



Recommended rules for IR GT CARS 27th of June to 30th of June LEIPZIG (Germany). V1.1

MRC Leipzig e.V.

20th of January 2019



1. CATEGORIES

International Race is open for five categories in GT:

- GT International Rules (IFMAR/EFRA),
- GT Italian Rules (SGT),
- GT electric cars with 4s batteries (1/8 GTE 4S),
- GT electric cars with 6s batteries (1/8 GTE 6S),
- GT electric cars (GT3-Cup, 4s battery, chassis and electronics limited)

racing in separate events.

2. RACE FORMAT FOR EFRA INTERNATIONAL RACE

- 2.1. Free practice for an IR is allowed from Thursday preceding the Race. It will not be allowed for competitors in the event to practice for 10 days before this Thursday.
- 2.2. 5 Rounds of Qualifying will be run, irrespective of the number of drivers. Qualifying will be:
 1. GT International Rules (IFMAR/EFRA): 7 minutes + last lap (WITHOUT REFUELLING) The starting procedure used will be **FLYING START**.¹
 2. GT Italian Rules (SGT) and all electric GT classes: 5 minutes + last lap. The starting procedure used will be **FLYING START**.
- 2.3. A point system will be used to establish the qualifying result.
- 2.4. ONLY IC: With everybody qualifying for Christmas Tree sub-finals other than drivers qualifying directly for the 'Main' Final. 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 'super-pole' 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 on controlled tires (from last round). The 'super-pole' running order will be 5, 4, 3, 2. The driver that scores the fastest lap will also move up straight to the 'Main' Final and take the second position on the starting grid. The other drivers from the 'super-pole' will start in the semifinals as per qualifying ranking.
- 2.5. 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 drivers '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.

¹ 7 minutes in Leipzig are really heavy, 6 minutes would be better

- 2.6. **Time schedule:** The time schedule should not be rigid but adapted to the number of entrants. As a guideline:

Thursday: FREE PRACTICE

Friday: Controlled timed practice with control tires in the morning and first qualifying in the afternoon

Saturday: qualifying, "super pole" (only IC) and SEMIFINALS

Sunday: Finals

- 2.7. 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. The heats shall contain a maximum of 12 drivers.

The Controlled Timed Practice heat will be of:

- 7 minutes duration for GT INTERNATIONAL (IFAMR/EFRA) and GT electric cars 4s and 6s,
- 8 minutes duration for GT3-Cup - GT electric cars (4s entry level, chassis and electronics limited) and
- 5 minutes duration for GT Italian Rules.

And qualification will be of:

- 7 minutes duration for GT INTERNATIONAL (IFAMR/EFRA) and
- 5 minutes duration for GT Italian Rules and all GT electric cars.

The ranking from controlled timed practice will be used to make the heats for the qualification heats. The arrangements of the Qualifying heats and the numbering will be defined with the best result of 3 consecutive laps of the Driver, made during controlled timed practice runs.

- 2.8. General format for sub-finals and main final (ONLY FOR IC):

Lower finals: Duration for lowers finals will be 20 minutes. The best 3 in each sub-final move up to the next final.

Semi-final: the best 3 in each semi-final move up to the main final, plus the best 2 remaining drivers from the 2 semi-finals combined. When racing conditions are different in the two semi-finals, the best 4 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. 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.

Final: Main final will be 45 minutes duration.

- 2.9. General format for FINALS (ONLY FOR GT ELECTRIC CARS):

2.9.1. The qualifying results will determine the composition for all finals with the top 10 proceeding to the "A" main final and so on down.

2.9.2. There will be 10 drivers in each final where possible. Finals will be organized for all competitors. The winner determined from the combined A finals will be the champion.

2.9.3. All finals will be run in three legs from slow to fast.

2.9.4. Final will be:

- 7 min for GT electric cars 4s and 6s
- 8 min for GT electric cars GT-Cup

2.9.5. The winner in the final gets 1 point, second 2 points and so on up to 10 points for 10th driver.

2.9.6. In the event of a tied position the driver with the single highest finishing position in either of the best 2 finals that counted will be awarded the tie. In the event of a continuing tie then the laps and times from the highest finishing position will be compared. The driver with the fastest laps and time total will be awarded the tie. In the case of a continuing tie, then the times from the second-best position will be compared.

3. TECHNICAL RULES FOR EFRA INTERNATIONAL RACE

3.1. GT INTERNATIONAL RULES (IFMAR/EFRA)

3.1.1. Introduction

GT/Rally cars with IC motor, 4WD. The basic principle for this class is the use of off-road cars and/or off-road parts, although we cannot prohibit the use of a single designed car for GT in the Future.

The chassis must have a minimum kick-off of 5 degrees in front. The kick-off needs to have a minimum length of 30 mm and lower suspension arms must be mounted on the kick-off. Kick off must start at a reference point from the front diff, min. 150 mm / max. 180 mm.

3.1.2. Dimension

Maximum length: 590 mm

Maximum width: 310 mm, including wheels

Wheel base: between 320 - 379 mm

Minimum height: 155 mm with chassis plate on 20mm blocks. See ANNEX 2

3.1.3. Weight

Minimum weight: 3500 grams

Minimum weight in order to run with empty tank.

3.1.4. Transmission

Single speed or two-speed only. Single speed configurations must include a solidly mounted spur gear to a standard bevel gear central differential or a solid spool (no one-way bearing). Any other differential types will be permitted. Two-speed transmissions must use an automatic centrifugal shifting mechanism that is not remotely adjustable or programmable. Because of the nature of the two-speed transmission design, no central differential is required, but the transmission must include a solid central shaft that doesn't allow differential action between the front and rear drive assemblies. A shaft-drive system with two gear-type open differentials are required.

No one ways (only for two speed), spools, locking "Torsion-type," or externally adjustable differentials are permitted. The geared differentials can only be tuned with the use of silicone-based fluid. Identical F/R drive ratios are required – no F/R underdrive / overdrive permitted. A single speed mounted to a centre spool, or an included two-speed transmission are permitted. The drivetrain shall be a central shaft system with ring and pinion gears driving the differentials. Shaft-drive only – belt driven cars are not permitted. The drive system must maintain the same features as used in the original off-road configuration except where noted, including the central differential/one speed transmission with separate front and rear central drive shaft's.

3.1.5. Engine

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

For EFRA International Race are a maximum number of ports allowed: A maximum of 5 inlet ports or booster ports. Any hole will be considered as one of the 5 allowed. 3 Outlet ports, 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.

The INS box is mandatory (according to the IFMAR INS box list).

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

3.1.6. Clutch

The clutch shall engage by using shoes that have predominantly radial movement. The contact between clutch shoes and clutch bell may only be in a radial (outward from the crankshaft centreline) movement. A small axial movement of the shoes is allowed if this is needed to compress an axial spring. (No "Centax" Type)

3.1.7. Mufflers

The car must be fitted with an exhaust silencer system. Only 3 chamber mufflers according to the EFRA/IFMAR list. The exhaust tailpipe must be directed towards the roadway or, at best, parallel to it.

3.1.8. Brakes

Each model car must be fitted with clutch and brake system in such a way that it can be maintained stationary with the engine running. The brake must act on the transmission and must be of the mechanical type. The use of separate brakes on the wheels is not permitted. 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 central driveshaft's. Brakes may not be located on the outboard axles.

3.1.9. **Tank**

The maximum capacity for the fuel tank is 150 ml, including filter and all internal tubing.

3.1.10. **Fuel**

The mixture may contain only methanol, nitro methane and lubricating oil with a maximum of 16 % nitro.

3.1.11. **Body**

Bodies must be commercially available 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 touring cars. Height of wing maximum 10 mm 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.

Bodies must be within the GBS dimensions by IFMAR. See ANNEX1.

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 headlight and grill details.

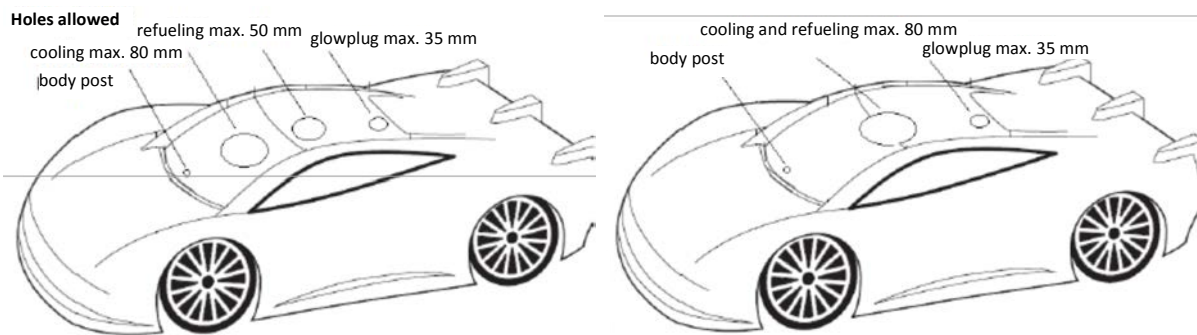
A diffuser mounted on the rear of the chassis is allowed. It may exceed a maximum of 10 mm but not further than the rear wing and not wider as the inner measurement of the wheels. The diffuser must be made of flexible material without any sharp edges. No internal body supports / stiffeners / braces allowed to avoid lightweight bodies with internal modifications and add-ons, excluding reinforcement of the wheel arches and back boot lit is allowed. The body must rest on a maximum of 5 posts. Bodies must be made from Lexan with a minimum thickness of 1 mm. Bodies with vertical sides (as nitro 1/8) are prohibited.

3.1.12. **Openings in the body**

Holes in the body for refuelling, fuel tank opener (maximum 10 mm), aerial, glow-plug, carburettor access (maximum diameter 10 mm), radio antenna (maximum diameter 10 mm) and exhaust (pipe hole not exceeding 80 mm² on one side of the body). Rear and side windows may be removed. Maximum height of 75 mm cut-out at rear on 20 mm blocks. One opening may be made in the front windscreen with a maximum dimension of 80 mm in any direction for refuelling and/or engine cooling. An additional hole for refuelling in the roof of 50 mm is allowed and 35 mm for the glow plug. Minimum distance between holes is 5 mm.

The cooling head of the motor must remain completely inside the body.

The windows cannot be folded outwards to get more air to the engine. It is also not permitted to have a system under the body for conveying air inside the body (It is possible in case of rain). All bodies must have the front and rear wheel arches removed. See ANNEX 2.



3.1.13. **Wing**

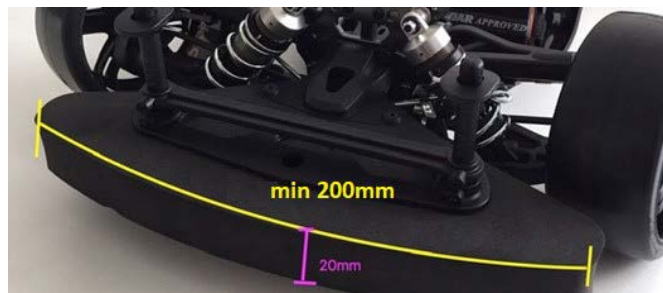
The wing must meet the following requirements:

- Must be mounted on the body

- Depth: 79 mm maximum, measured parallel to the inclination of the wing
 - Width: 315 mm maximum, measured parallel to the inclination of the wing
 - The wing must rest on maximum 3 body posts which are not wider as 30 mm each.
- The wing will be allowed 10 mm above the rooftop and the wing overhang, is max. 10 mm.
See ANNEX 2.

3.1.14. **Bumper**

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 20 mm.



3.1.15. **Wheels, tyres**

See point 4.

3.1.16. **Electronics**

It is not allowed to use any electronic devices with the exception of: The two radio channels of the receiver which will be used to operate steering, throttle and brakes. A battery to power the receiver with any voltage regulator and the transponder as well as cables, connectors and/or a switch.

3.1.17. **Technical Exclusions**

Use of one-way bearings, except for the 1st gear of a 2-speed transmission. Belts. Extra Body support struts for lightweight bodies. 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 heels. Body extenders or wheel flares. Carbon fibre chassis are not permitted. Treatment of the tyres with additives is prohibited.

3.2. **GT ITALIAN RULES (SGT)**

3.2.1. **Introduction**

GT/Rally cars with IC motor. They run all type of chassis of GT, based on on-road and off road. All type of lead transmission, all type of engine of 3.5 cc, free body. There are a number of Italian brands for this class available and a single one outside Italy.

3.2.2. **Dimensions**

Length: overall 730 mm
 Minimum width: 290 mm
 Maximum width: 310 mm
 Wheelbase: between 270 - 330 mm
 Maximum height: 340 mm including wing with suspension fully compressed, chassis against the floor.

3.2.3. **Weight**

Minimum weight: 3400 grams
 Minimum weight in order to run with empty tank.

3.2.4. **Transmission**

The transmission can be 2 or 4-wheel drive and must be mechanical (universal joints, belts, chains, etc.). Allowed is a gearbox with maximum two speed.

It is forbidden to use one-way drive axle. The cars must be equipped with front differential axle and rear differential axle, which cannot be locked.

3.2.5. Engine

The engine of the model car will have a total capacity of up to 3.5cc. Maximum carburettor diameter is 9 mm.

3.2.6. Mufflers

The car must be fitted with an exhaust silencer system. Only 3 chamber mufflers according to the EFRA/IFMAR list. The exhaust tailpipe must be directed towards the roadway.

3.2.7. Brakes

Each model car must be fitted with clutch and brake system in such a way that it can be maintained stationary with the engine running. The brake must act on the transmission and must be of the mechanical type. The use of separate brakes on the wheels is not allowed.

3.2.8. Tank

The tank can have a maximum capacity of 125.00 ml including filter and hose connection to the carburettor.

3.2.9. Fuel

The mixture may contain only methanol, nitro methane and lubricating oil with a maximum of 16 % nitro.

3.2.10. Body

All models must be fitted with a 1/8th scale body that is similar of a car really existing with the exception of open cockpit cars. Allowed are replicas from ALMS, GT1, GT2 or GT3, Super GT, DTM, and V8 Supercar Cars. No homologation required, but EFRA can refuse bodies which are not within the spirit of this class. The body must be fixed on the integral parts of the chassis. The bodies must be made of flexible material and painted. The front and rear and side windows must be transparent and cannot be painted. Any part of the model can protrude from the body with the exception of the posts. Aerodynamic aids like diffuser are not allowed.

3.2.11. Openings in the body

Holes in the body for refuelling, fuel tank opener (maximum 10 mm), aerial, glow-plug (maximum diameter 25 mm), carburettor access (maximum diameter 10 mm), radio antenna (maximum diameter 10 mm) and exhaust (pipe hole not exceeding 80 mm² on one side of the body).

The cooling head of the motor must remain completely inside the body.

One Hole with a diameter of 50 mm or oval 40 x 60 mm maximum for refuelling. It is allowed to have one opening in the front and rear with a maximum diameter of 50 mm each. Side window may be removed. The windows cannot be folded outwards to get more air to the engine. It is also not permitted to have a system under the body for conveying air inside the body (It is possible in case of rain). All bodies must have the front and rear wheel arches removed.

3.2.12. Wing

The wing must meet the following requirements: Must be mounted on the body. Depth: 79mm maximum, measured parallel to the inclination of the wing. Width: 315 mm maximum, measured parallel to the inclination of the wing.

3.2.13. Bumper

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 20 mm.

3.2.14. Wheels, tyres

See point 4.

3.2.15. **Electronics**

It is not allowed to use any electronic devices with the exception of: The two radio channels of the receiver which will be used to operate steering, throttle and brakes. A battery to power the receiver with any voltage regulator and the transponder as well as cables, connectors and/or a switch.

3.2.16. **Technical Exclusions**

Not more than two (2) servos. It is not allowed the use of additional electronic equipment for the Traction Control or braking (ABS). It is not allowed the use of any active telemetry system. 4-wheel brakes, or Independent controlled braking on the front wheels is not allowed. Liquid cooled engines. Hydraulic systems. The use of traction control devices, active suspension devices and any steering control aided by gyroscopes/"G"-force sensors is strictly forbidden. No body or wheel flares extenders allowed and no Lola, wedge or open cock pit style bodies are allowed.

Carbon fibre chassis are not permitted. Treatment of the tyres with additives is prohibited. IF any competitor should be discovered by using additives, he will be disqualified of the event. No chassis mounted or Buggy/ Truggy type wings allowed.

3.3. **GT ELECTRIC CARS (4S)**

3.3.1. **Introduction**

GTE cars. Admitted are all GT vehicles with brushless power, of a marketable 1/8 Buggy derived and based on on-road chassis. This corresponds in essential parts, such as wishbones, differentials, etc., although we cannot prohibit the use of a single designed car for GT in the Future.

3.3.2. **Dimension**

Maximum length: 590 mm

Maximum width: 310 mm, including wheels

Wheel base: between 320 - 379 mm

Minimum height: 155 mm with chassis plate on 20 mm blocks. See ANNEX 2.

3.3.3. **Weight**

Minimum weight: 3800 grams

3.3.4. **Transmission**

The transmission of driving force to front and rear axle is affected by cardan shafts. Belt drive is not allowed. Ball differentials and rigid through drive on the axles and freewheel front drive are prohibited, no centre differential is required.

No one-way, spools, locking "Torsion-type," or externally adjustable differentials are permitted. The geared differentials can only be tuned with the use of silicone-based fluid. Identical F/R drive ratios are required – no F/R underdrive/overdrive permitted. The drivetrain shall be a centre shaft system with ring and pinion gears driving the differentials. Shaft-drive only – belt driven cars are not permitted. The drive system must maintain the same features as used in the original off-road configuration.

3.3.5. **Motor**

There are brushless motors approved with the following maximum dimensions:

- Diameter: max. 44 mm

- Length: max. 75 mm

Both motors with and without sensor are allowed. The manufacturer is optional.

3.3.6. **Batteries**

Any type of battery will be allowed as long as it is commercially available. Only those of the type maximum 4S (4 elements in series) will be valid at the most, in A single pack of 14.8 V or in two packs of equal characteristics of 7.4 V. The brand, voltage, Manufacturer, etc. must be reliably in each battery, not valid those batteries that have lost the original manufacturer's instructions. Mandatory HARDCASE. The maximum voltage is 16.8 V at the start of the race. The batteries and Chargers must have an equalizer cable. The Chargers must have a program Specific for LIPO/LIFE load, i.e. CC/CV (constant current, voltage cut), with Cut according to the specifications of the EFRA regulation and the load must be made with the cable Equalizer. The maximum permissible current charging is 12 A and the maximum permissible current discharge is 20 A. It is obligatory to have a fireproof bag for the batteries. It's about a safety measure for the pilot, circuit and environment.

3.3.7. **Controller**

The controller (ESC) is optional.
It is not allowed to set the back Gear.

3.3.8. **Body**

Bodies must be commercially available 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 touring cars. Height of the wing is maximum 10 mm higher as rooftop. Measurement is 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.

Bodies must be within the GBS dimensions by IFMAR. See ANNEX1.

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 headlight and grill details.

A diffuser mounted on the rear of the chassis is allowed. It may exceed a maximum of 10 mm but not further than the rear wing 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 lit is allowed. The body must rest on a maximum of 5 posts. Bodies must be made from Lexan with a minimum thickness of 1 mm. Bodies with vertical sides (as nitro 1/8) are prohibited.

3.3.9. **Openings in the body**

Electric cars cannot trim the front windshield. The antenna hole (10 mm) and side windows can be trimmed. A hole of 50 mm in diameter can be made in the rear windshield. Additional cooling holes in the area of the radiator grille 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.

3.3.10. **Wing**

The wing must meet the following requirements:

- Must be mounted on the body
- Depth: 79 mm maximum, measured parallel to the inclination of the wing
- Width: 315 mm maximum, measured parallel to the inclination of the wing
- The wing must rest on maximum 3 body posts which are not wider as 30 mm each.

The wing will be allowed 10 mm above the rooftop and the wing overhang, is max. 10 mm.
See ANNEX 2.

3.3.11. **Bumper**

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 20 mm.

3.3.12. **Wheels, tyres**

See point 4.

3.3.13. **Electronics**

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.

3.3.14. **Technical Exclusions**

Not more than one (1) servos. It is not allowed the use of additional electronic equipment for the Traction Control or braking (ABS). Set the back Gear. It is not allowed the use of any active telemetry system. 4-wheel brakes, or Independent controlled braking on the front wheels is not allowed. Liquid cooled motor. Hydraulic systems. The use of traction control devices, active suspension devices and any steering control aided by gyroscopes/“G”-force sensors is strictly forbidden. No body or wheel

flares extenders allowed and no Lola, wedge or open cock pit style bodies are allowed. Treatment of the tyres with additives is prohibited. Competitors found using additives will be disqualified from the event.

3.4. **GT ELECTRIC CARS (6S)**

3.4.1. **Introduction**

GTE cars. Admitted are all GT vehicles with brushless power, of a marketable 1/8 Buggy derived and based on on-road chassis. This corresponds in essential parts, such as wishbones, differentials, etc., although we cannot prohibit the use of a single designed car for GT in the Future.

3.4.2. **Dimensions**

Maximum length: 590 mm

Maximum width: 310 mm, including wheels

Wheel base: between 320 - 379 mm

Minimum height: 155 mm with chassis plate on 20 mm blocks. See ANNEX 2.

3.4.3. **Weight**

Minimum weight: 3800 grams

3.4.4. **Transmission**

The transmission of driving force to front and rear axle is affected by cardan shafts. Belt drive is not allowed. Ball differentials and rigid through drive on the axles and freewheel front drive are prohibited, no centre differential is required.

No one-way, spools, locking "Torsion-type," or externally adjustable differentials are permitted. The geared differentials can only be tuned with the use of silicone-based fluid. Identical F/R drive ratios are required – no F/R underdrive/overdrive permitted. The drivetrain shall be a centre shaft system with ring and pinion gears driving the differentials. Shaft-drive only – belt driven cars are not permitted. The drive system must maintain the same features as used in the original off-road configuration.

3.4.5. **Motor**

There are brushless motors approved with the following maximum dimensions:

– Diameter: max. 44 mm

– Length: max. 75 mm

Both motors with and without sensor are allowed. The manufacturer is optional.

3.4.6. **Batteries**

Any type of battery will be allowed as long as it is commercially available. Only those of the type maximum 6S (6 elements in series) will be valid at the most, in A single pack of 22.2 V or in two packs of equal characteristics of 11.1 V. The brand, voltage, Manufacturer, etc. must be reliably in each battery, not valid those batteries that have lost the original manufacturer's instructions. Mandatory HARDCASE. The maximum voltage is 25.2 V at the start of the race. The batteries and Chargers must have an equalizer cable. The Chargers must have a program Specific for LIPO/LIFE load, i.e. CC/CV (constant current, voltage cut), with Cut according to the specifications of the EFRA regulation and the load must be made with the cable Equalizer. The maximum permissible current charging is 12 A and the maximum permissible current discharge is 20 A. It is obligatory to have a fireproof bag for the batteries. It's about a safety measure for the pilot, circuit and environment.

3.4.7. **Controller**

The controller (ESC) is optional.

It is not allowed to set the back Gear.

3.4.8. **Body**

Bodies must be commercially available 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 touring cars. Height of the wing is maximum 10 mm higher as rooftop. Measurement is 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.

Bodies must be within the GBS dimensions by IFMAR. See ANNEX1.

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 headlight and grill details.

A diffuser mounted on the rear of the chassis is allowed. It may exceed a maximum of 10 mm but not further than the rear wing 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 lit is allowed. The body must rest on a maximum of 5 posts. Bodies must be made from Lexan with a minimum thickness of 1 mm. Bodies with vertical sides (as nitro 1/8) are prohibited.

3.4.9. **Openings in the body**

Electric cars cannot trim the front windshield. The antenna hole (10 mm) and side windows can be trimmed. A hole of 50 mm in diameter can be made in the rear windshield. Additional cooling holes in the area of the radiator grille 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.

3.4.10. **Wing**

The wing must meet the following requirements:

- Must be mounted on the body
- Depth: 79 mm maximum, measured parallel to the inclination of the wing
- Width: 315 mm maximum, measured parallel to the inclination of the wing
- The wing must rest on maximum 3 body posts which are not wider as 30 mm each.

The wing will be allowed 10 mm above the rooftop and the wing overhang, is max. 10 mm.
See ANNEX 2.

3.4.11. **Bumper**

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 20 mm.

3.4.12. **Wheels, tyres**

See point 4.

3.4.13. **Electronics**

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.

3.4.14. **Technical Exclusions**

Not more than one (1) servos. It is not allowed the use of additional electronic equipment for the Traction Control or braking (ABS). Set the back Gear. It is not allowed the use of any active telemetry system. 4-wheel brakes, or Independent controlled braking on the front wheels is not allowed. Liquid cooled motor. Hydraulic systems. The use of traction control devices, active suspension devices and any steering control aided by gyroscopes/"G"-force sensors is strictly forbidden. No body or wheel flares extenders allowed and no Lola, wedge or open cock pit style bodies are allowed. Treatment of the tyres with additives is prohibited. Competitors found using additives will be disqualified from the event.

3.5. **GT ELECTRIC CARS (GT3-Cup)**

3.5.1. **Introduction, Chassis**

Electro-stock class. This class is characterized by its uniform appearance. Only GT vehicles listed below are allowed:

- Serpent Cobra GTE RaceRoller (SER-600044)
- Serpent Cobra GTE LWB RaceRoller (SER-600052)
- Team C 1: 8 onroad "Porsche 911" GR8LE 4WD (GR8LE RTR 911)
- Kyosho Inferno GT2 VE Race Specs (e.g., K.34102B / K.34103B)

- Hobao Hyper VTE On-Road 1/8
- BMT Racing Team - 1/8 GT BMT 801GT EP RTR
- HongNor – X3 GT 1/8 Electric Touring Car

Only components available in the respective kit are allowed, if not defined later on. Furthermore, only the original springs and stabilizers may be used, proof of the construction manual.

Ball bearings and hinge pins are free. In all models, the caster of the front wheel carriers must be at least 10 degrees or more. The front and rear wheel carriers must be made of plastic, not aluminum. It may not be installed carbon parts. CVD shafts are allowed on the front axle, only bones on the rear axle, no CVDs.

3.5.2. **Dimension**

Maximum length: 590 mm

Maximum width: 310 mm, including wheels

Wheel base: between 320 - 370 mm

Minimum height: 155 mm with chassis plate on 20 mm blocks. See ANNEX 2.

3.5.3. **Weight**

Minimum weight: 3880 grams

3.5.4. **Transmission**

The maximum transmission is 7.7

The internal gearing of the vehicles may not be changed. A centre differential does not have to be used. The geared differentials can only be tuned with the use of silicone-based fluid.

3.5.5. **Motor**

There are brushless motors approved with the following maximum dimensions:

- Diameter: max. 44 mm
- Length: max. 70 mm
- Motor Limit: max. 1800 kV

Both motors with and without sensor are allowed. The manufacturer is optional.

3.5.6. **Batteries**

Any type of battery will be allowed as long as it is commercially available. Only those of the type maximum 4S (4 elements in series) will be valid at the most, in A single pack of 14.8 V or in two packs of equal characteristics of 7.4 V. The brand, voltage, Manufacturer, etc. must be reliably in each battery, not valid those batteries that have lost the original manufacturer's instructions. Mandatory HARDCASE. The maximum voltage is 16.8 V at the start of the race. The batteries and Chargers must have an equalizer cable. The Chargers must have a program Specific for LIPO/LIFE load, i.e. CC/CV (constant current, voltage cut), with Cut according to the specifications of the EFRA regulation and the load must be made with the cable Equalizer. The maximum permissible current charging is 12 A and the maximum permissible current discharge is 20 A. It is obligatory to have a fireproof bag for the batteries. It's about a safety measure for the pilot, circuit and environment.

3.5.7. **Controller**

Only controllers with a maximum power up to 140 Ampere are allowed.

Since there is no boost 0 with the 1/8 controllers, all controllers must be driven in the lowest timing setting!

It is not allowed to set the back Gear.

3.5.8. **Body**

The body must be made from an existing car design. Only the following bodies are approved for the GT3 class (See ANNEX 4):

- Deltaplastik 0111 - Porsche 911 (0111)
- TPRO GT 3000 (TP104003 / TP104003L)
- TPRO GT 4000 (TP105003L)
- Absima Porsche 911 RSR body (2410004)
- Absima Audi R8 body

- Serpent 1/8 GT P911 pre-cut (SER-170352)
- Serpent 1/8 GT Audi R8 pre-cut (SER170357)
- Kyosho 1/8 Inferno GT2 Corvette C6-R (K.IGB102 / K.IGB152B)
- Kyosho 1/8 Inferno GT2 Audi R8 LMS (K.IGB159 / K.IGB109 / K.IGB105)
- Kyosho 1/8 Inferno GT2 Aston Martin DBR09 (K.IGB106)
- Kyosho 1/8 Inferno GT2 Dodge Challenger SRT Demon (K.IGB110)

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 headlight and grill details.

Aerodynamic aids like diffuser and flaps are not allowed. 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 lit is allowed. The body must rest on a maximum of 5 posts. Bodies must be made from Lexan with a minimum thickness of 1 mm. Bodies with vertical sides (as nitro 1/8) are prohibited.

3.5.9. **Openings in the body**

Only the holes for the body mount and for the antenna tube (10 mm) are allowed. Further body openings are not permitted.

3.5.10. **Wing**

The wing must meet the following requirements:

- Material: Lexan
- Must be mounted on the body
- Depth: 79 mm maximum, measured parallel to the inclination of the wing
- Width: 315 mm maximum, measured parallel to the inclination of the wing
- The wing must rest on maximum 3 body posts which are not wider as 30 mm each.

The wing will be allowed 10 mm above the rooftop and the wing overhang, is max. 10 mm.

See ANNEX 2.

3.5.11. **Bumper**

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 20 mm.

3.5.12. **Wheels, tyres**

See point 4.

3.5.13. **Electronics**

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.

3.5.14. **Technical Exclusions**

Not more than one (1) servos. It is not allowed the use of additional electronic equipment for the Traction Control or braking (ABS). Set the back Gear. It is not allowed the use of any active telemetry system. 4-wheel brakes, or Independent controlled braking on the front wheels is not allowed. Liquid cooled motor. Hydraulic systems. The use of traction control devices, active suspension devices and any steering control aided by gyroscopes/"G"-force sensors is strictly forbidden. Treatment of the tyres with additives is prohibited. Competitors found using additives will be disqualified from the event.

4. CONTROL TIRE

4.1. **General rules**

4.1.1. **Controlled tires for all classes during the event.**

4.1.2. Any kind of additive with the aim to get more traction is not allowed during the whole meeting, included free practice and controlled timed practice.

4.1.3. Official tire for the meeting will be selected for the Federation together with the organizer at least 8 weeks before the International Race. They must consider to choose the official tire items like: track surface, price and other important points with the aim to get best traction as possible and best conditions for the drivers.

4.2. Tire Specifications

4.2.1. Tires for front and rear are the same dimensions. The tires must be made of rubber, no foam tires. An insert is allowed. Holes in the rubber tires are allowed, so as the rim.
Tires width: max. 45 mm, diameter: 94 – 102 mm.
Rims diameter: 75 - 85 mm.

4.2.2. Wheels must use a 17 mm 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 17 mm wheel nut, threaded on to the hex hub. Quick change mechanisms are not permitted. No tire or rim may protrude outside the body.

4.3. Control tire procedure during the meeting

4.3.1. Control tire will be mandatory for the event.

4.3.2. Drivers must order quantity of tires for the whole meeting. 2 sets of tires (4 packs of 2 tires = 8 tires) are included in the entry fee. Those tires must be in controlled area in the track in a personal box with driver's name and entry number. If needed, drivers can order additional tires during the meeting to complete the event. 1 set for practice, 2 set for Qualifying, 1 set extra for semi-finals, 1 set extra for main final. If additional set of tires is needed for any reason, driver will be penalized with 2 laps in the last final or sub-final race.

4.3.3. For free practice, drivers have free choice of tires used, but no treatment is allowed. From the start of controlled timed practice (used for seeding), drivers have to use the Hand-Out tires.

4.3.4. Rain: In case of rain (decided by the Race director after consultation with the Section Chairman), any alternative tire can be used which has not been treated in any way, with the aim to get more or less traction.

4.3.5. Tires must be used as they are supplied (no modification to the rims, except the axle hole and no shore meters can be used to select tires) and will be given out and fitted in the controlled area. Drivers must only use tires which they have in their respective box in the controlled area.

4.3.6. When race is over and/or after technical inspection, drivers must leave the tires in their respective box in the controlled area and they must leave the pit lane without tires. If any tire leaves the controlled area, they will not be used anymore during the whole event.

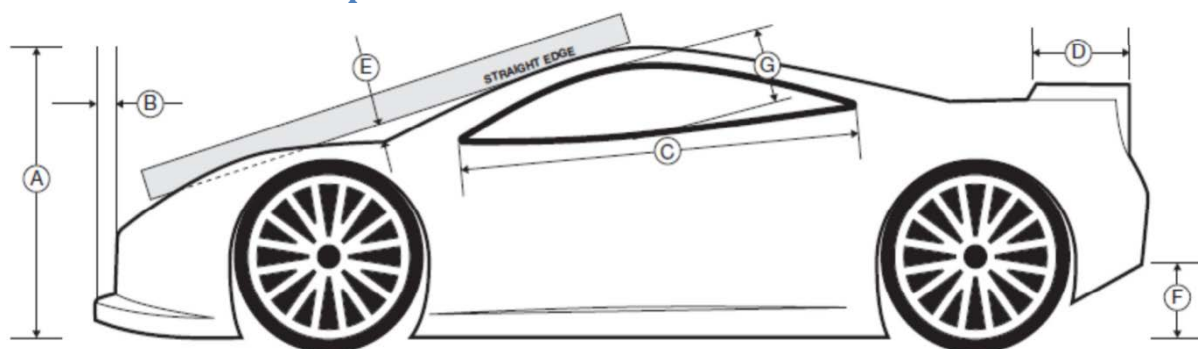
4.3.7. Drivers who have finished their participation in the IR, can collect their tires of the controlled area.

5. Other Items

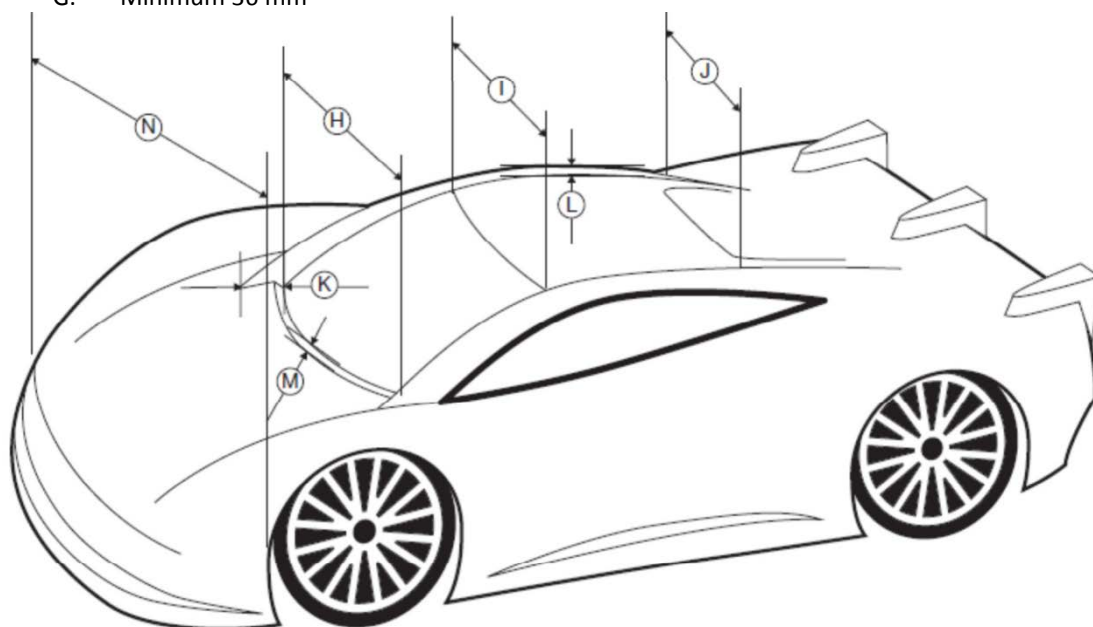
5.1. Others items which are not covered in this document, must follow next procedure:

- IFMAR GT Class Rules 2018 V1.1 ([Download IFMAR GT Rules V1.1](#))
- IFMAR Muffler list 1:8 IC TR ([Download IFMAR Mufflers](#))
- IRMAR INS Boxes ([Download IFMAR INS Boxes](#))
- Decision made in the team managers meeting or drivers meeting with simple majority of votes.

6. Annex 1 - GBS Proposal for GT Class²



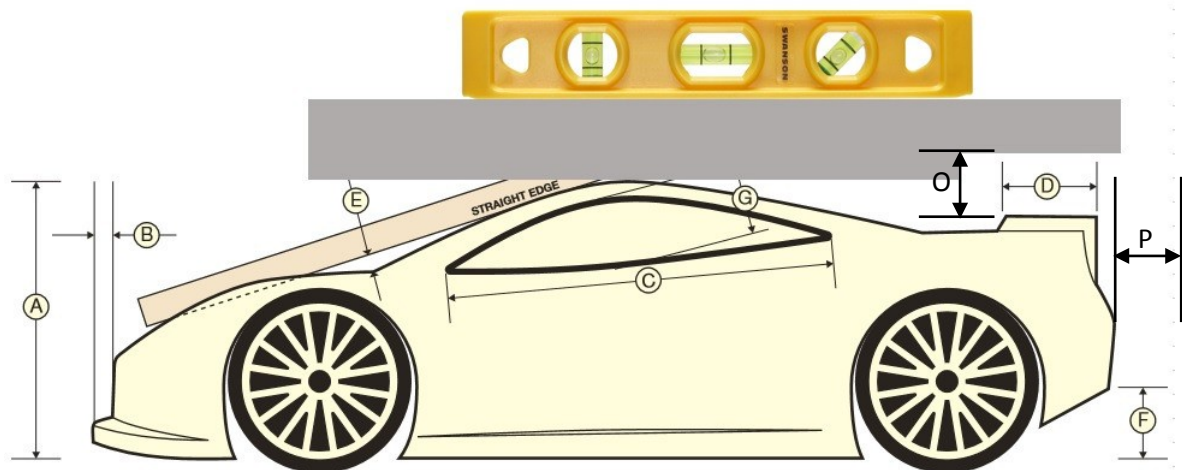
- A. Minimum 155 mm (with chassis on 20 mm blocks)
- B. Maximum 15 mm depth
- C. Minimum 170 mm
- D. Maximum 3 posts (50 x 20 mm)
- E. Minimum 12 mm, gap between straight edge bottom and hood plane where it meets windshield
- F. Maximum 75 mm (with chassis on 20 mm blocks)
- G. Minimum 36 mm



- H. Minimum 200 mm
- I. Minimum 145 mm
- J. Minimum 130 mm (top inside edge of C-pillar)
- K. Maximum 8 mm depth of A-pillar above the windshield surface plane
- L. Maximum 5 mm height of outer roof rail above the roof surface plane
- M. Maximum 4 mm (stagger between hood and windshield)
- N. Maximum 317 mm, minimum 300 mm overall width

² Not all typical GT bodies comply with the specified dimensions, see Appendix 3.

7. Annex 2 - Wing



- O. Maximum 10 mm above the rooftop
- P. Maximum 10 mm wing overhang to the rear

8. Annex 3 – Body recommended GT serie and GT-E

List of body recommendations. This is a recommended list of bodies but all bodies under GBS measures according to the IFMAR rules will be allowed.

Valid for the classes:

- GT International Rules (GT IFMAR/EFRA),
- GT electric cars with 4s batteries and 6s batteries

TPRO GT 3000 (TP104003 / TP104003L)



TPRO GT 4000 (TP105003L)



XRAY GTX8 (359730)



Sweep P1L GT (SD0002)



Blitz GT (60804)



Blitz GT2 (60805)



Blitz GT3 (60806)



JZ Racing (JZFLOW001)



Serpent 1/8 GT (SER170349 / SER170311)



Protoform Chevrolet Corvette C7.R GT1 (PRO1551-40)



Protoform Chevrolet Corvette C7.R GT2 (PRO1556-40)



Protoform PF8-GT (PRO1503-00)



VP-Pro GT03 (CB-GT03-CL)



VP-Pro GT02 (CB-GT02-CL)



Hobao Hyper GTB (90074G)



Hobao Hyper GT (90075)



Hobao Hyper VT (85052)



Deltaplastik Porsche 911 GT 96 (7503)



Deltaplastik F40 (0100)



Deltaplastik BMW M3 (0137)



Deltaplastik Porsche 911 GT1 EVO (0165)



Deltaplastik Porsche 911 GT1 96 (0164)



All bodies conforming to the specifications of Annex 2 are permitted.
The bodies of Annex 4 are also allowed.

Should anyone want to drive a body that does not meet the specifications of Appendix 2, 3 and 4, so this body can be proposed for testing.

9. Annex 4 – Body list for GT3-Cup

Only the following bodies are approved for the GT3-Cup:

TPRO GT 3000 (TP104003 / TP104003L)



TPRO GT 4000 (TP105003L)



Absima Porsche 911 RSR body (2410004 / 2410005)



Absima Audi R8 body (2410001)



Serpent 1/8 GT P911 pre-cut (SER-170352)



Serpent 1/8 GT Audi R8 pre-cut (SER170357)



Kyosho 1/8 Inferno GT2 Corvette C6-R (K.IGB102 / K.IGB152B)



Kyosho 1/8 Inferno GT2 Audi R8 LMS (K.IGB159 / K.IGB109 / K.IGB105)



Kyosho 1/8 Inferno GT2 Dodge Challenger SRT Demon (K.IGB110)



Kyosho 1/8 Inferno GT2 Aston Martin DBR09 (K.IGB106)



Deltaplastik 0111 - Porsche 911 (0111)

