EFRA HANDBOOK 2025

EFRA ASSOCIATE MEMBERS EFRA

RC MOTORSPORT EUROPE

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APPENDIX 5
LARGE SCALE I.C. RULES

1. RACE FORMAT

1.1 There will be two annual European Championships to determine the European Champion in:
a.) 1:5 Scale Touring Cars Sport, Open and F1
b.) 1:6 Scale Off Road Cars 2WD + 4WD + Short Course
c.) 1:5 Scale Touring cars and F1, 40+
d.) The 40+ event will be run as an International Race.
Drivers can only enter one class at a European Championship. There will not be a 1:5 touring car European Championship event held in the same year as an IFMAR World Championship event held in Europe, the 3 EFRA GP's will determine the European Champion in Touring car and Formula 1 with the 2 best results counting.

1.2 The results of the EFRA-GP´s will give the EFRA ranking list.
The Ranking list will be a continually updated one, for every new EFRA GP, the oldest one will be deleted.

1.3 The number of drivers per event is limited for GP's to 110 and for EC's to 150.
There are 4 classes at a GP (TC Pro, TC Sport, Gentleman and F1), in case of more than 110 attendees wants to subscribe the numbers must be limited for each section to 76 TC and 34 F1 = 110 drivers in total. With permission from the Chairman, the track and facilities being suitable, the maximum number of drivers at a GP can be increased.
A minimum number of 25 participants from 3 different countries in a class at an EC is required for that class to be officially classified as a European Championship and a European Champion title given to 1st place.
If 2 weeks before an EFRA GP one class is oversubscribed and the second class does not reach the allowed number, these places can be given to the drivers on the waiting list in the other class.

1.4 Qualification for the European championships and World championships 1:5th Touring Cars and F1:
20 places for the European championships and 7 places for the World Championships for the following year's meeting/s will be offered to the highest ranked drivers competing in the large scale EFRA GP series. The remainder will be split as per normal between countries as outlined in general rule 3.6.
Only the EFRA GP Meetings will count for the points system, with the drivers best 2 meetings out of the 3 to count. Points will only be awarded to a driver if they compete in their final/s. If there are less than 3 EFRA GPs then they will all count.
Points system to use: 1 = 150, 2 = 147, 3 = 145, 4 = 144, 5 = 143, … 10 = 138, 11 = 135, 12 = 134 … TQ = 1 extra point.
If a concourse competition is held at an EC, only cars and bodies that are used in the race are eligible.

2. RACE PROCEDURE

2.1. Duration of the races:
Free practice: max. 8 minutes
Heats: 10 minutes (plus the last lap and time of the last lap)
Sub-finals: min. 15 minutes, max. 20 minutes up from the 1/32 final and 20 minutes for semi finals
Final Touring Cars: 30 minutes (plus the last lap and time of the last lap)

Semi Final Formula 1: 25 minutes, (plus the last lap and time of the last lap)
Final Formula 1: 25 minutes (plus the last lap and time of the last lap)

a) The EFRA Christmas Tree will be used.

b) For the Touring car class, the no. 1 ranked driver after completion of the qualifying heats will move up directly to the main final and take the pole position on the starting grid. The drivers ranked 2nd to 5th will compete in a "superpole" final after completing the last Round of Qualifying. Each driver will drive the "super-pole" individually on the track, for 6 consecutive laps including warm-up. Procedure for Super Pole will be: 3 minutes warm up for each driver and then 6 consecutive laps. The "superpole" running order will be 5, 4 , 3 , 2. The driver that scores the fastest lap will also move up straight to the "Main" Final and take the second position on the starting grid. The other drivers from the "super-pole" will start in the semi-finals as per qualifying ranking. For other classes the no. 1 and 2 ranked driver after completion of the qualifying heats will move up directly to their main final and take first and second position on the starting grid respectively.
Prior to the semi finals, all direct qualifiers will have a 10 minute practice session (10 minutes for each class).

c) Sub-Finals: The first 3 drivers from each sub-final progress up to the next final. Semi-finals: the first 4 drivers from each semi final will progress up to their main final.

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

e) Radio communication between driver and pit lane is allowed but only one pair of headsets to be used and they can only be used by the driver on the rostrum and the mechanic in the pit lane.

2.3 a) Number of drivers:

Heat: 10 to 15 drivers (only 1:5), track and facilities permitting.	
Sub-finals and finals:	Maximum 10 drivers
Final F1 EC	Maximum 10 drivers
Final F1 EFRA GP's:	Maximum 15 drivers, if the team managers agree

The race format will be notified in the event information and invitation material.

b) In the event that the transponder loop is before the exit to pit lane any car that should start from the pit lane will start from position 11 on the grid (unless the car was too late exiting the pit lane when called to the grid).

2.4 TIME SCHEDULE for EC

EC Tracks must be closed for Large Scale Racing, two weeks prior of the event.
No cars are allowed on the track before Monday morning.
General qualification format for EC´s:
There will be a Minimum of 4 and a Maximum of 6 series of 10 minutes heats depending on the number of drivers. The number of series, time schedule and heat order to be announced prior to the first round of qualification.
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.
The event starts on Monday morning.
Approximate time schedule;-

Monday	09:00-18:00	Free practice (in full heats made by the organiser)
Tuesday	09:00-18:00	Free practice (in full heats made by the organiser)
Wednesday	09:00-18:00	Timed practice /tech inspection/qualification heats (a minimum of the car/body checked and

marked, engine marking is optional)

Thursday	09:00-18:00	Qualification heats
Friday	09:00-18:00	Qualification heats, lower finals
Saturday	09:00-17:00	Sub-finals and final. Prize giving ceremony

2.5 STARTS

(see also General Race Procedures Chapter 8).

The arrangement of the free practise heats will be created from drivers previous meeting results, known ability and common sense by the organiser. The arrangement of the heats and numbering will be done using common sense and a drivers best 3 consecutive laps. 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.

- 1 There must be a 3 min. gap between the end of one heat and the start of the next heat.
- 2 During qualifying 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.
- 3 For all sub finals and main finals, a "Formula 1" type grid start will be used with each grid start position spaced a minimum of 5 meters apart.
- 4 For all finals, the track will be opened 5 minutes prior to the start of the final. At 2 minutes to go all cars will be called back into the pit lane and re-fuelling is allowed. All refuelling must be done through the fuel tanks screw on or flip top fuel cap. At 45 seconds to go the cars are called to the start line, all cars will leave the pits in number order and drive round the track to their respective starting positions. The 10 second count-down will commence within 5 seconds of all cars being stationary in their correct grid position. If a car has not left the pit lane at 30 seconds due to unforeseen problems, the car may start from the pitlane after the other cars have officially started. The race director and referees will monitor the pitlane for the abuse of this facility.
- 5 From 10 seconds until 3 seconds prior to the start a second by second countdown will be made in English.
- 6 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 re-start, re-commencing the count down.
- 7 The official start signal will be audible by means of a hooter, operated by the Starter. This signal will also start the Timing Systems.
- 8 Early starts (i.e. any part of the car touching the starting line), will be penalised. (10 sec. up to 1lap) 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.
- 9 Under no circumstances will the race be stopped due to a jump start.
-10 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.
-11 Delayed start. As long as the starter has not called 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 their car.This delay can be granted only

once for each semi final and final. The track is closed and the remaining mechanics/drivers are only allowed to turn off the engine and receiver of their cars which must remain in the pit lane, tyre warmers are allowed to be used. They are not allowed to make any repairs or change any tyres. At the end of the 10 minute delay period (or if every participant is ready prior to the 10 minute time out), a complete new warm up time and start procedure will begin.

-12 When the starter calls the main final to the start line, the mechanics are not allowed to refuel the cars.

-13 The driver asking for the delay for what ever reason, except an error in frequencies of the race control, must start from the pit lane.

2.5.1 STARTING PROCEDURE OF HEATS

For qualifying heats no stop between practice time (warming up) and start of the heat. Just start the clock when practice time is over. (Flying start.)

-1 If the number of heats differ from 10, or if the event is planned with more/less rounds, a sequence following this general scheme has to be used.
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

Starting for Sub Finals and Final will be on a Formula 1 grid depending on the track layout, with the faster Qualifier starting in front of the slower.

2.5.2. -1 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.

-2 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.

-3 After returning to the pits, the engine must be stopped immediately and the transmitter turned off and impounded.

2.5.3. Qualification Order and Finals.

-1 In case of more than one driver recording identical best results of qualifications the next best result is taken.

-2 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 higher final placing.

-3 The sub-finals (which will run in the order of A, B, A, B...) and final are run according to the schedule printed in the official race program, which may only be changed by team managers majority vote.

-4 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.

2.5.4 During the warm-up period, or at any other time of a race in progress, deliberate stopping a car on the race track will lead to be penalised with a 10 second "stop and go" after the start of the race. Consecutive stopping on the race track will lead to immediate disqualification.

2.6. RAIN SITUATION

In case of different weather conditions during subfinals the final classification will be as follows: Place 4 of subfinal A and Place 4 of subfinal B will both be awarded place 11th equal in the general classification. Place 5 of subfinal A

and place 5 of subfinal B will both be awarded place 13th equal in the general classification ..... and so on.

2.7. 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, the jury 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 or a 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. 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.

2.8.1. 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 When all drivers in a class have had at least one dry heat, all results will be counted.
- 3 When weather and time permits, the Race Director may decide to re-run a heat for those drivers who raced in a wet qualifying heat or reschedule any cancelled qualifying heats.
- 4 When not all drivers in a class have had a chance to run a dry heat, only the wet results will be counted.
- 5 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 amend the time schedule.

2.9. ACCIDENTS/CRASHES

a) A yellow flag situation will be announced, if an accident occurs. (This must be a yellow flashlight combined with an audible signal, that can be operated by the referees and the race-director) During the yellow period overtaking other cars is not allowed. Cars are required to slow down so that they can stop immediately.
Disregarding this rule will be penalised by deducting one lap from the result of the driver concerned in that particular heat, sub-final or final. An official warning has also to be issued. Racing will recommence at racing speed following display of a green flag or the official announcement "track is clear". Signals given by flags have to be visible for all drivers.

b) Mechanics are allowed to enter the track to save the car of their driver. The mechanic may restart the engine (3x) beside the track, but not repair the car. The mechanic may not disturb the progress of other cars in the race.

Mechanics or Spectators entering the track from outside the pit lane to save a car will produce a penalty for that particular car. (Penalties can be given as stop and go or one lap penalty. The referees will inform the Team Managers about the sort of penalty given.)

If serviced by a spectator then the car should remain stationary until touched by a mechanic to save a penalty given.

The duration of a stop and go penalty given must be always as long as decided by the Referees and announced during the Team Managers meeting prior to the race-meeting. It is not allowed for any of the race officials to change the time of the stop and go penalties during the race meeting.

The driver have three laps time to come in.

Three stop and go penalties for one car during one race will lead to disqualification (black flag).

3. TRACKS

3.1.1 Tracks for Large Scale racing will be inspected by EFRA Officials with regard to safety provisions for drivers, mechanics, race officials and spectators. EFRA Officials have the authority to ask for improvements to be carried out before racing starts.

3.1.2 A monitor must be placed in the pit area or under the rostrum during all international races. (WC/EC/GP)

4. GENERAL Technical Specifications

4.1. ENGINE and FUEL

For Formula 1, Off Road and Fifth Scale Saloon:

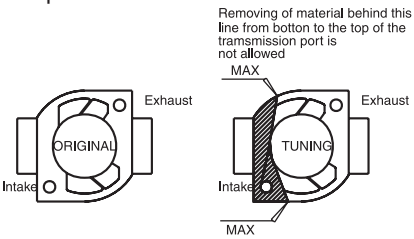
1. Only one marked engine allowed which will be marked with the official Efra technical inspection numbered stickers and enough bolts/nuts marked to monitor if an engine has been tampered with. In exceptional circumstances the race director may allow a second engine during the time of a wet track. The marked engine maybe repaired/serviced in technical inspection and the piston ring, gaskets, crankshaft seals and engine covers maybe replaced without penalty.

   If any other parts are replaced or a second engine is used then the driver will receive an automatic stop and go penalty in their first final (during the first four laps).Each driver is only allowed to use a maximum of 2 engines per event. All engine parts must be commercially available.
2. The engine to be a single cylinder, 2 or 4 stroke.
   Maximum of 23 cc for On Road touring cars.
   Maximum of 26 cc for F1 and 2wd Off Road.
   Maximum of 32 cc for 4wd Off Road.
   Maximum of 32 cc for short course Off Road.
   Electric starters can only be used in the pit lane and under no circumstances to be used on the race-track. There must be a secure protection on the flywheel cover to prevent people touching the flywheel or moving parts.
3. No Turbo charging, Fuel injection, Supercharging, Wankel or rotary valve/ distribution engines are allowed.
4. All ignition must be mechanically fixed, only manual static adjustment is allowed.
   Touring car Sport class- The engine must be a totally standard unmodified Zenoah as supplied by the manufacturer (including gaskets, bearings, seals etc) with the exception of these parts which may be changed/ upgraded- Carburettor Insulator block and/or a support bracket. Additional cylinder

clamping bolts. Spark plug. The choke leaver in the carburettor may be removed. Electric starter conversion is allowed. Engine covers/cases maybe coloured.

Off Road Engines- Only the standard Zenoah car engine type/size cast flywheel and ignition coil may be used. Additional parts are not allowed to be added to the flywheel but lightening and balancing is allowed. The minimum diameter of the flywheel is 88mm (measured across any point around the entire circumference and the full width of the magnetic faces).

5. No Battery operated ignition allowed. Only a passive ignition system using R.P.M. as the single input parameter is allowed . Engine Control Units (ECU) are allowed but power must only come from the standard ignition coil.
6. Only open deck admission ports are allowed in engines up to 30cc, they maybe closed ports on engines over 30cc. The removal of material is free as long as the modified shape of the transfer/admission port walls are in the direction of the cylinder bore at all times.
7. The Cylinder block must be of a single casting. No independent liners or slipping liners are allowed.
8. The maximum numbers of admission ports is limited to 4.
9. Engine must be air cooled. The air being driven directly by the flywheel.
10. The crankshaft must be of split shaft configuration, with enclosed big end. No half crankshafts allowed.
11. An air filter must be fitted to the carburettor.



12. The maximum venturi diameter of the carburettor is limited to 13 mm for engines up to 30cc and 14mm for over 30cc.
13. Only fuel admitted will be petrol normally available at street petrol stations. The fuel must be bought at fuel station within the vicinity of the event. Details of the fuel station location and opening times should be provided by the race organiser prior to the event commencement, The only exception to the above is alkylate type fuels (eg Aspen) is also allowed. Fuel testing should begin prior to the start of qualification. Special fuel's like Avgas, race fuel etc. are strictly forbidden. The only additive allowed is mass production two stroke oil.

    Technical inspection may ask for a sealed bottle of that oil, to check it. If a fuel is found suspect, the driver will be asked to mix his fuel at technical inspection, so it can be verified.

    If an organiser is able to provide fuel at the track, all competitors have to use this fuel. The price of this fuel must not exceed the normal street price by more that 5%. Fuel tests may be made at random during the race. The fuel tester must be available to the competitors during the event., free fuel test on drivers request can be provided only before controlled practice. After that, If a fuel is found illegal, the driver will be disqualified from the particular event. If a driver want's to protest that decision, he has to make a written protest to EFRA with a deposit of 500 Euros.
14. All drivers that qualify for the semi finals will have their fuel tank capacity tested prior to the semi finals. After testing the fuel tank will be emptied,

the drivers fuel container will be marked and remain in technical inspection (facilities permitting) until the driver/car is preparing to go out on track for their semi final and main final warm up. Only fuel from the drivers own marked fuel container is allowed to be used.

Any engine additives or treatments applied directly into the engine anywhere at an event is strictly forbidden

4.2. EXHAUST/NOISE REDUCTION

4.2.1 Maximum noise level is 81dB (A) measured at 10 metres, 1 metre above the track. The race director has the authority to decide a different method of measuring (using the EFRA noise trap) as long, as the result will be the same.

If a cars average over 10 or more laps exceeds the limit (with an additional +4db(A) for off Road and F1 classes) during the qualifying then the driver will loose their best qualifying result. If this level is exceeded during a final then the penalty is a 1 lap deduction at the end of that final. Under exceptional circumstances common sense will be used.

Both the Race Director and Referee's can decide if any car producing excessive noise is allowed to race.

Exhausts have to be of minimum three chamber type. No open exhausts or pipes are allowed.

The total exhaust must be inside the body, with the exception of the tail end of the pipe, which may protrude the body by no more than 10 mm.

No adjustable or moving parts are allowed in the manifold or muffler. The body may be cut out at that point max. 20 mm more than the tail end diameter.

Max. inside diameter tail end 13 mm.

4.2.2 All cars to be equipped with an air - box to reduce the intake noise of the carburettor. The air box must change the direction of air entering the carburettor by 90 degrees(or more). The exhaust must have a second muffler (if a two chamber exhaust is used) or be a three chamber type muffler. All three chambers must be designed so that the exhaust fumes will pass through and have to change direction twice to get the maximum possible noise reduction. The design of that additional silencer is free, but with both systems together, the max. noise level must not be over 81 dB (A).

4.2.3 No refuelling allowed during racing for all cars in 1:5 Touring Cars and Off Road. Refueling is allowed only in Formula 1.

4.2.4 The Engines adjustments and warming are strictly forbidden in pits and working areas. They are allowed only on protected tables supplied by the Organisers, and in the proximity of pit lane, and of the Rostrum.

4.3. CAR

a. The car has to have a functioning brake, which has to be capable of keeping the car stationary whilst the engine is running.
b. A mechanical fail-safe has to be fitted to the carburettor which returns the throttle to a closed position in case of breaking of the throttle linkage.
c. Variable ratio transmission is not allowed.
d. Only 2WD (rear-wheel drive) In class Off road 4WD only four wheel drive cars are allowed.
e. No other function than steering and throttle/brake are allowed to operate with radio control by the driver. Any other electronic or hydraulic systems are not allowed in the car, with the exception of electronic fail save to stop the car in case of radio failure and the hydraulic brake system. Movable upper formula1 wing (DRS) can be operated together with brake or throttle function. A separate radio channel to operate DRS is not allowed.

f. The use of an electronic fail-safe system is highly recommended.
g. The ignition kill switch must be in the original place on the engine and the window on this side must be cut out. The kill switch must be away from hot or moving parts, be clearly visible and must work when pressed.

4.4 TYRES

Tyres have to be black. The design of the tyre profile is free. It is not allowed to treat the tyres in the pit area. This means it is clearly forbidden. But if someone use it at home, it is recommended that the chemical components of these products must be harmless for people and environment. Liability at the use of tyre additives lies at the user and manufacturer. Oil of wintergreen, paragon and other strong smelling products are prohibited.

5. SPECIAL TECHNICAL SPECIFICATIONS

5.2 LARGE SCALE FORMULA

Only Formula one cars following the FIA 2000/1 (or younger) Formula One Regulations are allowed. Bodies must be the model of a existing car from the season 2000/1 or younger. Paintwork and colour is free. The design of the visible suspension parts must have the same appearance than the original F1 cars.

All cut-outs must exist also in the full size car. Cut outs for the engine and fuel tank are allowed in the area of the tank seal, starting device and adjusting screws for carburettor i.e. choke, neutral gear etc.

For Formula cars the side pods have to be used for the starting number. About the design of the Car numbers see 5. General Requirements EFRA Events 5.2.4

5.2.1 TECHNICAL SPECIFICATIONS

Minimum weight dry	10.000 g
Width Formula maximum	450 mm (incl. tyres)
Height maximum	250 mm
Wheel base	610 mm +/-25 mm
Fuel tank - capacity	Maximum 700 cm^3 with the fuel filter, fuel pipe and without any removable pieces inside
Tyres front diameter	142 mm +/- 5% = 134,9-149,1mm
Tyres rear diameter	142 mm +/- 5% = 134,9-149,1mm
Tyre width front minimum	60 mm, max. 75mm
Tyre width rear maximum	85 mm, rear wheels must be min. 5 mm wider than the front wheels
Rims outside diameter	80mm +/-5mm, indicators must be the same on tyres and rims.

No mixture of +/- is allowed on the wheels and tyres. No tyre will be measured after the race.

5.2.2 TYRES

Tyres must be semi-pneumatic rubber.

They must be moulded in one piece

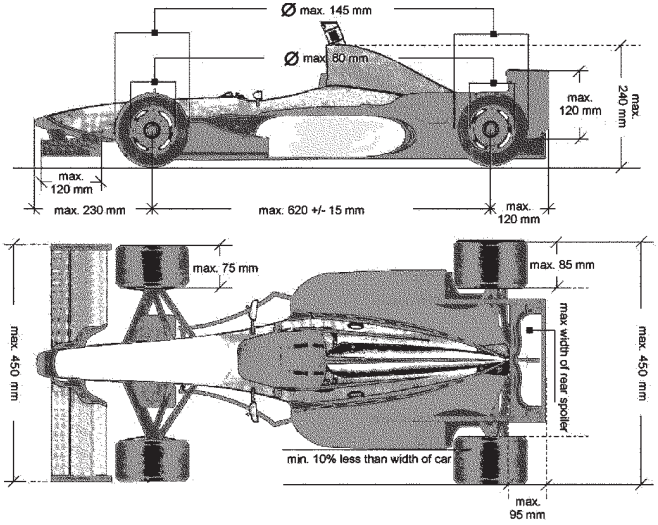
In case of rain the use of rain tyre can be allowed by the race director.

5.2.3 FRONT SPOILER

Max width 450 mm max. cord 120 mm. The front spoiler must be fixed at the chassis, so that it can bend up or down in case of an accident.

REAR WING

The rear wing must fit into a side profile box of 95x120 mm. The number of added wings inside is free. The rear wing must not be wider than the space between the rear tyres.



The front part of the car should not overhang the centre of the front wheel by more than 230 mm. The rear wing and a the diffuser should not overhang the car by more than 120 mm.

The width of the side-pods must be min. 10% less than the overall width. They should not be higher than the tyres.

5.2.4 TANK SIZE, ENGINE RULES, AIR BOX, MUFFLER ETC.

Air box, muffler, engine rules, etc have to follow Large Scale General Technical Specifications.

Exhaust outlet pipes must exit within the body shell side pods and point down to the track.

5.2.5 F1 WINGS

Front and rear wing are part of the bodyshell of a F1 car and must be repaired immediately if they get damaged or come off the car.

5.3 1:5 Scale TOURING CARS

There is one series recognised in accordance to the 1:1 scale series namely the FIA World Touring Car Cup, following FIA .

Touring cars raced in recognised mainstream national series in the past 10 years like Australian V8 Supercars, CTCC ;German Procar, Italian Super Stars and GT bodies (eg Porsche, Aston Martin, Mercedes etc) .

5.3.1 GENERAL SPECIFICATIONS

The car body has to comply with the calculated scale dimensions 1:5 with the allowance of using the following tolerances.

Length: within scale +/- 10%

Width: max. 395 mm measured at the widest point of the bodyshell

Height: within scale +/- 10%

Minimum wheel base: 500mm

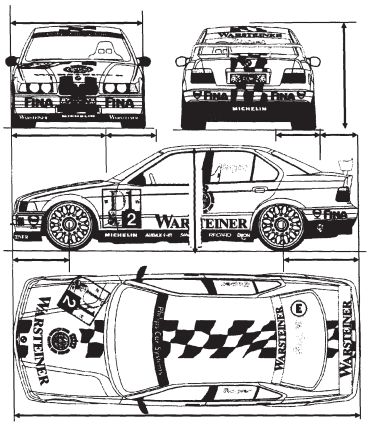
Maximum wheel base: 535mm

Tank capacity: 700cc (including pipes to and from the carburettor and any fittings). If a ventilation chamber/catch tank is fitted, it must be fitted above the tank and be transparent.

Minimum weight, without fuel: 10.000 g
Maximum weight, without fuel : 12.000 g

5.3.2 All 1:5 cars have to be genuine scale in all details and proportions and be a fully detailed model of an existing 1:1 touring race car. If the allowed tolerances are used, then all parts of the model in that particular view have to be within the same sign (wheelbase-, length,- //wheelbase+, length+). Mixtures of car designs are not allowed.
The minimum length of a Super Touring Car is 4.200 mm that gives a minimum length of 798 mm in scale including max.-tolerance.
All recognized cars must have a minimum length of 4,200 mm/165.35 in. All bodies that are produced world-wide, descend from a original touring car racing and are commercially available, under consideration of Paragraph 5.3, will be allowed. Only bodyshells that are approved by EFRA will be allowed to race in EFRA sanctioned events. The EFRA homologation number has to be permanently engraved or moulded in within the space normally used for car registration numbers at the rear end of the model. The minimum weight of the body is 550g ready to race including wing and wing support plate if used. The weight excludes any side guards/bracing or air ducts and if these are fitted they must be either removed or identical items provided if requested by technical inspection to allow the body weight to be calculated. Weights are NOT allowed to be added to the body.

5.3.3 BODY
Bodies have to follow the description in point 5.3.2. They have to be properly fixed to the chassis and must cover the outer edge of the wheels at the centre of the axle when viewed from the top.

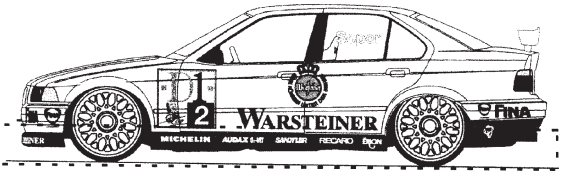


It is not permitted to cut the windscreen out. The side and rear windows may be cut out for cooling. It is not allowed to open them by cutting out only some holes. Also it is not allowed to mould air channels into the side windows to guide air into the interior. The body shells have to be painted and all windows to remain clear.
All parts of the car have to be covered by the body. Only the radio antenna is allowed to come outside. All openings in the body have also to be in the existing 1:1 race car.
It is not allowed to modify the car body by cutting it over the marked trim lines or to widen it by heating it or parts of it.
The start numbers must be placed according to the drawing (and the corresponding picture). About the design of the Car numbers see 5. General Requirements EFRA Events 5.2.4.
If the race-meeting has started, a competitor is only allowed to change the body shell in case of damage to a body shell of the same brand and car design.
Only allowed for manufactures: Aerodynamic modifications at the front, the sides and the rear below the wheel hub centre are free subject to the requirements for ground clearance, overall length and overall width.
The modifications have to correspond to the original. The materials have to

be the same as that of the bodyshell. The homologation number has to be engraved. A photo of the modification 1:1/1:5 have to be sent to the responsible Homologation Officer.

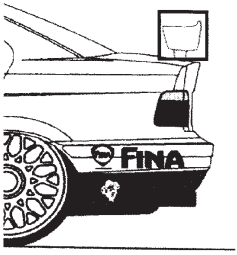
5.3.4 GROUND CLEARANCE

The measurement of the body shell height will be made with 6mm ground clearance.



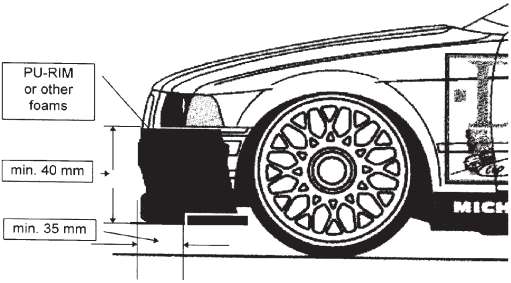
5.3.5 WING/SPOILER

On GT bodies the rear wing must be within % scale for the body. For all other bodies a single rear wing is permitted as long as it does not exceed the front view profile and the length of the car. The wing has to fit in a side "profile box" measuring 60 mm x 60 mm per side and should not overhang the end of the car. Extension pieces extending past the main end plates are not allowed.



5.3.6 BUMPER

A bumper has to be fitted to the chassis. Bumpers have to be designed in a way that they fill the front of a car body completely and be a minimum height of 40mm.The material used has to be flexible like PU-RIM or other foams, that are used in 1:1 car construction to absorb impact energy. At no point may any part of inflexible material for bodyshell mounting protrude from the body more than 10mm. If an opening is created through the foam bumper for cooling air, the combined thickness of the foam (above and below the cooling hole/slot) must still be a minimum of 40mm in height.



5.3.7. TYRES

Rim Diameter	max.: 107 mm
Rim and fitted tyre Diameter	max.: 136 mm
Rim and fitted tyre width - front	max.: 75 mm
Rim and fitted tyre width - rear	max.: 80 mm

Only semi pneumatic rubber is allowed. Foam tyres are not allowed.

5.3.8 Electric Touring Cars

Introduce Electric cars into the GP series for 2018, run as a separate class.

Minimum Weight	11Kg
Maximum Battery Size	25Ah, 8s.

The same battery size must be used during qualifying and finals.

All batteries must be either hard cased or enclosed in a box in the car and charged in a Lipo bag.

Semi Finals and Main Final 20 minutes duration.

Bumpers, wings, tyres etc as per the engine driven touring cars.

5.4 Large Scale Off - Road Rules

Technical requirements for Large scale off road racing with 2WD and 4WD.

5.4.1 Technical classes and weight.

All cars have to be large scale.

Only rear wheel drive allowed in the 2wd class.

Minimum weight limit 10kg for 2wd, 12kg for 4wd, and 14kg for short course.

Weight limits for a race ready car with transponder / PT but no fuel load.

Exposed carbon/kevlar parts (including the chassis and side pods) are not allowed.

Modifying or self builder cars are allowed, as far as those fulfill the technical rules mentioned. Maximum weight limit for any car is 20kg.

5.4.3 Exhaust: Exhaust as per General Technical Specifications, 4.2 Exhaust/Noise Reduction, except:

The exhaust end pipe may be outside the shell. This pipe must be fitted rearward or to the ground and within the size of the car.

5.4.4 Fuel tank sizes

The maximum content of the fuel tank including pipes to the carb is 800 cc for both 2wd and 4WD, and 850cc for the Short Course class.

5.4.5 Only 2 wheel rear drive is allowed in 2WD-class. Only all-wheel drive is allowed in 4WD-class.

Cars with electric drive, propellers or rocket-fuel drive are not allowed

Cars can only have 1 gearing: no multispeed transmissions allowed

5.4.6 Clutch and brake: The model cars must have a working clutch and brake system. Other than Active ABS systems there are no restrictions for brakes.

5.4.7 Bumper: All models must have a front bumper, a rear bumper is allowed but not mandatory. Bumpers must be made from a flexible material. The front bumper must have a minimum width of 100mm, a maximum size of 220 mm width, and 300 mm minimum width for short course. A rear bumper can have a max size of 380 mm width.

5.4.8 Tyres and wheels

Wheels: maximum diameter 160mm and maximum width 75mm.

Tyres: maximum diameter 190mm and maximum width 85mm.

Only wheels and tyres designed and made for large scale off road use are allowed and they must be commercially available .

The tyres have to be on the market a minimum of 4 weeks before the event starts.

The tyres must have been sold to everybody who wanted to buy them.

5.4.9 Chassis, Body measurements

Only large scale body shells are allowed.

The body must be fully painted except for the windows.

Short Course bodies must cover the wheels.

Motorstop access must be easy.

The chassis must be flat underneath and no screws may extend.

Car size

2wd & 4wd buggy:

Max length	820 mm
Max with	480 mm with fully compressed suspension
Max height	360 mm with fully compressed suspension
Max wheel base	599mm

Short course truck:

Min length	850 mm
Max length	1000 mm

	Min width	480mm Track measured at full suspension ride height
	Max width	530 mm Track with fully compressed suspension
	Min height	300 mm
	Max height	350 mm with fully compressed suspension
	Min wheel base	600 mm
	Max wheel base	650 mm.

5.4.10 Wing

The wing must be made from a flexible material

2WD Max size:	315 mm x 140 mm offroad.
Overhang max:	150 mm from the middle of the rear drive shafts
4WD Max size:	315 mm x 140 mm
Overhang max:	230 mm from the middle of the rear drive shafts
Short Course	
Max size:	500 mm x 100 mm
Overhang max:	180 mm from the middle of the rear drive shafts

5.4.11 Marshalls have to be 16 years of age minimum. If not they need to have an experienced substitute who is made known to the race director. Through qualifying the on track marshals shall be from be from the previous heat (the last heat of the round will marshal the first heat) and marshal on their car number positions. For the finals, each marshal point will be allocated to a country to cover marshal duties through out all the finals. This will be based on each countries driver numbers (a large country team may be required to cover 2 marshal points, where as small country teams may be required to cover 1 marshal point between them). All marshals must be competitors at the event.

5.4.12 Race procedure's as in EFRA Large scale except:

Semi final duration will be 20 minutes.

The top 5 from each semi final will be promoted to the main final.

QUALIFYING SYSTEM: In each round drivers will score points based on laps and times achieved. The 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 and so on. 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 drivers "best" (lowest) points being added together, based on the number of rounds to count. In the event of a tied position the driver with the single highest finishing position in any of the best rounds that counted will be awarded the tie (eg. 1+3+3 = 7 beats 3+2+2 = 7). 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 next 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. Out of 6 (six) completed rounds 4 (four) to count, Out of 5 (five) completed rounds 3 (three) to count. Out of 3 (three) and 4 (four) completed rounds 2(two) to count. Out of 1 (one) and 2 (two) completed round 1 (one) to count.

5.4.13 Tracks

a) Size: Minimum preferred total length: 200 meter. Minimum preferred width

between marking/lanes: 3.5 meter for GP's 4 meter for an EC. The point most far away from the middle of the drivers rostrum can be 60 meters

b) The track design can be made by the organiser. Obstacles as trees, etc cannot be inside the track area. The drivers view to the track must be free without obstacles of any sort.
The track must be made with a reasonable variety of small and large corners, left as well as right handed. The straights must have different lengths.

c) Marking
The lanes must be clearly viewable by the competitors on the rostrum and the track markers must be chosen in such way the cars will not be damaged if they hit the track markers. The track markers must be solid enough not to be moved by a single contact.

d) Track markings
The organiser must make sure a car can never come into the public. Safety of the public, drivers, mechanics and race directors / assistants must be maintained all time by a save and functional track surrounding. The track markers must be situated so that corner cutting is highly impossible and cars cannot enter another lane easily. Track markers can be made of wood, fire hoses filled with sand, rubber hoses etc. By choosing the track markers the safety of the public is far more important as preventing damage to the cars.

e) Start / Finish
There must be a clearly visible start/finish line. On the finish line the timing loop must be placed in such a way that the cars may not damage it. In case of a loose track surface the markings for start finish can be made on the track markers.

f) Pits: It needs to be separated from the track Pits entrance and exit needs to be at least 1 meter width.

g) The drivers preparation area needs to be within a reasonable distance of the track. It needs to have pit tables for all drivers and 220 volts available. Only drivers, mechanics and race officials can enter the pit area. They have to show ID cards, made available by the organiser to identify. Each driver should receive a card for himself and 2 cards for mechanics

h) Only weather resistant track surfaces to be used at European Championships from 2014 on.

5.4.14 All warnings and instructions must be clear to hear for all competitors and mechanics.

5.4.15 Adequate sanitary must be available during the event.

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