

2017 TECHNICAL REGULATIONS

Revision Date: December 16, 2016



Series:

IMSA WEATHERTECH SPORTSCAR CHAMPIONSHIP

Class:

PROTOTYPE CHALLENGE



Sanctioned by:

**INTERNATIONAL
MOTOR SPORTS
ASSOCIATION**

One Daytona Blvd.
Daytona Beach, FL 32114
(O) +1 (386) 310-6500
(F) +1 (386) 310-6695
www.imsa.com

PC
Technical Regulations

ARTICLE 1 – PRELIMINARY NOTICE

- 1.1 Any item which is not explicitly authorized by these regulations is forbidden.
- 1.2 The measuring and checking tools used by IMSA will be the reference for all measurements and data checks. No protest will be accepted in this respect. The competitors will have access to these tools in order to check the accuracy of their own equipment.
- 1.3 The technical data which constitutes the reference are those stipulated in the technical manual of the Oreca FLM 09.
- 1.4 In case of any technical evolution, IMSA will inform the competitors by a technical bulletin.

ARTICLE 2 – CARS

- 2.1 Only the prototype race car ORECA FLM 09, in the original version, in full compliance with the regulations, is allowed to take part in the Events.

ARTICLE 3 – MODIFICATIONS

- 3.1 It is strictly forbidden to make any modification of any kind, with the exception of those permitted by these regulations or by a technical note published by IMSA. In the case of a second-hand car being used, it is the competitor's responsibility to ensure that the car complies with the regulations.
- 3.2 All the parts which cannot be used due to wear, failure or accident must be replaced solely by genuine original Oreca FLM 09 parts.
- 3.3 Any mechanical operation on the engine or on any other sealed component must be completed by a company approved by IMSA.
- 3.4 Any changes will be issued via bulletin. If in question always ask or be subject to penalties. Any clarification or request must be submitted via rules@imsa.com.

ARTICLE 4 – WEIGHT

- 4.1 The weight may be checked at any time during an event.
- 4.2 The minimum weight of the ORECA FLM 09 shall be 910 kg. (The car must be ready to run with all its equipment without fuel and driver).

ARTICLE 5 – MONOCOQUE

- 5.1 No modification of any kind are permitted, including the drilling, reinforcement, cutting or fitting of neither brackets nor any other parts.
- 5.2 If a monocoque is damaged in an accident, it must be inspected by IMSA and the repair procedure must be approved. If the damage is determined to be major by IMSA the repair must be conducted by an approved IMSA facility. If the damages are too severe, the monocoque may be declared unusable for safety reasons. In this case, the monocoque must be replaced.
- 5.3 Zylon Panels must be installed on the driver's side of the monocoque. These panels may be installed on both sides of the monocoque at the Team's discretion.

ARTICLE 6 – BODYWORK

- 6.1 Bodywork slightly damaged may be repaired, but only after a request has been made to the Technical Director who will validate or not the quality of the work and the compliance of the repaired part(s) with the regulations.
- 6.2 Any damaged or poorly repaired component may be declared illegal by the technical officials at their sole approval.
- 6.3 The front crash-box may be repaired only by an IMSA approved facility.
- 6.4 Adhesive tape may only be used for the purpose of protection. In no case it may join separated parts or have an aerodynamic influence. It is permitted to use tape to seal the bodywork in the area of the fuel filler to retard spillage into the engine compartment or cockpit.
- 6.5 Air Extractors are mandatory for the area above the front and rear wheels. The size of the air extractors are defined by drawing which may be obtained from IMSA.

ARTICLE 7 – ENGINE

- 7.1 Engines must remain sealed and keep all the markings affixed by Katech, at all times, including when returning the engine to Katech for rebuild.
- 7.2 The competitor is responsible for the state of the seals and their presence at all times. Missing or deteriorated seals will be considered as an infringement to the technical compliance.
- 7.3 Any intervention on the engine is forbidden. Repairs and maintenance operations must be done by Katech. Only the following components may be dismantled by the competitors, on the condition that they will be replaced by similar components for the FLM 09 car:
 - The spark plugs, air filter, oil filter, belts.
 - The alternator and the power steering pump may be replaced.
- 7.4 The maintenance, repair and rebuild of the engine must be made in accordance with the specifications as defined by Katech.
- 7.5 Katech will have the right to exchange (replace) an engine without having to give reason.
- 7.6 The engine's rev speed will be restricted outside the Events. At the beginning of an event, during the technical checks, an Official will unlock the rev limiter. At the end of an event, before leaving the circuit, the competitor must present his car to the Officials in order to have the rev limiter reactivated.
- 7.7 At any time during an event, the technical delegates may check the recorded data.
- 7.8 The control units of the engine and of the gearbox are sealed.
- 7.9 No change of engine is permitted without first making the request to the Technical Officials and without receiving their agreement.
- 7.10 At the end of an event, an engine may be removed in order to check its compliance.
- 7.11 The exhaust system cannot be modified. On some circuits, the use of silencers may be compulsory if requested by the organizer.
- 7.12 An Engine air restrictor shall be defined by the Balance of Performance Bulletin.

ARTICLE 8 – FUEL SYSTEM

- 8.1 The fuel tank is FIA homologated and cannot be used for more than 5 years unless re-certified by the supplier for another 2 years of life time. In case of its replacement, only the fuel tank specified for the Oreca FLM 09 car is permitted.
- 8.2 It is forbidden to cool the fuel.
- 8.3 It is forbidden to add anything to the fuel.
- 8.4 The fuel capacity shall be defined by the Balance of Performance Bulletin.
- 8.5 Adjustment of the fuel cell capacity must only be accomplished by internal methods (for example plastic balls). Adjustment of the cell by any external method (outside of the fuel cell bag) is not permitted.
- 8.6 The only approved fuel fill system is the Dan Jones system as defined by IMSA.

ARTICLE 9 – COOLING AND LUBRICATION SYSTEMS

- 9.1 The water and oil systems (tank, lines, etc.) must not be modified. Heat sleeves on lines are permitted.

ARTICLE 10 – TRANSMISSION

- 10.1 All the gearbox parts must remain original parts. No modifications of the dimensions or aspect are permitted. The gearbox and differential must be sealed and all work to the gearbox must be completed only by Xtrac or their authorized agent.
- 10.2 Teams will have the option of choosing either the standard Short ratio gear set (as used in 2011) OR the Short ratio gear set 1st-5th with alternate Long 6th gear (19:20). For the Rolex 24 an alternative 5th and 6th gear are permitted, as supplied by Xtrac.
- 10.3 At any time during an event, it must be possible for the driver, sitting in his normal driving position, to select the reverse gear.
- 10.4 The gear selection unit and the electronic control system are sealed. The competitor is responsible for the state of the seals and their presence at all times. Missing or deteriorated seals will be considered as an infringement to the technical compliance.
- 10.5 Dismantling the flywheel (to change clutch stud) is forbidden, if this is needed please refer to a Katech technician.
- 10.6 The clutch assembly and its operating system must remain to their original specifications.
- 10.7 The diff case is sealed. The angle of the ramps cannot be changed or inverted. If the seal must be removed it must be removed by an Xtrac technician and the seals must be replaced by the IMSA technical delegate before every event.
- 10.8 The starter motor is free.

ARTICLE 11 – BRAKING SYSTEM

- 11.1 The whole braking assembly must not be modified, including the callipers, cooling, etc.
- 11.2 It is permitted to mask the cooling duct's entrance in order to regulate the brake's temperatures.
- 11.3 The choice of diameters for the master cylinders will be restricted, as indicated in the technical manual.
- 11.4 The only brake discs and pads permitted are from Carbone Industrie as follows:

Front disc reference:	AVE 32 SA3.0 15".
Rear disc reference:	AVE 32 SA3.0 14".
Pad reference:	BR GT98 H53.0 E31.5.

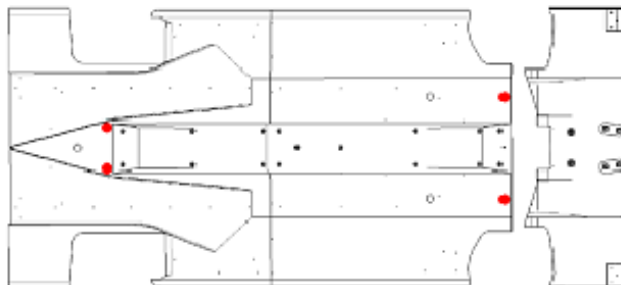
ARTICLE 12 – SUSPENSION

- 12.1 The shock absorbers are sealed. The competitor is responsible for the state of the seals and their presence at all times. Missing or deteriorated seals will be considered as an infringement to the technical compliance. The only settings permitted are those operated by the standard knobs. The rebuild and changing of the damper internals can only be performed by the IMSA specified agent.
- 12.2 Only the anti-roll bars provided by Oreca and listed in the technical manual are permitted.
- 12.3 Suspension packers and bump rubbers are free provided they are non-metallic and commercially available.
- 12.4 Left and Right Damper cooling is permitted. The only acceptable method is to utilize the existing brake cooling duct and similar hose size, and routing the hose to the vicinity of the damper.
- 12.5 Springs are free. The spring material must be metallic.
- 12.6 Suspension parts that have been crack checked may only be re-coated with Kephos or black oxide coating.

ARTICLE 13 – RIDE HEIGHT

- 13.1 The underbody plank must have an initial thickness of 20 mm. A maximum wear of 5 mm will be permitted on the skid block at the end of the practices and at the beginning of the race. The skid block will not be checked at the end of the race. The only skid permitted is the FLM skid block provided by Oreca.
- 13.2 Maximum cold pressures on Dry-Type tires for measurements is 30.45 PSI
- 13.3 A reference flat area will be available to the competitors in order to check the ride height of the cars. This reference surface and the measuring equipment of the Technical Officials will be the sole used to give a decision regarding the validity and the conformity of this measurement.

Figure 1



ARTICLE 14 – STEERING SYSTEM

- 14.1 It is compulsory to use the original parts of the complete steering system and of its power assistance, unless otherwise stated herein.
- 14.2 The rack and pinion steering and servo pump must not be repaired and/or dismantled.
- 14.3 The rack and pinion steering are sealed; missing or deteriorated seals will be considered as an infringement of the technical regulations.

ARTICLE 15 – WHEELS AND TIRES

- 15.1 It is compulsory to use the specified BBS or OZ rims as specified in the Technical Manual.
- 15.2 Over-pressure valves are forbidden.
- 15.3 The only tires permitted are the specific tyres made for the PC class and supplied by Continental Tire.

Dimensions:	Front	30 / 65 – 18
	Rear	31 / 71 – 18

ARTICLE 16 – COCKPIT

- 16.1 The cockpit components and equipment must remain in their standard state, batteries are free.
- 16.2 The driver seating area may be filled with expanded foam, to suit the driver's morphology. Use of the seat insert is not mandatory.

ARTICLE 17 – SAFETY FEATURES

- 17.1 Fire extinguisher, master switch, towing rings, etc., must remain in their standard state.
- 17.2 The headrest may be covered providing that a fire-resistant material is used.
- 17.3 It is recommended to mount additional rear lighting between the rear wing uprights in case damage occurs to the original light. This light shall be red in color and an additional harness may be added. Installation of this light must be approved by IMSA in writing prior to use.
- 17.4 Hella HID or IMSA approved LED lights are permitted as a replacement for the factory supplied lights.
- 17.5 All cars are required to install a green PC Class ID light (available from IMSA) light at the rear of the car.

ARTICLE 18 – ELECTRONICS

- 18.1 The electrical harnesses, lights, ECU, control unit of the gearbox, etc., must remain in their standard state and position. Any changes must be submitted in writing to IMSA prior to use.

ARTICLE 19 – DATA ACQUISITION

- 19.1 The only data acquisition permitted is the IMSA specified MOTEC system and those from the optional kit. It is forbidden to use any other measuring system or data acquisition system. Any request to change the system will require written IMSA approval. Any sensor is permitted provided it is not one of the following types:
 - Ride Height Sensors of any type including laser or ultrasonic.
 - Multiple axis gyros or accelerometers
 - Strain gauged pushrods
 - Tire pressure or temperature sensors

ARTICLE 20 – ADDITIONAL EQUIPMENT

- 20.1 Transponders: an IMSA issued driver ID transponder must be used. See Attachment 1 below.
- 20.2 Radios: A radio system "driver/pit" may be installed on the condition that the equipment is homologated by and declared to the relevant authorities. The radio equipment must be safely attached on the left side of the cockpit.
- 20.3 On-board cameras: it will be permitted, once the Officials have been informed, to fit an on-board camera, providing that the device is of small dimensions and safely attached. The mounting position must be approved by the Officials.

ARTICLE 21 – TECHNICAL CHECKS

- 21.1 The technical checks are carried out by the Technical Officials of IMSA.
- 21.2 Technical checks may take place at any time, before, during or after the practice sessions and the races.
- 21.3 Each car must pass technical scrutineering before the qualifying sessions in order to be allowed to anticipate in these sessions.
- 21.4 The presentation of a car to technical scrutineering will be deemed to constitute an implicit declaration of eligibility by the competitor.
- 21.5 Only the entrant or his representative duly designated must attend the technical checks. The entrant's mechanics will have the duty to dismantle and to re-fit the components to be checked according to the request and under the control of the officials.

21.6 The cars must be presented to the technical checks as described hereunder:

- Car ready to take part to the practice sessions or to the race.
- All the safety elements (fire-extinguisher, towing rings, etc.) in place and in working condition.
- Decorations and race numbers affixed and in good condition.
- Car in full compliance with the regulations.

Any car failing to comply with these requirements will be refused.

21.7 A car arriving on the starting grid with damaged seals will be subject to:

- a fine of \$750
- a quick check from the officials who will affix new seals if necessary.

This quick check of the car will not be an assumption of its compliance. A car with seals missing will not be allowed to start the race.

ARTICLE 22 – REFUSAL OF CHECKS

22.1 Any refusal of a control and/or a check will be deemed as a failure of the car's compliance and will lead to the car being excluded of the event at the first offence and to the permanent exclusion of IMSA with the loss of the entry fees at the second offence.

ARTICLE 23 – SEALING AND MARKING

23.1 The seals and markings on the mechanical components will be checked by IMSA and any removal, modification or deliberate damages of these seals and markings will lead to an immediate exclusion. The state of the seal(s) is the responsibility of the competitor.

23.2 The setting of any electronic box or casing is considered as a sealing; in no case it can be modified or damaged. The opening of such box or casing will lead to an immediate exclusion.

23.3 The imitation and/or modification of any seal or marking will lead to the driver and the entrant being excluded and banned from any further participation in the next event.

23.4 The following components must be sealed: Engine, shock absorbers, engine electronic control unit (ECU), gearbox, AGS system, and ballast weight, if used.

23.5 IMSA may decide to seal other components, after informing the competitors by bulletin.

23.6 The fact that seals are installed only presumes conformity and does not preclude in any case that the component concerned may be removed and/or checked at any time.

23.7 If a competitor needs to work on a sealed component, he must receive prior permission from the Sr. Director of Technical Regulation and Compliance.

23.8 Any parts removed and declared illegal will be retained, without replacement or reimbursement, by IMSA.

ARTICLE 24 – NON-CONFORMITY

- 24.1 A declaration of non-conformity due to missing seal(s) or marking(s), failure to attend the post-race checks, etc., have the same effects regarding the regulations as a technical non-conformity.
- 24.2 Any non-conformity will be treated as such within the meaning of the regulations; whatever the origin of this non-conformity (displacement, stop, tests, race, etc.) or the moment when it occurred or its cause (for example: vibrations, shocks, overheating, accidental introduction of a debris, etc.).
- 24.3 Any car declared illegal will be disqualified from the event and could be excluded permanently.

ARTICLE 25 – SHAKER RIG AND WIND TUNNEL TESTING

- 25.1 Shaker rig and wind tunnel testing are strictly prohibited. Any infraction will result in the loss of 50 championship points and up to a \$50,000.00 fine. Additional penalties may be imposed at the discretion of IMSA Officials.

ARTICLE 26 – PERMITTED MODIFICATIONS CONSIDERED “RACE PREP”

FUEL SYSTEM:

- Addition of Fuel level switch
- Additional capacity to the fuel tower
- Addition of hose and Quick Disconnect for fuel pump out
- Replacement of main and lift pump
- Modify fuel cell wiring harness for reserve system
- Addition of fuel reserve system (must be approved by IMSA in writing)

EXHAUST SYSTEM:

- Addition of heat wraps to exhaust system
- Utilize larger than stock muffler support hardware
- Replacement of muffler bracket spring with strap
- Permitted to coat the exhaust headers
- Install heat shielding on the floor under the exhaust system
- Only the exhaust system including mufflers as provided by Carl Haas Auto is approved

OIL AND WATER COOLING SYSTEMS:

- Radiator inlet screens are permitted provided they are to the satisfaction of the Officials
- Permitted a single NACA duct installed only for the purpose of alternator cooling
- Quick fill connections for the Cooling system are permitted
- Addition of engine water pre-heater system
- Addition of a larger gearbox oil cooler, localized modifications are permitted for installation

BODYWORK:

- Local modification to the lower rear wheel arch is permitted for tire clearance
- Extending the front brake hose attachment flange
- Addition of hardware to the vertical fence that hold the front brake hose
- Alternate bodywork hardware, i.e. camlocks or tridar fasteners are permitted on the external bodywork only
- Install additional stays for the floor
- Localized modification to the upper wheel arch for Long Beach event
- Localized modifications to the splitter for clearance from rubber build up
- Windscreen may be increased to reduce helmet buffeting, it may not be decreased
- A mesh air inlet cover is permitted
- The tub may be drilled for installation of radios, jump battery connections etc., provided the safety standards regarding drilling the tub are maintained

COCKPIT:

- Addition of a mounting panel for electronics is permitted
- Addition of a throttle return stop
- Localized modifications of the carbon dash for electronics, antenna etc.
- Modifications to the steering wheel buttons, switches for driver comfort
- Localized modifications to the carbon seat are permitted for driver comfort
- Headrest may be replaced with Mark One Composites replacement
- Localized modifications to the headrest are permitted for purpose of driver comfort

ELECTRONICS:

- Motec beacon receiver is permitted
- Addition of brake pressure transducers to the data system is permitted
- Localized modification to the steering wheel mil plug bracket for driver comfort
- Addition of Motec Power Distribution Module is permitted provided IMSA is provided with a detailed system description
- Video systems are permitted provided the camera location is approved by IMSA

HARDWARE AND PLUMBING:

- The addition of nut plates to the rockers and shock mounts is permitted
- Air jack hardware and location may be replaced or modified, single stage release is permitted
- Quick Disconnect hardware is permitted on all fluid lines and electrical connections

The following Appendices to the Technical Regulations provide IMSA-specific information and technical specifications. The Appendices are considered an integral part of the IMSA Technical Regulations for the relevant Series and/or class of Car. Where the Appendices are in conflict with the Technical Regulations, the language of the Appendices shall control. These Appendices are applicable only to IMSA sanctioned Events and are void in any other series.

APPENDIX A. SAFETY EQUIPMENT

Appendix A – Safety Equipment regulations shall be used in conjunction with the 2017 IMSA Technical Regulations for the Prototype Challenge Car.

A.1. Driver Restraint System

- A.1.1. The Driver harness must comply with FIA standard 8853-1998 or SFI 16.5-approved 6-point seat belt restraint system displaying a valid FIA or SFI label.
- A.1.2. The seat belt restrain system must be installed in accordance with the directions provided by the system supplier and/or manufacturer. In addition, please note the following guidelines:
 - a. Belts must be replaced after a severe collision and whenever the webbing is cut, frayed or weakened due to actions of chemicals or sunlight.
 - b. Belts must be replaced if any buckles are bent, deformed, rusted or not functioning correctly.
 - c. All belt components must be installed at each anchor point to prevent accidental release or opening.
 - d. Attaching individual belt straps to each other by any method is prohibited.
- A.1.3. It is the responsibility of the Driver and Team to ensure the seat belt restraint system and all associated components are correctly labeled, installed, maintained and properly used.

A.2. Racing Seat

- A.2.1. Per these regulations.

A.3. Window Nets

- A.3.1. Not applicable.

A.4. Racing Nets

- A.4.1. Not applicable

A.5. Protective Padding

- A.5.1. Where the Driver's body could come in contact with areas of the cockpit, flame retardant padding must be provided for protection (FIA Appendix J 253).
- A.5.2. It is permitted to add shielding to protect the Driver from equipment in close proximity to any portion of his/her body and but must not hinder cockpit exit.

A.6. Fire Suppression System

- A.6.1. As an option to the FIA extinguishing system in accordance with Article 253-7.2, a Car may be equipped with an extinguishing system meeting SFI 17.1 and with a minimum capacity of ten (10) pounds or equivalent of Novec 1230, FE 36 or AFFF suppression agents.
- A.6.2. A means of triggering from the outside must be combined with the circuit breaker switch, and operated by a single lever. This single lever must remain in their standard state on left side of Car.
- A.6.3. The system must be securely mounted with an unobstructed view of the pressure gauge, if present, date of manufacture and the next required service date without the use of photography, tools or seat removal. The exception is if the fire bottle is removed during the scrutineering process for examination, if instructed by IMSA.
- A.6.4. The nozzles must be suitable for the type of extinguishing agent and must not be installed to point directly at the Driver's face.
- A.6.5. All system components must be used and serviced per manufacturer specifications.
- A.6.6. Teams must be familiar with the operation of the fire suppression system and be able to:
 - a. Demonstrate proper system function by using the "test" mode, if present. This includes both interior and exterior fire suppression activation mechanisms.
 - b. Remove the fire bottle for inspection, if requested.

A.7. Exterior Safety Switches

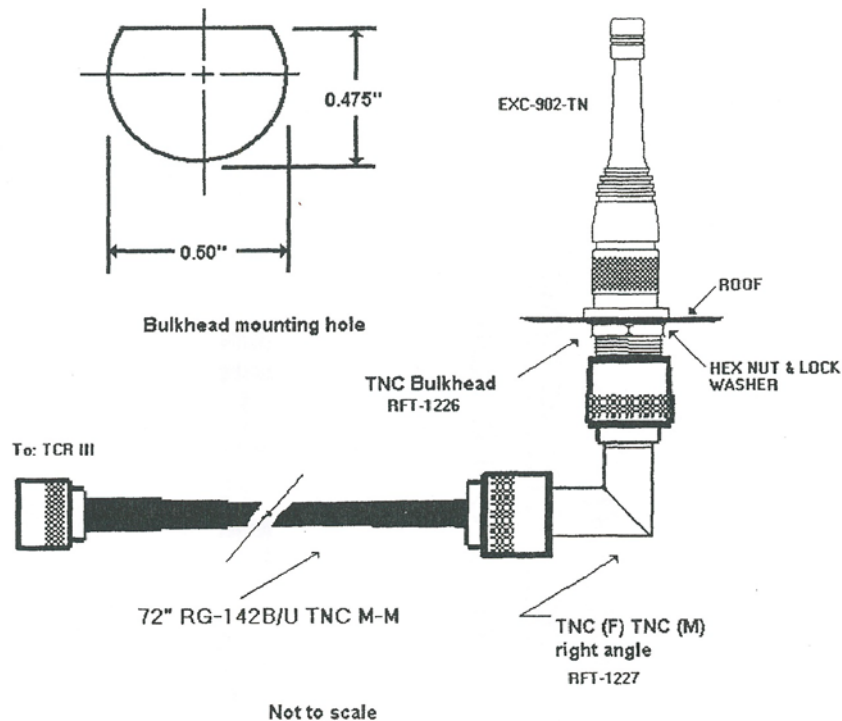
- A.7.1. The exterior switches for fire suppression system activation and electrical circuit breaker, whether separate or combined, must be located for easy identification and activation by emergency responders. Exterior safety switches must not be located under the engine cowl, wipers, behind bodywork or hidden in any way that may impede activation by emergency responders.
- A.7.2. Activation of the exterior safety switches by a gloved finger or hook using a single action by the emergency responder is required. The installation must not require the responder to perform multiple actions to activate the switch. The safety switches may be secured only during scrutineering, in Paddock or when the Car is located near large crowds (during Fan Walk) but must be removed prior to on-track activity.

APPENDIX B. IMSA SAFETY LIGHTS / DRIVER ID / BACKUP TRANSPONDER / LEADER LIGHTS

B.1. IMSA SAFETY LIGHTS

B.1.1. Entrants are provided one (1) Safety Light System and wiring instructions per Car. The Car must be fitted with the IMSA specified light, antenna and mounting bracket. Entrant must supply additional wiring per the installation instructions. The yellow indicator light must be prominently located in the cockpit in clear line of sight for the Driver. The activating receiver is provided by IMSA during Safety Checks at each Event and remains the property of IMSA. Entrants must surrender receiver when required by IMSA. A lost or damaged receiver is subject to a replacement fee referenced in the IMSA Accessories form.

B.1.2. Antenna Mounting Instructions



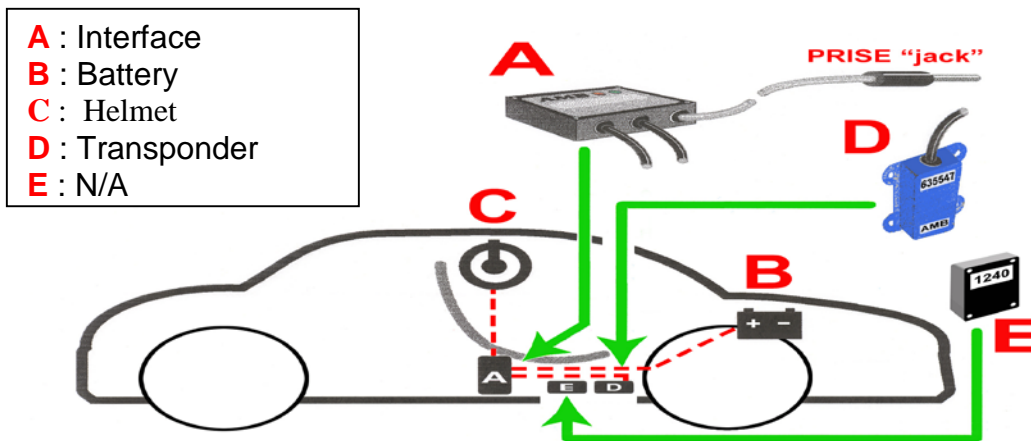
Use only the Centurion EXC-903-TN antenna
Mount antenna on car roof. Ground plane is not needed
Mount away from other antennas

B.1.3. A wiring loom is included in the MSE/Delphi Yellow Light Kit with a flying lead input for +12 VDC and Ground.

B.2. DRIVER ID

B.2.1. A Driver ID transponder, supplied by IMSA, must be permanently fitted to identify the Driver driving the Car.

- a. The Driver ID system consists of a direct-powered transponder with attached wiring and male plug.
- b. The Driver ID plugs (female) for Driver #1, Driver #2, Driver #3, Driver #4, and/or Driver #5 may be attached inside the Car cockpit or to Driver's individual helmets. Competitors may request additional plugs for spare helmets. Other installation types subject to IMSA approval.
- c. The transponder and plugs must be tested and operate to the satisfaction of the Timing and Scoring. Cost to replace a lost or damaged Driver ID transponder is listed in the 2015 IMSA Accessories Order Form.
- d. System Diagram:



- e. The installed transponder (D) must be above a 15mm x 15mm opening in the floor plate. This opening may be covered by fiberglass to a maximum thickness of 1mm in accordance with drawing below. For GTLM and GTD, this opening may be installed in the cockpit on the passenger side. The opening must permit the transponder an unobstructed view of the racetrack.
- f. The transponder (D) must be mounted vertically.
- g. If the transponder (D) is mounted in a position where the temperature may exceed 50°C, it is the responsibility of the Competitor to protect the transponder with appropriate materials.
- h. If, as part of the installation of the transponder (D), the cable between (D) and (A) must be cut, the Competitor must fit an appropriate connector to ensure connectivity at all times.
- i. The interface (A) must be fitted in the cockpit of the Car such that the LED is always visible.
- j. Connection cables must be protected against temperatures in excess of 150°C for the black cables and 70°C for the blue cables.
- k. The jack socket, connected to interface (A), must be permanently attached in the cockpit to a rigid part of the Car.
- l. The female end of the jack, which identifies the Driver, must be attached inside the Car cockpit or to the Driver's helmet.
- m. The interface (A) must be connected to a fused 12-volt DC power supply. Power consumed is less than 40mA (10-30vDC). Power supply specifications must be within the ISO 7637 norm.
- n. Outside interference must not exceed the levels as described in 95/54/EEG. These two standards are commonly used in the automotive industry.

B.3. LEADER LIGHTS

B.3.1. Leader Light installation and configuration information, general:

- a. The Leader Light system displays the actual position of each Car within its respective class. The display is color coded as: P and GTLM are red LED panels, PC and GTD are green LED panels.
- b. Leader Light panels mount in specific locations for each class and for certain Cars as shown in Attachment 6 of the Sporting Regulations. Individual fitment issues are addressed on a case-by-case basis with the Technical Director.
- c. There are additional images to assist in the installation and wiring including drawings that depict the various components and configurations for the system.
- d. Failure of the Leader Light system during a Race does not constitute a technical infraction, so long as it was functioning at the start of the Race.
- e. Leader Light systems are distributed at the ROAR pre-season test and then available from IMSA on a per-entry basis.

B.3.2. **Power supply:** The power loom is terminated on the module side. Competitor supplies the connector to integrate into their specific harness for 12 V DC power. Current demand for the system peaks at 2.8 amps, and typically draws 1.6 amps.

B.3.3. Light Panels/Break-out box:

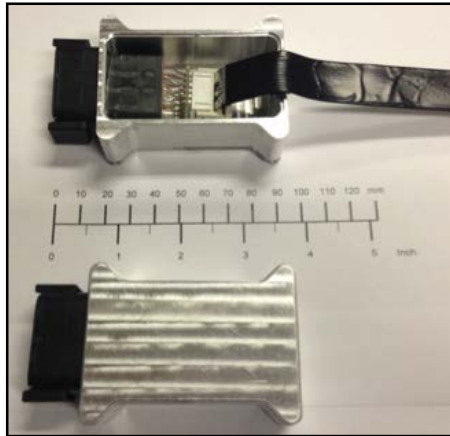
- a. Leader Light panels may be applied with the supplied adhesive backing. Additional panel mounting options are the Competitor's responsibility and are subject to the approval of the Technical Director. Care must be taken to avoid the circuitry for the LED array. Replacement panels are available for purchase from IMSA.
- b. The break-out box must be located near the Leader Light panel on the interior of the Car. The ribbon cable from the LED panel has a protective foil sheath. The ribbon lead is 500mm long and may be shortened. If the panel is mounted on the outside of the bodywork, a (1.0"x.375") pass-through hole in the body for the ribbon cable/plug assembly may be necessary.

B.3.4. **Panel wiring:** The (A) section has the plug installed and is 500mm long. The individual panel looms are delivered un-terminated. They are (B) 1500mm by (C) 2300mm. Teams may cut the runs to length and install the supplied DTM connectors per installation. Bulkhead connectors required for any installation are provided by the Competitor. Each panel loom contains 12 #22 AWG wires.

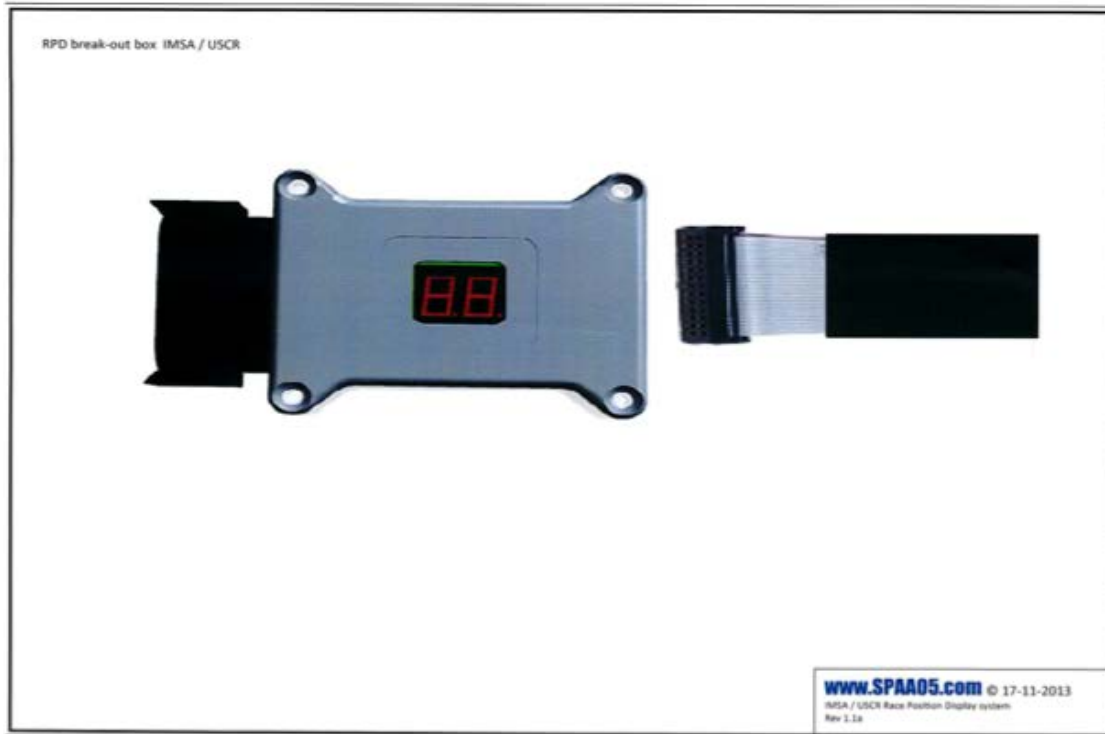
B.3.5. **Antenna:** The antenna is mounted on the inside at the top of the windshield. It may be behind the windshield banner as long as the banner is of a non-metallic material. Open cockpit Cars must locate the antenna in such a way to have unobstructed signal reception.

B.3.6. **Receiver/Controller:** The receiver/controller unit must be mounted in the Driver compartment. Bolt spacing for the mounting holes is 4.0"

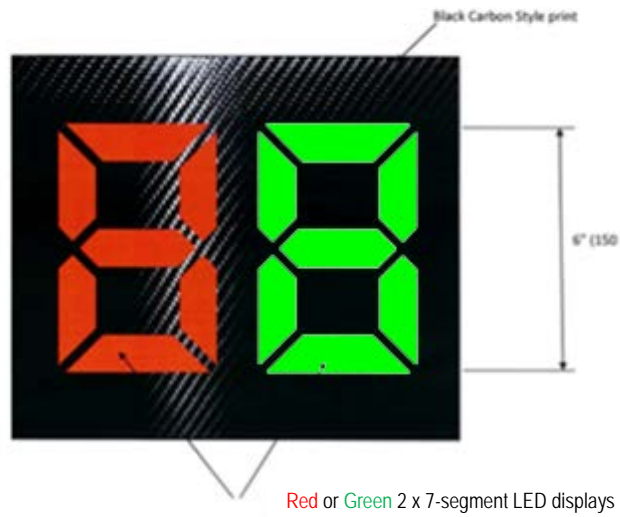
B.3.7. Breakout Box Dimensions:



B.3.8. Additional Information:

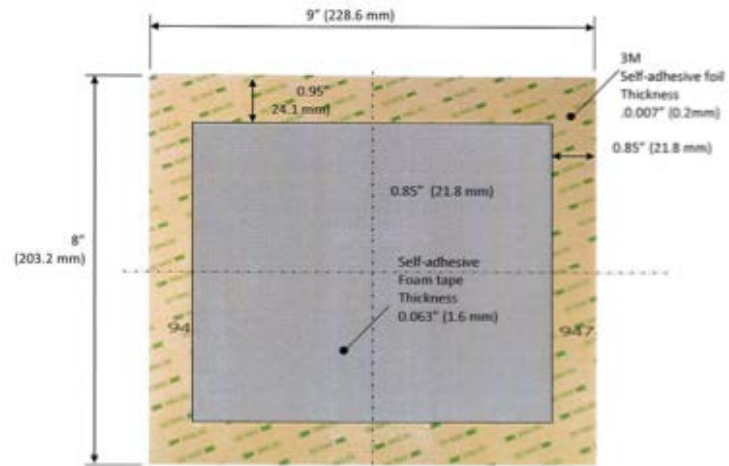


RPD Display dimensions IMSA / USCR



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