



2026 MSA KARTING CIRCUIT GUIDELINES

VERSION 1

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REVIEW AND AMENDMENTS

Amendments and updates to the rules will be recorded in the Amendment Record, detailing the updated version, date of approval of the amendment and a short summary of the amendment.

AMENDMENT RECORD

<i>Modified SSR / ART</i>	<i>Date applicable</i>	<i>Date of Publication</i>	<i>Clarifications</i>

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ARTICLE 1 - OBJECTIVE

These Criteria, drawn up by Motorsport South Africa (MSA), shall be referred to by MSA Karting course Inspectors when deciding whether competitions held on the courses concerned may be issued with MSA Event Permits. To this end these criteria may be used for initial guidance by course designers.

The specific requirements made of a circuit by the MSA Inspectors will be based on the study of the Circuit drawings, the safety and the adaptation of the Criteria to each case individually.

In the case of existing Kart circuits some of the measurements stated in this booklet may be different and accepted by the inspector/MSA Circuit Safety Panel.

Any new circuits being designed and built must comply with these specifications unless permitted otherwise by the MSA Safety Panel in consultation with MSA MANCOM.

ARTICLE 2 - DEFINITIONS

- Circuit : a closed course, permanent or temporary, beginning and ending at the same point, specifically built for or adapted to Karting races.

- Inspection : a visit by delegates of MSA in order to establish recommendations in accordance with these Criteria, to verify or approve work carried out on the basis of such recommendations, or to control all safety conditions and services required for the safe conduct of an international competition.

- Circuit Licence : a MSA Event permit will be issued, and this implies that a circuit has been inspected by MSA Safety Panel, stipulating the conditions under which it may be used, and the eligible categories of karts and competitions.

- Absorbing barriers: Plastic barriers and tyre barriers with a space behind them (normally 500mm) are absorbing.

- Foam barriers: Depending on the density and width of the foam, these barriers may be either hard or soft.

- Tyre barriers:

* Hard type: very hard blocks of tyres, as specified in the FIA Karting guidelines, and where possible have a five hundred (500) mm space behind them.

* Standard type: different constructions, e.g. with conveyor belts.

- Plastic barriers: They are all similar and depending on the construction and arrangement, they can be classified as semi-absorbing.

ARTICLE 3 INSPECTION PROCEDURE

3.1) The designers of a new circuit which they intend for international, national or regional competitions shall submit a comprehensive dossier of plans and specifications to Motorsport South Africa (MSA).

3.2) The MSA Safety Panel will review, make suggestions and assist the owners/designers to meet compliance for local MSA conditions which will be loosely based on the FIA Karting circuit specifications.

Karting circuits wanting to fully comply with FIA Karting circuit specifications must apply as per the FIA Karting circuit requirements of Article 3 of the FIA Karting circuit document requirements.

3.3) After having examined each case in relation to its particular characteristics, MSA may recommend modifications considered necessary in terms of circuit safety and compliance with local MSA circuit requirements and standards based upon the FIA Karting standard.

3.4) On site inspections will be performed by the Inspectors appointed by MSA as per Art 4 below, with at least one (1) annual inspection. One final inspection, if deemed necessary, may be required at the discretion of MSA. For permanent circuits, the final inspection must be made not later than fourteen (14) days before the first day of a national competition to be held there, at which inspection all work relating to the track surface, permanent features and safety installations must be completed in accordance with the criteria defined in these regulations and with the comments made by the MSA safety panel.

3.5) The above procedures under Article 3.4 are also mandatory for circuits undergoing major modifications. Any modifications to the layout or safety installations which are not submitted for MSA acceptance prior to execution are liable to make the Permit null and void and hence to render the circuit ineligible for any competitions.

ARTICLE 4 - INSPECTIONS

4.1) Inspections will be mandatory for :

- the granting of a MSA circuit Permit,
- new circuits intended for international/national competitions, in the form of pre-inspections,
- circuits having undergone changes to the layout or safety installations, before they can be used for a competition,

4.2) Inspections may also be decided for other reasons, possibly on proposal of MSA, or at the request of MSA's circuit representatives.

4.3) Procedures for MSA inspections :

4.3.1 Inspector(s) will be appointed by MSA Safety Panel in consultation with the MSA Sporting Manager and National Sporting Coordinator.

4.3.2 Inspector(s) must be accompanied by the circuit representative.

4.3.3 Prior to the inspection, the appointed Inspector(s) must be able to study the circuit dossier and plans of any projected work.

4.4) Representatives of the Press will not be admitted on the track during the inspection, and MSA and circuit representatives will be responsible for ensuring that the Inspectors are not in any way impeded in the execution of their task by persons whose presence is not indispensable in this respect. No vehicles/karts will be allowed to circulate on the course during the inspection.

4.5) Fees for MSA inspections:

An inspection fee, covering all expenses, will be charged to the circuit owner for each circuit inspected.

4.6) MSA inspection reports:

Within 15 days of the inspection, the Inspector(s) shall submit to the MSA copies of his/their report comprising all recommendations concerning measures to be taken or improvements to be made and a deadline for the completion of the work.

ARTICLE 5 - CONSEQUENCES OF AN INSPECTION

5.1) Whenever an official inspection report is officially sent to MSA of the circuit concerned, the safety panel must first approve the inspection concluded regarding the said report. In the absence of any comment, the report and any specified scheduled work will be considered as final and accepted by all the parties.

5.2) It is understood that the organisation of any event may be forbidden if the required work has not been fully carried out according to the schedule established by the Inspector(s) of the MSA Safety Panel.

MSA is entitled to allow any national competition on a circuit or, if the directions of MSA have not been complied with, or prohibit such competition. Should a circuit consist of more than one layout, the approval will only be valid for the inspected and approved configuration/s.

Circuits are accepted for the running of competitions entered on the MSA Karting Sporting Calendar only in the same configuration and with all the same installations, as are indicated on the plan held by MSA and which are agreed with the MSA Inspector of the Safety Panel.

ARTICLE 6 – NUMBER OF KARTS ALLOWED TO START

6.1) The maximum number of starters for MSA sanctioned karting events will be determined as follows, unless otherwise permitted under special application to MSA and approved in writing by the MSA Event and Circuit Safety Panel:

6.2) Circuits up to 900 (nine hundred) metres in length:

6.2.1) Classes less than ninety-nine (99) cc engine capacity – thirty (30) starters; and
Classes greater than One hundred (100) cc engine capacity – twenty-four (24) starters.

6.3) Circuits over nine hundred (900) metres in length: All Classes - thirty-four (34) starters.

ARTICLE 7 - CIRCUIT DESIGN

The considerations in this Article are intended to be of assistance in the basic conception of circuit projects for submission to MSA in view of issuing permit/s for any new circuits from June 2026.

In South Africa where the local metro law demands it, those responsible for a course must ensure that the prescriptions laid down by the Public Authorities are complied with and must obtain their official approval. Signs indicating that it is forbidden to smoke in the Servicing Parks, in the Paddock, on the starting grid, on the track and in the premises required by local legislation shall be put in place.

7.1) Plan:

The shape of the course in plan is not subject to restrictions, although MSA Safety Panel may recommend changes in the interests of good competition and from practical necessity.

7.2) Characteristics:

7.2.3) Length of permanent and temporary circuits:

Eight hundred (800) meters minimum.

Non gearbox classes:

One thousand seven hundred (1,700) meters maximum.

Gearbox classes:

Two thousand five hundred (2,500) meters maximum.

7.2.4) Width of permanent and temporary circuits:

Seven (7) meters minimum.,

Twelve (12) meters maximum.

7.2.5) Gradient of circuits :

Longitudinal : five percent (5%) maximum

Transversal : ten percent (10%) maximum.

7.2.6) Start/finishing straight line of permanent or temporary circuits :

One hundred (100) meters Minimum.

- 7.2.7) Tunnel :
There must be a thirty (30) meter straight before a tunnel entrance and a twenty (20) meter straight after a tunnel exit.
Width of the track, plus one point eight (1.8) meters of run-off area (protections included) on both sides of the track.
Minimum height two point five (2.5) meters.
- 7.2.8) Bridge :
There must be a thirty (30) meter straight before a ramp that goes up to a bridge and a twenty (20) meter straight after a ramp that comes down from a bridge.
Width of the track, plus one point eight (1.8) meters of run-off area (pastoral type protections) on both sides of the track.
- 7.2.9) Surface :
Asphalt on the whole length of the track.
- 7.2.10) Lighting :
For night, an absolute lighting of a minimum of 200 Lux is necessary, and for the Servicing Parks a minimum of 150 Lux is necessary.
- 7.2.11) Measurement
Track: Every twenty (20) meter along the centreline of the track from start to finishing line. Height must be between one hundred (100) and two hundred (200) centimetres above ground. Uniformity of brightness: Tolerance is between the maximum value of the track minus fifteen percent (15%).
There must be no element that may dazzle the drivers.
- 7.2.12) Deceleration lane and exit lane :
Intersections of deceleration and exit lanes relating to the track must be located in such a way that there may be no crossing between the lines of karts that are on the track and those of karts that enter the Repairs Area or leave it. (Refer FIA Karting [Appendix 19](#))
- 7.2.13) Number of karts allowed to start :
The maximum number of starters for MSA sanctioned karting events will be determined as follows, unless otherwise permitted under special application to MSA and approved in writing by the MSA Event and Circuit Safety Panel:
- 7.2.13.1) Circuits up to 900 (nine hundred) metres in length:
Classes less than ninety-nine (99) cc engine capacity - a maximum of thirty (30) starters;
and Classes greater than one hundred (100) cc engine capacity – a maximum of twenty-four (24) starters.
- 7.2.13.2) Circuits over 900 (nine hundred) metres in length: All Classes - thirty-four (34) starters.
- 7.2.14) The angle of the deceleration lane and of the pit exit lane relative to the track must not exceed thirty degrees (30°).
- 7.2.15) The left and right edges of the track asphalt must be delimited by the required white or yellow lines, in compliance with the road standards valid in the country of the circuit but with a maximum width of 120 mm.

7.3) Parc Ferme / Paddock :

There must be a park ferme area reserved for competitors beside the track; it must be linked to it by clearly distinct entry and exit.

The area should be a minimum size of one hundred square meters (100 m²).

The Parc Ferme area must be completely fenced and enclosed.

The Parc Ferme area must be in one (1) part only.

7.3.1 It is recommended that the Paddock shall include an installation of power outlets, with at least 1 outlet for 8 units (220V 20A or local voltage/amperage).

7.3.2 The Area must notably comprise of:

- a) A covered room for the storing of technical equipment.
- b) A covered post exclusively dedicated to technical checks (dismantling).
These two (2) rooms must be of solid construction, and it must be possible to close and seal them.

7.3.3 A covered post for the scales. Access to the scales shall be facilitated by ramps or by their integration in the ground.

The scales must be electronic and officially certified seven (7) days before a National Championship event

If no National Championship event is held at the said venue, the scale must be certified annually.

The Organiser must provide an officially certified 100-kg control weight. This weight will be used for the adjustment of the scales before and during the competition.

7.3.4 For safety reasons, the Parc Fermé. Paddock shall be closed and guarded at night

7.4) Pit Area/Servicing Parks:

7.4.1) There must be a chicane at the entry to the deceleration lane aimed at reducing the speed of the karts.

7.4.2) The width of the deceleration lane must be between three (3) meters and four (4) meters.

7.4.3) A minimum of 5 x 9kg fire extinguishers must be strategically placed in the pre-race area.

7.4.4) Each Competitor must have the minimum of a one point five (1.5) kg fire extinguishers

7.4.5 If temporary fences are used to delimit the Servicing Parks, their limits shall already be marked on the ground on the day of the inspection of the Circuit.

7.5) Track edges, verges and run-off areas :

7.5.1 The track must be bordered all along its length on both sides by compact verges having an even surface and having a minimum width of one point eight meters (1.80) meters.

These verges must be free of debris or gravel and must be grass-covered or compacted ground over a minimum width of one (1) meter.

There must be a continuation of the transversal profile of the track, with no negative slope between track and verge, any horizontal transition must be very gradual and progressive.

- 7.5.2 By run-off area, it is meant that section of ground between the verge of the track and the first (1st) line of protection.

Unless otherwise specified, it must have the same basic characteristics as the verge, although it may be less stabilised. (Refer FIA Karting [Appendix 16](#)).

The run-off area must be graded to the verge without a negative slope; if there is a positive slope, this should not be in excess of ten percent (10%), with a smooth transition from track to run-off area. These requirements also apply to gravel beds.

- 7.5.3 The minimum dimension of the verge and of the run-off area should be the result of a numeric simulation calculated according to the speed of the kart on its line, the impact angle and the friction coefficient, as well as other specific parameters.

- 7.5.4 The minimum distance between two adjacent sections of the track must be decided by the circuit inspector, but it should be a minimum of six (6) meters.

In the case of existing circuits where it is less than six (6) meters, double tyre barriers of between 600 and 800 mm must be in place at the discretion

A separating barrier in this safety area, can be required to the satisfaction of the MSA Safety Panel and sub-committee.

- 7.5.5 By run-off area is meant the area comprised between the verge of the track and the first (1st) line of protection; unless otherwise specified, it is mandatory to build one in the axis of kart lines with a change of direction of over eight degrees (80°).

7.6) Starting grid and starting straight:

- 7.6.1 The Starting Grid is to comply with the sketch [Appendix 10](#) of the FIA Karting.

- 7.6.2 There must be at least fifty (50) meters between the starting line and the first corner. This corner must be open as much as possible and have a width of eight (8) to twelve (12) meters at new circuits, depending on the width of the starting straight line. By the first corner, it is meant a change of direction of at least forty-five degrees (45°).

7.7) Starting lights :

- 7.7.1 For the start of Karting races, the facilities must respect the following requirements :
A) The lights must be positioned between 10 and 15 m ahead of the first row of the starting grid.

B) The lights must be located at a height of between 2.5 and 3.5 m above the track.

C) The lights must be positioned as a minimum above half the track and ideally over the centre line of the track. The control platform shall be 2.5 m high and located 3 m maximum from the edge of the track.

It is recommended that, an additional lights system (red and orange) shall be placed in the Starter's visual field when he gives a start (in front of the grid). Refer FIA Karting [Appendix 12](#).

- 7.7.2 Meanings :

The lights must have the following meanings :

RED LIGHTS switched on : prepare to start racing.

RED LIGHTS switched off : the race has started, take the start.

Flashing ORANGE LIGHTS : delayed start, you are required to start for another formation lap.

The orange lights shall be placed next to the red lights and shall be duplicated at the end of the start straight line in the axis of the track.

The lights must be as large and as bright as possible and at least as large and intense as the permanent lights used for traffic control on public highways. All the lights must be duplicated, to remedy a possible bulb failure.

The switch circuit must permit the following combinations :

Standing start :

- All lights switched off.
- Red lights being switched on according to an automated sequence lasting 4 seconds and switched off manually (by the Clerk of the Course) within the next 2 seconds (all lights switched off = start given).
- Flashing orange lights blocking the red lights sequence.

Rolling start :

- All lights switched off.
- Red lights switched on alone (all lights switched off = start given).
- Flashing orange lights switched on at the same time as the red lights.

7.8) Lap scoring and clock :

A lap scoring device (manual or electronic) must be placed in a location visible for the Drivers. In the case of electronic failure, it must be possible to use it manually.

ARTICLE 8 - PROTECTIVE MEASURES

When determining the measures intended for the protection of spectators, drivers, race officials and service personnel during competitions, the characteristics of the course must be taken into consideration (layout, adjacent areas, and buildings) as well as the speed attained at any point of the track. The type of track protection recommended depends on the available space and the probable impact angle. As a general principle, where the probable impact angle is small (less than 30°), a continuous, smooth and vertical barrier is preferable, (in case of tyre barriers a conveyor belt or equivalent in front of tyres), and, where the probable impact angle is large, a system of deceleration (e.g. gravel bed) and stopping (e.g. foam mattress) devices must should be used, it being indispensable to provide for sufficient space at such points in the planning stage. The MSA Safety panel can provide advice on the above, after examination of the proposed layout at the time of the submission of the dossier. The public must be placed at the same level as/or higher than the track edge. Where the public enclosure is situated on a gradient, the latter must not be steeper than 25%, unless the ground is terraced or there is a permanent grandstand. The public area shall be at a minimum height of 1.50 m from the track, and the embankment thus constituted shall have a minimum gradient of 50% (45°). The public must be retained by a metallic fence or another equivalent structure of a minimum height of 1.20 m. It must be at a minimum distance of 1 m behind one or two lines of track protection approved by the MSA safety panel (simple pastoral or protection fence with a minimum height of 2 m), or be located at the top of that 1.50 m embankment at 45°.

All public areas as well as all areas forbidden to the public must be efficiently enclosed by continuous barriers.

8.1) Protection barriers:

A type : Air mattress.

B type : Foam mattress, catch fence, plastic block.

C type : Foam block, pile of tyres.

- 8.2) Tyre barriers generally must be eight hundred 800mm in height and should not generally exceed nine hundred (900) mm in height unless they are being used for Marshal protection and protection of poles.
- 8.3) They tyre barriers must be bolted together using the FIA Karting method comprising of eight (8) mm bolts and thirty-eight (38) mm fender type washers on each side affixed with a 8mm nut. They must be built in packs of between four (4) and six (6) packs of tyres wide, which must then be strapped together using nylon strapping only. Refer to FIA Karting Appendix 5.
- 8.4) MSA permits the use of TEK screws subject to them being used with a 38 mm washer on each end. Refer to Addendum 1 back of this document. Any sharp ends may be removed as deemed necessary.
In certain circumstances where it is deemed unsafe to fully comply to the minimum tyre barrier height specifications as stipulated, the karting sub-committee in consultation with MSA licensed national Clerks of the Course may permit a lesser specification for a specific circuit only.
Such lesser specification agreed to and permitted by the karting sub-committee and with the input from the National Clerks of the Courses will further inform the safety panel of such decision for such specific circuit.
- 8.5) Gravel beds:
Gravel beds (or approved equivalents) may be placed in run-off areas; they must be set up over a minimum width of two (2) meters and made or filled in with rolled gravel with a granulometry of 5/15 preferably or of 8/20 maximum over a minimum thickness of 30 cm. They must be DE compacted before every competition. Gravel beds must neither be located below the track level nor be preceded by a heightened verge, even slightly heightened in relation to the level of the surfacing of the circuit. Refer to FIA Karting Appendix 4.

ARTICLE 9 - CIRCUIT BUILDINGS AND FACILITIES

The availability and the conditions of rooms will be indicated in the inspection form.

Requirements regarding Race Control, Marshals' Posts, Paddock, Medical Centre, etc., vary according to the type of competition planned.

Each project must be established in collaboration between the circuit management, and the MSA Safety Panel.

However, for MSA National Championships, the facilities must comprise of the following as a minimum:

- Stewards' room
- Timekeeping room
- Race Secretary room
- Clerk of the Course room
- Marshals' room (flags, extinguishers, brooms, etc.)
- Medical Centre
- Briefing room (preferably)

Marshals' posts must be composed of a minimum one point five (1.5) meters x one point five (1.5) meters plan surface heightened by ten (10) to fifteen (15) cm from the ground, surrounded by

protection (tyre wall, foam mattress or block, etc.) with a height of one hundred to one hundred and two (100 to 120) cm.

Refer FIA Karting [Appendix 18](#).

ARTICLE 10 - FACILITIES FOR THE DISABLED

Facilities for the disabled at all race venues must be in accordance with the laws of the relevant Metro concerned.

ARTICLE 11 - MEASUREMENTS OF CIRCUIT LENGTH

- 11.1) The length of a circuit for the calculation of race distances, race records and classifications is considered to be that of the centreline of the track.
- 11.2) The centreline of the track is the median line between the left and right edges of the asphalt of the track as delimited by the required white or yellow lines; particular attention should be paid to this in the case of temporary circuits.
- 11.3) The length should preferably be measured on site (average of the measurements of the left and right edges) but failing that it may be calculated. To this end, the following method is proposed:
- 11.4) The geometrical form of the layout shall be defined in terms of plan and longitudinal profile along the track centreline, and this layout shall be used in the calculation of the official circuit length.
- 11.5) The plan definition shall include the horizontal centreline length of all straights and curves, the radius of all circular curves and the mathematical description of all transition curves.
- 11.6) The longitudinal profile shall be defined in terms of either vertical circular curves or a series of centreline levels at intervals of not less than ten (10) meters, accurate to zero point zero one (0.01) meters.
- 11.7) The official track length will be calculated to an accuracy of one (1) meter by combining the horizontal track length with the longitudinal profile.

ARTICLE 12 - TRACKSIDE STRUCTURES

- 12.1) Advertisement signs and hoardings, video screens and other trackside structures must be stable and securely fixed. The location and characteristics of advertising must at no time interfere with Drivers' and Officials' visibility nor produce an adverse or misleading optical effect (e.g. bewildering repetition of posters with bright and contrasted colours; badly placed hoarding inducing misjudgement of the track layout, etc.).
- 12.2) Protection of poles, sign posts, etc., refer FIA Karting [Appendix 17](#). There must be no publicity structures in the area comprised between the track and the first protection barrier.
- 12.3) Any structure behind the first protection must be at least one (1) meter behind and shall not obstruct circulation or emergency services in any way. Should a structure be positioned so that it can, if it falls, cross a safety barrier, it must have additional stays behind it to prevent this.
- 12.4) Any paint on the circuit surfacing, other than that which delimits the edges of the track and determines the starting grid, is forbidden for safety reasons.

ARTICLE 13 - ACCIDENT REPORTING

- 13.1) Whenever an accident occurs during testing or competition that results in damage to any circuit installations (including incidents that demonstrate the effectiveness of such installations during a high-energy impact), the circuit owner shall be responsible for ensuring that
- All safety features remain compliant at all times
- Any damage is reported to MSA and repaired
 - An inspection may take place after repairs have been conducted to ensure compliance.
 - If safety is compromised, officials (Clerk of the Course, MSA Stewards, Safety Officer, MSA Safety panel Inspector) can:
 - Delay or stop events
 - Declare the circuit unsafe
- 13.2) MSA reserves the right to revoke permits where such damage may compromise the safety of a future race event.

ARTICLE 14 - CIRCUIT MAINTENANCE

- 14.1) It is required that the relevant event/s Clerk of the Course/s should make regular inspections before the event that he/she is officiating at.
- 14.2) Proper maintenance of the circuit and its installations is a condition of the Permits being issued. The circuit should be checked not only before a competition, but also afterwards by the circuit management/owner/s, so that the damage can be assessed and a repair programme established. The main items which need regular attention include :
- 14.1.1) Track surface : Cleanliness and general condition.
- 14.2.2) Edges, verges and lateral areas :
All edges, verges and lateral areas should be level with the edge of the track and all areas behind kerbs filled in and level. In all grass-covered areas, the grass should be kept trimmed; dry grass and all vegetation should be removed. Vegetation should be removed from gravel beds. All lateral areas, up to the first protection, should be kept clear of any obstruction.
- 14.3) Tyre barriers :
Tyre barriers should be checked for firm location to existing structures and tight attachment together.
- 14.4) Spectator and debris fencing:
These fences should be checked regularly for support and tensioning. The fences should be checked for deterioration.
- 14.5) Kerbs :
Kerbs must be painted in two colours alternately (recommended colours: red and white).
Kerbs should be continually checked for damage.

Broken kerbs should be repaired/replaced immediately. (Refer FIA Karting Appendix 2 and Appendix 3).

- 14.6) Drains and drainage:
Drains should be cleaned, and inspected by the circuit owners for correct operation prior to major competitions.
- 14.7) Circuit demarcation lines :
All demarcation lines for Track and Pits should be kept clear and clean and preferably repainted prior to major competitions and/or annually.
- 14.8) Observation and vision :
Clear vision should be maintained at all times between consecutive Marshals/Observation Posts/Signalling locations etc. Trees and vegetation should be cleared or trimmed to maintain good vision.
- 14.9) Communications:
Telephone/Cell phone signal and other communications should be checked.

ARTICLE 15 - VENUE MODIFICATION AND APPROVAL REQUIREMENTS

- 15.1) Notwithstanding GCR 69 and GCR 79 any venue may not make alterations to the circuit without prior approval from MSA in consultation with the MSA Events and Circuit Safety Panel. This requirement applies to all modifications, including but not limited to:
- Track layout changes (corners, chicanes, straights)
 - Run-off areas
 - Barriers (Armco, tyre walls, etc.)
 - Kerbing, surfaces, or elevation changes
 - Pit lane entry/exit modifications
 - Safety installations (fencing, debris fencing, marshal posts)

Before any work is done, circuit owners must submit:

- Detailed plans drawn to a 1:500 scale
 - Risk and safety assessments
 - Specifications of materials and safety systems
- 15.2) These plans will be reviewed by the MSA Event and Circuit Safety Panel, and an inspection may be conducted before approval is granted.
- 15.3) Once changes are completed the circuit must be **re-inspected**.
- 15.4) If a circuit owner makes changes without approval. The MSA permit for events can be withdrawn and a fine may be imposed.

CIRCUIT REGULATIONS : PART 2

CHAPTER 1 - OBJECTIVE

The recommendations in this Appendix apply in particular to Kart races.

This Appendix shall define the aims and organisation of the supervision of the circuit and the emergency services and establish the rules which it is recommended to observe in achieving these aims.

The supervision of the circuit is intended to maintain optimum safety conditions for the running of the Competition. Trackside workers (marshals, doctors, paramedics, etc.) must be made easily identifiable according to their functions

1.1 - General organisation

The Clerk of the Course may nominate a deputy responsible for organising and administering the supervision of the circuit and the emergency services. This deputy will have the title of chief safety officer and will report directly to the Clerk of the Course. For each MSA Karting Competition MSA shall appoint an official Starter. He/she should be the Clerk of the Course or assistant Clerk of the Course.

CHAPTER 2 - SUPERVISION OF THE CIRCUIT

Duties in connection with supervision of the circuit include the following areas : observation, signalling and intervention, with a determined equipment (Article 2.1), observation posts (Article 2.2) and very specific signalling (Article 2.3).

2.1 - Equipment

For Race Control :

- a) A radio walkie-talkie system connected with Timekeeping, Clerk of the Course and the Stewards, Parc Fermé officer and marshals
- b) all the flags necessary for the good running of the Competition,

2.1.1 For Stewards:

The Stewards' office may be located in the same building as that of the timekeepers. This room should be a sound-proof room accessible only to officials. It should have an independent exit to the track or the Parc Fermé.

This room must be equipped with :

- a) a radio transceiver for communication with each steward,
- b) a plan of the circuit showing the location of all safety services as well as the red zones provided for the press.

2.1.2 Before the start of every race/heat of the Competition, it is the duty of the Clerk of the Course or his deputy, to ensure :

- a) that the circuit is free from all obstacles,
- b) that all marshals are duly positioned,
- c) that all access lanes to and from the track are closed.

2.1.3 The other duties of the Clerk of the Course concerned by this Appendix are :

- the authorising of the deployment of any emergency service as shall be deemed necessary in agreement with the chief of that service,
- the use of those signals expressly reserved for his use,
- the surveillance of the track by the naked eye,
- and ensuring that a proper compilation of all reports (from marshals, etc.) be kept so that action may be taken where appropriate.

Further, it shall at all times be his responsibility to see that the competition is run in full compliance with the MSA Sporting Code, the Championship Standard Regulations if appropriate and the Supplementary Regulations for the Competition.

2.2 - Observation posts

2.2.1) Surveillance of the track and its immediate surroundings is provided by observation post staff (the marshals). In their design these posts, adjacent to the track, must provide an adequate stabilised area protected from the competing karts and sheltered from the elements, for the officials and equipment.

a) Number and location:

These are determined for each circuit in accordance with the circuit characteristics and that approved as minimum by the safety panel. The Clerk of the Course may request additional marshals in consultation with the Chief Marshal for the event.

b) No section of the circuit must escape observation.

c) Each post shall be manned by two persons as a minimum.

d) Each post must be able to communicate by sight with the preceding and the following ones and to communicate by radio with Race Direction.

e) Each post must be marked with a signboard bearing a number increasing incrementally from the first post after the starting line.

2.2.2) Protection:

The posts must be situated so that only in the case of an incident would their staff be compelled to operate unprotected.

The posts must have a type of protection imposed by the MSA safety panel.

a) Equipment: each post must be provided with:

a set of signalling flags (Pantone references) comprising:

- 2 yellow (yellow C),
- 1 yellow with red stripes,
- 1 white,
- 1 green (348 C),
- 1 blue (298 C),
- 1 red (186 C).

(b) each post must be provided as a minimum with :

- 1 portable fire-extinguisher,
- 1 «SLOW» board,
- 2 brooms.

2.2.3) Staff :

Marshals must be qualified for this task after a special examination under ASN control.

Duties :

Each post shall :

- warn Drivers by means of signalling (flags, boards or lights) of any danger or difficulty which they may be unable to foresee,
- report to Race Control any incidents occurring within the limits of action of the post and propose the calling into action of emergency services as necessary,
- verify whether the race is run fairly from a sporting point of view and report to Race Control any unsporting or dangerous behaviour,
- maintain its sector of the track clean and clear of obstacles, attempting to remove any spilled oil, as well as any gravel which may be on the track after an accident.

Clothing :

Marshals must all wear the same clothing supplied by the organiser or his ASN.

Marshals must not wear clothing similar in colour to any signalling flag.

2.3 - Signalling

In the supervision of the circuit, the Clerk of the Course (or his deputy) and the observation posts rely on the use of signals to contribute to the Drivers' safety and enforce the regulations.

Signals are given in daylight by different coloured flags or boards, or by lights of different colours at night. Flags :

The minimum size of all flags is 60 x 80 cm except the red and chequered flags which shall be at least 80 x 100 cm.

* Flag signals to be used by the Clerk of the Course or his deputy at the start line :

(a) MSA flag :

This flag is normally used to start the race. The starting signal must be given by lowering the signal which, for standing start Competitions, must not be raised above the head until all karts are stationary and in no case for more than 10 seconds. This flag shall only be used in certain circumstances (e.g. in the case where the light signals no longer function) and for Qualifying Practice.

(b) Red flag :

This flag must be waved at the start line when it has been decided to stop a practice session or the race. The red flag may also be used by the Clerk of the Course or his deputy to close the circuit.

(c) Black and white chequered flag :

This flag must be waved. It signifies the end of a practice session or a race.

(d) Black flag :

This flag should be used to inform the Driver concerned that he must stop at his pit or at the place designated in the Supplementary or Championship Regulations on the next approach to the Parc Fermé entrance. If a Driver fails to comply for any reason, this flag should not be shown for more than four consecutive laps.

The decision to show this flag rests solely with the Stewards of the meeting. The Entrant concerned will immediately be informed of the decision.

(e) Black flag with an orange disc (40cm in diameter) :

This flag should be used to inform the Driver concerned that his kart has mechanical problems likely to endanger himself or others and means that he must stop at the repair area on the next lap. When the mechanical problems have been rectified, the kart may rejoin the race.

(f) Black and white flag divided diagonally :

This flag should be shown only once and is a warning to the Driver concerned that he has been reported for unsportsmanlike behaviour.

These last three flags (in d, e & f) should be shown motionless and accompanied by a black board with a white number which should be shown to the Driver of whose kart the number is displayed.

These flags may also be displayed at places other than the start line should the Race Director or the Clerk of the Course deem this necessary.

Normally the decision to show the last two flags (in e & f) rests with the Race Director or the Clerk of the Course: however, it may be taken on request of the Stewards of the meeting in order to impose a sporting sanction.(g) Blue and red flag (double diagonal) with number : The Driver concerned must stop before being lapped or also when he has been lapped. This flag may only be used if it is provided for in the Championship, Cup or Trophy Sporting Regulations or in the Supplementary Regulations of the Competition.

Flag signals to be used at observation posts :

(h) Yellow flag :

This is a signal of danger and should be shown to Drivers in two ways with the following meanings :

- single waved : reduce your speed, do not overtake and be prepared to change direction. There is a hazard on the edge or on part of the track.

- double waved : reduce your speed, do not overtake and be prepared to change direction or stop. There is a hazard wholly or partly blocking the track.

Yellow flags should normally be shown only at the marshals' post immediately preceding the hazard.

Overtaking is not permitted between the first yellow flag and the green flag displayed after the incident.

(i) Yellow flag with red stripes :

This flag should be shown motionless to inform Drivers that there is a deterioration of adhesion due to oil or water on the track in the area beyond the flag. This flag should be displayed for at least 4 laps unless the surface returns to normal beforehand. However, it is not necessary for marshals in the sector beyond the place where this flag is being shown to show a green flag.

(j) Blue flag :

This flag should normally be waved, as an indication to a Driver that he is about to be overtaken.

(k) White flag :

This flag should be waved and is used to indicate to the Driver that there is a much slower vehicle on the sector of track controlled by that flag point.

(l) Green flag :

This flag should be used to indicate that the track is clear and should be waved at the observation post immediately after the incident that necessitated the use of one or more yellow flags.

It may also be used, if deemed necessary by the Clerk of the Course, to signal the start of a warm-up lap or the start of a practice session.

(j) A set of white non-reflective numbers with a recommended size of not less than 300mm high by 170mm wide with a 30mm stroke, which can be suitably mounted to be visible to competitors on the circuit. As an alternative, the numbers may be written clearly on a blackboard with white chalk or alternatively a white board and non-permanent black marker.

(i) a lap display board to indicate to competitors the number of laps remaining in a race;

Optional:

«SLOW» board signalling:

The minimum dimensions of the boards should be 60 x 80 cm. Boards must be yellow, with the word «SLOW» in black.

2.4 Circuit markings

- a. The 25-metre line - A yellow line of 100mm to 150mm width must be painted across the width of the circuit 25 (twenty-five) meters before the start line.
- b. The 90-metre line - A red line of 100mm to 150mm wide must be painted across the width of the circuit not less than 90 (ninety) meters before the start line.
- c. Starting Grid Lines - Two pairs of continuous white lines, marking lanes 2 (two) meters wide with an ideal minimum of 2 (two) meters separating the two lanes must be painted for a maximum distance of 90 metres prior to the start line and with due consideration to the limitations of the circuit.
- d. A push start line must be made available at all circuits. A clear demarcation will be made between this push start area and the circuit itself. No pit crew or
- e. mechanic will be allowed on to the circuit to start any kart that is unable to start within the push start area. Any kart not able to start may not be pushed past this line on to the circuit. The kart must be removed from the circuit by the circuit officials and/or marshals and taken back to the push start area for any further attempt to start (on the assumption that it is safe and/or appropriate to do so in the sole discretion of the Clerk of the Course).

2.5 Fire Fighting equipment

- a. A minimum of eight (8) fire extinguishers with a combined capacity of at least 60kg, four of which must be in the pre-race paddock in an immediately visible position, the remaining four being strategically placed around the circuit. All fire extinguishers must bear satisfactory evidence that they are in working order and/or that they have been serviced within the previous 12 months. (Note: This clause shall apply to permanent kart circuits only. For street races and long-circuit races, the firefighting equipment is to be increased proportionately.)
- b. the firefighting equipment is readily available and correctly situated and that his/her assistants and the paddock marshals are familiar with the operation thereof.

2.6 Public Address System for officials

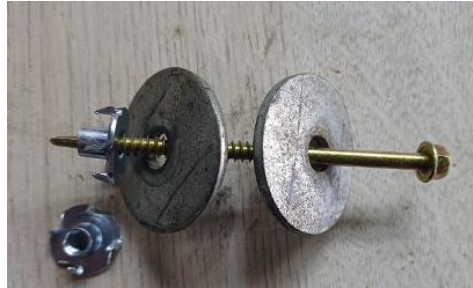
- a. A public address system available to the Clerk of the Course and/or the Chief Paddock Marshal for communication with competitors (a hand-held megaphone is acceptable as a minimum).

2.7 General

- a. If their use has been approved by MSA, lights may be substituted for the starting flag;
- b. One blackboard and chalk or suitable means of writing and displaying notices;
- c. Circuit cleaning equipment consisting of shovels, brooms, suitable cleaning agents for removal of oil (cement may be used provided it is brushed off the circuit after use).
- d. any circuit-cleaning units are situated at suitable points

ADDENDUM 1 -TEK SCREW METHOD TO FASTEN TYRE WALLS.

Tek Screw that may be used for tyre walls. Nut in right side photo from Gelmar



TEK Screws with washers being used to build tyre walls.



NOTE: for a nut (**compulsory**) the following can be used, a steel plate 40x40x2mm. A 4mm pilot hole can be drilled into plate for ease of self-cutting by the Tek screw.

Also, the Nut as per photo above from Gelmar can be used in conjunction with 40 mm Fender washer
40 mm washers **MUST** be used on both sides as illustrated in the FIA drawing