



**HONG KONG  
HUMAN POWERED VEHICLE  
ASSOCIATION**

**RACE RULES  
AND  
REGULATIONS**

**RELEASE 4.0**

**May 2008**

## **1 GENERAL**

- 1.1 The International Pedal Kart Specifications (IPKS) form the basis of racing in Hong Kong and are supplemented by the following additional rules and regulations. In the case of any ambiguity or contradiction these rules will take precedence.
- 1.2 Pedal Kart racing in Hong Kong is subject to amendment from time to time but currently consists of a 24 hour race targeted for the second half of November
- 1.3 Pedal Kart racing in Hong Kong is run by the Hong Kong Human Powered Vehicle Association (HKHPVA). The decision of the HKHPVA and/or its appointed Pedal Kart organiser will be final in regard to all interpretations of rules and regulations. The interpretation of these rules will be done with the safety of those taking part being of prime importance.
- 1.4 Pedal Kart racing, while at times very competitive, should be a friendly and good natured sport and, in the case of the 24 hour race, its intention is to raise a substantial amount of money for local charities in conjunction with the Association of Round Tables Hong Kong. It is therefore expected that all participants will comply with both the letter AND THE SPIRIT of these rules for the safety and enjoyment of all.
- 1.5 The National Association of Round Tables in Hong Kong, Round Table 10, the Hong Kong Human Powered Vehicle Association and the event site owners will not accept liability for any articles that may be lost, stolen or damaged during the course of the event. They also accept no liability for any damage or injury sustained during or in connection with the event, howsoever caused. Individual teams are recommended to secure suitable insurance cover for possible liabilities.
- 1.6 These rules and regulations should be read in conjunction with race notices and other explanatory notes, newsletters and information as may from time to time be issued by the Race Organisers.

## **2 ADDITIONAL KART SPECIFICATIONS**

### **2.1 Lighting**

- 2.1.1 For races, part of which are during the normal hours of darkness, karts must carry front and rear lights that comply with the following:
- Lights at the front of the kart must show a steady white light capable of being clearly seen by an observer standing 10 metres in front of the kart. Minimum 1.5 W per lamp. LED lights are considered too difficult to see and are therefore not permitted.
  - Lights at the rear of the kart must show a steady or flashing red light capable of being clearly seen by an observer standing 5 metres to the rear of the kart. LED lights which in the opinion of the scrutineer are clearly visible will be permitted.
- 2.1.2 Karts experiencing total front or total rear light failure during the statutory lighting up period must effect repairs on the next succeeding lap.

2.1.3 Karts suffering a single front or rear light fail are permitted to continue to race until the next scheduled pit stop at which time effective repairs must be made. In order to enforce this rule, any kart exiting the pit lanes with a failed light may be subjected to a thirty second time penalty on the next scheduled pit stop.

## 2.2 Braking

2.2.1 Traditional cycle type caliper brakes acting on the wheel rim are considered ineffective.

2.2.2 Reference should also be made to item 6.3.6 for further details concerning effectiveness of brakes during the race.

2.2.3 Brakes will be tested for efficiency before and after the event and will be expected to hold the kart stationary when the kart is subjected to reasonable forward force.

## 2.3 Audible Warning

An audible warning device in addition to the driver's voice must be fitted.

## 2.4 Safety

2.4.1 Two hard cycling helmets, with provision for fastenings by chin strap, two pairs of gloves and two pairs of goggles must be produced with each kart at scrutineering. The wearing of helmets by all drivers is mandatory and any driver observed with no helmet, or an incorrectly fitted one, will be stopped immediately. The wearing of gloves or goggles is optional but recommended, especially in the event of rain.

2.4.2 Karts without a floor plan preventing pedaller's feet from contacting the ground are strongly recommended to use clip pedals - either with straps or SPD/Look or similar. Karts not complying with this are required to come to the pre-scrutineering session to be checked and will only be permitted to race if in the opinion of the Chief Scrutineer the design is safe.

## 2.5 Identification

2.5.1 Racing numbers will be allotted once entries close and will be based on the previous year's finishing positions with new entries being numbered in alphabetical order.

# 3 **TEAM SPECIFICATIONS**

## 3.1 Racing Categories

3.1.1 To cater for the wide range of expected kart designs and speeds there are several categories which teams may be eligible for, some based on kart design, some on team composition. In addition to an automatic entry for the overall first, second and third place trophies, each team may enter **one** of the following should they qualify:

### **Formula 88**

This is a restricted entry for karts whose design means they are unlikely to win the overall event but which are still entering to compete and win. There may be up to 12 named pedallers.

<b>School teams</b>	May have up to 14 named pedallers, all of whom must be current students at that school and all of whom are nineteen years of age or younger at the start of the race.
<b>Aviation Industry</b>	May have up to 12 named pedallers, 6 of whom must be from the entering Aviation Industry institution
<b>Construction Industry</b>	May have up to 12 named pedallers, 6 of whom must be from the entering Construction Industry institution
<b>Manufacture Industry</b>	May have up to 12 named pedallers, 6 of whom must be from the entering Construction Industry institution
<b>Public Transport and Utilities</b>	May have up to 12 named pedallers, 6 of whom must be from the entering qualifying institution.
<b>Formula Fun</b>	This is for slower teams whose main aim is to raise funds. The winner of this will be determined by the organisers and will not be based on finishing position, rather on how much fun they had!

#### Additional Trophies

In **addition** to the above, should a team qualify according to the compositions below, a team may also enter for one of these additional trophies.

<b>Female teams</b>	May have up to 17 named female pedallers.
<b>Mixed teams</b>	Shall have a minimum of 6 men and 6 women and a maximum of 7 men and 7 women.
<b>Veterans teams</b>	May have up to 14 named pedallers all of whom must be a minimum of 38 years old at the start of the race.
<b>Round Table</b>	May have up to 12 named pedallers, 6 of whom must be from the entering Table

Other teams which are not entering a category or for an additional trophy may have a maximum of 12 named pedallers.

A pedaller may only pedal for ONE team. A pedaller who pedals for a second team may make that team ineligible for any trophies.

3.1.2 Formula 88 is based on kart construction and will be differentiated by the use of the following techniques:

- (i) Use of exotic materials such as carbon fibre, Kevlar, titanium, Aircraft grade aluminum; this includes exotic materials in control systems;
- (ii) Ackermann steering;
- (iii) Centre hub or centre point steering;
- (iv) Light weight (under 40Kg);

(v) Double curvature fairing.

A kart using any 3 or more of the above is not eligible for Formula 88. All karts will be judged on an individual basis with a view to being as fair as possible to all teams.

3.1.3 In addition to the overall and one race category, a team may be eligible for a “One Design” trophy. For a One Design trophy to be available, a minimum of five karts of a recognizable single design must be in the race, entered by at least three separate institutions. One Designs typically will share an identical chassis, braking, drive and steering system. The only recognized One Design in HK at the moment is the Karbyk.

3.2 Teams with more than the above number of pedallers may still compete at the organiser’s discretion but they will not be eligible for any of the race trophies.

### 3.3 Team Management

3.3.1 Official identification badges will be issued by the Race Organisers as follows :

- 2 Team Manager
- 1 for each Registered Pedaller
- 2 Pit Crew
- 3 Guests

Badges must be worn at all times whilst inside the Restricted Area (see 4.1.3 below).

3.3.2 All teams must have a Team Manager, who must be at least 21 years of age. The Team Manager will be held responsible for the conduct of the team and will be the point of liaison between the Race Organisers and the team. A Team Manager must be present in the team pit throughout the race. In the event of the Team Manager wishing to be absent, an Acting Team Manager shall be appointed who will assume the authority and responsibility of the Team Manager. An additional Team Manager badge is issued for this purpose.

3.3.3 The Team Manager must ensure that all team members understand the race rules and the consequences of their infringement, and abide by the race rules and instructions from Marshals and Officials. In particular managers should thoroughly brief their teams on those rules in section 4 relating to conduct at the race venue and in section 6 relating to conduct during the race itself.

3.3.4 The Team Manager's badge may be transferred so as to comply with 3.3.2. above. Pit Crew badges and Guest Badges may be transferred provided that no more people than the issued number of badges within the Restricted Area at any one time. Pedallers’ badges are strictly nontransferable.

### 3.4 Pedaller Registration

3.4.1 Teams intending to compete for race trophies must submit team lists to the Race Organisers before the start of the race. No substitutes will be allowed after the race has started unless by reason of 3.5 below. In the interests of fairness to those competing for the race trophies the Race Organisers may conduct spot checks of pedallers’ names against team lists during the race and, if pedallers are found who are not on the list, that team will no longer be eligible for race trophies. Teams which initially entered to compete for a trophy but feel that they are no longer in contention are permitted to withdraw from the competition, at the organiser’s

discretion, for any race trophies and may then change and/or increase their pedallers at any time. Race Control should be advised of this decision.

- 3.5 In the event of sickness or injury to any pedaller, a substitution may be made, but at the sole discretion of the Race Organisers and only if a representative of the official first aid or physiotherapy personnel confirm that the sick or injured person is incapable of continuing the race. If the substituted pedaller takes any further part in the race (other than as a non pedaling member of the team) the team may be liable to disqualification.

## 4 RACE VENUE

### 4.1 Track Area

4.1.1 The layout of the track will involve bends in both directions with a minimum inside radius of 6 metres and a track width of 4 metres.

4.1.2 The track will be measured by surveyors wheel at the centre line of the track. If more than one measurement is made, the median of three readings will be the official measurement for the event.

4.1.3 The area within the perimeter security area will not be open to the public during the event and will be designated a "Restricted Area" and, as such, will only be open to competitors, officials and authorised visitors. Access to the "Restricted Area" shall be via the security entrance and only those people with the necessary passes shall be allowed entry to the "Restricted Area".

4.1.4 The race track, pit lane and change-over area will be delineated by means of mills barriers, cones, tyres and other suitable indicators.

### 4.2 Team Facilities

4.2.1 Each team will be allocated a pit area of approximately 5m by 6m, of which an area approx 2.4m square may be covered.

4.2.2 Each team will be allocated to a specific change-over station. This will be close to the team's allocated pit area. Three or four teams may be required to share each change-over station.

### 4.3 Welding

4.3.1 A welding service will be provided in the vicinity of the pits for the 24 hour race. No other welding equipment will be allowed into the "Restricted Area".

**Safety note:** Extreme caution should be exercised in the area of the welding tent due to the potential dangers from the equipment used. Young children must be kept away.

### 4.4 Car Parking

4.4.1 Car parking facilities are venue specific. It is intended (though may not be possible) to allocate one car parking space to each team. The space will be suitable for a vehicle of a maximum size 5m x 2.5m (i.e. Hiace van, etc). This space will be inside the "Restricted

Area", or other area as indicated by the Race Organisers, and depending on the layout of the venue it may be the case that once the vehicle is in position it cannot be moved until after the race. Access is by permit only. All permits will bear the name of the team. The Race Organisers will carry out spot checks during the race and any cars found without a permit will be required to leave.

4.4.2 Teams wishing to use lorries to deliver karts and equipment must advise the Race Organisers of the vehicle registration number at least 3 days in advance. Due to size constraints at the venues involved, it may not be possible for all vehicles to obtain access, and teams will be advised closer to the events when such limitations may exist.

4.4.3 Teams are to park their vehicles in the indicated parking area in front of their tents, or as otherwise directed by the Organisers.

#### 4.5 Food Preparation

4.5.1 For reasons of fire safety **NO OPEN FLAME COOKERS OR FOOD WARMERS** will be permitted in the restricted area.

#### 4.6 Electricity Supplies and Lighting

4.6.1 At the most only background lighting will be provided by the Race Organisers during the hours of darkness and this lighting may not be sufficient for working in the pits. Teams must therefore provide such additional lighting as they consider necessary.

**ALL ADDITIONAL LIGHTING MUST BE BATTERY POWERED. GENERATORS ARE NOT PERMITTED.**

4.6.2 Mains power points will generally not be available in the pits. However, for the 24 hour race, a number of power points will be available adjacent to the welding shop for communal use by all teams. Teams will not be allowed to take trailing leads from these power points to their pit position.

#### 4.7 Arrival Time

4.7.1 The venues will be open for competitors from 1000 hrs on the day of the race. Car Park passes issued by the organisers will not be valid before this time. Please arrive in plenty of time for scrutineering and time trials (see section 6.8.3 below), but not before the venue is open.

#### 4.8 Security

4.8.1 Only officials, Team Managers, pit crew, competitors and authorised visitors shall be allowed into the "Restricted Area" (see 4.1.3) and, except as specifically allowed for elsewhere in the rules, nobody shall be allowed onto the race track, the pit lane or change-over stations.

4.8.2 Team members and visitors shall enter and leave the "Restricted Area" via the security entrance. Relevant passes must be worn at all time whilst in the "Restricted Area".

## 5 **SCRUTINEERING**

- 5.1 All karts will be examined before the start of the race to ensure that Kart Specification and safety requirements are complied with and no kart will be allowed to start until it has passed this scrutineering. Successful karts will be required to comply with the Kart Specification and safety requirements throughout the competition and may be re-examined during the race.
- 5.2 Any kart which is found by the scrutineers to have failed to comply with the Kart Specification may still be permitted to compete in the race for sponsorship trophies, but shall not be considered as a competitor for race trophies. Karts infringing safety rules will not qualify for this concession.
- 5.3 A pre-scrutineering session will be arranged prior to the 24 hour race, where teams may have their karts examined by the official scrutineers to identify any potential problems in time to rectify them before the event. Where possible, the venue will be chosen to allow for karts to practice. Teams attending this session will still have to attend and pass the scrutineering on the day of the event.
- 5.4 Scrutineering on the day of the race will take place, at the location indicated by the Organisers, between 1.5 and 4.5 hours prior to the race start. Teams will be advised at the managers' briefing prior to the race as to the exact arrangements. Karts not presented for scrutineering will be disqualified.
- 5.5 After scrutineering, the scrutineering form must be signed by the Chief Scrutineer and the team manager. The kart classification stated on the form will then be final.
- 5.6 All karts that may be eligible for race trophies will be re-examined after the race. If instructed by the Race Organisers, karts after finishing must proceed directly to the scrutineering area and not to the pits. Any kart not complying with this may be disqualified.

## **6 RACE RULES**

### **6.1 Compliance with Rules, Penalties**

- 6.1.1 There will be a briefing for team managers one hour before the start of the race. The team manager, or his delegated representative, for every kart must attend. The purpose of the briefing is to ensure that all managers are familiar with the rules and that all scrutineering forms have been signed off and the racing category of each entry is agreed.
- 6.1.2 All participants are expected to comply with both the letter and the spirit of these rules and to conduct themselves with the safety of others and good sportsmanship being of paramount importance. Those who, in spite of warnings to the Team Manager, fail to do so may be penalised at the discretion of the Race Organisers. Depending on the seriousness of the offence the penalty may involve a Stop/Go time penalty, the docking of one or more laps, the disqualification of one or more team members, or ultimately the disqualification of the kart. Laps docked may be credited back later in the race at the discretion of the organisers.
- 6.1.3 Stop/Go time penalties will be taken in the offending team's pit area on the instruction of the Race Organisers. When a kart has completed its pit stop and it is clear that it is ready to depart, a marshal will stand in front of the kart for 30 seconds before it is allowed to leave.  
Note: It is understood that the event is extremely competitive and in addition the object of the 24 hour race is to raise funds as well as compete, and loss of laps or a time penalty could

result in loss of fund-raising potential. However, if the rules are infringed, particularly those regarding safety, or it is obvious to the marshals that a team is engaging in blatant gamesmanship to gain an unfair advantage, a penalty may be imposed which in the opinion of the Race Organisers exceeds any advantage gained.

## 6.2 Pits and Pit Lanes

6.2.1 Pit areas will be allocated and marked out as shown on the plan and teams may use only their allocated areas.

6.2.2 Any kart entering the pit lane must stop at its designated change-over station as far away from the track side as possible and in any case far enough over so as to avoid hindering any kart wishing to come past.

6.2.3 **The pit lane is not the race track.** Karts in the pit lane shall reduce speed as necessary for the safety of all competitors and shall obey marshals' instructions at all times. The pit lane must not be used as a short cut. There is no overtaking permitted in the pit lane.

6.2.4 The race track will, wherever possible, have two pit lanes, with the generally faster karts using one and slower karts the other. The pit lane may be divided by a line of cones. In such instances the following additional rules will apply to ensure safety:

- Karts must enter and exit the pit lane in the outside lane (ie the one farthest from the pit area and nearest to the racing track) and cross into the inside lane only at their own change-over area;
- Karts may only stop in the inside lane and there will be no stopping and no overtaking in the outside lane;
- Karts deliberately impeding others in the outside lane may be subject to a Stop/Go penalty FOR EACH KART so impeded.

## 6.3 Driver Changes

6.3.1 Only nominated pedallers will be allowed to drive with only one driver on any one lap. Driver changes may be made only in the team's own change-over station.

6.3.2 Karts must be stationary at the time of driver change. Pit crew and "resting" pedallers must stay out of the change-over area to avoid impeding others.

6.3.3 As space in the change-over stations is limited, access to the area is restricted to 1 Team Manager, 1 pit crew, 1 outgoing driver and 1 incoming driver per team at any one time.

6.3.4 In the interests of safety in the pit lane, karts may not be given any external assistance in restarting. Teams infringing this regulation will be warned by the track marshal and, if the practice persists, will be subjected to a Stop/Go penalty.

6.3.5 Driver changes may take place in the pits after a stop for servicing and / or repairs.

6.3.6 Karts will be required to come to a halt in the change-over area by means of their own braking systems. Stopping with assistance from others is not permitted. This process will be used by the Race Organisers and marshals to assess the continuing effectiveness of the kart's braking system and any kart requiring assistance in stopping may be called in for

examination.

6.3.7 Incoming and outgoing drivers **must** get into and out of their karts **only** on the opposite side of the kart to the race track. For safety reasons, this rule will be strictly enforced. Teams infringing this rule will be warned by the track marshal and if the practice continues will be subjected to a Stop/Go penalty.

6.3.8 It is permitted to help a driver out of the kart as long as such aid does not obstruct the pit lane.

#### 6.4 Repairs

6.4.1 All repair and servicing work must be carried out in the pit area. No repairs or servicing will be allowed on the track side or in the change-over area.

6.4.2 In the event of breakdown, karts shall be pushed or carried directly to the pits. Team members may assist in these circumstances.

6.4.3 Welding may only be carried out in the designated welding shop and only by authorized personnel who will be on duty for the duration of the event.

#### 6.5 Overtaking

6.5.1 Drivers must keep to the left hand side of the track while being overtaken.

6.5.2 Baulking or impeding the overtaking kart will be penalised.

6.5.3 In the interests of local residents, drivers must not use their audible warning devices between 23:00 hrs or from the time the music is turned off, whichever is earlier, until 07:00 hrs the following morning. The use of horns at night time is the cause of many public complaints and warnings from the police and persistent breaches of this rule could result in suspension of the race.

#### 6.6 Safety

6.6.1 Any evidence of dangerous driving will be recorded and investigated. Drivers found guilty of such an offence will be disciplined. This may take the form of a warning for minor offences, a Stop/Go penalty or suspension or disqualification of the driver or his team for serious and/or repeated offences.

6.6.2 Drivers must wear protective headgear when driving. Such headgear must conform to a BSI or equivalent specification. This headgear must be fastened by a chin strap at all times when driving. Failure to conform will result in a penalty and possible disqualification.

6.6.3 A significant amount of grit and debris accumulates on the track during the course of the race and drivers are advised to wear protective goggles and gloves.

6.6.4 For safety and security reasons it is essential that unauthorised personnel keep off the race track area. For the same reasons only authorised personnel with a pass will be allowed into the "Restricted Area". Teams whose members or supporters disregard this rule may at the discretion of the Race Organisers be subjected to a penalty.

## 6.7 Driving Behaviour

- 6.7.1 The highest standards of road manners will be required. Impolite or abusive language and furious, over-aggressive or dangerous driving will not be tolerated and Team Managers are required to ensure that team members are aware of this. Repeated warnings may result in a penalty being imposed.
- 6.7.2 Drivers must remain seated whilst the kart is in motion and loose cushions, the effect of which is to raise the seated height of the driver, will not be permitted.
- 6.7.3 Moving karts have the right-of-way over stationary karts. Karts entering or leaving the pit lane shall give way to karts on the race track. Karts entering the pit lane shall give way to karts already in this lane.
- 6.7.4 Any kart leaving the designated track for whatever reason shall return to the track at the same location. Accidental or deliberate leaving of the track shall not be used to cut corners, or otherwise gain unfair advantage.
- 6.7.5 Draughting or tailgating, even between karts of the same team, gains an unfair advantage and is not permitted. On a straight the rear kart must pull out unless it is unsafe to do so. Teams observed draughting for continuous periods of one lap or more will be warned to desist, and further warnings may result in the team being penalised.
- 6.7.6 In the event of any collision, any kart hitting another kart from behind shall be deemed to be at fault.
- 6.7.7 Team Managers are asked to ensure that their pedallers are aware of the overtaking rules in 6.5 and to ensure that all pedallers have had some practice in controlling the kart.

## 6.8 Race Starting and Finishing Procedure

- 6.8.1 The 24 hour race will start at 1500 hrs Hong Kong time on the designated day. The 90 minute races will start at 1100 hrs and at 1400 hrs. At each start, on hearing the 2 minute warning, all people other than the drivers of the karts must leave the track.
- 6.8.2 The race will be started using a traditional grid start. Teams will be advised in good time to take up their position on the grid, and those failing to do so will lose their allotted position.
- 6.8.3 For the 24 hour race, teams will be allocated positions on the starting grid in accordance with the results of the time trials held immediately after scrutineering. Karts not taking part in the time trial will be allocated places at the back of the grid on a ballot. Certain venues may preclude the possibility of running time trials, in which case a starting order will be set by the organizers based on previous years' results, with the additional requirement that Formula Fun karts will start at the back of the grid so that they do not impede faster karts.

Other events will have a separately advised method of determining start positions.

- 6.8.4 The 24 hour race will finish when the lead kart crosses the Start/Finish line after 15:00 and this will be indicated to the drivers by displaying a chequered flag. In the event that the lead kart is off the track at that time the second place kart will be used, and so on. Having taken

the chequered flag drivers must continue on to the scrutineering area as instructed by the Race Organisers. The pit lanes will be closed. Teams leaving the track prior to forming up at the scrutineering area may be disqualified from race awards.

6.8.5 Karts which finish on the same lap will be considered to have finished in the order in which they cross the finish line.

## 6.9 Flag Signals and Marshalling

6.9.1 In the interests of impartiality, all teams are required to provide at least one person for marshalling duty. All marshals will be fully briefed before the race and will be expected to treat all teams, including their own, with equal fairness.

6.9.2 Marshals will be attired in such fashion that they will be readily identifiable. Drivers must respond to any orders or advice given by the Marshals.

6.9.3 Marshals at strategic points on the course will be issued with signalling flags. Team Managers must make sure their pedallers understand the meaning of the various flags which are:

(a) Hong Kong SAR - race start.

(b) Yellow Flag - either proceed with caution as there may be an obstruction on the course, or warning the driver of an infringement of the rules.

(c) Black Flag - in conjunction with a team's name or number, the instruction to stop immediately either as a form of penalty or for safety reasons.

(d) Red Flag - the order for all karts to stop. Karts will only be stopped for a special reason e.g. serious injury. Karts must stop in their current race order. **Overtaking when the red flag is displayed is strictly forbidden and will be penalised.** The race will be restarted by all race marshals simultaneously raising a yellow flag to give a 10 second warning and dropping the flag to indicate the restart.

(e) Black/White Chequered Flag - race finish.

## 6.10 Team Identification

6.10.1 Team Managers must provide, by the deadline set by the Race Organisers, a list of all team members. The Race Organisers reserve the right to check the identity of any pedaller against the team name list.

6.10.2 All team members must be identified with the official badge provided by the Race Organisers.

6.10.3 Anybody not identified and who is not an official will be required to leave the "Restricted Area".

6.10.4 All team members must have with them a valid form of identification, for example their Hong Kong ID Card, should the Race Organisers require it.

## **7 SPONSORSHIP**

- 7.1 Sponsorship must be sought by all competitors and the Race Organiser will provide individual sponsorship forms to each team for this purpose.
- 7.2 Sponsorship may be on a per kilometre or per lap basis, or for a fixed amount for the event.