

CONSTRUCTION RULES

F1 STOCK CARS

1. Models to be a reasonable representation of a full-size open wheel Formula 1 only.
2. No car shall be constructed to be dangerous to persons or cause damage to competitor's cars or to the track surface. No sharp or protruding objects are allowed on the cars.
3. Overall chassis length to be between 285mm and 310mm. Overall chassis width to be a maximum of 160mm.
4. Front and rear bumpers must be fitted and have a contact surface between 9mm and 16mm. The distance between the bumper centreline and the ground must be between 32mm and 41mm. All bumpers must be plugged and have no sharp edges and must be constructed from a non-metallic material.
5. Over riders must be bolted to front and rear bumpers. The height from the top of the bumper to the top of the overriders must be between 19mm and 32mm at the front and must have a maximum of 19mm at the rear. Any over rider mounted underneath the chassis as rear shock absorber protection must not overlap the rear tyres.
6. Nerf bars must be fitted on the same level as the bumpers and attached to the chassis rails with a maximum contact surface of 12mm.
7. Body and chassis must be securely joined at the start of race and must remain on car during the race. When initially entered at a meeting the body shell must be neatly finished and complete. *Bodyshell must be neatly finished and complete at the start of the meeting, bodyshell must be secured to the car with a minimum of 2 fixings and the bodyshell must remain in its correct position for the duration of all races. Any car losing a fixing that causes the bodyshell to become detached must be removed from the track and be re-secured. Failure to do so incurs a zero score from that round/DQ for final.
8. Bodies and aerofoils must be made from ABS or polycarbonate, metal bodies or aerofoils are not allowed. All windows must be cut out on both Lexan and ABS Shells. The height of the body roof from the floor to be between 88mm and 126mm. Aerofoils if fitted must have no sharp edges and be mounted in a safe manner. The maximum size of the centre panel to be no more than 126mm-126mm, and the side panels 126mm-70mm. If an aerofoil is fitted, this alone may be painted with the driver's classification colour, if an aerofoil is not fitted then the roof of the shell must be painted in the driver's classification colour.
9. Driver's race number must be displayed on the exterior of the car, with a minimum height of 10mm. Any colour may be used but it must be legible. The driver's name must be on the outside of the body or aerofoil. If a driver plans on racing at national meetings they should check that their number is available and register with the 1/12th F1 National Committee.
10. The cost of the complete car in kit form excluding all electrics must not exceed £250.00. In the case of scratch-built cars the entrant must be prepared to produce exact replicas of the car in kit form if so required for a price of £250.00 or less. Including wheels, tyres, wing and shell.
11. Aerial tubes to be a maximum height of 200mm from track surface. Steel whip aerials and rollover masts are not allowed.

12. Tyres must be foam or rubber, you can change them from kit supplied and use sleeves, Tyre additives are not allowed. Tyres must have a minimum 12mm and maximum 26mm width, and maximum 60mm diameter.
13. **Rear tyres to be used by the F1 section must be 37sh red banded Contact tyres only.**
14. Ball races are allowed on the front and rear axle. Limited slip devices and differentials of any kind are not allowed, solid rear axle only. Single nut fixing at either end of the axle are allowed only. No carbon axles allowed, Steel rear axle only to be used.
15. All cars must have a maximum baseplate thickness of up to 3.2mm, with motor blocks bolted directly to the baseplate. Maximum 2 cut slots to provide flex / suspension. Minimum 1x and Maximum 2x telescopic shocks must be fitted with a minimum of 1 mounted to the top deck. No guide pins or extra springs are permitted. The only damping permitted is to be via the shocks. No spacers allowed between the motor blocks and base plate.
16. The only devices that may be connected to the in-car radio receiver are- Steering servo, E.S.C., Transponder, Roof Lights, Power Cap.
17. The use of multiple speed transmissions (gearboxes) is not allowed, any 32dp pitch gears and holders are allowed. Pinion gears: size (number of teeth) is free. Single Idler gears of any size are permitted as a means of reversing motor rotation, these are to be mounted between the motor pinion and the spur gear.
18. There is a minimum ground clearance of 3mm, this includes any protruding screws, 1mm clearance for spur gear.
19. Servo savers, track rods and track rod ends can all be up-rated from kit supplied.
20. All cars must have reverse fitted and working at the start of the race.
21. Cars are to be powered by either a brushed or a brushless system as defined below
Brushed System - Kamtec K21, Saturn 20 or Core 21 brushed motors. These must remain unopened, and unmodified. Motor cleaning fluids / additives are allowed.
Cars will be powered by 1s Lipo or 4 to 6 cell 6 sub C sized batteries with 1.2v nominal voltage, conforming to the current Electric Board battery list.
Brushed Speed controllers are without restriction providing that they include an operating reverse function and are commercially available with a recommended retail price not exceeding £65.
Brushless system - Motors - Core RC Star 10.5t Fixed timing motor (CR856), Core RC Star 13.5t Fixed timing motor (CR857), Speed Passion v3 10.5t or 13.5t motor only with standard 10-degree sensor plate. All motor parts must be factory standard as originally issued.
Brushless speed controllers - the Pace 45R, Pace 60R, Pace 95R or **Pace 100R** speed control must be used. ESC must run in Blinky Mode i.e., the "ROAR blinking LEDs mode."
22. **Lipos** - All Lipos used in any competitions MUST be hard-cased. Soft cases or no cases are not allowed. Cars to be powered by a 1S LiPo conforming to the current BRCA Electric Board homologation 1S stick LiPo list and safety considerations.
23. **Race ready cars to race on track must have a minimum weight of 1400g. This will be measured before each race and after each final. Weight failure after the finals will mean car/driver will be DQ and placed last in that final.**
Weight must be bolted securely into the car and within the confines of the car. No metallic weights are to be used on any exterior surface of the car such as any bumper, side pod, bodyshell and/or wing. This is primarily for the safety of anyone who may need to handle the car and protect the carpet.

24. Front suspension can be used with no damping allowed. One o-ring can be added to the front beam under ball joints only.
25. The Club reserves the right to retain a speed controller and motor after the conclusion of a meeting to measure its performance against the above criteria in a controlled environment. The equipment, or identical new replacements, will be returned to the competitor within 5 working

PERMITTED F1 SHELL LIST

Bandit Bodyshells

[Bandit Long Track](#), [Elite/Speaky](#), [Tom Harris](#), [Andy Smith/Sworder](#), [Murray Harrison](#), [Bandit F1](#), [Bandit Dutch](#), [Bandit Shale](#), [Bandit Harrad](#), [Bandit Short Circuit](#), [John Lund](#), [Bandit Smithy](#), [Wainman Wedge](#), [Leyton/Smith](#), [Bandit Pop](#), [Harry Smith](#), [Bandit Coupe](#), [Bandit Cooper](#), [Chisolms](#), [Finnikin](#), [Cronshaws](#), [Glynn Perry](#), [Bandit Oldie](#).

Kamtec Modelsport

[SS1 Stu Smith](#), [FW1 Wainman](#), [FW2 Wainman](#), [FW3 Wainman](#), [AS1 Smith](#), [AS2 Smith](#), [NZ1](#), [Pinky](#), [KAM 2](#), [KAM 3](#), [Tom Harris](#).

This list is not exhaustive, if you want to race a shell that isn't on the list, please contact the club beforehand who will advise on legality and add it to the list if necessary.

