

**GRAND PRIX MIDGET CLUB
TECHNICAL SPECIFICATION REGULATIONS**

1.0 ENGINE

- 1.1 [Any 4 cylinder 4 stroke production engine may be used.](#) (Amended at 2005 AGM)
- 1.2 Maximum capacity permitted is 1427cc including repair sizes
- 1.3 Two camshafts may be used. Cams are free, valve springs are free.
- 1.4 Multi-valve heads may be used, again must be derived from a production car. No BDA heads permitted. (When using multi-valve heads, a specification sheet must be produced at any time during any race meeting upon request, describing in detail the full credentials of the type of head used.)
- 1.5 Strictly no porting or polishing is allowed on multi-valve heads, although the inlet manifold may be matched to the head.
- 1.6 Valve sizes must be kept in standard form on multi-valve heads for the particular model used.
- 1.7 When using multi-valve heads, the carburettor(s) must have 32mm diameter choke tubes fitted. The size of the choke tubes must be made available for checking at any time by the Scrutineer.
- 1.8 Any other method of normal aspiration tuning is permitted.
- 1.9 Fuel injection is NOT permitted.
- 1.10 Only normal street pump petrol is permitted. (Valve lubricant is permitted)
- 1.11 No special mixes or methanol blends, nitrous oxide or octane boosters are permitted.
- 1.12 Engines must self start.

2.0 TRANSMISSION AND FINAL DRIVE

- 2.1 Only rear wheel drive is permitted.
- 2.2 Differentials may be Free, Locked or Limited Slip.
- 2.3 Motor cycle type roller chain is NOT permitted.
- 2.4 Flexible band or toothed belt or Hyvo chain MUST be fully enclosed in substantial casing.
This must be to the Technical Committee/Scrutineer's satisfaction.
- 2.5 Operative clutch and reverse gear are mandatory.
- 2.6 Gearboxes/transaxles are free.

3.0 CHASSIS

3.1 Dimensions: Refer APPENDIX A at rear of Technical Specification booklet

Maximum overall length	130" (3300mm)
Maximum overall width not to exceed	66" (1675mm)
Maximum wheelbase	82" (2085mm)
Minimum wheelbase	68" (1725mm)

3.2 A welded steel tube spaceframe is normal but a monocoque chassis is permitted.

3.3 All cars of space frame type chassis will have a minimum of two longitudinal chassis rails of minimum 1" x 16g (25mm x 1.6mm) square or round tubing (*rails to be one either side of the cockpit*).

3.4 The cockpit side rails must be a minimum of 6" (150mm) above seat height (when uncompressed). No part of the driver's seat shall extend rearward further than a line level with the back edge of the rear tyre. Bodywork must be secure and completely cover the chassis forward of the roll cage and the sides from the rear arch of the roll cage forward.

3.5 Considerable triangulation is required in construction for safety and handling.

3.6 A metal firewall must be fitted between the engine and driver in all cases, except where it can be demonstrated to the Technical Committee or their appointed Scrutineer's satisfaction, that it is impractical and safe to do so. (Written exemption should be applied for. Approval from the Technical Committee / Scrutineer should be recorded in the log book)

In all such cases where exemption is granted a fuel collection tray must be fitted under the carburettors and fuel lines. It must be fitted in such a way that any leaking or excess fuel will be collected and drained away from the engine, driver and chassis.

A drain tube to below the chassis level is recommended.

It is also recommended that a heat-proof shield is also fitted between the exhaust system and the driver.

It is recommended that a substantial reinforcement is used between the driver and the flywheel clutch area of the power unit in case of explosion.

3.7 A deformable structure in front of the driver's feet is MANDATORY. This may be a specially constructed disposable section, or an integral part designed so that it will collapse progressively, absorbing some of the impact energy, in the event of a frontal collision, before damage occurs within the driver's compartment or footwell. A substantial bulkhead must be installed between the driver's footwell and the deformable area to protect the driver's feet.

3.8 The nose cone width of any car must be not less than the widest part of the chassis at the front of the car and in any case not less than 18" (450mm) wide

3.9 [No moveable aerodynamic devices which adjust by movement or flexing whilst the vehicle is moving.](#) (Proposal carried at 2005 AGM)

4.0 **ROLL CAGES: See also APPENDICES B & C**

NEW CONSTRUCTION There are two minimum sizes as follows, either to be used.

- 4.1 1¼" x 14g (32mm x 2.0mm) round steel tube with 20" (510mm) maximum unsupported length. There must be fore and aft bracing to the rear arch of a minimum of ¾" (19mm) tube, attached at a minimum of ¾ rear arch height (measured from the top chassis rail) and attached at the equivalent distance of ½ rear arch height along the top chassis rail. A diagonal cross brace, minimum ¾" (19mm) must be incorporated in the rear arch between the top of the arch and a point level with the top chassis rail.

OR

- 4.2 1½" x 16g (38mm x 1.6mm) steel round tube with 23" (585mm) maximum unsupported length. A diagonal cross brace of minimum 5/8" (16mm) must be incorporated in the rear arch between the top of the arch and a point level with the top chassis rail.

PLUS

- 4.3 A substantial "A" frame may be used instead of a diagonal cross. All bracing and diagonals must be symmetrical about centre line of the car where practicable.
- 4.4 A substantial head restraint is to be incorporated into the chassis or seat back
- 4.5 Round steel tube only for the roll cage. Fore / aft and diagonal bracing may be round or square tube.
- If welded in, fore or aft brace will bar engine removal, this bracing may be bolted in using minimum 5/16" (8mm) high tensile bolts and lock nuts, preferably in double-shear.
- 4.6 All space frame type chassis are to have the roll-cage attached directly to the chassis rails of minimum 1" X 16g (25mm x 1.6mm)
- 4.7 No part of the driver's body whilst in the normal driving position shall be outside the side "plane" of the roll cage.
- 4.8 A side deflector bar will be fitted. This must be made of 16 gauge 1" tubing and must be a minimum height of 21" from the ground whilst on a level surface. It must be fitted from the back to the front of the roll cage on the left hand side of the car. (On the side that is inside whilst racing)
- 4.9 There must be a minimum distance of 4" (100mm) between the top of the driver's helmet and the top plane of the roll cage.

4.10 *EXISTING ROLL CAGES* (G P Midget cars built prior to 1996)

These cars may alter existing cages as follows in order to comply with above the above regulations.

To comply with 1¼" x 14g option but to have bracing of a minimum of 1" x 16g (25mm x 1.5mm) tube to meet with the Technical Committee's guidance and approval.

Fore and aft bracing may be crossed over, in a symmetrical pattern, if cross bracing or "A" frame bracing in the rear arch is impractical.

A car with a modified cage shall have the log book so annotated to indicate that the roll-cage is approved.

Any existing car that needs extensive repairs to the roll-cage or which has extensive modifications to the roll-cage (not including modification in accordance with the above specifications) must comply with the roll cage specification in their entirety.

5.0 **SUSPENSION**

- 5.1 Some form of suspension is compulsory, allowing a minimum travel (compression and rebound) of 3" (75mm) at each wheel.
- 5.2 Solid or compressed rubber bush type suspension is NOT permitted.

6.0 **WHEELS AND TYRES**

- 6.1 Racing and competition tyres are not restricted, with the exception of studded tyres or any form of detachable grip enhancer (chains) which are NOT permitted.
- 6.2 Wheels are free but should be strong enough for oval racing.
Banded type steel wheels are permitted but should be regularly checked for cracking around the hub fitting.
- 6.3 Wheel balance weights should be of stick on type mounted within the rim. Edge fitting clip-on weights are NOT permitted.
- 6.4 Centre lock wheels MUST have locking pins, safety clips fitted.
- 6.5 Wet weather tyres must be used during a wet race. The most Senior Committee member(s) present on the race day will deem whether an event is declared a "wet" race.

7.0 **PROTECTIVE (NERF) BARS**

(Protective bars are designed to prevent wheels becoming entangled during racing)

- 7.1 Only lightweight construction (eg. 16g steel) protective bars are permitted. At the front and rear the bar must have rounded ends and be no wider than the inside edge of the tyres in the straight ahead position.
- 7.2 Side protection bars are recommended but not compulsory. Recommended form is a single or double rail of lightweight construction mounted slightly higher than the wheel centre, tapering out from behind the front wheel to a point greater than 1" inside the rear wheel lateral extremity. **Some form of side protection bars protecting the rear driving wheel is mandatory with effect from 27th June 1999. Refer to Technical Committee for drawings.**
- 7.3 There should be no sharp edges on bar work and all tube ends are to be filled in/rounded off.

8.0 **FUEL TANKS AND SYSTEMS (amended 2004 AGM)**

- 8.1 A metal or approved type bag tank of not more than 4 gallons (18 litres) may be fitted. **Where a metal tank is fitted it must be properly secured within the main chassis frame of the car or in a sub-frame of at least equal strength to the main chassis of the car with a suitable clearance acceptable to the Chief Scrutineer, with a recommended clearance of 75mm all round to the tank itself.**
- 8.2 A positive action fuel tap mounted within easy reach of the driver whilst in the driving position is MANDATORY. It must be clearly marked and the method of operation clearly indicated.
- 8.3 Fuel hoses or pipes may be metal or rubber and must be fitted with clips at all joints, even if the pipe appears tight. (Use of plastic braid pipe was banned at 2000 AGM)
- 8.4 All fuel lines must be adequately protected from any rotating or moving parts when passing through the cockpit area.

8.5 All fuel lines must be maintained in good condition and replaced at the first sign of fraying (where applicable) or deterioration.

9.0 **ELECTRICS**

9.1 All batteries must be secured to the chassis within the main frame, or in a substantial subframe or cage.

9.2 Lead acid type batteries must be covered to prevent spillage particularly where fuel, or brake lines and seat belts are nearby.

9.3 A master switch clearly marked and easily operated by the driver whilst in normal driving position, must be fitted. It should be connected into the earth side of the electrical system.

9.4 A red high intensity rear lamp, with a diameter of not less than 2" (50mm), must be fitted. It must be operated by a manual switch and have a minimum 21 watt bulb, and must be switched on for the duration of all wet races.

9.5 An indicator light for the red rear lamp must be fitted and operative, mounted in the dash or other prominent position in the driver's view, which indicates that the rear lamp is on.

10.0 **BRAKING SYSTEM**

10.1 Brakes must be fitted and working on all four wheels.

10.2 Dual circuit hydraulic systems are MANDATORY and must be capable of locking up all four wheels.

11.0 **SEAT BELTS**

11.1 A '5 point' racing harness type seat belt with crutch strap is MANDATORY.

11.2 All seat belt straps must be protected from fraying through rubbing on sharp edges and maintained in a clean and secure condition at all times.

11.3 The shoulder straps must have an effective mounting height of between 1" and 6" (25mm and 150mm) below shoulder height of the driver.

12.0 **GENERAL SAFETY**

12.1 A 3½" (90mm) hole is to be located in any bodywork enclosing the engine and / or fuel tank, pumps and carbs to provide fire extinguisher access to each such point.

12.2 A suitable fire extinguisher of at least 1Kg capacity complete with condition gauge must be carried on the car and be capable of being readily removed by hand.

12.3 A catch tank **minimum capacity 1 litre** must be fitted to all fuel and oil breather vents and overflow pipes. No 'drinks cans' will be allowed for this purpose.

12.4 Any car found to be leaking fluids onto a race circuit will be excluded from racing.

12.5 All cars must be fitted with two rear view mirrors of not less than 100mm x 100mm. Glass type mirrors should be backed with a rubberised adhesive or taped to secure against fragmentation.

- 12.6 Every effort should be made to protect the driver from burst and failed connections in oil or water hoses by routing them clear of the cockpit or by providing adequate shielding within the cockpit.
- 12.7 Scrutineering will take place at every race meeting and drivers **MUST** ensure the car is checked before racing, practice or qualifying. Reference should be made to Club Rule 2.6 with regard to scrutineering requirements and documentation. If the scrutineer(s) point out a matter of concern, the driver is expected to correct the matter before the next race meeting or if practical before racing. Any car deemed unsafe will be excluded from racing.
- 12.8 It is recommended that a crash pad of 4" (100mm) square be fitted to a substantial support directly behind the driver's crash helmet when strapped in.

13.0 **DRIVER'S PERSONAL SAFETY EQUIPMENT**

- 13.1 Crash helmets used must be of a type approved by RAC and MSA and must carry the **BS 6658** number **TYPE A only (not Type B) or the new European standard E2205**. Helmets should be regularly checked by the wearer and replaced as necessary.
- 13.2 Flame retardant overalls are **MANDATORY** and should be to standard BS 6249, Part 1 Index B. Overalls are to be brightly coloured, clean and presentable at all times.
- 13.3 The use of a neck brace is recommended *and may become mandatory in near future*.
- 13.3 The recommended footwear is leather boots which cover the driver's ankle.
- 13.4 Flame resistant gloves are recommended. NB. Some circuits require these before allowing you to race.

14.0 **SILENCERS**

- 14.1 Exhaust noise level must not exceed 96 decibels. However, many circuits require cars to have a maximum exhaust noise level of 90 - 92 decibels and any such track's rules must be complied with. Some circuits also carry out static noise checks and any cars exceeding their limit will be excluded from racing.

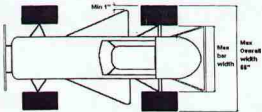
15.0 **FINPLATES & RACE NUMBERS**

- 15.1 All cars must carry a fin plate to denote race number and grade and must be made of a suitable material to enable it to remain upright whilst racing. E.g. aluminium. It should be secured in a prominent position on the car for lap scoring purposes, preferably on the roll cage.
- 15.2 Fin plate size must be 12" x 12" (300mm x 300mm)
- 15.3 Race numbers on the fin-plate must be a minimum size of 9" high and 1" thick (230mm high, 25mm thick) - this is important for lap scoring.
- 15.4 Race numbers on the fin-plate should be black or white as appropriate as follows:
- a) White on blue or red fins
 - b) Black on white, yellow, silver and gold fins
 - c) Silver fin denotes the current leading points scorer in the National Points Championship
 - d) Gold fin denotes current World Champion.

- 16.0 **MINIMUM & MAXIMUM WEIGHTS (amended February 2005 AGM)**
[A minimum weight limit of 375kgs for the whole car at any time.](#)

A maximum weight limit of 530kgs for the whole car at any time.







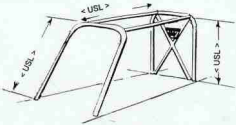


Roll Cage Notes

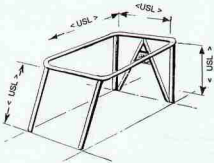


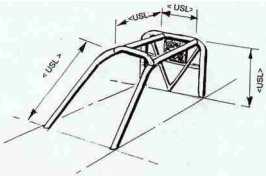
Roll cage diagonal bracing

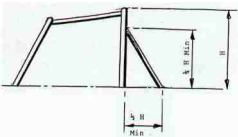
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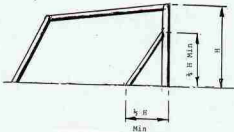


USL = Unsupported length









Sheet, folded box gussets
or round or square tube
corner braces may be used
to reduce USL of main cage.

