowest starting numbers will choose their position on the rostrum one by one to the highest number and the mechanics must stand under the driver where this is possible or in the same order.



- 4.2. **STARTING PROCEDURE OF HEATS FOR EC's**  
Starting of the qualifying will be in flying start according to the rule CHAPTER 9 STARTING PROCEDURES rule 9.2.b.
- 4.3. **Qualifying for EC's.**  
Qualifying runs and Finals are run by "time plus completion of lap" system. Qualifying heats are 4 minutes duration for 1/8 and 1/10 and 7 minutes duration for GT8 classes. For duration Lower Finals and Main Final see 2.6. The use of a personal transponder is mandatory.  
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.  
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.  
After returning to the pits, the engine must be stopped immediately and the transmitter turned off and impounded if needed.
- 4.4. **Qualifying, rolling start system for EC's:**
  - 1. There must be a 2 min gap between the end of one heat and before starting the 3 min warmup time of the next heat . In the 2 min gap it shall be allowed to start the engines so they can heat properly before putting them on the track.
  - 2. An audible warning will be given at 2 minutes, 1 minute and again at 30 seconds prior to the official start, in English and other languages as appropriate.
  - 3. Drivers must cross the timing loop within a limit to be decided by the race director (which shall be the average lap time taken from timed practice plus 50%) of the start signal being given by the timing system
- 4.5. **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 (20% differences in lap times). On the corresponding record sheets, this must also be marked. The Race Director together with the Referees will decide in case of any 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. Due to the points system and when weather and time permits, the Race

Director must try to complete as many Rounds as possible under equal circumstances.

4. 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.).
  5. When 1 Round is finished under dry conditions, the Race Director can 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 the track for controlled practice.
  6. In case of interruption due rain situation when a round of qualification is running, all this ROUND of qualification will be discarded.
  7. When race director declares the race to be wet, a second car can be used as a rain car in same conditions like in sub-finals and final (see 4.8).
- 4.6. Qualification Order and Finals.
1. After all Qualifying Rounds have been completed the Qualification order is established, by taking the total counted points result of each driver.
  2. In case of more than one driver recording identical best results of qualifications the next best result is taken.
  3. 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 number 5 and 2 have equal times, 5 is deemed to have the higher final placing.
  4. The Sub-Finals and Main Final are run according to the schedule printed in the official race program, which may only be changed by a team managers majority vote.
  5. After all Sub-Finals and Main 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 4.8.
- 4.7. STARTING FOR SUB-FINALS AND FINAL
- Starting for sub-finals and final will be on a 'Le Mans' type grid, with the faster Qualifier starting in front of the slower. Finals, Le Mans start grid:
1. There must be a minimum 5 min. gap between the end of one final and the start of the next final. Also a minimum of 2 minutes must be allowed between the issuing of the transmitters and the start of the final.
  2. There should be a 30 minute gap after the Last Chance Final before the start of the main final.
  3. The main final only will have a 10 minute warm up period.
  4. 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.
  5. From 30 seconds until 10 seconds countdown the cars must be held at the starting boxes. If a car is not at the starting box at 10 seconds countdown(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 procedure.
  6. For all finals, from 10 seconds until 3 seconds prior to the start, a second by second countdown will be made in English.
  7. For Le Mans Grid 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. At this point, all cars must be released by the mechanics, who will all step back 1 meter. The cars must remain in the boxes, no part of the car touching the starting line.

8. From 3 seconds; the verbal count-down stops and the actual start-signal will be given by the Starter after a period of between 0 and 5 seconds has elapsed. If the grid is not to the satisfaction of the Starter, he may require a restart, re-commencing with the count-down from 30 seconds.
9. The official start signal will be audible by means of a 'hooter' (computer operated signal), operated by the Starter/Timekeeping supervisor. This signal will also start the Timing Systems.
10. Jump-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, Race Director or the Referee and must be announced immediately after the start. The penalty will be marked on the result-sheet.
11. Under no circumstances will the race be stopped due to a jump-start.
12. The Starter may only interrupt the race and make a restart in the event that he considers the starting procedure, or the start was not carried out correctly.
13. Delayed start: Providing the starter has not called 30 seconds (the trial lap, see 4.3 is part of the procedure after 30 seconds) for the cars to the start line, 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 the final. The track must be closed during the delay start period, once the 10 minutes has expired the timekeeper will call for 5 minutes to the start. Only the driver who has called for the technical timeout can work on the car, all other cars must be placed into parc ferme conditions with the bodyshell remaining in place on the car. Disregard of the parc ferme will result in the driver receiving a stop and go penalty to be taken within 3 racing laps from the start. The parc ferme period ends once the timekeeper calls the end of the 10 minute period. The driver asking for a delay will start from the end of the grid (11th position to be painted on the track 12th position in the main final) or from the pit lane in case he is not within time at the grid.

#### 4.8. RAIN PROCEDURE Sub-Finals:

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...

**WET CAR:** When a race director declares the race to be wet, a second marked (to distinguish between the dry/wet car) car can be used as a rain car. This car cannot be used (shared) by another driver/s in the same event. Multiple marking of the chassis is not allowed. This rain car can only be used in wet conditions and not in dry conditions. This car cannot be used when the heat or final has already started. Once you start (in time) with a rain car you must finish the heat/final with this rain car. The rain car will also be scrutinized by the technical inspection team in the same way the marked dry car would be (using a different colour or other means to differentiate between the dry and wet car).

#### 4.9. 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 a sub-final or main final the following procedure will be used:
  - A. If less than 10 minutes of a final has 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. Vehicles may not be repaired before the new start. 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 to the vehicle or changing of tyres. Any driver who does not observe this rule will be immediately disqualified.

## 5. GENERAL TECHNICAL SPECIFICATIONS

EFRA will convene, chair and manage a "Technical Commission" who will be responsible for all technical aspects of the rules for the classes described within this appendix. The technical commission will be composed of industry experts, manufacturers and EFRA board members. The decisions taken by the technical commission in relation to the construction rules of the section will be subject to general rule 6 "Technical Rule Changes" and will be embodied as agreed. These rules changes will not be subject to AGM vote but the rationale explained during the AGM. The EFRA chairman will make the final decision with regards to the rule changes proposed by the technical commission after careful consideration which may include discussions with drivers of the last EC.

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

### 5.1. TYRES/Rims:

Tyres must be black, except for writing on the side wall (exceptions only after EFRA agreement). Foam and/or rubber tyres can be used. Treatment of tyres with any type of additive is strictly not allowed.

TYRE DIMENSIONS FOR 1/8th: Maximum width of rear tyre: 64.0 mm.

TYRE DIMENSIONS FOR 1/10th: Maximum width of front & rear tyre (across side-walls): 31.0 mm.

### 5.1.1 SPECIFICATIONS FOR CONTROL TYRE

Definition of Control Tyre: 1 set (front and rear), 1 brand, 1 diameter front, 1 diameter rear, 1 shore for front and 1 shore for rear.

A Control tyre is mandatory for: Controlled time practice (which are used for seeding), Qualifying, Sub-finals and final. The configuration, price and brand(s) of tyre will be decided between EFRA and the supplier and published in the

Stage 1 report for each event season.

Default Diameters for 1/8th: 69.0mm front and 76.0mm rear however these can be changed should track conditions require it in consultation between the organisers and EFRA with a default shore hardness of 32 front and 35 rear.

Diameters for 1/8th electric stock: 64mm front and 70mm rear - tyre trueing in the pit shall be allowed as there exist many different split options between the brands.

Default Diameters for 1/10th: 62mm front, 64mm rear.

Default Shore hardness for 1/10th: 35 front and 37 rear however these can be changed should track conditions require it in consultation between the organisers and EFRA.

PROCEDURE FOR CONTROL TYRE (specific rules for drivers): -

- Only EFRA chosen supplier controlled tyres can be used (Hand-outs)
- Reused tyres will be allowed.
- Mandatory sets for official race: 8 (eight) sets. Specific for 1/8th electric class: As the class needs less tyres, mandatory quantity of tyres shall be fixed by considering different tyre wear.
- With registration drivers must order and prepay the number of tyres for free practice they want to get, so the Official Tyre Supplier can provide enough tyres for whole event. The method of doing so will be published in the stage 1 report. Any driver who fails to order enough practice tyres will not be guaranteed any practice tyres on the day
- The official tyre supplier will be responsible for organising the mandatory 8 sets into bags or boxes with the drivers name
- Drivers have to pay official sets directly at the track to the Official Tyre Supplier.
- If the hand out tyres have any visible defects (bad gluing, visible damage to tyre or rim) the effected tyre(s) can be exchanged before the race start by the tyre supplier. Production tolerance (including shore hardness) will not be considered as a defect. Tyres must be used as they are supplied and will be marked with the drivers number and placed into parc ferme before timed practice. (No modifications to the rims, except the hole for the axle, no shore meters can be used to select from the supplier however a shore meter can be used during marking of the tyres only for the purpose of the driver to arrange the tyres into run sets)
- During their race time, drivers can use tyres from their box in the controlled area. After finishing their race time, drivers must leave their tyres in their box and leave the pit area without tyres. If any tyre leaves the pit, it cannot be used in the Official race anymore.
- When drivers finish their participation in the event, they can collect their used or unused tyres from the controlled area and keep them
- For free practice, drivers have free choice of tyres used, but no treatment is allowed. From the start of the controlled timed practice, drivers have to use the Hand-out tyres.
- In case of rain (decided by the Race director after consultation with the Section Chairman), any alternative tyre can be used which has not been treated in any way, with the aim to get more or less traction.

PROCEDURE FOR CONTROL TYRE (specific for manufacturers/brands)

- Only EFRA registered manufacturers/brands allowed to be Official Tyre Supplier. They must be registered at the Official Tyre Supplier list before 31st of January.

- Requirements to be Official Tyre Supplier for EFRA events:
    1. All manufactures/brands must be Associated Member in EFRA.
    2. They must have enough capacity to provide necessary amount of tyres for EFRA events. The Official tyre suppliers have to provide a minimum sets as follow: Mandatory tyres for Official race + Tyres booked for drivers for free practice + Tyres needed for finals + Margin to cover additional demands no less than 30%
    3. Official Tyre Supplier has to be completely in charge of tyre distribution of tyres. This means: provide tyres directly at the track, take care of all regarding payments (they will accept cash and recommended credit card payments), handling Official tyres together with organiser (except controlled area), in general, all minor things needed for the Control Tyre system to operate smoothly
    4. Manufacturers must assure a good quality of tyres, which means right hardness (with minimum tolerance), balanced tyres, good quality of gluing and right hole for the axle.
    5. EFRA will carry out quality control of TYRES during the event at its sole discretion to assure these requirements. EFRA reserves the right to refuse selected manufacturers before the event if they cannot assure the quality needed and/or EFRA has the right to ban Manufacturers as Official Tyre Supplier for a period between 1 to 5 years if they don't provide handout tyres according to the EFRA requirements. Decision from EFRA in this point is final.
  - Manufacturers/Brands as Official Tyre Supplier have the right to:
    1. To make any promotion by themselves as EFRA Official Tyre Supplier.
    2. To get enough space on the track during EFRA EVENTS to handle all necessary regarding Control Tyre System.
    3. To put banners on the track as EFRA Official Tyre Supplier with a maximum of 5 banners. If more banners on the track or another kind of advertisement, that will be in agreement with the organiser.
    4. To get all benefits for EFRA Associated Members.
  - After 31st of January a final list with the Official Tyre Suppliers will be published on the EFRA webpage.
- 5.2. Fuel may only contain methanol (methyl alcohol, CAS number 67-56-1), lubricating oil, a small content of anti- corrosion chemicals and maximum 16% for 1/8 and 16% for 1/10 of nitro methane (Cas number 75-52-5) IN WEIGHT (not in volume). The specific gravity of the mixture may not be heavier than 0.859 grams/cc at 20°C and standard atmospheric pressure. Aromatic additives are expressly prohibited, a Spectrometer will be used to detect the use of any of these prohibited additives. For quick testing a Nitromax 16EU can be used, but in case of failure with the Nitromax an official density meter must be used to control the specific gravity of the fuel including the temperature recorded during the test. A specific table will be produced to report the density (grm/cc) based on the temperature (from 0 to 50°C). The tolerance on the measurement will be +/- 0.5% based on the data reported in density table. 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.
- If an EFRA World Championship Event is to be run at a Country which permits the use of a heavier content of nitro methane (up to 25% in volume) and the Organizer can ensure EFRA and the participants its supply track side, then the limits will be according to the IFMAR with a maximum 25% of nitro methane

- (Cas number 75-52-5) in volume, using for quick testing the corresponding Nitromax tool.
- 5.3. 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.
  - 5.4. Each motor must be equipped with an exhaust system and inlet silencer (INS-box) to reduce the amount of noise. A Registered muffler and Homologated INS-BOX is mandatory. In case of rain and on instruction of the Race Director, drivers can use something else as an INS box (In this case the INS box is not mandatory). EFRA's definition of a noise level is always final. Any modification to the muffler or INS Box is forbidden.
  - 5.5. Only EFRA registered mufflers are allowed at EFRA sanctioned events. The EFRA registered number must be engraved on the sidewall of the muffler. The tail pipe must be oriented on or below the horizontal Race directors have the right to measure at track side and take out cars that make too much noise. EFRA's definition of a noise level is always final. For 1/8th and GT8 IC, a 3-chamber muffler is mandatory. For 1/10th a double chamber design, including silencer chamber, must be fitted.
  - 5.6. The aerial must be flexible. Carbon, metal, etc. is not allowed.
  - 5.7. The body and spoiler must be made of a flexible material and be painted properly. All windows must remain clear or be semi-transparent. When initially entered in a meeting the body must be neatly finished.
  - 5.8. The minimum weight limit of the cars (Weight limit will be unchanged for 2026):  
1/8th Class: 2350 grams for 4WD cars. For 2027 the weight limit will be 2300 grams  
1/10th Class: 1650 grams.  
GT8 IC Class : 3500 grams. For 2027 the weight limit will be 3400 grams  
GT8 E Class: 3800 grams. For 2027 the weight limit will be 3700 grams  
For all Classes: The weight limit will be checked with the cars ready to race but with empty fuel tanks and with transponder (personal or with battery). 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 will be disqualified from the heat, sub-final or final.
  - 5.9. Baseboard for checking the width of the car.  
1/8th Class: The car shall be measured for width by placing it on a baseboard equipped with two side rails of minimum 40.0 mm height spaced 267.0 mm apart and a length of 637.0 mm for Formula and Sports cars and 610.0 mm for GT cars which includes provision for checking the maximum height.  
1/10th Class: The cars shall be measured for width by placing it on a baseboard equipped with two side rails of minimum 40.0 mm height spaced 200.0 mm apart and a length of 460.0 mm x 175.0 height (incl. 10 mm spacer).  
For both Classes: Base-board 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 the straight ahead position without any part of the wheels, bumpers, body shell or any other part of the car touching the side rails irrespective of the compression or extension of the suspension. 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 regulation at all times when it is on the track and the organiser 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.

- 5.10. Checks at the 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 the old to the 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 made after the Main Final for the top 4 places with the additional requirement to check engine compliance. EFRA can at its sole discretion decide to check engines randomly during the event at any time.

EFRA can at its sole discretion decide to check engines randomly during the event at any time.

- 5.11 Only two (2) servos are allowed.
- 5.12 It is not allowed to use any electronic parts for "Traction Control and/or braking control (ABS)" which can control the power of the transmission by means of a feedback system. It is not allowed to use any form of telemetry with active transmission. Temperature sensor cables with display are allowed (not wifi or Bluetooth transmission).
- 5.13. 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 registered and homologated during the year will not be put on the list until the 1st of March next year.

## **6 1/8th CLASS TECHNICAL SPECIFICATIONS.**

- 6.1. The engine may have a total capacity of not more than 3.50 cc. A maximum carburettor diameter of 9.00 mm.
- 6.2. The fuel tank including filter and fuel pipes up to the carburettor may hold a maximum of 125.00 ml. No loose inserts allowed. Any tank found illegal (>125 ml) after a heat or final shall be removed from the car and inspected for a second time after an initial "cool down period" of approx. 15 minutes. This period of 15 minutes is only necessary if ambient temperatures are above 20° C.
- 6.3. Overall dimensions of the car:
  - Wheel base: 270.0 - 330.0 mm, overall width max. 267.0 mm
  - Overall width of the body max.: 267.0 mm, measured on all points on the body.

The lower sides between the two front and rear wheel arches will not be taken into account for technical inspection as long as they are not wider than 277 mm. If the body is wider than 277 mm on the lower sides the technical inspection has the right to take action with a warning for the first occurrence but disqualification from the race result for any further occurrences. For all finals: bodies must first pass technical inspection for verification and a first warning is not applicable.

- 6.4. Rims: The rim must not exceed 54.0mm. An edge to reinforce the rim on the inside (car-side) of 2.0 mm thickness and 3.0 mm height is allowed, flange diameter max. 60.0 mm. Any fixing bolts or other equipment installed in the wheel rims may not extend beyond the exterior of the wheel rim.
- 6.5. The front of the vehicle must be equipped with a bumper in such a manner, that it will minimise an injury if it makes contact with other participants or members of the public. The bumper must be made from a flexible material with all corners and sharp edges radiused. The contour of the bumper will follow the contour of the body with which it is being used. At no point may the bumper protrude more than 5.0 mm in front and 13.0 mm on the sides of the body.
- 6.6. If a rear bumper is fitted it must finish not more than 50.0 mm behind the rear axle. Rear diffuser is allowed as long as they don't finish more than 50.0 mm behind the rear axle.
- 6.7. All EFRA sanctioned events will be raced with open/closed cockpit prototypes/sportscars/ can-am type/GT-P's/Group-C or similar cars. All lists of approved equipment, (i.e. Bodies, mufflers and batteries) must be available on EFRA's website from the 1st of March every year. These are the final lists for the year and no changes will be made before the next year. Equipment homologated/registered during the year will not be put on the list until 1st of March next year.
- 6.8. A realistic driver figure (minimum 3 colours) made to 1/8 scale must be fixed in the correct position in open cock-pit cars. The windscreen and windows must be translucent (i.e. Not completely painted-in).
- 6.9. All bodies must have the front and rear wheel arches cut out if the original was so designed.
- 6.10. CUT OUTS

The windscreen must not be cut out. One hole of max. 6.0 sq. cm for cooling is permitted-side windows and rear windscreen may be removed..It is not allowed to bend windows to the outside - all parts of the vehicle must be covered, except:

- a) Cooling head of engine.
- b) Air filter.
- c) Aerial (max. 10.0 mm).
- d) Outlet pipe of muffler.
- e) Fuel filler cap.
- f) Roll-over bar.

Only if these parts are extending the body. Cut-outs for above mentioned parts are to have no more than 10.0 mm clearance. In addition to this, the following holes are allowed:

- g) For muffler outlet.
- h) For fuel filler cap (50.0 mm maximum, round, viewed from above, or oval 40 mm x 60mm maximum). Note: Hole for roll-over bar and fuel filler cap can be combined. It's not allowed to combine fuel filler cap with Air filter hole and/or cooling head engine hole.

The following rules refer to the GT-P/Group-C body: In case of the Proto types or open cockpit cars, a clearance of 10 mm around the fuel filler cap is allowed.

- i) For radio switch (max. 10.0 mm)
- j) For glow plug (max. 20.0 mm).
- k) Fuel mixture valve (max 15.0 mm).

6.11. Specific body attributes:

- a) Group C: Cars eligible for this class are those that have been used under "Group C" rules in the FISA Sportscar World Championship.
- b) GT1/GT2-Cars: Cars eligible for this class are those that are or have been racing in FIA GT Class. This can be either GT1 or GT2 cars like McLaren F1, Porsche 968 GT1, Ferrari F40, Marcos etc. The cut-out of the body at the rear is free after the rear axle, but rear lights must be fitted if the original is equipped with these.
- c) GT-P cars, eligible for this class are those that are or have been racing in the FIA "GT-P" class (see Le Mans 1999), or the Petit Le Mans Series in America.
- d) Proto type CAN-AM cars: eligible for this class are those that are of have been racing in any official championship.

Homologation procedure: For all types of cars, the body shape behind the rear axle is not subject to control. The outer edge of the wheels must be covered at the centre of the axles viewed from the top. All bodies must be homologated by EFRA. The homologation number of the body must be visible, during the painting it will be possible to maintain transparent or semi-transparent the EFRA number.

Minimum weight of the body: 145 grams. The body must be ready to race, which means, painted with gurney trip, stiffness, stickers and any other allowed parts. It's not allowed to add extra weight into the body to set up minimum weight. Clarification of extra weight: any part/glue that is only used to set up minimum weight of the body and also it could be used to improve performance in any way. It's allowed to add glue or adhesives to strengthen of the body

6.12. Wings and Spoilers:

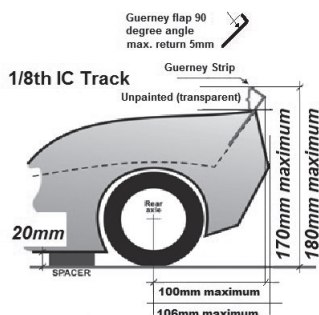
Separate wings and spoilers are not allowed. Only a Gurney strip mounted on the rear of the body is allowed. The "Gurney" should not be higher than 5mm with a 90 degrees angle (see drawing). Maximum height for the body, side and rear wing is 170mm with the chassis raised on 20 mm blocs. This maximum height with the Gurney Strip is 180 mm on a 20 mm spacer.

The maximum overhang is 100 mm measured from the rear axle centre point. See drawing.

Maximum dimensions: Group "C", GT-P, Can-Am, GT1 and GT2 cars max. width: 267 mm, max. height: 170 mm (180mm for flat chassis pancars) (on 20 mm blocs). Overall, maximum height including a Gurney strip 180 mm (190mm for flat chassis pancars) (on 20 mm blocs). Max distance behind rear axle: 100 mm (110 mm for 2wd & flat chassis cars).

- 6.13. 4WD cars can be used without any technical restrictions except those listed in Section 5. The use of separate front wheel brakes, except through transmission is also not allowed (locking of a one-way bearing is allowed).

- 6.14. A roll bar may be fitted which must not project more than 30 mm above the cooling fins or roof, in case of, for instance a saloon car.



**7 1/10th CLASS TECHNICAL SPECIFICATIONS:**

- 7.1. The engine may have a total capacity of not more than 2.11 cc. Engines will be air-cooled, with front rotary valve, two-stroke induction. The engines may have a 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 are allowed. Reference to 'hole' in this rule means any hole that is surrounded completely by material.
- 7.2. Engine internal modifications are allowed as long as they are within parameters of rule 7.1.
- 7.3. A maximum carburettor diameter of 5,50 mm.
- 7.4. 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 (>75.00 ml) after a heat or final will 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 ambient temperatures are above 20°C.

7.5. Overall dimensions:

	Min. (mm)	Max. (mm)
Wheelbase:	230.0	270.0
Width without body:	170.0	200.0
Width with body:	175.0	205.0
Length incl. body & wing:	360.0	460.0
Height of the top of the roof (measured with a 10 mm spacer under the chassis plate level):	120.0	175.0
Wing width incl. side dams:	125.0	200.0
Wing:		55.0
Side dams:		35.0 x 50.0
Wing overhang (at rear):		10.0
Wheel dia. ( measured at tyre bead location):	46.0	50.0
Wheel width (incl. tyre bead) and tyre width (across side walls):		
Front:		31.0
Rear:		31.0

Although the wheel diameter at tyre bead mounting location must not exceed 50.0 mm diameter, an edge to reinforce the rim of 2.0 mm thickness and 3.0 mm height is allowed, giving an overall wheel diameter max. 56.0 mm

- 7.6. 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 / spring charged or electric system to change the wheels is allowed (only manpower).
- 7.7. The front bumper must follow the body contour and must be constructed so as to minimise injury that may result from being hit by a car. The bumper must be made from foam rubber or a flexible plastic material.
- 7.8. Bodies must be a 1/10 scale touring car in character, their design being inspired by vehicles that exist or have existed and must comply to the GLOBAL BODY SPEC 1/10th IC Track. Bodies need to be sent to the Body shell Homologation Officer for approval as indicated in appendix 9.

The EFRA Registration Number has to be embossed in the body at an edge of the front window.

Minimum weight of the body: 90 grams. The body must be ready to race, which means, painted with rear wing (rear wing can be painted or clear), stickers and any other allowed parts. It's not allowed to add extra weight into the body to set up minimum weight. Clarification of extra weight: any part/glue that is only used to set up minimum weight of the body and also it could be used to improve performance in any way. It's allowed to add glue or adhesives to strengthen of the body.

- 7.9. The rear of the body may not be cut higher than 50.0 mm measured with a 10.0 mm spacer under the chassis plate when level.
- 7.10. 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 moulded body shell (no body stiffeners allowed).
- 7.11. Cuts outs:  
 Only the following holes and sizes are permitted in the body shells:  
 - Maximum two holes may be cut with a maximum diameter of 60.0mm each.  
**Note:** holes may not be combined. Minimum distance between holes: 5,0mm.  
 - A hole with max. diameter of 35.0mm is allowed just above the engine cooling head for easy glow plug access but cannot be combined with any other hole, minimum distance between holes: 5.0mm.  
 - Both front side windows and rear window can be removed for ventilation, but not the side rear windows, which must remain intact. Small holes can be made for the body posts, transponder, carburettor adjustment and radio antenna (max. dia. of 10mm).  
 - The hole for exhaust pipe must be of reasonable size.  
 - No other holes are permitted.
- 7.12. 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.  
 - Wing and spoiler may not be fixed to body with piano wire (they must be mounted directly to the body).  
 - 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, measured from the most rear point of the body.  
 - Side dams may be fitted but must be a reasonable representation of those fitted do 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, including side dams, must not extend higher than the roofline.  
 - Wings (excluding side dams) are to be of single moulded construction (no flat packs/bend your own).  
 - Any sticker or graphics will not be allowed on any part of the roof, independent of size and/or position.
- 7.13. 4WD and 2WD cars can be used without any technical restriction except those

listed in Section 7. The use of separate front wheel brakes, except through trans.

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

## **9. PENALTIES**

9.1. 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)".

9.2. 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.

9.3. Any driver who is given 2 (two) official warnings will be immediately disqualified from the race in progress. After 3 (three) warnings the driver will be disqualified from the entire event.

9.4. Deliberate waiting for other cars will be treated as a verbal blue flag offence and a "Stop/Go" penalty issued. The Referee will advise the driver that his 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.

9.5. Deliberate obstruction of other cars in an attempt to influence the result of a race will lead to immediate disqualification and loss of his/her International Registration until after the next event of the same kind. (e.g. GP/EC/WC).

9.6. The Fuel gun/refueling device must not cross the pit wall line at any time. Failing this will result in a drive through penalty.

## **10. GT TECHNICAL RULES**

10.1 Technical rules

All driveshaft must be made in steel (not lightweight materials like Aluminium or Titanium).

Brake System: Maximum 2 brake system in Central Drive Shaft / Central braking only on crown wheel (spur gear). Only standard mechanical brakes are permitted. Up to two brake discs are permitted anywhere on the centre driveshafts. Brakes may not be located on the outboard axles.

One-ways, spools, locking "Torsion-type," or externally adjustable differentials are not permitted. Front & Rear geared Differentials can only be tuned with the use of silicone-based oils. No centre differential allowed. Ball differentials not allowed/only gear differentials. Front and Rear differential gear ratios must be identical. Front or rear underdrive or overdrive is not permitted. The rear differential must be "finger proof", so it must be at least partly covered in case of an open differential. The final drive ratio front and rear must be the same.

Overall dimensions of the chassis:

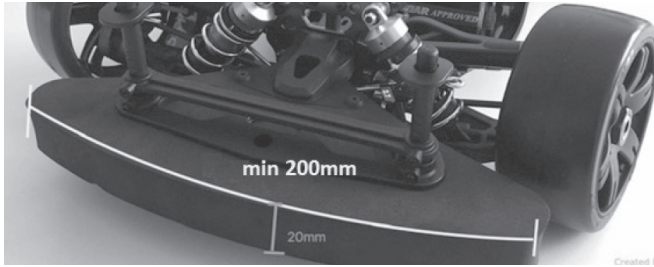
Height: minimum height 155.0mm with chassis plate on 20mm blocks.

Wheel base between 320-379mm

Length Maximum: 590mm

Width max 310.0mm, including wheels, axles and wheel-nuts.

The front of the car must be equipped with a bumper made from flexible "foam" material with all corners and edges rounded off. The contour of the bumper will follow the contour of the body. The bumper may not protrude in front of the body. Minimum dimensions 200 x 20mm.

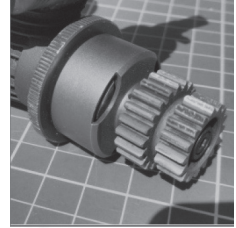


Created by Rai

There should be minimum 20mm foam material available to absorb any impact, both on top as on the bottom.

The maximum capacity for the fuel tank is 150cc max, including all internal tubing.

The Clutch must be a centrifugal type with a maximum of 4 shoes. No axial engagement of the shoes (No "Centax" Type clutches). Clutch must use radial centrifugal shoes only in conjunction with Std parallel sided cylindrical clutch bell similar design to the unit shown.



Direct Drive, i.e. single speed or maximum two speed gear box allowed.

10.2

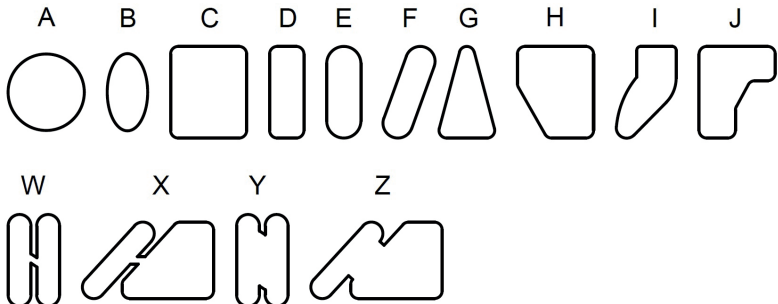
Engine rules

Engines allowed will be .21 or 3.5cc engines. Maximum carburettor diameter is 7mm. The motor shall be air cooled. Conical plugs allowed.

**Number of Ports.** 3 Outlet ports, is defined as consisting of 1 (one) main Outlet port and 2 outlet booster ports, regardless the name and dimensions, every hole is to be considered as one of the 3 allowed.

A maximum of 5 inlet ports or booster ports. Any hole will be considered as one of the 5 allowed.

The definition of 'port' is a hole in the cylinder liner for fuel inlet or exhaust extraction. The inlet and exhaust holes/ports can be any regular recognised shape, eg. Circle, Ellipse, Square, Rectangle, Triangle, Pentagon etc., or Polygon shapes that are recognised as not being regular shapes joined with a 'slot' or hole. Corners and ends of any shape can be radiused and any individual side does not have to be a straight line. A maximum of two additional "lubrication" holes are allowed under the exhaust ports, with the restriction they will start opening with the piston closing the exhaust port Examples:- Shapes A to J are allowed. Shapes X to Z are not allowed. See drawing below:



**The INS box is mandatory.**

Engines must be capable of running a heat of minimum 7 minutes on one tank of 150cc fuel to avoid excessive tuning.

**Approved / registered or homologated 3 chamber mufflers** according to the EFRA list, including INS box list . It is not allowed to use some kind of trumpet to direct the exhaust fumes outside for muffler outlet pipe, they make too much noise. Using a rubber stinger on the outlet pipe is OK, as long as the noise is not higher. Definition of Trumpet in this instance: Any addition to the pipe or body that increases the DB levels, as determined by race management. Bodyshell mounted exhaust deflectors with the sole aim of preventing exhaust byproducts (ie oil) to remain inside the body shell or impact the rear tyres are permitted so long as these are mounted in such a way as not to be seen as adding significant weight to an underweight body shell and should only be mounted with plastic hardware or glue. These must be made from flexible lexan type materials only - rigid/hard materials such as 3D printed deflectors are not allowed.

10.3 Body Rules

Bodies must be EFRA homologated (carry the EFRA number in the windscreen AND be on the current year homologation list) and have been previously commercially available at least 3 months prior to the EC 1/8th scale GT1, GT2, Super GT, DTM, or V8 Supercar cars, 2 door GT bodies.

At least a body with a separate wing like in touring cars. Height of wing max. 10mm higher as rooftop. Measurement taken with chassis plate on the ground. The roof cannot be designed in such a way that ribs or vins are used to manipulate the height. The measurement of the height of the car is done on the highest point of the rooftop, excluding any air intake scoops, ridges or any other extension from the actual true rooftop Maximum width body 317mm. Wing compared to body and wing overhang, same as sedan 1/10th class, max 20mm. Wing can be unpainted/clear.

Wing width max 310 mm, including side plates, but never wider at the rear of the body. Wing chord max 80 mm. Wing endplates maximum 40 x 80mm.

The body must be mounted to the sprung mass of the car at front and rear. No mounting on the suspension uprights allowed. For clarity the body can be supported by suspension mounted supports (with the intention of preventing the tyre rubbing on the body shell in corners) which do not protrude through the body shell while adhering to the body post rule below.

Minimum weight of the body: 250 grams. The body must be ready to race, which means, painted with rear wing, stickers and any other allowed parts. It's not allowed to add extra weight into the body to set up minimum weight. Clarification of extra weight: any part/glue that is only used to set up minimum weight of the body and also it could be used to improve performance in any way. It's allowed to add glue or adhesives to strengthen of the body. Flexible exhaust deflectors which are mounted to the bodyshell in such a way as not to be construed to add significant weight and can only be mounted with plastic hardware or glue.

The body must have visible windows, body panel and trim markings, and the windows must be mostly clear. Some intrusion for creative painting purposes and tinting is permitted, but the windows must be transparent. Bodies must have headlights and grill details.

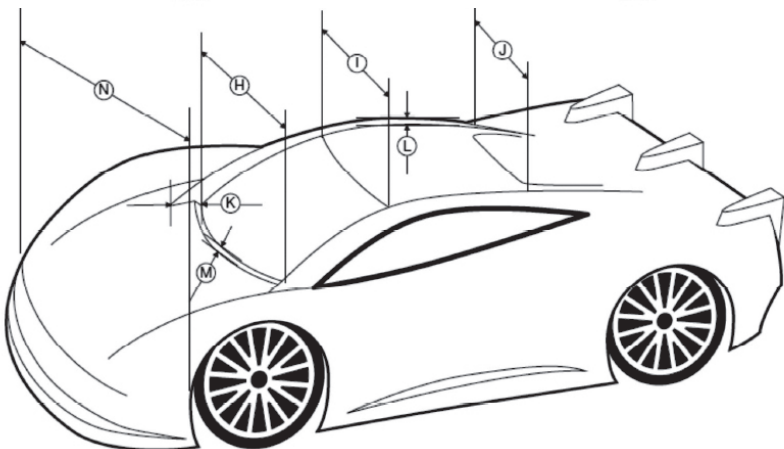
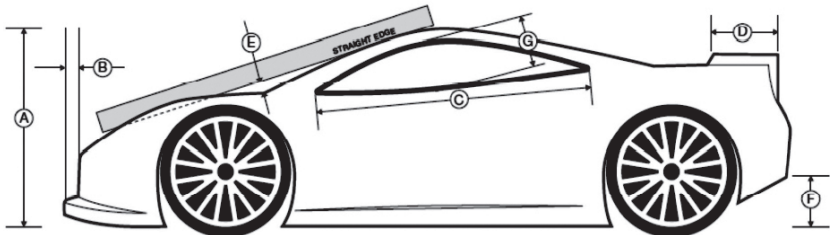
1 piece body moulding to avoid internal aerodynamics. A diffuser mounted on the rear of the chassis is allowed as long as it stays inside the body and not wider as the inner measurement of the wheels. The diffuser must be made of flexible material without any sharp edges.

No internal body supports / stiffeners / braces allowed to avoid lightweight

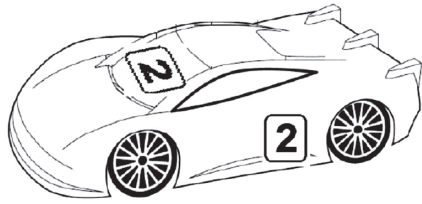
bodies with internal modifications and add-ons, excluding reinforcement of the wheel arches and back boot lid is allowed. The body must rest on a maximum of 9 posts, of which 5 can protrude outside the bodies. The wing must rest on maximum 3 body posts which are not wider as 50x 20 mm each. The body must be made from an existing car design, for which the name must be mentioned on the request for homologation. After been approved the name of the body is free to avoid license fees etc.

Bodies must be within the GBS dimensions by IFMAR. See drawings below.

- A) Minimum 155,0mm (with chassis on 20mm blocs),
- B) Maximum 15 mm depth
- C) Minimum 170mm
- D) Maximum 3 posts 50mm x 20 mm
- E) Minimum 12,0mm, gap between straight edge bottom and hood plane where it meets windshield.
- F) Maximum 75,0mm (with chassis on 20mm blocs)
- G) Minimum 36mm
- H) Minimum 200mm
- I) Minimum 145mm
- J) Minimum 130mm (top inside edge of C-pillar)
- K) Maximum 8mm depth of A-pillar above the windshield surface plane
- L) Maximum 5mm height of outer roof rail above the roof surface plane
- M) Maximum 4mm stagger between hood and windshield
- N) Maximum 317mm, minimum 300mm overall width

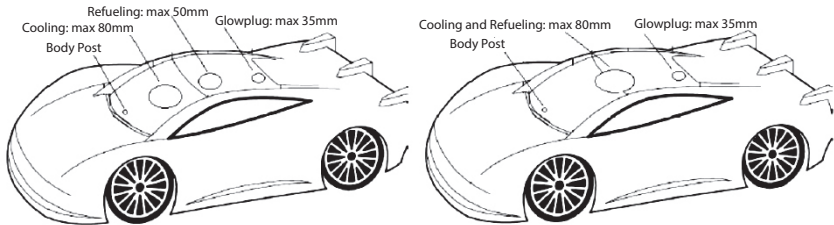


Numbering of the cars. Cars will be numbered 1 to 10 or 1-12 in each heat. The car must have 3 numbers. Only the numbers supplied by EFRA will be used on the cars. They may not be cut out to eliminate the background. 2 Numbers on the sides in front of the rear wheels, 1 in front on the hood or window. These numbers will change during the qualifying heats (after re-seeding).



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

Holes in the body. Holes in the body for fuel-gun, fuel tank opener, aerial, glow-plug, carburetor access and exhaust. Rear and side windows may be removed. Maximum height of 75mm cut-out at rear on 20mm blocks. One opening may be made in the front windscreen with a maximum dimension of 80.0mm in any direction for refueling and/of engine cooling. An additional hole for refueling in the roof of 50mm is allowed and 35mm for the glow plug. Minimum distance between holes is 5mm. An extra hole for ty-rap to open tank in the front windscreen will be allowed, max. 10mm See drawings:



### 10.4 Tyre Rules

Controlled tyres for all EFRA events for GT class which means 1 brand. The official tyre supplier must be EFRA ASSOCIATE MEMBER. Procedure about selection of manufacturer and how to manage tyres on the track must be according to the rule 5.1.1. Appendix 1 PROCEDURE FOR CONTROL Tyre. EFRA has to be informed of the price of set of tyre and EFRA has the right to impose a fix price for a set of tyres. Once chosen for an event the same manufacturer is not allowed to supply tyres for the next EFRA GT event.

Tyres for front and rear are the same dimensions. The tyres must be made of rubber, no foam tyres. An insert is allowed. Tyres and compound must be limited per driver for practice and race with only 1 extra set for the main final. Tyres must therefore be impounded, 1 box per driver. Holes in the rubber tyres are allowed, so as the rim will be better for temperature. No additives on the tyres allowed under any circumstances, these holes can be drilled by the driver during the initial handout of the tyres only.

Tyres width, max 45mm

Rim measurement, spoke design, *see picture*. No dish like rims.

Rim Off set positive, +/- 7 mm because the use of controlled tyres.

The rims must have a minimum 75mm and maximum 85mm diameter.

The diameter of the tyre when it is new before racing must be between 96mm minimum and 102mm maximum. One compound to be used for the entire event under dry conditions.



Wheels must use a 17mm hex hub consistent with the dimensions and function of the hubs used in 1/8 off road racing. The wheel must be affixed by a 17mm wheel nut, threaded on to the hex hub. Quick change mechanisms are not permitted.

Number of control tyres for an EFRA event must be specified and will depend on track layout and tyre wear. This will be announced in the Stage1 report A drivers allocated control tyres will be used from Control Timed Practice up to and including the drivers FIRST final. For each bump-up final and main final drivers can purchase 1 additional set per final driven. All used tyres from the drivers initial allocation available for re-use during ALL finals.

As a recommendation EFRA will advise 3 sets for the whole official event which include control time practice, qualification and 1 final. (excluding free practice). Tyre changes during finals are permitted only using the tyres from the drivers original allocation.

In the event of event being declared WET by the race director the use of WET tyres is free (no control tyre required once the event has been declared WET), however the use of additive remains strictly prohibited.

#### 10.5 PROHIBITED or NOT ALLOWED

- Use of one way bearings, except for the 1st gear of a 2-speed transmission.
- Belts.
- Extra Body support struts for lightweight bodies, except those mentioned in the rules.
- The use of traction control devices, active suspension devices and any steering control aided by gyroscopes/'G'-force sensors is strictly forbidden.
- 4 wheel brakes. Independent controlled braking on the front wheels is not allowed.
- Hydraulic braking systems.
- More than 2-speed transmissions.
- Quick change wheel systems are not allowed, or the use of electric, spring or flywheel based tools to change wheels.
- Body extenders or wheel flares.
- Tyre-warmers.

#### 12 GT ELECTRIC POWERED (GT EP)

All electric final groups will consist of 3 legs for all with a duration of 7 minutes per leg. Construction and

Technical rules and race procedure of the GP class should be followed with the below EP rules being specific deviations for the electric class. Where there is no rule below the GP rule will be followed. Brushless motors with the following maximum dimensions:

Brushless motors with the following maximum dimensions:

Diameter: max . 44 mm

Length: max . 75 mm

Motors with and without sensor are allowed.

The use of a WET car is allowed once the race has been declared WET by the race director .

GT Electric Track Cars will be driven by Lithium based batteries with a nominal voltage of no more than 15 .2 volts (4S). It is allowed to use 2 x 2S or 1 x4S.

If multiple individual batteries are connected together (in parallel or series), then all batteries used must be of the same manufacturer brand and same Part Number.

Only homologated batteries shown on the EFRA Approved Lists on the official EFRA website will be legal for use at EFRA sanctioned events. All Lithium Batteries must comply with the published data shown on the EFRA Approved Battery Lists. Batteries that are not compliant with the dimensional rules or published weights will not be allowed .

LiPo/LiFe drive batteries must be in a 'Lipo sack' at all times when being charged or discharged. This applies to any discharging procedures except during a race or when using organiser supplied resistors. Anybody not doing this will be penalised at the event. LiPo sack is defined as a receptacle designed for the purpose of charging LiPo/ LiFe batteries and of a suitable construction as to contain a LiPo/LiFe fire.

The maximum charging cut-off voltage is 4.20v per cell in series (16.80v for 4S). Organisers can check this voltage at any time during the event.

Penalties for battery "over" voltage:

Per Cell.	Total Pack 2s.	Total Pack 4s.	
≤ 4.20	≤ 8.40	≤ 16.80	= OK
4.21-4.22	8.41-8.44	16.81-16.88	= DISCHARGE ONCE
4.23-4.25	8.45-8.50	16.89-17.00	= NO ENTRY TO HEAT
> 4.25	> 8.50	> 17.00	= DQ FROM EVENT

"Discharge once" means, only one time allowed to have your battery discharged and checked again, if they are still too high you are not allowed to start. You must leave the voltage checking area discharge and queue again from the back of the queue.

"No entry to heat" means no driving in that specific heat/final.

"DQ" means disqualification from the event.

Technical inspection to use a calibrated measuring device to check the voltages, preferably a "fluke" meter.

All Rules concerning:- Technical Specifications, Race Procedures, Homologation The Electronic Speed Controller (ESC) is not restricted however it's not allowed to enable the reverse gear (it must be disabled).

The low voltage battery cut out function must be enabled. The minimum cut-off voltage is 3.0v per cell (12v in a 4S battery).

The above 2 requirements will be randomly checked by technical inspection (the driver/mechanic will be called to demonstrate this to the technical inspector's satisfaction) by means of an LCD program box or bluetooth interface connected to an application which clearly shows this requirement is activated at the correct minimum voltage..

Procedures, for Lithium Batteries can be found in NEW APPENDIX 4.

Motors should have a maximum KV rating of 2800.

In GT EP cars is not allowed to cut the front windshield. The antenna hole (10 mm) and side windows can be cut out. Rear window can be removed. Additional cooling holes in the front where normally is the radiator of the respective body are allowed. If the dimensions of a single hole is bigger than 10

x 12 mm the area needs to be covered from inside with a corresponding grid. The electrical / electronic equipment consists of the battery (LiPo hardcase), controller (ESC) and a servo for steering. Electronic driving aids such as ESP and ABS are prohibited. Telemetry is allowed as long as they function is part of the remote control and the receiver, as well as the associated sensors. This applies also to passive devices for recording data, and video that have no device for radio transmission. No kick up needed.

Chassis material can be carbon fibre or aluminium alloy. No other materials are allowed such as titanium.

The EP class will have the same number of controlled tyres as the GP class and follow the controlled tyre procedures . The only exception being that as EP class do not have bump-up finals EP drivers cannot purchase additional tyres for the finals and must use the original tyre allocation for all track events including all final legs.

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