



2011 Radical Masters

Regulations

Issued by
International Motorsport Events S.A.

29 März 2011

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2011 Radical Masters Sporting & Technical Regulations

2010 Radical Masters

1. SPORTING REGULATIONS – GENERAL

1.1. Title and Jurisdiction

The 2011 RADICAL Masters is organised and administered by International Motorsport Events S.A. (IME) in accordance with the General Regulations of the Royal Automobile Club Motorsports Association (incorporating the provisions of the International Sporting Code of the FIA) and these Series Regulations. The organisers reserve the right to issue additional statements clarifying items in the rules and regulations and all such statements will be issued to all registered drivers by posting to the address on the registration form.

Series Permit No: Series Grade:

Race Status: **National B**

Single national race event with international participants - NEAFP

1.2. Officials:

1.2.1. Co-ordinator: Christian Droop / Alexander Tauer, IME

1.2.2. Licensed Eligibility Scrutineering
Team:

Chief Scrutineer Phil Mason
Assistant Scrutineers Mike Wright, Rob Mason

1.2.3. Series Stewards: tba
 tba
 tba
 tba

Any three of the above may reach a decision

1.2.4. Race Director George Copeland

1.3. Competitor Eligibility

1.3.1. Entrants must be in possession of a valid 2011 Competition (Racing) National "B"-level or higher issued by the MSA or of a corresponding level issued by any recognized ASN.

1.3.2. All necessary documentation must be presented for checking at all rounds when signing-on.

1.4. Registration

1.4.1. All drivers must register as competitors for the series by returning the Registration Form and the registration fee to the Co-ordinator prior to the Final Closing date of the first round being entered.

1.4.2. Registration for the Radical Masters will be for TEAMS of one or two drivers. **Drivers registering into the Radical Masters will fall into one of the following three categories:**



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Grade A:

Professional driver, under the age of 55, and satisfying one of the following criteria:

- ✚ Has competed in Le Mans series events or similar as a paid driver, or non paying driver
- ✚ Has been a driver paid by a manufacturer
- ✚ Has competed in national or international GT series or similar as a paid driver
- ✚ Has competed at national or international standard in single seaters from Formula 3 upwards, and holds any finish 6th place or higher
- ✚ Has competed in national or international touring cars as a paid, or non paying driver
- ✚ Is a driver whose performances and achievements despite not being covered by one of the definitions above, may be considered grade A by the Race Director.

Grade B:

A driver who has distinguished himself/herself in national or international series who satisfies one of the following criteria:

- ✚ A driver satisfying Grade A, aged 55 and above
- ✚ Has won a Radical series, or European series in association with a professional driver (see Grade A definition above) or as a single driver
- ✚ Has won any national or international non professional series eg GT series
- ✚ Holds an instructors license, or gains any kind of income through instructing
- ✚ Has been placed top 6 in any national or international karting series
- ✚ Is a driver whose performances and achievements despite not being covered by one of the definitions above, may be considered Grade B by the Race Director.

Grade C:

An amateur driver who satisfies one of the following criteria:

- ✚ A driver who has yet to win any national or international series
- ✚ A driver who has limited race experience
- ✚ Is a driver whose performances and achievements despite not being covered by one of the definitions above, may be considered Grade C by the Race Director.

The following combinations are acceptable for Team Pairings in the Radical Masters:

Grade A + Grade B
Grade A + Grade C
Grade B + Grade B
Grade B + Grade C
Grade C + Grade C

Formatiert: Portugiesisch
Brasilien

If a "Team" is a single driver then only Grade B or Grade C drivers will be accepted.

If, at any point in the season, a Driver proves himself to be more capable than his current grading, he may be moved up to the next highest grade.

1.4.5 If a driver changes classes during the season points will not be carried over from one class to another.

1.4.6 There is no Registration Fee for this Series.

1.4.7 Registrations will be accepted from 1st November 2010 until further notice. Registration numbers will be the permanent Competition numbers for the Series and will be allocated by the Radical Co-ordinator. Number 1 will be reserved for the 2011 Series winner. Should the current champion not re-register for the series, the number 1 (One) shall not be used.

1.4.8 At the discretion of IME a guest driver may compete in this series.

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1.5 Series Rounds

1.5.1 The 2011 Radical Masters will be contested over 6 Single-EVENTS as follows:-

<u>Event</u>	<u>Date</u>	<u>Venue</u>	<u>Organising Club</u>
1	15-17 April	Silverstone Arena	MSVR
2	4-6 May	Spa-Francorchamps (LMS)	RACB
3	4-5 June	Brands Hatch GP	MSVR
4	1-3 July	Imola (LMS)	tba
5	3-4 September	Zandvoort	KNAF
6	1-2 October	Valencia (DTM)	tba

1.5.2 In accordance with MSA regulation **D11.1** the organisers reserve the right to amend the published list of dates and rounds, in which case, all registered competitors will be informed of the amendments by Official Bulletins posted to the address specified on the Official Registration Form.

1.6 Scoring

1.6.1 Points will be awarded to **registered teams**, in all classes, listed as classified finishers in the Final Results as follows:

30, 26, 22, 18, 16, 14, 12, 10, 8, 7, 6, 5, 4, 3, 2, 1 plus 1 for pole position and 1 for fastest race lap.

In the case of 2 competitors sharing a car, each of the sharing competitors receives the same points.

Points will also be awarded to teams (team points) running 2 or more cars in the Radical Masters 2011. Points will be awarded to each team on the basis of the 2 highest finishing cars per race on the same basis as the points awarded to competitors.

1.6.3 **The totals from all qualifying events will determine the final series points and positions.**

1.6.4 Ties shall be resolved using the formula in **Regulation Q3.4** of the 2011 MSA Yearbook.

1.6.5 Any **Celebrity/Guest** car entered will not be eligible to score points. and the car will be ignored for points purposes in the final race classification. **Any car entered on behalf of a competitor who has not registered for at least 5 events prior to the end of the first event in which such competitor participates will not be eligible to score points and the car will be ignored for points purposes in the final race classification.**



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1.7 Awards

- 1.7.1 All awards are to be provided by the Organiser.
- 1.7.2 Trophies per series round in all classes: 2 x 1st, 2 x 2nd, 2 x 3rd.
- 1.7.3 Champagne per Series Round: 2 x 1st in each class provided by the Organisers.
- 1.7.4 Trophies – Series: 1st, 2nd, 3rd in each class, 1st, 2nd, 3rd overall.
- 1.7.6 Bonuses
In the event of a bonus scheme or schemes being introduced all registered competitors will be informed by official bulletin.
- 1.7.7 Presentations
Trophies are to be provided for the presentation at the end of each race or at a presentation ceremony. All competitors must attend presentations.
- 1.7.8 If a competitor has monies outstanding with IME/Radical Motorsport/Radical Performance Engines (RPE) or any series supplier, then all series points accrued from the date of supply shall be withdrawn and trophies shall not be presented at the end of season awards ceremony.

2 SPORTING REGULATIONS – JUDICIAL PROCEDURES

2.1 Rounds:

In accordance with **Section C** of the 2011 MSA Yearbook and these regulations

2.2 Series:

In accordance with **Section C** of the 2011 MSA Yearbook and these regulations.



3 SPORTING REGULATIONS – RACE MEETINGS & RACE PROCEDURES:

3.1.1 Entries:

3.1.2 Competitors are responsible for sending in correct and complete entries with the correct entry fees prior to the entry closing date which shall usually be 20 days before each round.

3.1.3 Incorrect or incomplete entries (Including Driver to be Nominated Entries) are to be held in abeyance until they are complete and correct and the date of receipt for acceptance of entry purposes shall be the date on which the Secretary of the Meeting receives the missing or corrected information or fee.

3.1.4 Any withdrawal of entry or Driver/Car changes made after the acceptance of any entry must be notified to the Secretary of the Meeting in writing. If Driver/Vehicle changes are made after publication of entry Lists with Final Instructions the Competitor concerned must apply for approval of acceptance by the Stewards of the Meeting BEFORE Signing-On.

3.1.5 The maximum Entry Fee for each round shall be 1.650 EUR per car with one driver. The entry fee for a second driver will be 250 EUR per round.

3.1.6 Qualification races will be held at the discretion of the Organisers.

3.1.7 Reserves are to be nominated on the Final List of Entries published with Final Instructions or Amendment Sheet Bulletins. All reserves will practice and replace withdrawn or retired entries in Reserve Number order irrespective of class. If any reserves are given Grid Places prior to issue of the first grid sheets for any round the times set in practice shall determine their grid positions. If Reserves are given Grid Places after publication of the Grid sheet and prior to cars collecting in the Official "Assembly Area" they will be placed at the rear of the Grid and will be started WITHOUT time delay. Otherwise they will be held in the pit lane and be released to start the race after the last car to start the GREEN FLAG LAP or last car to take the start has passed the startline or pit exit, whichever is the latter. Such approval to start MUST be obtained from the Clerk of the Course.

3.2 Briefings:

Organisers should notify Competitors of the times and locations for all briefings in the Final Instructions for the meetings. Competitors must punctually attend all briefings. A fine will be charged in case of a late arrival to or missing of the briefing.

3.3 Practice:

3.3.1 Two 30 minute sessions or one 60 minute session to be provided for practice. Additional practice sessions may be held at selected events.

3.3.2 Should any practice session be disrupted the Clerk of Course shall not be obliged to resume the session or re-run sessions to achieve the series criteria and the decision of the Clerk of the Course will be final.

3.3.3 Should the need arise to stop any practice, RED LIGHTS will be switched on at the start Line and RED FLAGS will be displayed at the startline and at all other Marshal Signalling points around the circuit.

3.3.4 This is the signal for all drivers to cease circulating at racing speeds, to slow to a safe and reasonable pace and return to the pit unless directed by officials not to do so.

3.4 Qualification:

3.4.1 Qualifying will be held over a minimum of thirty-five (35) minutes split into at least two **15 minute sessions with a 5 minute break between the two sessions. At some rounds a 30 minutes qualifying will be held.**



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Driver 1 will qualify in Session 1(Q1), Driver 2 will qualify in Session 2(Q2).

The LOWEST graded driver will be Driver 1 and will do Q1: the HIGHEST graded driver will be Driver 2 and will do Q2!

All drivers qualifying in Q1 will start race 1, all drivers qualifying in Q2 will start race 2.

- 3.4.2 After 15 minutes of qualifying (Q1) a chequered flag will be waved **which** will indicate the end of Q1 **and the pit exit will be closed**. Once the driver has passed the chequered flag he should then proceed to the pit lane where he will stop at his allocated pit. **If, in a two driver team**, the drivers will change places. **If a single driver, the driver will have the opportunity to stop at his pit or the driver can decide to proceed to the end of the pit lane ready to rejoin the circuit.**

The pit exit will re-open at 20 minutes, where ever possible. Cars must form an orderly queue at the end of the pit lane prior to the pit lane being re-opened and Qualifying 2 (Q2) will then commence for a further 15 minutes after which time the chequered flag will be waved to indicate the end of Qualifying, when all cars must go directly to Parc Ferme unless directed to contrary by Officials of the Meeting.

- 3.4.3 Not less than 30 minutes before Qualifying, the Drivers for Q1 and Q2 should be nominated and notified to the Series Co-ordinator.

The List of Drivers will be circulated to the Clerk of Course, Timekeepers and Chief Pit Lane Marshall amongst others.

- 3.4.4 A single driver must complete laps in both Q1 and Q2 to establish a grid position for race 1 and race 2.

- 3.4.5 The grid for race 1 will be set by the fastest qualifying time achieved in the Qualifying Session 1 (Q1). The grid for race 2 will be set by the fastest qualifying time from Qualifying Session 2(Q2).

- 3.4.6 In the case of a third race, the fastest time recorded by either driver in race 2 will set the grid with the top 6 grid positions being reversed ie a driver achieving 6th place on the grid will move to pole and the pole position driver will be relegated to 6th place.

- 3.4.7 In the case of Force Majeure, providing the Driver(s) has satisfactorily complete 3 laps at a Radical official test day in that season and in a similar car at that circuit prior to the Event, it will not be necessary to complete 3 (three) laps of qualifying to qualify for the race. If this is the case, the Driver will be placed at the back of the grid for whichever race he has not completed the qualifying. If neither Driver qualified in the usual manner both drivers will start from the back of the grid.

- 3.4.8 Should any qualifying session be disrupted the Clerk of Course shall not be obliged to resume the session or re-run sessions to achieve the series criteria and the decision of the Clerk of the Course will be final.

- 3.4.9 Should the need arise to stop any practice, RED LIGHTS will be switched on at the start Line and RED FLAGS will be displayed at the startline and at all other Marshal Signalling points around the circuit.

- 3.4.10 This is the signal for all drivers to cease circulating at racing speeds, to slow to a safe and reasonable pace and return to the pit unless directed by officials not to do so.

3.5 Races:

The minimum scheduled race distance shall be **40** minutes duration whenever practicable but should any race distance be reduced at the discretion of the Clerk of the Course or Stewards of the Meeting it shall still count as a full points scoring round.

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3.6 Starts:

- 3.6.1 All race start countdowns are to have a minimum elapsed period of 3 minutes from the time that all cars are released to form up on the grid to the start of the rolling lap(s) in the formation as specified on the Track Licence for each circuit.
- 3.6.2 The minimum countdown procedures/audible warning sequence shall be:
- Rolling Starts: 2 x 2 Formation (subject to track licence)
 - 1 minute to start of Rolling Lap – Start Engines, Clear Grid
 - 30 seconds – visible and audible warnings for the start of the rolling lap.
- 3.6.3 Towards the end of the **rolling** lap(s) the pace car will leave the circuit after extinguishing its roof lights indicating a start is imminent. **The grid will continue at a similar speed on the approach to the start line.** All cars will start racing when the red start light(s) are extinguished. In the event that the starting light(s) fail the Starter will revert to using the National Flag.
- 3.6.4 Any cars removed from the grid after the 1-minute stage or driven into the pits on a rolling Lap shall be held in the pit lane. They may start the race after the last car to take the start from the grid has passed the start line or pit lane exit, whichever is the later.
- 3.6.5 Any drivers unable to start the **first** rolling lap or start are required to indicate their situation as per MSA Regulation **Q12.13.2** Any drivers unable to maintain grid positions on the rolling lap to the extent that all other cars are ahead of them may complete the Rolling Lap. They **MUST** remain at the rear of the last row of the grid.
- 3.6.6 **Aborted Start:**
If the start is aborted prior to the pace car pulling off, the pace car will not extinguish its roof lights and will continue to lead the field around the circuit for an additional lap and a new start will be attempted. The race will not start until the pace car pulls off the circuit, the signal to start will not be given, and the start lights may remain at red. When this signal is given, all cars should exercise extreme caution and return slowly round the circuit maintaining their original grid positions stopping on the grid. At the discretion of the Clerk of the Course, the race distance may be reduced accordingly.
- 3.6.7 Excessive weaving to warm up tyres – using more than 50% of the track width and falling back in order to accelerate and practice starts – is prohibited.
- 3.6.8 The use of tyre heating/heat retention devices, tyre treatments and compounds is prohibited.

3.7 Race Stops:

- 3.7.1 Should the need arise to stop any practice or qualifying session, RED LIGHTS will be switched on at the startline and RED FLAGS will be displayed at the Startline and at all Marshals Signalling Points around the Circuit. This is the signal for all drivers to cease circulating at racing speeds, to slow to a safe and reasonable pace and to return to the pit lane.
- 3.7.2 Should the need arise to stop a race, RED LIGHTS will be switched on at the Startline and RED FLAGS will be displayed at the Startline and at all Marshals Signalling Points around the circuit. This is the signal for all drivers to cease circulating at racing speeds, to slow to a safe and reasonable pace and return to the starting grid which will automatically become a Parc Fermé Area.
- 3.7.3 Cars may not enter the Pits unless directed to do so. Work on cars already in the Pits must cease when a race is stopped and may only continue under the control of the Scrutineers. Cars that are already in the pit lane, or return to the pit lane, may only take any restart from the pit lane after all other cars have started.
- 3.7.4 **Case A** – Less than two laps completed by the race leader:



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The race will be null and void. The race will restart from the original grid positions. Competitors unable to take the restart may be replaced by reserves who will start from the back of the grid in reserve order. Gaps on the grid should not be closed up. The length of the restarted race will be determined by the Clerk of the Course.

3.7.5 **Case B – More than two laps completed by Race Leader but less than 75% of race distance completed:**

The race will restart from a grid set out in the finishing order of part two. The result of the race will be the finishing order at the end of part two. The result will not be aggregated. The length of the restarted race will be determined by the Clerk of the Course.

3.7.6 If the leader has completed more than 75% of the race distance it shall not be restarted and the results will be declared in accordance with MSA regulation **Q5.4.3**.

3.8 **Re-Scrutiny**

All vehicles reported involved in contact incidents during practice or race must be represented to the Scrutineers before continuing in practice or race.

3.9 **Pits & Pit lane Safety:**

3.9.1 Pits:Entrants must ensure that the MSA, Circuit Management and Organising Club Safety Regulations are complied with at all times.

3.9.2 Pit lane:The outer lane or lanes are to be kept unobstructed to allow safe passage of cars at all times. The onus shall be on all drivers to take all due care and drive at **60km/h maximum in pit lanes**.

3.9.3 Refuelling:May only be carried out in accordance with MSA Regulation **Q13**., Circuit Management Regulations and the SR's or Final Instructions issued for each Circuit/Meeting. No refuelling may take place during a race.

3.9.4 Speed Limit: The speed limit in operation in the Pit Lane is **60 km/h. A hand held speed gun will be supplied to the pit lane Marshal's in order to carry out random speed checks on cars using the pit lane**.

3.10 **Pit Stops**

3.10.1

After **18** minutes of racing a 'Pit Lane Open' warning sign will be displayed at the Startline to the leading car and all cars behind. The sign will remain displayed until the whole field has passed the board once. After passing the displayed board, competitors may enter the pit to make their mandatory pit stop.

This stop must be made within a time period of 8 minutes and will be confirmed at Drivers Briefing, after which time the Pit Lane Closed sign will be displayed at the startline.

Should a competitor complete their mandatory pit stop prior to the 'pit lane open' sign being displayed or after the 'pit lane closed' sign being displayed, a "Stop/Go" penalty will be issued.

Failure to make a mandatory pit stop will lead to exclusion of the competitor(s) concerned from the results of the race.

3.10.2 **Pit Stop/Driver Change Procedures**

3.10.2.1 All seatbelts must remain fastened until the car has stopped and refastened before the car pulls away.



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- 3.10.2.2 During all pit stops the engine MUST be switched off and can be started again prior to the car pulling away as long as the driver is seated and belted in the car.
- 3.10.2.3 During the designated pit stop window, cars must enter the pit lane and stop in the designated area (as outlined in the drivers briefing) adjacent to their team and switch off the engine.
- 3.10.3 The pit stop time for each class will be notified to the teams/drivers in the supplemental regs and also at the Drivers briefing prior to each event.
- 3.10.3.1 Pit stops will be a **minimum of 45 seconds plus the Driver Penalty** which is dependant upon the highest graded driver in the "team" as follows:
- | | |
|-----------------------|--------------------------|
| Grade A + Grade B | Add 15 seconds |
| Grade A + Grade C | Add 15 seconds |
| Grade B + Grade B | Add 10 seconds |
| Grade B + Grade C | Add 10 seconds |
| Single Grade B Driver | Add 10 seconds |
| Grade C + Grade C | No penalty seconds added |
| Single Grade C Driver | No penalty seconds added |
- 3.10.3.2 In the case of a single driver, stop the car and switch off the engine, wait a minimum of 30 seconds before re-starting the car and after the allocated time – see 3.9.4.1 (also as notified in the supplemental regs and Drivers briefing) may pull away and re-join the race.
- 3.10.3.3 In the case of a two driver team the 1st driver changes place with the second driver, re-starts the engine and pulls away after the allotted time – see 3.9.4.1 (Also as notified in the supplemental regs and Drivers Briefing)
- 3.10.4 Work may be carried out on the car during the pit stop by 2 team members only. One team member may responsible for timing. No other personell will be allowed in the Pit Stop area during the designated Pit Window.
- 3.10.5 The mandatory pit stop will be monitored by pit lane marshals. Any car found stopping for less than their allotted time will receive a "Stop / Go" penalty.
- 3.10.6 If a car needs to "pit" at a time other than the designated window there will be no limit on the number of personnel allowed to work on the car UNLESS there is a change in weather conditions and the tyres need to be changed. In this case only the two team members will be allowed to change the tyres.
- 3.10.7 If for reasons of *force majeure* a car needs to "pit" just before the opening of the designated pit open window and is then ready to leave within window, **it must rejoin the circuit and pass the 'pit lane open' sign before returning to the pit lane to do the mandatory stop**. It is not possible to claim that being stationary before the pit open window commenced will count towards the stopping requirement.
- 3.10.8 At the opening of the designated pit window (at the showing of the pit lane open board) all personnel **instead of the designated 3 team members** must vacate the pit lane and remain behind a control line between the open pit lane and the inside of the garage.
- 3.10.9 Once the designated pit window has expired, (at the showing of the pit lane closed board) retired personnel will be free to return.
- 3.10.10 Drivers who are competing in this race are exempt from restrictions 3.10.8 & 3.10.9.

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3.10.11 Driving Standards – Race

All competing cars will be issued with an in-car camera. The camera must be mounted at the approved point. At the end of Qualifying, Race 1 & Race 2 the “Driving Standards Scrutineer” will collect memory cards from all competing cars. He will then monitor all footage. If he observes any competitor driving in a way that would endanger another competitor or in a way so as to bring the series into disrepute he will notify the Clerk of Course. The Clerk of Course will then be at liberty to deal with the incident(s). The same applies to a undercutting of the standing time in the pits which can be also controlled by the in-car camera.

When the Driving Standards Scrutineer has monitored all the footage the memory card will be returned to the competing drivers.

If a driver does not have an operational camera or memory card in his camera at the start of the meeting he will not be allowed to race.

In the event that no data is available on request (other than due to a proven defect with the equipment) sanctions may be applied. The burden of proof to establish the cause of such failure will lie with the competitor.

These may include but are not limited to:

A fine of up to 775,00 GBP

Exclusion

The Clerk of Course may also refer the matter to the Series Stewards for further sanctions including but not limited to loss of Series points.

Driving Standards – Pit Lane

Competitors must be and are responsible for driving standards when entering and leaving the pit lane area and this includes checking for overtaking vehicles when departing from their pit lane apron stopping position. Any competitor who is involved in a collision or near-miss whilst in the pit lane area and is deemed to have been the cause of such, will be penalised under MSA Regulation C1.1.5. – driving in a manner incompatible with general safety, **and may have points deducted from their series points total.**

Driving Standards – Paddock

If a competitor (or the technician responsible for the competitors car) is observed driving in a dangerous manner in the competing car or private road car ie at speeds greater than 10 Km/h (MSA Q14.1) or in a way in which the public at large would be put in danger, in the paddock area then the Clerk of Course will be at liberty to impose a suitable penalty to that competitor, ranging from points deducted from series to exclusion from previous or next race results depending on the severity of the violation.

3.10.12 Pit Lane Speed Limit

The pit lane speed limit will be applicable to the whole pit lane, from crossing the line at the pit lane entrance to crossing the line at the pit lane exit. **Failure to observe the pit lane speed limit will result in a “Stop / Go” penalty being applied in accordance with MSA Regulation Q12.6. A hand held speed gun will be supplied to the pit lane Marshal’s in order to carry out random speed checks on cars using the pit lane.**

3.10.13 Stop / Go Penalty

Any Stop / Go penalty must be undertaken within 3 laps of such a penalty being advised or applied. If for operational reasons, and at the discretion of the Clerk of the Course, it is not possible to apply a Stop / Go penalty (i.e. too near to the end of the race), it will be automatically substituted for a 60



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second time penalty which will be added to the elapsed race time of the competitor concerned. In such a case where a substitute time penalty is applied, licence penalty points will not be accrued.

However, once applied, should any competitor fail to undertake a Stop / Go penalty (either totally, or within the 3 lap limit) as directed, a penalty of full exclusion from the race will be applied.

3.11 Race Finishes:

After taking the chequered Flag drivers are required to:

Progressively and safely slow down, remain behind any competitors ahead of them, return to the Pit lane entrance/Paddock Entrance as instructed, comply with any directions given by Marshals or Officials and keep the helmets on and harnesses done up while on the circuit or in the pit lane.

3.11.1 Parc Ferme:

Data: At the start of the season each car will be issued with an "ECU Download Form" Book.

During Parc Ferme, 1 Data Technician from each car will be responsible for the download of engine data from their car and recording the data onto the ECU Download Form.

The Data Technician will be responsible for analysing the data. Any anomalies recorded must be reported immediately to the Powertec representative present in Parc Ferme.

All ECU Download Forms must be handed in to the Powertec representative (keeping a carbon copy for the teams use) after Qualifying, Race 1 and Race 2, before leaving the Parc Ferme area.

Failure to complete and hand in the ECU Download form before leaving Parc Ferme may result in a penalty for that team and may invalidate the engine warranty.

3.12 Results:

All Practice Timesheets, Grids and Race Results are deemed to be PROVISIONAL until all vehicles are released by Scrutineers after Post Practice/Race Scrutineering and /or after completion of any Judicial or Technical Procedures. The Series Clerk of the Course may declare the results provisional for a maximum of 60 (sixty) days until any investigation of video or other evidence has been completed and subsequent judicial procedures undertaken regardless of whether this investigation is as a result of a protest or merely a result of establishing if a Regulation has been broken. These results will remain provisional until such time as they are declared final by the Championship Clerk of the Course upon completion of any judicial procedures and will be communicated to all Entrants/Drivers via a Series Newsletter.

3.13 Timing Modules:

3.13.1 All competitors will be required to fit an Electronic Self Identification Module (Transponder) to their cars for the purposes of accurate timing. Holders for these and detailed fitting instructions will be issued with the transponders and it will be the responsibility of the competitor to fit these in the car in the position and manner specified. The modules must be in place and functioning correctly for all Series qualifying practice sessions and races. The setting and servicing of the items must only be carried out by properly authorised MSA licensed Timekeepers. Competitors will be charged by the timing company for replacement of the Modules due to misuse or loss at any time during the season.

3.13.2 Competitors may not place electronic timing equipment within 5 metres of the Official Start, Finish or any other official timing lines at any event or test day session/day. Any such equipment placed within these zones will be removed.

3.14 Qualification Races

In the event of any rounds being oversubscribed the Organising Clubs, in liaison with the coordinator may at their discretion run Qualification Races.

3.15 Operation of Safety Car (in accordance with MSA Blue Book, Section Q, Appendix 2)

3.15.1 The Safety Car will be brought into operation to neutralise a race upon the sole decision of the Clerk of the Course. The Safety Car will be driven by an experienced circuit driver (in accordance with GR B27) and will carry an observer capable of recognising all competing cars and who is in permanent radio contact with race control.

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- 3.15.2 The Safety Car, yellow/amber lights illuminated, will normally join and exit the circuit from the pit lane and the Safety Car boards will be shown initially from the start/finish line. If these locations are to be varied specific written instructions and verbal briefings will be issued detailing the exact locations to be used.
- 3.15.3 On the order from the Clerk of the Course, the Safety Car will join the circuit with its revolving lights on, regardless of where the race leader is.
- 3.15.4 When the order is given to deploy the Safety Car a waved yellow flag and "SC" board will be displayed at the start/finish line. The waved yellow flags and "SC" boards will flow around the circuit in both directions, as an adjacent post displays both their waved yellow flag and "SC" board. This system may be supplemented by a message being simultaneously broadcast to all marshals' posts if such a communication system is available.
- 3.15.5 Flashing yellow lights may also be used at the start-line and at other points around the circuit.
- 3.15.6 All competing cars, when notified of the Safety Car intervention (by the flag signals, "SC" boards, or by any other means) will reduce speed and line up behind the Safety Car, no more than 5 car lengths apart, and maintaining the same speed as it. Overtaking or overlapping of any other competing car during a Safety Car intervention is forbidden. Overtaking of a Safety Car is forbidden unless the particular competitor concerned is signalled to overtake the Safety Car by the observer in the Safety Car.
- 3.15.7 When ordered to do so by the Clerk of the Course, the observer in the Safety Car will wave past any cars between the Safety Car and the race leader. These cars will continue at reduced speed and without overtaking until they reach the line of cars behind the Safety Car.
- 3.15.8 While the safety car is in operation, competing cars may enter the pit lane, but may only rejoin the track when signalled to do so and not when the safety car and the line of cars following it are about to pass or are passing the pit exit. A car re-joining the track must proceed at an appropriate speed until it reaches the end of the line of cars behind the Safety Car.
- 3.15.9 The Safety Car will remain in operation until at least the majority of competing cars on the circuit are lined up behind it.
- 3.15.10 When the Clerk of the Course calls in the Safety Car it will extinguish the yellow/amber flashing lights prior to exiting the circuit. This would normally be such that a minimum of 25% of a lap for circuits over 2 miles and 50% of a lap for circuits under 2 miles should be completed by the Safety Car with its lights extinguished.
- 3.15.11 Following the safety car extinguishing its lights, and prior to passing the green flag, the race leader will dictate the pace and, if necessary, fall more than five car lengths behind the Safety Car. In order to avoid the likelihood of accidents before the Safety Car returns to the pits, from the point at which the lights on the car are extinguished drivers must proceed at a pace which involves no erratic acceleration or braking nor any other manoeuvre which is likely to endanger other drivers or impede the restart.
- 3.15.12 As the Safety Car is approaching the pit entry, the green flag will be displayed at the start/finish line and the "SC" board withdrawn. Following this display of the start signal yellow flags and "SC" boards at the marshals posts will be withdrawn and be replaced with a waved green flag for one lap. The waved green flag will flow around the circuit in both directions, as an adjacent post displays their waved green flag. This system may be supplemented by a message being simultaneously broadcast to all marshals' posts if such a communication system is available. Overtaking remains strictly forbidden until the start signal at the start/finish line is passed.
- 3.15.13 Each lap covered while the Safety Car is in service will be counted as a race lap unless specified to the contrary in Series regulations.



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- 3.15.14 Under certain circumstances the Clerk of the Course may ask the Safety Car to use the pit lane. In this case, and provided its yellow/amber lights remain illuminated, all cars must follow it into the pit lane without overtaking. Any car entering the pit lane under these circumstances may stop at its designated garage area.
- 3.15.15 Should it be necessary to stop a race during a Safety Car deployment the Safety Car, with all competing vehicles following, will pass through the red flag at the start/finish line, complete one further lap at reduced speed and then, once the Safety Car comes to a stop at a position indicated by the Safety Car observer (which will usually be either the grid or Parc Fermé), all competing cars must stop behind it unless otherwise directed.
- 3.15.16 In exceptional circumstances the following may apply:
- (i) The race may be started behind the Safety Car. In this case its revolving yellow/amber lights will be turned on at the two-minute signal. This is the signal to the Entrants/Drivers that the race will be started behind the Safety Car and it will remain at the front of the grid during the remainder of the countdown. When the Green Flag is shown at the Start/Finish Line, the Safety Car will leave the grid and all cars will follow in single file in grid order no more than 5 (five) car lengths apart. The race will be deemed to have started when the Safety Car leaves the grid and the Green Flag is displayed.
 - (ii) Cars will leave the grid in single file grid order behind the Safety Car under the instruction of the Chief Start/Finish Line Marshal. Cars will remain in single file without overtaking, except that a car that falls behind may regain its grid position if the cars behind it could not avoid passing without unduly delaying the remainder of the field. In this case, Drivers may carefully overtake to re-establish their original starting grid order. If a car falls to the back of the grid, it must remain at the back of the grid.
 - (iii) Any car(s) delayed leaving the grid may not overtake another moving car if stationary after the remainder of the cars had crossed the line. In this case the car(s) shall remain at the back of the grid, in the order they left the grid.
 - (iv) A time penalty or Drive Through Penalty may be imposed on any Driver who, in the opinion of the Clerk of the Course, unnecessarily overtakes another Driver during these laps.
 - (v) The "SC" boards and Yellow Flags will be displayed at Marshals' Signalling Posts around the circuit until the Clerk of the Course withdraws the Safety Car from use in accordance with Regulation 3.10.10, 3.10.11 and 3.10.12.
 - (vi) All laps undertaken in this start procedure will be deemed to be counted as race laps
- 3.15.17 Any car being driven unnecessarily slowly, erratically or which is deemed potentially dangerous to other drivers at any time whilst the safety car is deployed will be reported to the Clerk of the Course. This will apply whether any such car is being driven on the track, the pit entry or the pit lane.

3.16 Paddock Presentation:

Each team will also be required to fly the Radical Flag plus a driver nationality flag prominently on their transporter or trailer during qualifying and race days. The Radical flag and flag pole are available from Radical Sportscars.

Radical Sportscars will park its trucks and awnings centrally in the paddock space allocated by MSVR / LMS / DTM. All teams are required to park their vehicles in an orderly manner adjacent to the Radical Trucks, as directed by the Paddock Parking Marshal.



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4 Series Race Penalties:

4.1 Infringements of Technical Regulations:

4.1.1 Arising from post practice Scrutineering or Judicial action:

Minimum Penalty: The provisions of MSA **Regulation C3.3**

4.1.2 Arising from post race Scrutineering or Judicial Action:

Minimum Penalty: The provisions of MSA Regulation **C3.5.1 (a) & (b)**

For infringements deemed to be of a more serious nature the Clerk of the Course and/or the Stewards of the Meeting are to invoke the provisions of MSA Regulation **C3.5.1 (c)**.

4.2 Additional Specific Series Penalties

4.2.1 As per the current MSA Judicial Procedure Regulations and the provisions of these Series Regulations.

4.2.2 Additional Specific Series Regulations.

All Registered Teams will be issued with an in-car camera on a rental basis. The rental fee for the camera is about 80,00 EUR / season. At the end of the season the camera will be returned to Radical Sportscars in an operational state. If the camera is broken or lost during the course of the season then the full price of the camera will become payable by the competitor to whom the camera is registered. The use of the camera is mandatory! The camera must be fitted to the car in the correct place and manner before qualifying for the first race entered. If a car does not have the camera fitted it will not be allowed onto circuit. The memory card from the camera will be routinely removed by the Series Driving Standards Scrutineer for observation.

Breaches of driving standards will be firmly dealt with. If it appears from official video recordings, in car video or any other track evidence that there may have been a breach of driving standards or behaviour, on or off the track, in a manner considered to have brought the series into disrepute, the Series Co-ordinator will be entitled to request that the Series Stewards consider the inception of an inquiry into the matter, notwithstanding that the Clerk of the Course or the Stewards of the event may or may not have already investigated the incident. Penalties may include individual race bans, loss of points, awards, and/or end of season awards or exclusion from the 2011 Radical Masters.

In order to maintain standards of conduct, the Series Co-ordinator, in consultation with the Clerk of the Course, may monitor any / all official reports of adverse behaviour at race meetings. If any individual is included on two such reports during one racing season he will receive written warning from the series Co-ordinator that his driving / behaviour is to be specifically observed at future race meetings. Any adverse reports during this period of observation could result in official MSA action and will result in a Series Stewards enquiry, with possible loss of Series points and refusal of further entries.

4.2.3 The Clerk of the Course reserves the right to impose Stop and Go or Drive Through penalties in accordance with MSA Q.12.6.

4.2.4 The Clerk of the Course reserves the right to impose a grid place penalty of up to 10 grid positions for a breach of the regulations.

4.3 Infringements of non-technical MSA Regulations and the Sporting Regulations issued for the Series.

As per 2011 MSA Judicial Procedure Regulations.



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5 Technical Regulations

5.1 Introduction

- 5.1.1 The following Technical Regulations are set out in accordance with the MSA specified format and it should be clearly understood that, if the following texts do not clearly specify that you can do it, you should work on the principle that you cannot. All references to the MSA Yearbook (blue book) relate to the current edition. Therefore everything that is not specifically authorised and anything not specified in these regulations or any series bulletin is strictly forbidden.
- 5.1.2 The 2011 Radical Masters is a 'single-brand' race series, for competitors participating in the Radical SR3 or SR8 as specified herein.
- 5.1.3 Each Radical model is manufactured to an identical class specification. In the interests of fairness and safety, competitors may not depart from this specification under any circumstances, other than as specified below.
- 5.1.4 All parts must be supplied by Radical Sportscars or its appointed distributor and fitted in their original position and as supplied, unless specifically stated in these regulations. Parts may only be fitted to the appropriate model.
- 5.1.5 Whilst the eligibility Scrutineer is empowered to check all competing vehicles for compliance and has been provided with the data to determine the continuing eligibility of each car, the onus of responsibility for the eligibility of vehicles competing in this Series, rests with the entrant/Competitor. In the event of a dispute concerning the compliance of a vehicle with these Regulations, the onus will be on the Entrant/ Competitor to satisfy the Organisers with regards to such compliance, and NOT the organisers to prove non-compliance.
- 5.1.6 Tests to establish the power output of any car may be carried out by Powertec. Such power testing will be carried out using rolling dynamometer equipment owned by Powertec and operated in accordance with the equipment manufacturers instructions.
- 5.1.7 Where it is suspected that a component or structure fitted to the competing vehicle, may render the vehicle ineligible under these regulations, the component or access to the component will be sealed by the Eligibility Scrutineer for subsequent examination. Where ineligibility is subsequently proven, all points accrued by the competitor from and including the date of sealing the said component, to the date of the examination, shall be forfeit (**C3.4**). (C3.4 - Competitors whose vehicles are subject to a pending eligibility check must advise this fact in writing to the Clerk of the Course of any event in which they wish to take part. The results of any such event will remain provisional until the eligibility decision has been made. Failure to inform the Clerk of the Course will result in a fine.)
- 5.1.8 Where costs are incurred as a result of any eligibility check, as may be reasonably requested either by the Eligibility Scrutineer or the Series Organisers, these will be borne by the competitor/entrant.
- 5.1.9 As a method of control, any component on a competitor's car may be removed by the Eligibility Scrutineer and exchanged for a similar component provided by the Series Organisers. This includes the ECU. Whilst efforts will be made to ensure that the condition of the exchanged parts is similar, responsibility for the care of exchanged components lies with the recipient. Exchanged components may be returned on completion of the race.
- 5.1.10 Any infringement of these Technical Regulations will render the competitor liable to penalties as defined in Article 4.1 of the Sporting Regulations.

5.2 General Description

- 5.2.1 The 2011 Radical Masters is a 'single brand' race series for Radical SR3 and SR8 race cars as specified herein.



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- 5.2.2 **Masters Class**
SR8 2.6litre V8
SR8LM 2.8litre V8
SR8 2.7litre V8

- Supersport Class**
SR3 1500 Supersport
SR3 RS1500 Supersport
SR3 1340 Supersport
SR5 2.0 litre Honda

Cars accepted into the Invitation Class by discretion of Radical Sportscars. Cars accepted into this class will not score points.

5.3 Safety Requirements

The following Articles of the MSA Section K Safety Criteria Regulations will apply (including specified clarification notes):-

K1.6.1.

K2.1.2. Minimum of Four point seatbelts. Two shoulder straps and one lap strap, with four anchorage points on the chassis/body shell or roll over bar of the vehicle. One either side of the driver and two to the rear of the driver's seat.

- K3.1.2.** (a) Medium, Plumbed-In, for discharge into both cockpit and engine compartment. (AFFF 2.25 litres, Zero2000 2.25 litres)
(b) Medium, Hand-Operated, for discharge into both cockpit and engine compartment. (AFFF 2.25 litres)

Organisers Note: K3.1.3 (4kg) is highly recommended as an alternative to K3.1.2(a) (2.25kg)

3.1.3 Large, plumbed-in, for discharge into both cockpit and engine compartment (AFFF 2.25 litres, Zero2000 2.25 litres)

K5. A rearward facing red warning light of a minimum of 21 watts, with surface area minimum 20cm², maximum 40cm², or of 21 watts with a surface area minimum of 50cm² and with lens and reflector to EU Standards, must be located within 10cm of the centre line of the vehicle and be clearly visible from the rear. Vehicles fitted with full width bodywork may alternatively use two lights equally located about the vehicle centre line. An alternative light unit of equal or enhanced constant luminosity or LED lights that are either homologated by the FIA or comply with relevant EU Regulations may be used.

The warning light must be switched on when visibility conditions are reduced, or as detailed within series and/or event regulations, or when so instructed by the Clerk of the Course.

K6. Tank fillers and caps must not protrude beyond the bodywork or be situated within the driver/passenger compartment. The caps must have an efficient locking action to reduce the risk of opening during an accident and to ensure closing after refuelling . Air vents must be at least 25cm to the rear of the cockpit and must be designed to prevent the escape of fuel should the vehicle be inverted. It is recommended that a non return valve is incorporated in the vent system. The entire fuel tank area 'Licked by the open air stream' must incorporate a crushable structure

K7. The crushable structure should be a sandwich construction based on a fire resistant core of minimum crushing strength 25lb/sq in. It is permitted to pass water pipes through this core. The minimum thickness of the sandwich construction must be 10mm. The fore and aft fuel tank area, however, must provide for a crushable structure of at least 100mm thickness at its thickest point, the position of this widest point to be at the constructor's discretion, over a length of at least 35cm after which it may be generally reduced to 10mm.

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- The sandwich construction must include two sheets of 1.5mm thick aluminium sheet having a tensile strength of 14 tons/sq in and minimum elongation of 5%.
All oil tanks mounted outside the main chassis structure must be surrounded by crushable structure of minimum thickness 10mm.
- K8.** The circuit breaker, when operated, must isolate all electrical circuits with the exception of those that operate fire extinguishers.
The triggering system location must be identified by a Red Spark on a White-edged Blue triangle (12cm base), and the 'On' and 'Off' positions clearly marked.
- K9.** Clean Flame-Resistant overalls, must be worn. Flame resistant overalls may be manufactured from Nomex III, Proban or equivalent materials.
Acceptable standards:- **Racing** - FIA 8856-2000
FIA approved Flame Resistant gloves, socks, balaclavas and full underwear must be worn. For FIA Standard Overalls the homologation label will be stitched into the fabric of the garment or on a sewn in label. For International use overalls must comply with: FIA 8856-2000
As with any item of safety equipment, evidence of damage or excessive wear can render it unsuitable for use. In the case of overalls this could include over frequent, or incorrect, washing, broken seams or stitching and worn patches. Two piece overalls should be avoided, but if worn must overlap and provide flame resistant coverage.
Due to the complex nature of national test standards and variations of detailed testing it is not possible to quote 'equivalents' from foreign national standards unless they are FIA approved as detailed above. National test standards are in the process of being superseded by European norms (CE Marks), which will provide a common standard throughout Europe. Individual competitors are responsible for ensuring their own safety and that appropriate flame resistant overalls are worn when mandatory.
Specific regulations concerning Flame Resistant gloves, socks, balaclavas and underwear are published by the FIA and applicable to International events.
When a name appears on a driver's helmet or overalls, this must be the name of the person wearing them.
- K10. Standards.** Helmets bearing one of the under mentioned 'standards' may be approved by the MSA subject to other criteria being met.
(a) INTERNATIONAL EVENTS & ALL MSA EVENTS.
FIA 8860-2004.
SNELL SA2005.
SNELL SA2000*.
SFI Foundation 31.1A, 31.2A.
BS 6658 Type A/FR
SNELL SA2010
SNELL SAH2010
- K11.** Either goggles or a visor must be worn at all times during training, practice and competing, unless in a closed vehicle. Recommended visor standard (minimum) BS4110Z. Goggles or visors must be clear or neutral density filters.
- K12. Intentionally left blank.**
- K13.** Head restraints when required to be fitted, must be capable of restraining a 17kg mass decelerating at 5g. Dimensions to be 10cms x 10cms and located such that the driver's/passenger's head/helmet is restrained and cannot move past it under rearward forces, or be trapped between the rollbar and the head restraint. It is recommended that it be within 5cm of the driver's/passenger's helmet when they are normally seated.



K14. General Safety Recommendations

Electrical

(a) **Batteries** – precautions should be taken to reduce the possibility of acid burns from batteries in case of accidents. Batteries should be secured within a non-conductive leak-proof compartment.

(b) **Electrical System** – all wiring should be secured and well protected to reduce the risk of fire from electrical short circuits.

Fuel

(a) **Fuel Tanks and Pipes** – every effort should be made to isolate fuel tanks and pipes from the driver/passenger compartment. The risk of fuel spillage from accident damage can be reduced by use of bag type tanks or by coating metal tanks with GRP. Tanks should be located so that they are given maximum protection by the structure of the vehicle. Vents should be designed to avoid spillage if the vehicle becomes inverted.

(b) **Fuel Fillers** – these should be designed and located to reduce risk of damage. Filler caps should not be liable to open in the case of an accident. Simple screw caps are effective. The positive locking of the fuel filler caps is recommended. The filler pipe to the tank should be of minimum possible length and not protrude beyond the bodywork (6).

Steering Wheels. The types least likely to inflict injuries due to breakage should be selected. Uncovered wooden rims should be avoided.

Fire Extinguishers. Even small extinguishers carried in a vehicle can extinguish or contain fires before they develop seriously. Minimum recommendation is for a 1.75 litre AFFF extinguisher or equivalent with BS4123/EN3 approval (EN3 minimum size is 2 litre AFFF) and a rating of at least 34B. More sophisticated equipment is required in many events and full vehicle systems are highly recommended (see 3).

Radiator Caps. These caps should be positioned or shielded in such a way that hot water or steam cannot scald the driver of the vehicle if they become opened or broken in an accident.

Safety Equipment As a general principal competitors are advised to replace any safety item, helmet, safety harness, seats etc., should they have been involved in a severe accident.

Paddock Safety. In areas to which the public has access, no engine shall be run with the gears engaged whilst the vehicle has any driving wheels not in direct contact with the ground, unless all moving parts are adequately guarded and, with the exception of Karts, a competent person is seated in the driving seat.

Heat and Flame Resistant Clothing. Where appropriate and required by specific regulations the FIA standard is shown below, as detailed in FIA Yearbook, Appendix L, Chapter III, Article 2. These standards are advised for all competition use where protective clothing is either mandatory or recommended.

(a) **Underclothing.** Materials tested to ISO 6940. An indication of this should appear on the front of the upper garment, which must cover the neck.

(b) **Balaclavas.** Materials tested to ISO 6940. All the part seen in frontal projection when worn to consist of at least 2 layers of minimum 180 gr/m² each. The bottom of the balaclava to meet the requirements in (f).

(c) **Socks.** Materials tested to ISO 6940. Socks to be half hose (to mid-calf) and made from at least one layer minimum 180 gr/m².

(d) **Shoes.** To cover the whole foot and ankle. Materials tested to ISO 6940 and fastenings and laces to be of non-fusible material. Soles to be manufacturer certified as resistant to hydrocarbons and to flames. Thread used to be flame resistant. Manufacturers to register all shoe models with the MSA and FIA.

(e) **Gloves.** Materials tested to ISO 6940. Each glove to be labelled to that effect. Backs of gloves to be made from at least two layers of 180 gr/m². Thread must be flame resistant and non-melting, seam stitching to be invisible from the outside. Gloves must be fitted at the wearer's wrist and cover the cuff of the wearer's overalls. Manufacturers must register all glove models with the MSA and FIA.

(f) Where MSA/FIA regulations specify the wearing of protective clothing the labels on overalls and upper underclothing may be verified by the organisers for compliance with regulations. Officials shall also have the right to examine other articles of clothing subject of regulations upon request. Wearers are warned of the particular vulnerability of neck, wrists and ankles. Balaclavas must extend to enter inside the overalls or undergarment around the



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neck and not come free whichever way the head is moved. Upper undergarments should have a polo style neck.
Ankles and wrists should always be covered by at least two items of protective clothing.

K3.1.3 (4kg) is highly recommended as an alternative to K3.1.2(a) (2.25kg)

5.3.1 Two fire extinguisher nozzles must be fitted on the SR8/SR8LM, one either side of the engine bay, to ensure suitable spray coverage in the event of an engine fire

5.3 General Technical Requirements and Exceptions

5.3.1 DEFINITIONS:MSA Section B, Nomenclature & Definitions apply. All references to standard parts and or materials in these regulations shall be taken as being the Radical Sportscars original specifications and drawings. In all cases of dispute, query or clarification or ruling these drawings and specifications shall be regarded as fact. All parts listed in the Radical 2010 International Order Forms are eligible respective to car type., unless otherwise indicated in these regulations.

5.4 Chassis

5.4.1 Powder coated tubular steel space frame chassis with aluminium panels and integral roll over bar completely standard and unaltered. This includes thickness of panels and rivet spacing. Optional forward facing roll-bar stays may be fitted. They must be equipped with FIA safety foam.

5.4.2 Towing Point – All vehicles must comply Q19.1.3

There must be substantial towing eyes securely fixed to the main structure of the vehicle, front and rear, within the confines of the body to enable the vehicle to be moved. Towing eyes must have a minimum internal diameter of 60mm. Towing eyes/towing points should be painted a contrasting bright colour (dayglo red, orange or yellow).

5.4.3 An FIA approved collapsible crash box structure supplied by Radical Sportscars must be fitted to the chassis during series events.

5.4.4 **All Radical Models are manufactured to a standard specification and may not be altered.** All chassis repair work must be carried out by Radical Sportscars Ltd.

5.5 Bodywork / Aerodynamics:

5.5.1 Any aerodynamic device **manufactured by Radical Sportscars for the particular model**, listed on the Radical SR3 and SR8 (SR8LM) 2010 or later international order form may be fitted as supplied, i.e. front splitter, front diffuser, dive planes, single plane rear wing, double plane rear wing, rear diffuser or roll bar fairing.

5.5.2 GROUND CLEARANCE: The minimum ground clearance is 40mm **J5.20.11**

Under no circumstance can any part of the bodywork, or of the suspended part of the car, be below a horizontal plane passing 40mm ~~4em~~ above the ground, the car being in normal racing trim with the driver aboard. A gauge of 40mm ~~4em~~ may be used by Scrutineers before or after races or practice to check the ground clearance.

5.6 Engine/Transmission

All engines are prepared and sealed by Radical Performance Engines (RPE) for Radical Sportscars Ltd. All repairs and rebuilds must be undertaken by RPE.

5.6.1 Masters Class

SR8

380bhp RPE 2600cc RPA V8 engine

460bhp RPE 2800cc RPB V8 engine

460bhp RPE 2700cc RPX V8 engine



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Supersport Class

260bhp RPE Suzuki 1500cc K8
252bhp RPE Suzuki 1500cc K7
210bhp RPE Suzuki 1340cc K8
225bhp Honda K20 2000cc

The starter, generator and ignition system must be fitted as standard

- 5.7.2** All competitors who have previously raced in the Radical Masters must have all out of season engine work carried out by RPE before 2011 Series commences.
- 5.7.3 Competitors not having out of season work carried out will have their MSA engine seals inspected by the Eligibility Scrutineer prior to qualification for the first event.
- 5.7.4 Once registration for the 2011 Radical Masters has been accepted ALL engine work for the duration of the 2011 Series must be carried out by RPE.
- 5.7.5 Cooling System**
The oil and water radiators as supplied as standard by Radical Sportscars must be retained. It is permitted to blank off the radiator to control the temperature.
- 5.7.6 Induction System**
The entire induction system including carburettors/injector system must be standard for the engine. The standard air box and filter as supplied by Radical Sportscars must be retained and used.
- 5.7.7 Exhaust System**
The exhaust system including silencer must be standard as supplied by Radical Sportscars. Exhaust wrapping is not permissible.
- 5.7.8 Ignition System**
The standard Radical Sportscars ECU must be retained. It is not permitted to reprogram the ECU. The Eligibility Scrutineer will on a regular basis supply a replacement ECU, which the competitor must change on request.
The ECU must be located in the position as supplied from the factory. Heat shielding the ECU is free but it must not restrict removal when required.
- 5.7.9 Fuel Delivery System**
The standard fuel pump as supplied by Radical Sportscars must be retained.
- 5.7.10 Heat shrink or heat insulation of fuel lines, wiring loom and wires may be fitted. This must be easily removable for inspection, if required.
- 5.8 Suspension**
- 5.8.1 All cars may be fitted with AVO or INTRAX shock absorbers supplied by Radical Sportscars. No internal modifications are permitted.
- 5.8.2 Spring rates front and rear are free. Alternate front anti-roll links and rear anti-roll bars as supplied by Radical Sportscars, may be used.
- 5.8.3 The front and rear suspension is double wishbone. The front and rear suspension is fitted with the unique Nik-Link anti-roll system

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5.9 Transmission

- 5.9.1 A separate gearbox catch bottle must be located near to the gearbox breather and connected by a braided hose on all SR8 (SR8LM) cars
The Radical Pneumatic paddle operated shift system may be fitted.
- 5.9.2 The reverse drive system as supplied by Radical Sportscars must be retained and operational by the driver when seated in the driving position at all times.
- 5.9.3 The final drive system must be standard as supplied by Radical Sportscars. Drive ratios may be adjusted by changing sprockets/gears supplied by Radical Sportscars.

5.10 Electrics

5.10.1 Exterior Lighting

Cars may run with or without the full lighting kit supplied by Radical Sportscars. Headlight covers must be fitted in either case. Brake lights must be fitted and in working order and must not be wired in a way that allows them to be switched off.

5.10.2 Rear Fog Warning Light

Radical Sportscars' high intensity LED rear lamp must be fitted and be in working order.

Radical Sportscars' high intensity led rear lamps must be fitted and be in working order. Two lights to be installed equi-spaced about the vehicle centre in standard bodywork lighting locations.
Rear lights to be a minimum intensity of 21w with a surface area between 20 & 50cm²

When competing in a Radical Masters round a centrally mounted, high intensity FIA Approved LED rear light must be fitted and working.

5.10.3 Battery

An electrically powered starter motor and battery are mandatory and must be operable by the driver when normally seated and capable of repetitive starts.

5.10.4 Alternator

Must be standard as supplied by Radical Sportscars, and be in working order.

5.10.5 Dashboard Instruments

Data loggers supplied by Radical Sportscars are permitted, however these will be used for drivers' guidance only. Official times will be provided by the official timekeeper. The fitting of a transponder is mandatory. The Radical lap timer, as supplied by Radical Sportscars may be fitted. This, however, will be used for drivers guidance only. Official times will be provided by the Official timekeeper. The Series Eligibility Scrutineer shall have access to data loggers and data logger equipment, upon request.

- 5.10.6 An additional sticker must be placed on both outer sides of the cockpit to clearly identify the location of the electrical cut-off being inside on the dashboard

5.11 Brakes

5.11.1 Radical 4 pot calliper front and rear

- 5.11.2 Vented 260mm diameter discs or optional 280mm (SR3) and 300mm (SR8) floating vented discs supplied by Radical Sportscars. Only colour coded brake pads supplied by Radical Sportscars may be fitted.

- 5.11.3 The fitting of a cockpit adjustable bias adjuster as supplied by Radical Sportscars is permitted.

- 5.11.4 A mesh screen supplied by Radical Sportscars must be fitted across the brake duct apertures on all cars to prevent ingestion of grass and debris to the brake ducts.



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5.12 Wheels and Steering:

- 5.12.1 Radical Master Class and Supersport Class - cast wheels as supplied by Radical Sportscars.
- 5.12.2 Steering wheel diameter may be changed to suit drivers preference, and must be supplied by Radical Sportscars.

5.13 Tyres

- 5.13.1 Dunlop tyres marked with the Radical Trademark on the tyre wall as supplied by Radical appointed tyre distributor.

Where necessary, alternative tyre compounds may be specified by series bulletin.

- 5.13.2 A maximum of **8 tyres** may be used per event. Wet weather tyre quantities are unrestricted. Serial numbers from these tyres must be declared on the Radical Series Tyre form. Top copies of the form are to be retained by the team/driver and the bottom copy must be handed to the Eligibility Scrutineer prior to the start of **each** qualification.
- 5.13.3 Each car must be fitted with four brand new slicks and have two brand new slicks as spares for the first event of the season.
- 5.13.4 Should a competitor require an additional tyre(s) during the race weekend and the Series Eligibility Scrutineer, Radical Chief Technician and Dunlop Technician deem a the tyre(s) unsafe for racing the competitor is permitted to purchase a replacement tyre(s). If the replacement tyre puts the competitor over his/her permitted tyre allocation then for the following race he/she will forfeit 5 series points per tyre over and above the allocated number. Replacement tyres shall be declared on the tyre form.
- 5.13.5 The use of tyre heating equipment/heat retention devices, tyre treatments or compounds, is prohibited.

5.14 Weights

All cars will be weighed during **Parc Ferme – after qualification and again as required by the Eligibility Scrutineer, after either or both of the races.**

Cars will be required to meet the minimum weights with driver and driver equipment, as weighed on the Series Scales.

Master Class: 765kgs
Supersport Class: 675kgs

5.15 Fuel Tank and Fuel:

5.15.1 Type Of Fuel Tank

Standard tank (FIA Fuel Cell – Radical Masters) as supplied by Radical Sportscars must be retained.

Pursuant to MSA GR J5.13.4, competitors are permitted to use fuel complying with FIA Appendix J – Article 254 – Article 9

- (Fuel (a) - All substances fed into the combustion chambers of an engine excepting only: (a) Atmospheric air and water vapour contained naturally therein.
(b) Lubricating oil exceeding in viscosity 5 cS at 100 °C.
(c) Anything recommended in the relevant vehicle manufacturer's instruction manual as normal treatment for the specific type of recognised production car.)

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2011 Radical Masters Sporting & Technical Regulations

Fuel supplied by Shell Racing Solutions is mandatory for all official series testing, practice, qualifying and race sessions. Compliance with this regulation will be verified by fuel testing carried out throughout the season. To allow comparison testing to be carried out, competitors must have a minimum of 3 litres of fuel left in the fuel tank at the end of any session.

5.15.2 Each car must be fitted with a Radical Fuel testing 'T' piece plus a Radical dry break valve fitted to the fuel line to facilitate safe fuel testing.

5.16 Silencing

Specification as per MSA regulations **J5.17. – J5.18.**

5.18 Competition Numbers/Decals

5.18.1 Positions

Racing numbers must be affixed in accordance with MSA regulations. Radical and Sponsors decals as issued for the current year must be affixed to the vehicle as laid out in the diagram issued with those decals. Each of the classes will be required to secure a different colour number background to make it clear which class they are racing in. Failure to comply will render the car ineligible.

- | | | |
|------|--|--|
| i) | Masters Class | Blue backgrounds/ White numbers |
| ii) | Supersport Class | Red backgrounds/ White numbers |
| iii) | Invitation Class
(If required) | Black backgrounds/ White numbers |

5.18.2 Decals

Club and sponsor decals will be available at the first event at which the car is entered.

One complete set of decals including numbers and number backgrounds, will be sent to each team on receipt of completed registration form, FOC. Any subsequent numbers or number backgrounds will be charged according to the 2010 Radical price list.

Sponsor decals are to be positioned as per drawing available from Series Co-ordinator. Failure to comply will render the car ineligible.

5.19 Driver Safety

The use of a HANS Device is recommended at all Radical Masters rounds.

5.20 Radio Communication

Cars will be Permitted to carry radio transmitters or receivers, for which Ofcom licences maybe be checked at scrutineering, in races due to Driver changes.

No signal of any kind may pass between a moving car and anyone connected with the car's Entrant, Team or Driver save for the following: This includes wireless/Bluetooth data transfer during pitstops

- (i) Legible messages on a Pit Board
- (ii) Body movement by the Driver
- (iii) Verbal communication between a Driver and his Team by means of radio using an approved frequency.



6 Appendices

The following Commercial Undertakings are not subject to the judicial procedures of either the Series Stewards or the MSA/MSC.

6.1. Race Organising Club and Contacts

Vehicle Manufacturer:

Radical Motorsport Ltd
24 Ivatt Way Business Park
Westwood
Peterborough
PE3 7PG

Tel: 01733 331717

Fax: 01733 264959

e-mail: info@RadicalSportscars.com

web-site: www.RadicalSportscars.com

Eligibility Scrutineer:

Phil Mason
16 Beaufort Drive
Bourne
PE10 9PN

Tel: 01778 424877 (h)

Tel: 01733 292247 (w)

Series Organiser:

International Motorsport Events S.A.
204 Route de Luxembourg
7241 Bereldange
Luxembourg

Tel: +44 (0)1733 331717

e mail: service@imevents.lu

Series Co-ordinator:

Christian Droop / Alexander Tauer
International Motorsport Events S.A.

Tel: +44 (0) 1733 331717

e-mail: service@imevents.lu



6.2. Commercial Undertakings

6.2.1 Vehicle Presentation

The presentation of the car is fundamental to the profile of the series, its sponsors and its audience. Therefore in considering whether to permit any car to the race, at any point during the season, the organisers will regard as paramount the presentation of the car. In taking into account its appearance inherent in which is the standard of its presentation (including interior) they may exclude any car which they consider may prejudice the reputation of the series/series or is otherwise acceptable.

This will include where the car is presented at a race event bearing accident damage sustained at a previous event and which has not been subject to the completion of a full and proper repair. A double-header is regarded as one event for the purpose of this regulation.

6.6.2 Team Wear

It is important to project a professional image. It is a condition of entry to the Radical Masters Series that all mechanics and members of the team wear matching and professional teamwear. All drivers are to have embroidered Radical badges (supplied free of charge to every registered driver) sewn to their overalls.

Each team will be required to fly the Radical Flag prominently on their transporter or trailer during qualifying and race days. A flag and flag pole are available from Radical Sportscars.

6.6.3 Paddock

Radical Sportscars will park its trucks and awnings centrally in the paddock space allocated by the Organiser. All teams are required to park their vehicles in an orderly manner adjacent to the Radical Trucks, as directed by the Paddock Parking Marshals.