

# British Federation of Pedal Car Racing

## British Pedal Car Specification Issue 7 (2024)

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For the 2010 season onwards, the BFPCR has adopted this British Pedal Car Specification. For anyone designing a new car, or modifying an existing vehicle, the following technical specifications must be followed if you wish to enter any BFPCR event.

### Notes

This Specification must be read in conjunction with the BFPCR Rule Book, the BFPCR Number Plate Requirements and any other pertinent documents and information. These define, for example, type of lights to be used during darkness, number plate colours and other mandatory class markings, etc. Certain rules below have differences depending on whether a car was substantially built before January 15th 2001 (such cars are henceforth referred to as "Pre rule date cars").

Pedals, chainrings, number plate mounting spikes and the like are all considered "... protruding parts, which in the opinion of the scrutineers could cause damage or injury..." (rule 10.2) if not suitably protected (rule 10.5)

### 1. Number of Road Wheels

Four, all functional and load bearing.

### 2. Configuration of Road Wheels

Conventionally arranged in two pairs.

### 3. Dimensions

- 3.1. Maximum overall length: 3000mm
- 3.2. Maximum overall width: 1125mm
- 3.3. Maximum overall wheel diameter (measured over the inflated tyre): 560mm.  
(Pre rule date cars: 765mm.)
- 3.4. Maximum height of uncompressed seat cushion (above ground level): 400mm
- 3.5. Minimum distance between the centre of the wheels (track width) measured between the contact patches of the tyres on the ground: 650mm  
(Pre rule date cars: 550mm.)  
EXCEPT where the height of uncompressed seat cushion is 200mm or less whereby the minimum track of 1 pair of wheels (front or rear) may be reduced to 500mm provided the track of the second pair is 600mm minimum.
- 3.6. Minimum distance between front and rear axles: 650mm
- 3.7. Maximum height of car and seated driver (including helmet): 1050mm (to clear timing gantry)

Safety Note: Experience shows that short wheelbase cars are significantly less stable in corners and designers are urged to ensure an adequate size for their cars.

## 4. Motive Force

Motive force must be that of a single driver only, at all times during normal racing. Push starts, kinetic energy recovery systems, etc., are forbidden. It is permitted to push or carry a stricken or failed car clear of the track and to the pits for repairs.

## 5. Manoeuvring

- 5.1. Steering shall be provided such that the car has a turning circle of not more than 10,000mm diameter (which includes the width of the car) when underway.
- 5.2. The design of the steering shall be such that the wheels can be moved from full left lock to full right lock in one uninterrupted movement.
- 5.3. Steering must be effective on front wheels by a safe system of rods or cables. All linkages must be secure and free of excessive play. Four-wheel steering systems are permitted. Steering systems acting only on rear wheels are banned.

## 6. Braking

- 6.1 New cars under design or construction should use disc or drum brakes. Since calliper/rim brakes acting on wheel rims can become ineffective through wear and poor maintenance. This is especially so in wet weather
- 6.2 Existing cars running rim brakes should, when under refurbishment or major overhaul attempt to change to disc/drum where it is technically feasible and not cost prohibited
- 6.3 Pre rule change cars running rim brakes may continue to race subject to the below conditions.
  - 6.3.1 Brakes must be efficient, effective, capable of stopping the car in the event of an emergency, and acting on at least 2 wheels.
  - 6.3.2 Brakes must be demonstrated at scrutineering where they must meet the above criteria, have sufficient reserve travel and brake material, and all components must be in sound condition and securely attached.
- 6.4 If Race Control suspect at any time that a car's brakes may have ceased to meet these criteria, a car will be stopped until the team has proved otherwise. If found to be in breach of the rules a penalty as per technical regulations 16.2 will be applied.
- 6.5 If any driver is seen to be braking with their feet, or if a team is employing a team member to slow the car down from outside the vehicle at pit stops, this will be seen as proof of a car having ineffective brakes and the car will be made to stop immediately to rectify the situation. A penalty can be applied as per breach of technical regulations 16.2

## 7. Mirrors

Mirrors, if fitted, shall not extend outside the widest part of the car as measured at any point perpendicular to the centre line and must be plastic or otherwise rendered shatterproof.

## 8. Seating

- 8.1. The driving position will be between upright and supine (not prone).
- 8.2. The seat back recline angle must not be so excessive as to prevent a clear and easy view to the front.
- 8.3. The driver must be able to get into and out of the car unaided.

Safety Note: Excessive recumbent angles on seating which in the opinion of the organisers will endanger the driver in the event of a collision will fail scrutineering on safety grounds.

## 9. Fairing

- 9.1. If a fairing is fitted all pedallers must either be tall enough to be able to see over it, or a section must act as a transparent windscreen. In either case good all-round visibility for the driver must be demonstrated.
- 9.2. It should not have any sharp or dangerous edges which could cause injury in the event of a collision or rolling the car.
- 9.3. The design of the fairing should be such that, in the event of the car rolling, drivers can protect their heads with their arms. Where this is impossible roll bars must be fitted that are at least as high as the tallest pedaller in the team when seated and wearing a crash helmet.

## 10. Safety

- 10.1 Hand controls shall not be positioned near the chain or sprocket wheels.
- 10.2 No protruding parts, which in the opinion of the scrutineers could cause damage or injury, will be permitted. If unavoidable they should be covered (see 10.5)
- 10.3 All components shall be securely fixed to the car and in good condition.
- 10.4 Any entry, which, in the opinion of the scrutineers, is unsafe, will be refused permission to start.
- 10.5 For the safety of all, suitable protection must be provided, within the overall permitted dimensions, to any items considered a danger by the scrutineers. This could be in the form of bumpers, crash bars, Chain ring guards or a fairing.
- 10.6 It is advised that either teams run cleats (clip-in pedals), cars have a solid floor or other means of preventing a foot that slips off a pedal contacting the floor and being "run over" by the car.

## 11. Identification

- 11.1 Racing numbers must be clearly visible from the front, back and both sides of the car, from any reasonable viewing angle, including those represented by other competitors, race marshals and possible manual lap scorers.
- 11.2 Racing numbers must be of highly contrasting colours and must be weatherproof (i.e. not paper)
- 11.3 Minimum height of numbers is 150mm and minimum width of stroke of each number 25mm
- 11.4 Race rules may mandate colour schemes for numbers and their backgrounds to enable competitors to identify racing divisions

NB. Templates for legal numbers are available.

## 12. Lighting

At least two headlights and two rear lights must be operational during any statutory lighting up period and shall be battery powered. Lights must be securely fitted on a stable base for scrutineering prior to any race with statutory lighting up periods, though may be removed outside any such periods. Restrictions on the type of lights (if any) may be found in the race rules.

**IMPORTANT: See the BFPCR Rule Book for additional lighting requirements for BFPCR events.**

## Change Log

### **BPCS Issue 7, effective March 2024:**

These sections were altered from the BPCS Issue 6

Corrected references to rule 10.2 and 10.5

Added advisory 10.6 note regarding clip-in pedals or floor to catch feet

### **BPCS Issue 6, effective January 2024:**

These sections were altered from the BPCS Issue 5

Whole section 6, braking rewritten and rules regarding rim brakes amended

### **BPCS Issue 5, effective January 2022:**

These sections were altered from the BPCS Issue 4

3.6 Maximum height of car and seated driver (including helmet): 1050mm (to clear timing gantry)

### **BPCS Issue 4, effective 25<sup>th</sup> January 2021:**

These sections were altered from the BPCS Issue 3: 6

### **BPCS Issue 3, effective 20<sup>th</sup> November 2016:**

These sections were altered from the BPCS Issue 2:

3.4; 3.5

### **BPCS Issue 2, effective 30<sup>th</sup> October 2011:**

These sections were altered from the BPCS Issue 1:

4; 6; 10 (New 10.3 inserted; existing 10.3 and 10.4 renumbered)

### **BPCS Issue 1, effective 2<sup>nd</sup> November 2009:**

These sections were altered from the IPCS (see below):

3.1

### **International Pedal Car Specification (IPCS):**

IPCS adopted 15<sup>th</sup> January 2001, in conjunction with The Hong Kong Human Powered Vehicle Association and Karbyk (of Italy): no longer used by the BFPCR.