

RULE
BOOK

MEGA E-BIKE CHAMPIONSHIP

Sponsored by Organized by



APRIL
2025

RETROFITTED
MANUFACTURED

FMSCI

Affiliated

Both class



0123456789

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ABOUT AUTOSPORTS INDIA

INTRODUCTION

Autosports India is a pioneering organization dedicated to nurturing and promoting motorsports in India. With over a decade of experience in organizing high-octane events and providing world-class platforms for aspiring engineers and motorsports enthusiasts, Autosports India has established itself as a cornerstone in the Indian motorsports landscape.

MISSION

Our mission is to foster a culture of innovation, teamwork, and technical excellence among engineering students and motorsports enthusiasts. We aim to provide them with the necessary skills and exposure to thrive in the competitive world of motorsports.

VISION

We envision a future where India stands tall as a global powerhouse in motorsports, with our homegrown talent leading the charge in international competitions.

Ajit Pandey

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MAJOR EVENTS

MEGA E-BIKE CHAMPIONSHIP

Launched to promote sustainable innovation, the Mega E- Bike Championship is a unique event focusing on the design and development of electric bikes. This competition aims to drive the future of eco-friendly transportation solutions in India.

MEGA ATV CHAMPIONSHIP

The Mega ATV Championship is our flagship event, renowned for its rigorous challenges and high standards. It attracts teams from top engineering colleges across the country, offering them a platform to showcase their skills in designing and building All-Terrain Vehicles (ATVs). It includes ATV Quad-Bike and ATV Buggy.

MEGA KARTING CHAMPIONSHIP

The Mega Karting Championship is designed for go-kart enthusiasts, providing an exciting arena for students to demonstrate their technical prowess and racing skills. This event serves as a breeding ground for future professional racers.

PROFESSIONAL RACES

OVERLANDER CHAMPIONSHIP

OFF-ROAD

The Overlander Off-Road Championship is an extreme off-road racing event designed for professional racers. This championship features challenging terrains and rigorous obstacles, pushing participants and their vehicles to the limits. It is a true test of skill, endurance, and technical expertise.

DESERT RALLY CHAMPIONSHIP 1000 CC

The 1000 CC Desert Rally Championship is a prestigious rally event for professional racers competing in the 1000 cc category. Participants navigate through a series of challenging stages, demonstrating their driving prowess and the capabilities of their vehicles. This event is a highlight in the professional racing calendar, attracting top talent from across the country.

MOTOCROSS CHAMPIONSHIP

The Motocross Championship is a high-octane motorbike racing event for professional riders. This championship features a challenging motocross track with jumps, sharp turns, and varied terrains, providing a thrilling experience for both riders and spectators. It is a showcase of speed, skill, and precision in the world of professional motocross racing.

RACE TRAINING SERVICES

Autosports India offers comprehensive race training services for beginners to advanced drivers. Our training programs cover everything from basic driving skills to advanced racing techniques, ensuring that participants receive hands-on experience and personalized coaching. We provide training in various classes, catering to the needs of aspiring racers at different levels of proficiency.

IMPACT ON SOCIETY AND FUTURE OF MOTORSPORTS IN INDIA

EDUCATIONAL IMPACT

Our events have a profound impact on the participating students, equipping them with hands-on experience in engineering, project management, and teamwork. The skills gained through our competitions are invaluable for their academic and professional careers.

SOCIAL IMPACT

By fostering a community of passionate engineers and motorsports enthusiasts, we contribute to the development of a vibrant motorsports culture in India. Our events promote innovation, sustainability, and safety in motorsports.

FUTURE OF MOTORSPORTS

Autosports India is at the forefront of the motorsports' revolution in India. We are committed to making motorsports accessible to all, fostering talent, and ensuring that India becomes a global hub for motorsports excellence.



TRACK DETAILS

OFF-ROAD RACE TRACK-2 GOA

Our Off-Road Race Track-2 in Goa is the largest in-house off-road race track in India. It is designed to meet international standards and provides a challenging terrain for testing and competitions. We also offer consultancy services for track design and construction for various companies and racing events.

MEDIA COVERAGE

NATIONAL AND INTERNATIONAL PRESENCE

Autosports India has garnered extensive media coverage from prestigious national and international newspapers, TV channels, and digital media platforms. Our events have been featured in renowned publications such as The Hindu, Times of India, Telegraph, and international news agencies like PTI and ANI. We have also been covered by major TV channels including Zee News, Doordarshan, and many more.

WIKIPEDIA AND ONLINE PRESENCE

Our flagship event, the Mega ATV Championship, has its own Wikipedia page, reflecting its significance and impact. Our online presence is further bolstered by regular updates and features in Google News and other digital platforms.

AWARDS, AFFILIATIONS, AND CERTIFICATIONS

Autosports India has been recognized with numerous awards and certifications for our contribution to motorsports. We have affiliations with leading organizations and are acknowledged by government bodies for our efforts in promoting motorsports as a professional sport.

PARTICIPATION

BENEFITS

BENEFITS FOR COLLEGES AND TEAMS

Participating in our events offers significant benefits to colleges and individual team members. It enhances their profiles, provides exposure to real-world challenges, and opens up opportunities for scholarships, internships, and jobs in the automotive and engineering sectors.

GOVERNMENT RECOGNITION

Participating in our events offers significant benefits to colleges and individual team members. It enhances their profiles, provides exposure to real-world challenges, and opens up opportunities for scholarships, internships, and jobs in the automotive and engineering sectors.

SPONSORS AND ASSOCIATES

We are proud to have partnered with leading brands such as Red Bull, DLF, Hindustan Petroleum, OYO, ITC Hotels, Audi, KTM, Force Motors, Ford Motors, and many more. Our events are also supported by prominent news channels and media houses, ensuring wide coverage and visibility.

SECTION-1

ADMINISTRATIVE REGULATIONS

MEGA E-BIKE CHAMPIONSHIP OVERVIEW

The most thrilling and electrifying event of the year is here – the Mega E-Bike Championship and Mega E-Karting Championship! After the roaring success of the past nine seasons, we are gearing up for an even bigger and better competition. The competition will be organized by Autosports India in association with Fmsci (Federation of motorsports clubs of India) **OBJECTIVE**

Mega E-Bike Championship is an intercollegiate engineering design competition for undergraduate students. The object of the competition is to promote the culture of “LEARN WITH FUN “. Each team is expected to learn the different aspect of automobile while designing the vehicle and have fun while testing the self-made vehicle in different adventure tracks prepared especially for this type of vehicle. This competition also aimed to contribute in automobile sector by creating designing expert and racing sector by encouraging the student to build their career of being professional racers. This completion also improves the soft skill of participating students.

DESIGN OBJECTIVE

Each team's goal is to design and build an E-Bike sporting vehicle whose structure contains the driver. The vehicle is to be handle all kinds of different challenges thrown to it. The vehicle will be tested for its reliability, maintainability, ergonomics, and endurance. The vehicle performance will be measured by success in the dynamic events which are described in the website, and are subject to event- site weather and course conditions.

ADMINISTRATIVE REGULATIONS

GOOD ENGINEERING PRACTICES

Vehicles entered into Mega E-Bike Championship are expected to be designed and fabricated in accordance with good engineering practices. **OFFICIAL ANNOUNCEMENTS AND COMPETITION INFORMATION** Teams are required to read the articles posted on the website homepage as well as in the dashboard of registered students. It is the responsibilities of student read and follow all the Announcements published by organizing team and MEGA E- BIKE CHAMPIONSHIP Rules Committee. **OFFICIAL LANGUAGES** The official language of the Mega E-Bike Championship is English. Document submissions, presentations and discussions must be in English. **RULES COMPLIANCE** By entering in Mega E-Bike Championship competition, the team members, faculty advisors and other personnel of the entering university agree to comply with, and be bound by, the rules and all rules interpretations or procedures issued or announced by MEGA E-Bike CHAMPIONSHIP, the MEGA E- Bike CHAMPIONSHIP Rules Committee and other organizing bodies. All team members, faculty advisors and other university representatives are required to cooperate with, and follow all instructions from competition organizers, officials and judges.

ADMINISTRATIVE REGULATIONS

UNDERSTANDING THE RULES & COMPETITION INFORMATION

Teams are responsible for reading and understanding the rules in their entirety for the competition in which they are participating. The section and paragraph headings in these rules are provided to facilitate reading; they do not fully explain all the paragraph contents.

LOOPHOLES

It is virtually impossible for a set of rules to be so comprehensive that it covers all possible questions about the vehicle's design parameters or the conduct of the competition. Please keep in mind that safety remains paramount during Mega E-Bike Championship, so any perceived loopholes should be resolved in the direction of increased safety/ concept of the competition. And student is encouraged to notify any loopholes to the Mega E-Bike Championship rule committee to avoid dispute during events. **PARTICIPATING IN THE COMPETITION**

Teams, team members as individuals, faculty advisors and other representatives of a registered university or racing club/society who are present on-site at a competition are considered to be "participating in the competition" from the time they arrive at the event site until they depart the site at the conclusion of the competition or earlier by withdrawing.

ADMINISTRATIVE REGULATIONS

RIGHT TO IMPOUND MEGA E-Bike CHAMPIONSHIP and the other competition organizing bodies reserve the right to impound any on-site registered vehicle at any time during a competition for inspection and examination by the organizers, officials and technical inspectors. **GENERAL AUTHORITY** MEGA E-Bike CHAMPIONSHIP and the other competition organizing bodies reserve the right to impound any on-site registered vehicle at any time during a competition for inspection and examination by the organizers, officials and technical inspectors.

PENALTIES Organizers have the right to modify the penalties listed in the various dynamic event to better reflect the design of their event courses, the course lengths or any special conditions unique to the site. The standard dynamic event penalties in these rules are default values that will be applied unless there is a change by the organizer.



SECTION-2

INDIVIDUAL PARTICIPATION REQUIREMENTS

ELIGIBILITY LIMITS Eligibility is limited to undergraduate students (BE, B.Tech, ITI, Diploma) to ensure this is an engineering competition and a race. Individual members of teams participating in this competition must satisfy the following requirements. **STUDENT STATUS**

Team members must be enrolled as degree seeking undergraduate student (BE, B.Tech, ITI, Diploma) in a college or university. Team members who have graduated in 2024 remain eligible to participate.

AGE Team members must be at least eighteen (18) years of age at the time of the competition.

DRIVER'S LICENSE

Team members who will drive a competition vehicle at any time during a competition must hold a valid, government issued civil driver's license. And FMSCI License This will be required onsite for proof.

LIABILITY WAIVER

All on-site participants and faculty are required to sign a liability waiver upon registering on-site.

INSURANCE

Individual medical and accident insurance coverage is not required, but driver's insurance is must. Drivers can also apply for FMSCI license which also covers medical insurance.

FACULTY ADVISOR

FACULTY ADVISOR STATUS

Each team is expected to have a Faculty Advisor/coach appointed by the university/club/society. The faculty advisor is expected to accompany the team to the competition and will be considered by competition officials to be the official university representative. On-site presence of faculty advisor is not mandatory.

RESPONSIBILITIES

Faculty Advisors/team coach are expected to advise their teams on general engineering and engineering project management theory.

LIMITATIONS

Faculty advisors/team coach may not design any part of the vehicle nor directly participate in the development of any documentation or presentation. Faculty Advisors/team coach may neither fabricate nor assemble any components nor assist in the preparation, maintenance, testing or operation of the vehicle.

Faculty Advisors/team coach are not allowed to participate during technical inspection, Innovation design presentations. The team captain or other designated members of the team must do all the presenting although Faculty Advisors may silently observe.

In brief – Faculty Advisors may not design, build or repair any part of the vehicle.

ELIGIBILITY VEHICLES

STUDENT CREATED

The vehicle and associated documentation must be conceived, designed and fabricated by the team members without direct involvement from the professional engineers, faculty or professionals in racing communities.

PROFESSIONAL FABRICATION LIMITS

Vehicles which have been professionally fabricated may be disqualified from the competition. If a team does not have access to machine shop / workshop facilities, the frame can be professionally fabricated without penalty. Lack of access must be documented. (Letter from the faculty advisor copy of policies which prohibit machine shop/ workshop access, etc.).

NOTE: EXCEPTIONS WILL BE CONSIDERED FOR RETROFITTED CLASS CATEGORY.

PREFABRICATED SUBASSEMBLIES

These rules do not exclude the use of prefabricated or modified sub-assemblies.

PROTESTS

It is recognized that hundreds of hours of work have gone into fielding a vehicle. In the heat of competition, emotions peak and disputes can arise. The organizers and Mega E-Bike Championship staff will make every effort to fully review all questions and resolve problems quickly and efficiently.

ELIGIBILITY VEHICLES

PRELIMINARY REVIEW – REQUIRED

If a team has a question about scoring, judging, policies or any official action it must be brought to the organizer's or Mega ATV Championship staff's attention for an informal preliminary review before a protest can be filed. **CAUSE FOR PROTEST** A team may protest any rule interpretation, score or official action (unless specifically excluded from protest) which they feel has caused some actual, non-trivial harm to their team, or has had a substantive effect on their score. Teams may not protest rule interpretations or actions that have not caused them any substantive damage. **PROTEST FORMAT AND FORFEIT** All protest must be filed in writing and presented to the organizer or Mega ATV Championship Staff by the team captain or a designated student team member. In order to have a protest considered, a team must post a **TWO RANK PENALTY** protest bond which will be forfeited if the protest is rejected. **PROTEST PERIOD**

Protests concerning any aspect of the competition must be filed within half hour (30 minutes) of the end of the event to which the protest relates.

DECISION

The decision regarding any protest is final.



SECTION-3

REGISTRATION REQUIREMENTS

REGISTRATION REQUIREMENTS

More than one team from same institution/college/university/club/society are eligible to participate. If multiple teams participating from same institution/college/university/club/society, teams must have different: Team name, Team logo, Color of the vehicle, Team captain and other members, Team jerseys/Uniforms.

TEAM SIZE

Team must have minimum of 10 members and maximum of 30 members and maximum of 2 faculty advisors/team coach are allowed per team. As there will be Day and Night event so each Team must have at least two drivers. The teams are advised to have team captain, strategist, driver, technical crew, team manager, navigator (Who can communicate with drivers during the events)

REGISTRATION FEES

E-Bike (Electric & Combustion) - ₹30,000/- (Rupees Thirty thousand only).

Additional GST of 18% will be applicable.

SPECIAL BENEFITS

FMSCI Driving License- Free for all drivers as our 10th-anniversary gift.

Club Membership- Automatically granted to registered colleges and universities free of cost.

SECTION-4

RULES FOR RETROFITTED CLASS AND FULLY CONSTRUCTED VEHICLE CLASS

RETROFITTED CLASS

THE RETROFITTED CLASS IS DESIGNED FOR VEHICLES THAT HAVE BEEN MODIFIED OR UPGRADED FROM THEIR ORIGINAL FORM. THE FOLLOWING RULES APPLY TO THE RETROFITTED CLASS



SOME EXAMPLES OF RETROFITTED CLASS BIKES

ORIGINAL FRAME

The vehicle must retain its original frame structure. Modifications are allowed but the basic structure should remain identifiable.

ENGINE REPLACEMENT

The original internal combustion engine (ICE) must be replaced with an electric motor. The motor should comply with the specifications provided by the organizers.

BATTERY SYSTEM

The vehicle must be equipped with a battery system that meets the required voltage and capacity as specified by the competition guidelines.

RULES FOR RETROFITTED CLASS AND FULLY CONSTRUCTED VEHICLE CLASS

SAFETY MODIFICATIONS

All safety features must be upgraded to meet current standards, including the addition of safety harnesses, roll cages, and other necessary safety equipment.

BRAKING SYSTEM

The braking system must be modified to include disc brakes on both front and rear wheels if not already present.

SUSPENSION

The suspension system should be evaluated and modified if necessary to handle the new weight distribution and power output of the electric motor.

DOCUMENTATION

Teams must provide detailed documentation of all modifications made to the original vehicle, including schematics, parts used, and safety checks.

RULES FOR RETROFITTED CLASS AND FULLY CONSTRUCTED VEHICLE CLASS

FULLY CONSTRUCTED VEHICLE CLASS

The fully constructed vehicle class is for teams that design and build their vehicle from scratch. The following rules apply to the fully constructed vehicle class



SOME EXAMPLES OF FULLY CONSTRUCTED CLASS

CHASSIS DESIGN

Teams must design and construct their own chassis. The design should prioritize safety, durability, and performance.

ELECTRIC MOTOR

The vehicle must be powered by an electric motor that meets the competition's specifications for power output and efficiency.

BATTERY SYSTEM

The vehicle must be equipped with a battery system that meets the required voltage and capacity as specified by the competition guidelines.

RULES FOR RETROFITTED CLASS AND FULLY CONSTRUCTED VEHICLE CLASS

SAFETY FEATURES

The vehicle must include all necessary safety features such as roll cages, safety harnesses, fire extinguishers, and impact-resistant body panels.

BRAKING SYSTEM

The vehicle must have disc brakes on both front and rear wheels. The braking system must be designed to provide adequate stopping power for the vehicle's weight and speed.

SUSPENSION SYSTEM

The vehicle must have a suspension system designed to handle the expected stresses and provide a smooth ride. The design should include adjustable components to fine-tune performance.

AERODYNAMICS

Teams should incorporate aerodynamic elements into their design to enhance performance and efficiency. This includes features such as fairings, spoilers, and diffusers.

INNOVATION

Teams are encouraged to incorporate innovative technologies and design elements. This can include advanced materials, unique design approaches, and cutting-edge electronics.

DOCUMENTATION

Detailed documentation of the design and construction process must be provided. This should include design drawings, material specifications, safety analysis, and testing results

RULES FOR RETROFITTED CLASS AND FULLY CONSTRUCTED VEHICLE CLASS

THESE RULES ENSURE THAT BOTH RETROFITTED AND FULLY CONSTRUCTED VEHICLES MEET HIGH STANDARDS OF SAFETY, PERFORMANCE, AND INNOVATION IN THE COMPETITION.



SECTION-5

TECHNICAL REQUIREMENTS VEHICLE CONFIGURATION

MAXIMUM VEHICLE DIMENSIONS

The maximum overall length of the vehicle should not exceed 2100 mm, while the maximum overall height is limited to 1200 mm. The overall width of the bike must not exceed 950 mm. Additionally, the wheelbase should be a maximum of 1500 mm. The ground clearance of the vehicle must be at least 150 mm to ensure adequate clearance from the ground. The handlebar height should be a minimum of 800 mm. These requirements are essential for the construction of the electric bike to ensure safety, stability, and performance.

RUNNING CAPABILITY

The vehicle must be capable of safe operation over rough land terrain including obstructions such as rocks, sand jumps, logs, steep inclines, mud and shallow water in any or all combinations and in any type of weather including rain, snow and ice. The vehicle must have adequate ground clearance and traction.

VEHICLE ERGONOMIC CAPACITY

As a prototype of a commercial product, the design intent should be to accommodate drivers of all sizes from the 95th percentile male (in the country in which the competition is held) to the 5th percentile female. The largest driver must be able to meet the requirements, and fit into a comfortable driving position, while wearing the entire required driver's equipment. The smallest driver must be able to comfortably reach all of the vehicle's controls.

TECHNICAL REQUIREMENTS VEHICLE CONFIGURATION

MATERIAL FREEDOM

Teams have the liberty to choose any type of material for their bike's design.

CHASSIS DESIGN

Teams must create their own chassis design

TUBULAR FRAME

A tubular frame must be used, with a minimum outer diameter of 25mm and a minimum thickness of 2mm.

FRAME SPECIFICATIONS

The frame must include spaces for the motor mounting, steering head, battery, and rear suspension linkage.

FOOTREST POSITION

The footrest should not be positioned lower than the lowest part of the frame.

BIKE STANDS

There must be either a side stand or a center stand.

TECHNICAL REQUIREMENTS

VEHICLE CONFIGURATION

SUSPENSION AND STEERING

SUSPENSION

The electric bike must feature both front and rear suspension, which can be mono or dual.

FRONT SUSPENSION

The front suspension must be a double shock telescopic hydraulic system.

REAR SUSPENSION

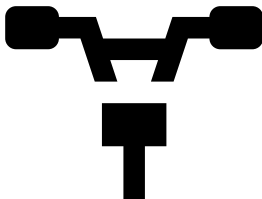
Teams can use either a swing arm with mono suspension or a dual swing arm suspension.

HANDLEBAR DESIGN

The handlebar should be designed by the team and properly attached to the chassis.

STEERING STOP

A steering stop must be provided on both sides, with a maximum angle of 45 degrees.



The above image represents an E-bike handle



The above image represents the Suspension

TECHNICAL REQUIREMENTS

VEHICLE CONFIGURATION

BRAKES

BRAKE INSTALLATION

The bike must have a braking system installed on both the front and rear wheels.

BRAKE TYPES

Teams can use any braking system such as drum or disc brakes on the rear wheel.

ACTUATION METHOD

Brakes should be actuated through mechanical linkage, not wire actuated.

DISC BRAKE REQUIREMENT

At least one disc brake must be present on the bike.

OPERATION

One brake should be operated by hand and the other by foot, similar to standard bikes.

HYDRAULIC DISC BRAKES

Disc brakes must be hydraulically actuated; wired actuation is not allowed.

BRAKE LIGHT

A red brake light must indicate the actuation of both front and rear brakes.

TECHNICAL REQUIREMENTS

VEHICLE CONFIGURATION

DASHBOARD SYSTEM

DASHBOARD MODIFICATION

Teams need to modify the dashboard to meet the requirements.

DISPLAY REQUIREMENTS

The dashboard must display speed, battery level, and battery temperature.

DASHBOARD DEVICES

A tablet, mobile, or any other digital integrated dashboard can be used.

DIMENSIONS

The dashboard should not exceed 8 inches in length and 6 inches in width.

VISIBILITY AND ACCESSIBILITY

The dashboard should be easily visible and accessible to the rider.

TYRES & WHEELS

TYRE SIZE

The tyres must have a minimum diameter of 17 inches.

WHEEL TYPES

Teams can use either alloy wheels or spoke rims.

TECHNICAL REQUIREMENTS

VEHICLE CONFIGURATION

PROHIBITED TYRES

Cycle tyres are not allowed.

ADDITIONAL REQUIREMENTS

MIRROR

A single mirror must be attached to the handlebar for clear rear visibility.

INDICATOR LIGHTS

Orange indicator lights must be present on the front and rear for turning signals.

AUDIBLE WARNING

The bike must have a permanent audible warning system.

LIGHTS

The headlight and taillight must be connected to the battery.

BIKE STANDS

The bike must have either a main stand or a side stand.

BRAKE LIGHT

A red brake light must indicate the actuation of the brakes.

SECTION-6

TRACTIVE SYSTEM RULES

VISION & MISSION “To accelerate the automobile transition towards electric culture through sustainable energy. The focus on sustainability indicates the compliance of the AUTOSPORTS INDIA with global demands of electric vehicle that align with calls for green energy. **DEFINITIONS** A. High Voltage System (Traction System): Operation Voltage 48V-72V B. Low Voltage: Operation Voltage < 48V. C. E-kit: the complete electric setup including battery, motor, controller, accumulator, etc. D. Tractive System Accumulator: battery cells storing electric energy (used by tractive system). **TERMINOLOGY** A. HVS/TS: High Voltage System/Traction System B. LVS/GLVS: Low Voltage System/Ground Low Voltage System C. BMS: Battery Management System D. AIR: Accumulator Isolation Relays E. TSAL: Traction system Active Light

GENERAL REQUIREMENTS

BASIC REQUIREMENTS & COMPONENT SPECIFICATIONS

A. BATTERY: 48V-72V, 80Ah (Max), Li-ion or LiPo4

B. MOTOR: 1.5-2 KW (max)

C. TSAL: 2-5Hz, Red

D. CHARGER: 48V-72V

E. FUSE: Required

F. ACCUMULATOR CONTAINER: IP67

G. AUXILLARY BATTERY: SAME SPECIFICATIONS AND DIMENSIONS AS PRIMARY BATTERY

TRACTIVE SYSTEM Direct connection between motor and accumulator is prohibited. There should be a controller device in between motor and accumulator. Direct contact between the chassis (or any other conducting part) must be avoided. All the components in the TS must be rated for maximum TS voltage. All the components must be rated for maximum possible temperature which may occur during operating condition.

GENERAL REQUIREMENTS

TRACTIVE SYSTEM ENERGY STORAGE

- The Tractive System Accumulator pack shall include at least one AIR and one Fuse which will open the circuit and disconnect the energy flow from accumulator to the remaining tractive system whenever a fault is detected.
- Direct connection between motor and accumulator is prohibited. There should be a controller device in between motor and accumulator. Direct contact between the chassis
- (or any other conducting part) must be avoided. All the components in the TS must be rated for maximum TS
- voltage. All the components must be rated for maximum possible temperature which may occur during operating
- condition. Tractive System Energy Storage All cells which store the TS energy must be enclosed in accumulator
- container. It must be possible to open the TS accumulator
- container for technical inspection so that the voltage can be measured. The Tractive System Accumulator pack shall
- include at least one AIR and one Fuse which will open the circuit and disconnect the energy flow from accumulator to the remaining tractive system whenever a fault is detected.
- The tractive system accumulator container must be made from an insulating material and if made from electrically
- conductive material, the insulation barrier must be adequately protected against conductive penetrations.
-

GENERAL REQUIREMENTS

TRACTIVE SYSTEM ENERGY STORAGE CONT.

- Every wire used in an accumulator container, no matter whether it is part of the GLV or tractive system, must be rated to the maximum tractive system voltage. All TS
- accumulator container must lie within and be attached to the primary structure and should not lose its position during event. Any type of fastener can be used meet the general rules regarding fasteners. All accumulators must be
- mechanically robust and the container material must be fire resistant.

PRECAUTIONS

- A caution mark in form of sticker or paint to be pasted in the accumulator container. The sticker should be at least 500 sq. mm and must of yellow color stating (CAUTION HIGH VOLTAGE) to be written. All teams must take
- proper precautions during handling of the system and its components like batteries motor and other energized parts. All wires/cables must be protected and of proper
- color as specified and marked. Charging of the accumulator system can be done in ready condition in
- the vehicle on site and separately accumulator system with container may also be charged on site. However the handling/transport of the accumulator system to be done
- by a trolley which can carry the batteries/accumulator properly.

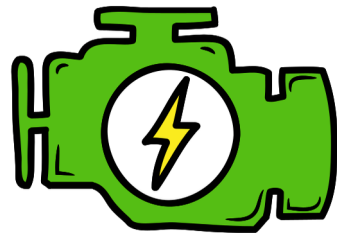
GENERAL REQUIREMENTS

PRECAUTIONS CONT.

- All electric vehicles must use a warning system like sound and an indicator light to be used if the vehicle is in ready to move condition for spectators and other peoples other than the driver. No annoying sound animal sound to be used. We strongly recommend to use pre-recorded engine sound for this.

LIMITATIONS

- Batteries used must be of a reputed manufacturer any alteration, tempering, modification in the original batteries are strictly prohibited. The above rules are given to the
- tractive system for electric vehicles only. However all vehicles must meet the other rules given in the rule book. The tractive system batteries cannot be used for other
- components like lamps, alarm, buzzer brake light and other similar components used in the vehicle. A separate battery to be used for these purposes, keeping all rules related to
- this in mind.



SECTION-7

SAFETY GEAR REQUIREMENTS FOR BIKE RIDERS

SAFETY REQUIREMENTS

For the safety of the riders during the students' e-bike championship race, the following safety gear, compliant with FIM rules, must be worn by the driver at all times during the competition.

HELMET

A full-face helmet with a visor that meets the ECE 22.05 or SNELL M2015 or ISI Rated rating.

RACING SUIT

A one-piece leather racing suit or a two-piece suit that zips together. The suit must be made of leather or another durable material and should include CE-rated or ISI Rated armor at the shoulders, elbows, knees, and back.

GLOVES

Full-length leather gloves with knuckle protection and reinforced palm areas. The gloves must have CE-rated or ISI Rated armor.

BOOTS

Motorcycle racing boots that cover the ankles and provide support and protection. The boots must have reinforced toe, heel, and ankle areas with CE-rated or ISI Rated armor.

BACK PROTECTOR

A CE Level 2 or ISI Rated back protector that fits under the racing suit.

SAFETY GEAR REQUIREMENTS FOR BIKE RIDERS

CHEST PROTECTOR

A CE Level 2 or ISI Rated chest protector to be worn under the racing suit.

KNEE SLIDERS

Replaceable knee sliders for additional protection during cornering.

ELBOW GUARDS

CE-rated or ISI Rated elbow guards if not already integrated into the suit.

NECK BRACE

A motorcycle-specific neck brace to reduce the risk of neck injuries.

RIDING SOCKS

Long, thick socks that extend up to the knees to be worn inside the boots. These safety gears are mandatory for all riders to ensure maximum safety and protection during the race.

NOTE: JERSEYS, GLOVES, SOCKS OR OTHER GARMENTS MADE FROM NYLON OR ANY OTHER SYNTHETIC MATERIAL WHICH WILL MELT WHEN EXPOSED TO HIGH HEAT, HENCE ARE PROHIBITED. ALL MATERIAL MUST BE IN OVERALL GOOD CONDITION AND SHOW NO SIGNS OF WEAR, NO CUTS CHAFFING OR WEAR.

PERSONAL PROTECTIVE EQUIPMENTS

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Personal Protective Equipment is anything used or worn by a person to minimize risks to his/her safety.



SECTION-8

VEHICLE IDENTIFICATION

Vehicle numbers are used by the organizers and officials to positively identify team vehicles. Teams must design numbers to be visible in all race conditions or keep them clean and conspicuous.

NOTE: NUMBERS THAT ARE NOT EASILY READ MAY BE BLACK FLAGGED AND MIGHT NOT BE SCORED DURING THE ENDURANCE EVENT.

BACKING PANEL Each number on the vehicle shall have a highly contrasting

LED Light/radium numbers of specified dimensions or above size and location as given in the figure, to facilitate easy reading in pitch dark from adequate distance without help of any external light source. Numbers may be outlined to provide enhanced contrast. Number backing panels must be securely fastened to the vehicle frame

SWITCH BACKGROUND COLOR

The background of the kill switch mounting should be colored with yellow for easy identification by the co-workers and track volunteers, with an instruction **“PUSH TO KILL”** to be written near the switch. The surrounding background of the kill switch mounting should be at least 1.5 inches wide and may be circular or square shape. Teams please keep in mind that only the surrounding to be made no alteration in the original kill switch to be done. Stickers, Tape, plastic color is allowed for this job. Kill switch electric circuit- Both the kill switch must be capable to kill the engine simultaneously and must be a separate circuit other than other electric components. The kill switch should not de-energized other equipment's like brake light reverse alarm head lamps etc.

SECTION-9

TECHNICAL INSPECTION

INSPECTION PROCESS Each vehicle will be inspected to determine if it complies with the requirements and restrictions of the **Mega E-Bike Championship** rules. This inspection will include an examination of the driver's equipment including helmet and arm restraints, a test of driver exit time and to ensure that all drivers meet the requirements of the rules. Kill switch and dynamic brake testing both the external and cockpit kill switches will be tested for functionality. If both switches pass the test, then the vehicle will be dynamically brake tested. Each vehicle must demonstrate its ability to lock all wheels and come to rest in an approximately straight line after acceleration run specified by the inspectors. If a vehicle fails to pass any part of the inspection, it must be corrected/modified and brought into compliance with the rules before it is permitted to operate.

FULL VEHICLE INSPECTION

- The vehicle will be inspected to ensure that the vehicle meets the rules given in the rule book or not. The vehicle
- must not have any sharp edges. There should not be any
- Un-welded, incomplete welding or weak welding, (There must not be any crack or holes visible on the welding). All body panels and other components which is not a part of
- roll cage must be fastened by sound engineering practice and should not be loosen. Fastening the body panels by wire or zip tags or adhesive are strictly prohibited.
-

TECHNICAL INSPECTION

FULL VEHICLE INSPECTION CONT.

- All fasteners, Screws must have at least 3 full threads out of the nut. All rotating parts in the drive train must be covered
- or properly shielded by metal. Two fire extinguishers must be there of specification given in the rule book. One
- mounted at the vehicle and one at the hand of pit workers.

Dimension of the vehicle must not exceed given as per the Rule book.

EQUIPMENT'S CHECK All drivers must wear the safety equipment's given as per the rules of Mega E-Bike Championship. All equipment's must be present with their purchasing certificate at the time of technical inspection.

CO-WORKERS As per the Mega E-Bike Championship Rules the vehicle is not allowed to start anywhere out of the event track or without any permission of the concerned authority/Inspector. The vehicles must be marched at walking speed without starting the engine all the time. Four members from each team must be around the vehicle one keeping the fire extinguisher.

TECHNICAL INSPECTION

CO WORKERS CONT. These crews/ Co-workers must wear industrial safety jacket of orange color. Indicating team name and vehicle no at back and front side (Letters must be at least 1-inch-long) with black color.



The above images represent the safety jackets that are acceptable



The above image represents the safety jackets that are not acceptable

SAFETY JACKETS

BRIEF DETAILS

Only these crews can come to the track or nearby (On call) the vehicle during the dynamic events. The inspection will determine if the vehicle satisfies the requirements and restrictions of the general motorsports rules for the safety of driver and the audience. If vehicles are not ready for technical inspection when they arrive at the inspection site, they will be sent away. Any vehicle may be re-inspected at any time during the competition and correction of any non-compliance will be required. The team which doesn't clear this level will not be allowed to advance in next level. After the technical inspection each team will be issued with the pass to advance in next level. The team is advised to check the safety rules continuously while fabricating the vehicle so that they don't face elimination. This level doesn't reward any point but without this level the team will not be able to gain any point.



SECTION-10

CHECK LIST FOR THE TEAMS BEFORE COMING TO EVENT

DOCUMENTS Teams need to check that all documents as given in the mail are available or not and must be arranged in the sequence in the documents file as instructed.

INSPECTION SHEET

Teams must bring the inspection sheet checking all the points as suggested in inspection sheet and rule book duly signed by the faculty advisor/team coach.

ORIGINAL ID CARDS

Teams must bring all ID cards as given in the documents section in original at the event site.

TOOLS

We strongly recommend to bring tools and equipment's with you which are to be used for repairing and maintenance of the vehicles on site.

SPARES

We strongly recommend the bring the necessary spare parts like clutch plates, cables, spare bulbs, spare batteries, gear and differential oil, engine oil, brake oil, nut and bolts, screws and fasteners, battery charger etc.

ANNEXURE FORMS AND DECLARATION

Teams must bring their Annexure forms with them and declaration in stamp paper in their documents file. Do not forget to give the forms for transportation of the vehicle to the vehicle transporter/ transport company.

CHECK LIST FOR THE TEAMS BEFORE COMING TO EVENT

SAFETY JACKETS TO TEAMS Do not forget to bring the safety jackets for each team member as specified.

SAFETY SUIT AND KIT FOR DRIVER

Check all safety equipment's along with the seat belt for the driver as specified and mounted properly.

FIRE EXTINGUISHERS

Check all fire extinguisher and make sure that they are not expire and the date of filling and expiry/re-filling is mentioned in the extinguisher.

PENALTY SYSTEM

Teams may be penalized on violation of any rules as given by the event organizers. Organizers reserves the right to penalize the teams on violation in any rules. Penalty may be imposed as score penalty, Declaration of DNF, Disqualification of team and vehicle, blacklist the team/ any of the team member(s), certificates, monetary fine and rank penalty.



SECTION-11

TECHNICAL INSPECTION (STATIC EVENT)

GENERAL RULES Teams need to check their vehicle before bringing to event site that the vehicle is manufactured as per the rules suggested for Mega E-Bike Championship. Teams need to check all points given in the inspection sheet provided. The vehicles of the teams will be inspected on site by the event technical inspectors and will be allowed to run only if the vehicle pass the on-site inspections. Technical inspection includes electrical system, electrical power system/tractive system, engine test, Brake test, driver's safety suit and kit inspection, and whole vehicle inspection as per the given rule book.

VEHICLE CONSTRUCTION

The vehicles must be constructed as per the rule book only. The vehicle must meet all construction rules of the rule book.

BRAKE TEST

In brake test the vehicle need to run in a nearly straight and flat road for a distance of around 50 Meters. The vehicle should go on full throttle and apply the brake at the indication given. The vehicle must stop at the given area and after stopping the vehicle must stop in nearly straight line position.

The brakes must apply on each of the wheels. If any vehicle does not pass the brake test in first attempt they will be given second and third attempt to pass respectively. After failing third attempt team will be declared as **NOT PASSED** and eliminated.

TECHNICAL INSPECTION (STATIC EVENT)

LIMITATIONS ON ATTEMPTS The attempts will be given only in the specified time i.e. in the mentioned schedule the technical inspection will start at 11:00 Hrs. and continue till 18:00 Hrs. All vehicles must complete their all attempts in the specified time. No vehicles will be allowed to take an attempt after the mentioned schedule.

TRACTIVE/ELECTRIC POWER SYSTEM CHECK

All Tractive system will be inspected. Teams need to keep their vehicle ready as specified in the rule book. The tractive system will be checked and given an OK signal to teams and will be sealed. Teams are strictly instructed not to make any changes after inspection.

DRIVER SAFETY TEST

Teams need to produce safety suit and kit for driver, in good condition and specified rating as per rule book. Teams need to produce the invoice for each individual equipment's related to driver's safety if required for verification in case of any dispute. All equipment's must be in good condition, not in damaged condition in any manner. Damaged or torn equipment's will not be accepted. Driver's equipment's must be as specified in the rule book and must cover full body of the driver, no jackets or half jackets will be allowed. Exceptions-Driver shoes may be ordinary or general sports shoes may be allowed in some cases.

TEAMS CANNOT GIVE EXAMPLES OF OTHER SIMILAR EVENTS ORGANISED BY OTHER ORGANISATIONS

TECHNICAL INSPECTION (STATIC EVENT)

LIMITATIONS ON ATTEMPTS

NOTE: As safety for the drivers and fellow participants are the first priority so there will be no compromise in the any of the safety rules. Teams must confirm that they have proper safety equipment's of specified rating and quality like seat belt, safety suit, balaclava, helmet, shoes etc.

TEAM MEMBER SAFETY JACKETS

All team members must have safety jacket of orange color only (Other color are not accepted) as specified in the rule book which will be inspected at the time of technical inspection. If any team fails to produce the team member's safety jackets are not allowed and will not be allowed to move in the event area.

LIGHTS

Teams must have lights mounted properly in the vehicles which will be inspected during the technical inspection and before the night endurance event. If lights are not working properly the vehicle will not be allowed to participate in night endurance/black out event.

BACK UP AND EMERGENCY LIGHTS

It is strongly recommended to teams that teams should make a mounting for emergency lights/torches (High quality battery operated torches), in case the lights are not working /in case of light failure teams can continue their race with emergency backup lights.

TECHNICAL INSPECTION (STATIC EVENT)

BRAKE LIGHTS

It is strongly recommended to teams that teams should make a mounting for emergency lights/torches (High quality battery operated torches), in case the lights are not working /in case of light failure teams can continue their race with emergency backup lights. Teams must have brake lights operated by hydraulic pressure switch which must operate on application of brake at all time, and mounted properly as given in the rule book. Brake test will not be passed if brake lights are not working.

EGRESSION TEST

The egression of the driver will be tested, driver must wear all safety equipment's and sit in driving position by keeping both hands on steering wheel, in static position of the vehicle. And the instruction will be given by the technical inspector to come out. The driver must come out within the five seconds form when the instruction given by the technical inspector to when driver's both the feet are at ground. Maximum three attempts for this will be given.

TILT TEST

There must not be any leakage of oil in the tilt position of the vehicle at 45 degree angle from both sides of the vehicle and from the front also. There must not be leakage in any fuel, engine oil.

TECHNICAL INSPECTION (STATIC EVENT)

VEHICLE INSPECTION GO-NO-GO

The maximum size/dimensions of the vehicle is restricted as per the rule book, and the tracks are designed as per the maximum dimensions of the vehicles. We will check the maximum size of the vehicle and GO-NO-GO devices will be installed to check the vehicle size. Oversized vehicles are not allowed to participate in the event. Hence they will be rejected during the technical inspection.

LIGHT AND VEHICLE VISIBILITY TEST

The vehicles will be tested in dark after sunset for the head lamps, brake lights, number plates, complete vehicle visibility as given in the rule book. Teams please keep in mind your complete vehicle and its all dimensions must be visible if your vehicle is kept in dark from all sides. It is necessary to put tape lights/radium lights in all exposed members must be illuminated all the time during night endurance race.

FIRE EXTINGUISHER

Teams must have fire extinguishers as specified in the rule book. Spray and other rated or oversized extinguisher should not be mounted in the vehicle.

CAR NUMBER

The vehicles must contain car nos. as specified in the rule book. No vehicle will be allowed to participate without having car nos. or wrongly installed car nos. Car no. must be written by strip/tape lights/acrylic LED lights only in given letter format in rule book.

TECHNICAL INSPECTION (STATIC EVENT)

FASTENERS All fasteners/nut bolts used in the vehicles must be properly tightened and must use lock nuts where nuts are used. Nut and bolts where nuts are used bolts length must be chosen in such a way that at least two threads are out in fully tighten position of nut and bolts.

SHARP EDGES

There must not be any sharp edges which can harm anyone in touching of the vehicle and must not be cause of penetration of drivers body in case of the vehicle meets any accident or during the escape of the driver from the vehicle.

USE OF RADIO

If any team using radio signals in any communication devices they must have approved frequency license to use the radio devices at the event site.



LOOPHOLES As there may be loopholes in the rules and exceptional cases may arise, organizer will take decisions in such cases which will be favorable to all teams, event, and safety and favorable to the participants.

TECHNICAL INSPECTION (STATIC EVENT)

ALCOHOL Consumption of any alcoholic beverages, narcotics drugs etc. is completely banned. No team member or driver should be under the influence of any drug or alcohol. Organizers reserves the right to do medical test any time during the event and post event.

SAFETY JACKETS

All safety jackets must be of orange color and team name and car no must be printed or sticker may be pasted of size at least 4" (Inches) in back side and 2" (Inches) in front left chest.

TOEING

Considering safety, toeing of the vehicles will be given only after completion of the event. No toeing support will be given during the event.

ELECTRICAL POWER SYSTEM TEST

For electrical power system all power system must meet the specifications power and voltage limits as suggested in rule book.



SECTION-12 EVENT

FORMAT AND RULES

DRAG RACE (DYNAMIC EVENT)

(10:00 Hrs.-12:30 Hrs.), Patch no.-3, 60 Mts.

GENERAL RULE In this race, two bikes will be running simultaneously for a length of around 60 meters. Drivers need to accelerate their bike as much as possible to get the best result. Here, acceleration of the bike will be recorded and bike ranking based on fastest bike will be done, which will be used during the lineup of the next consecutive events. Score will be awarded on the basis of time taken to complete the distance by each vehicle. Vehicle which completes the track in minimum time will be declared as winner among all the vehicles. Only one chance for each vehicle will be given in this particular event no second chance or repeat chance will be given to any vehicle. After crossing the finish line vehicle needs to decelerate and stop the vehicle only in the specified region. **TRACK DESCRIPTION** In this event almost flat and nearly straight path of soil around 60 Meters will be there. No obstacles like humps, rocks, tyre and logs will be there. **POWER OR TRACTIVE SYSTEM FAILURE DURING THE EVENT** In this event power or tractive system failure takes place,

EVENT FORMAT AND RULES

POWER OR TRACTIVE SYSTEM FAILURE DURING THE EVENT

Case-1, within 15 meters from the starting line, vehicle will be allowed to take second chance and will be called back to the starting line and start the race with other vehicle in next slot without imposing any penalty, if again tractive system shuts down one member of the team may come and re-start the power or tractive system, and continue the race no third chance will be given. **Case -2**, if the power or tractive system failure takes place after 15 meters of the starting line one team member of the same vehicle may come and start the tractive system and continue the race, without any penalty, no second chance will be given in this case. **REPAIRING** Vehicles meets permanent or temporary failures will be termed as DNF, no repairing or second chance will be given in case of repairing.

DNF (DID NOT FINISH) Vehicles which are awarded as DNF will be awarded zero score for this particular event.

CHARGING/REPLACEMENT OF BATTERIES

Charging/replacement of batteries are not allowed during the event to any vehicle for this particular event.

EVENT FORMAT AND RULES

PENALTY Vehicle going out of the track during running of the vehicle will be termed as DNF for this particular event. Vehicle do not stop in the specified region after completing the race will be awarded one rank penalty.

AUTOCROSS EVENT

GENERAL RULE The autocross event tests the e-bike's handling, maneuverability, and the driver's skill in navigating a course marked by cones or other obstacles. Each e-bike will have only one run on the course. Time penalties will be added for hitting cones or going off-course. E-bikes must pass a technical inspection to meet safety and technical requirements. **TRACK DESCRIPTION** The course will be to challenge the driver's skills with a variety of turns, including tight corners, chicanes, slaloms, and sweepers. The track will be a minimum of 400 meters and a maximum of 800 meters long. Safety barriers or cones will line the course to guide the bikes and ensure safety.

EVENT FORMAT AND RULES

AUTO-CROSS TRACK

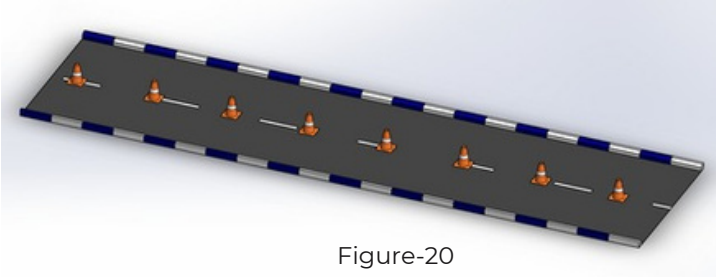
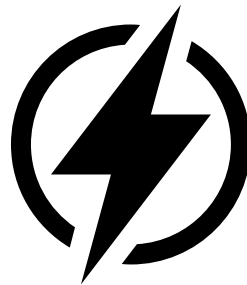
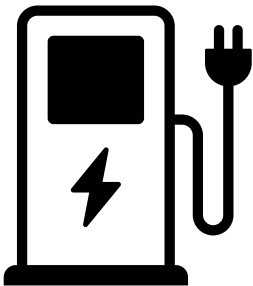


Figure-20

REPAIRING Vehicles meets permanent or temporary failures will be termed as DNF, no repairing or second chance will be given in case of repairing. **DNF (DID NOT FINISH)** Vehicles which are awarded as DNF will be awarded zero score for this particular event.

CHARGING/REPLACEMENT OF BATTERIES

Charging/replacement of batteries are not allowed during the event to any vehicle for this particular event.



EVENT FORMAT AND RULES

PENALTY Vehicle going out of the track during running of the vehicle will be termed as DNF for this particular event. Vehicle do not stop in the specified region after completing the race will be awarded one rank penalty. The fastest time wins, with time penalties added for course infractions, +2 seconds for each cone knocked down, +5 seconds for going off-course. If a bike fails to complete the course, the slowest time of the day plus 10 seconds will be recorded for that run.

MANEUVERABILITY EVENT

GENERAL RULE

The maneuverability event focuses on the bike's ability to navigate through tight spaces and around obstacles, testing the precision of control. Each bike will have only one attempt to complete the course, with the fastest time counting towards the final score. The event will be timed, and precision will be crucial as penalties are imposed for hitting obstacles. Drivers will start from a standstill and must complete the course as quickly and accurately as possible. **TRACK DESCRIPTION**

The course will be a tight, technical layout with numerous short straights and a variety of corner types. The course length should be between 400 and 800 meters. Obstacles such as slaloms, hairpin turns, and decreasing radius turns will be included. Cones or barriers will define the track limits and obstacles.

EVENT FORMAT AND RULES

REPAIRING Vehicles meets permanent or temporary failures will be termed as DNF, no repairing or second chance will be given in case of repairing. **DNF (DID NOT FINISH)** Vehicles which are awarded as DNF will be awarded zero score for this particular event. **SCORING/PENALTY** The fastest time wins, with penalties added for errors. +2 seconds for each cone or barrier hit. +5 seconds for going off the course. Failure to complete the course results in a DNF (Did Not Finish) and the slowest time of the day plus 10 seconds.

FIGURE OF 8 TEST

GENERAL RULE The figure of 8 test measures the lateral grip and handling of the e-bike by driving in tight circular paths. Each e-bike will make a series of timed laps around the concentric circles. Drivers will start at the entry point, complete two laps in the clockwise direction, then transition to two laps in the counterclockwise direction. The best lap time from each direction will be recorded. Time penalties will be added for hitting cones or going off the designated path.

EVENT FORMAT AND RULES

TRACK DESCRIPTION The course will be a tight, technical layout with numerous short straights and a variety of corner types. The course length should be between 400 and 800 meters. Obstacles such as slaloms, hairpin turns, and decreasing radius turns will be included. Cones or barriers will define the track limits and obstacles. **REPAIRING** Vehicles meets permanent or temporary failures will be termed as DNF, no repairing or second chance will be given in case of repairing. **DNF (DID NOT FINISH)** Vehicles which are awarded as DNF will be awarded zero score for this particular event. **CHARGING/REPLACEMENT OF BATTERIES** Charging/replacement of batteries are not allowed during the event to any vehicle for this particular event. **SCORING/PENALTY** The combined best lap times from both directions will determine the final score. +2 seconds for each cone knocked down. +5 seconds for going off-course.

EVENT FORMAT AND RULES

HILL CLIMB

GENERAL RULE

The hill climb test evaluates the bike's power and torque by measuring the time taken to ascend an inclined course. Each bike will make a timed run from the start to the finish line. Drivers will have only one attempt, and the time will be recorded. Time penalties will be added for going off-course or hitting barriers.

TRACK DESCRIPTION

The course will have a steep incline with a gradient between 10% and 15%. The length of the course will be between 50 and 100 meters.

REPAIRING Vehicles meets permanent or temporary failures will be termed as DNF, no repairing or second chance will be given in case of repairing. **DNF (DID NOT FINISH)** Vehicles which are awarded as DNF will be awarded zero score for this particular event.

CHARGING/REPLACEMENT OF BATTERIES

Charging/replacement of batteries are not allowed during the event to any vehicle for this particular event.

If the total time taken to complete the track by any particular vehicle is more than 60 minutes will be declared as dnf and zero score will be awarded to the team.

EVENT FORMAT AND RULES

SCORING/PENALTY The fastest time determines the winner. +5 seconds for going off-course. +2 seconds for hitting a barrier.

SOLO RACE

GENERAL RULE A solo race in an e-bike competition is a dynamic event where individual riders compete to complete a designated track or circuit in the shortest possible time. It emphasizes the e-bike's speed, acceleration, handling, and battery performance. Riders must navigate various sections of the course, which may include straights, sharp turns, and elevation changes, testing the bike's agility and power output. This event showcases not only the rider's skill and control but also the efficiency and performance of the e-bike's motor and battery system. The goal is to balance speed with precision, ensuring optimal use of the bike's power while maintaining control throughout the race. **TRACK DESCRIPTION** In this event the track will be the main track where night endurance will take place. The track may consists of natural soil road, humps, hills, rocks water etc. **DNF (DID NOT FINISH)** Teams/vehicles who will not complete the total length will be declared as DNF and zero score will be awarded to the team for this particular event.

EVENT FORMAT AND RULES

REPAIRING In case of any temporary failure during the event teams may take their vehicle out of the track and sort out the problem and again take the vehicle into the race track, teams need to continue the race from the same place brake down occurred, any shortcut or passing the tracks out of specified path will be penalized as DNF and zero score will be awarded to the team. Vehicles taking time more than ½ hours to repair in case of brake down in this particular event shall not be allowed to continue the race again and will be declared as DNF.

CHARGING/REPLACEMENT OF BATTERIES

Charging/replacement of batteries are not allowed during the event to any vehicle for this particular event.

TRACTIVE SYSTEM SHUT DOWN DURING THE EVENT

In case of power/tractive system failure, driver may ask any track volunteer to re-start the bike. In case no volunteer or persons are available nearby, driver may start the system and lock the safety belt properly and run the vehicle, if the driver did not put/lock the belt properly the vehicle will be penalized as DNF. For electric vehicles if tractive system shut down they may re-start and move forward.

SCORING/PENALTY Vehicles need to run in the specified path only any trespasses or short-cut taken will be penalized as DNF or may be banned for the next event ONE EVENT in case of serious safety rule violation.



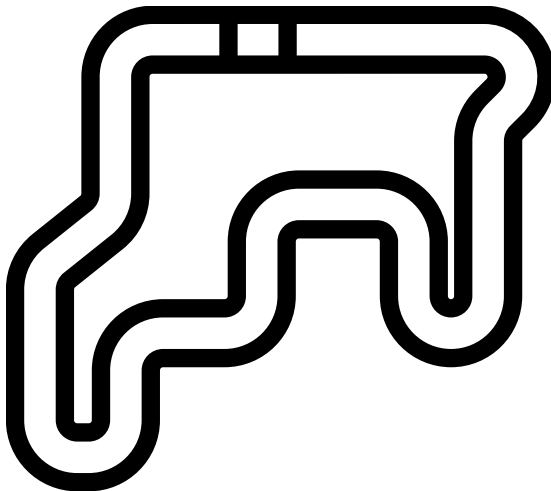
NIGHT BLACK OUT ENDURANCE RACE

(DYNAMIC EVENT)

(17:00 Hrs.-21:00 Hrs.), Main Track.

GENERAL RULE This is the endurance racing of the vehicles participating in the event. All vehicles who have passed technical inspection and their lights are working properly. In this event, the vehicles will be running at a time of around four hour's non-stop, where durability of the vehicle and the capability of the drivers will be tested. This event will occur in the main track of the event which is a long-closed loop. The vehicles will be moving in the closed loop and score will be given on the basis of maximum no of laps covered by each vehicle in the specified time i.e. maximum distance travelled by a vehicle in the specified given time. Vehicle who will cover maximum distance in the given time will be declared as winner. **TRACK**

DESCRIPTION In this event, the track will be the main track.



NIGHT BLACK OUT ENDURANCE RACE

61

(DYNAMIC EVENT)

DNF (DID NOT FINISH) Vehicles which are awarded as DNF will be awarded zero score for this particular event. **TRACTIVE SYSTEM SHUT DOWN DURING THE EVENT** In case of tractive system shut down driver may ask any track volunteer to re-start the bike In case no volunteer or persons are available nearby, driver may start the tractive system and lock the safety belt properly and run the vehicle, if the driver did not put/lock the belt properly the vehicle will be penalized as DNF. **LIGHT FAILURE** As per rule book lights are mandatory to install in the vehicle. At the starting line-up before the race starts all lights will be checked/inspected of each vehicle whether they are working or not. But during the running of the vehicle, in the race at least any two lights in horizontal directions. In case of light failure/not working all lights at a time, driver should stop the vehicle immediately and take the vehicle out of track and repair it and then continue the race or (Driver can continue race with Backup/emergency lights). In case lights are not working and vehicles are continuously running we will stop the transponder reading /receiver and impose the penalty if required at that moment and vehicle will not allowed to further continue the race until the lights starts working. It is very clear instruction from the event organizer that we will not give any type of warning to any vehicle if the lights are not working and vehicle is still moving it is the prime duty of the driver to stop and repair.

NIGHTBLACK

OUT ENDURANCE RACE

(DYNAMIC EVENT)

REPAIRING In case of any temporary failure during the event teams may take their vehicle out of the track and sort out the problem and again take the vehicle into the race track, teams need to continue the race from the same place where tractive system was shut down/brake down occur, any shortcut or passing the tracks out of specified path will be penalized and the LAP will not counted for the particular lap. **PENALTY** Vehicles need to run in the specified path only any trespasses or short-cut taken, LAP will not counted for that particular lap. Vehicles may be imposed penalty of demotion of one Rank, or may lead to disqualification in case of serious safety rule violation. **MAINTANANCE BAY/ PEDDOCK STOPPAGE** Driver's who needs any type of interaction/discussion with their team member or things like running inspection of vehicle/changing of driver/drinking water/soft drinks/refreshments/checking of fuel level/inspection of fasteners to be done at maintenance bay only. **CHARGING** There will be one charging station for charging of the vehicles in the race track. Teams need to re-fuel their vehicles when needed during the race. As this is the most precious and dangerous place so the violation of any safety rules in the fuel area may lead to disqualification of the team. Some of the rules are:-



NIGHT BLACK OUT ENDURANCE RACE (DYNAMIC EVENT)

CHARGING AREA

1. The vehicle should come for charging at a speed less than 20 Kmph. Any rash driving near the fuel area will be counted as violation of safety rules.

Charging of the vehicles will be done by the event organizers crew members only. No team members are allowed in the fuel area.

3. Teams are not allowed to do any type of interaction/discussion with the driver at the charging area. Things like running inspection of vehicle/changing of driver/drinking water/taking eatables are strictly prohibited in the fuel area. Doing these act at the charging area will be counted as serious safety violation.

Drivers are instructed to keep their vehicle slow as much as possible while entering into fuel area and during exit from the fuel area. Drivers need to kill the tractive system at the fuel area and re-fuel the vehicle. Fuel will not be given if the tractive system is in start position/running.

During the exit of the vehicle after re-fuelling and entering into track will be escorted by volunteer/Crew member present over there. Driver need to follow the instruction of the crew while entering into track and maintain marching speed or speedless than 20Kmph.

TEAM MEMBERS

All members from each team will be allowed to enter the track area during this event wearing orange colour safety jackets only.

NIGHT BLACK OUT ENDURANCE RACE (DYNAMIC EVENT)

ALCOHOL

Consumption of any alcoholic beverages, narcotics drugs etc. is completely banned. No team member or driver should be under the influence of any drug or alcohol. Organizers reserves the right to do medical test any time during the event and post event. **SAFETY JACKETS**

All safety jackets must be of orange color and team name and car no must be printed or sticker may be pasted of size at least 4" (Inches) in back side and 2" (Inches) in front left chest.

TOEING Considering safety, toeing of the vehicles will be given only after completion of the event. No toeing support will be given during the event. **GENERAL REGULATIONS** Teams are requested to keep in mind that the maintaining the dignity, discipline and safety of the fellow participants during the event should be their first priority. Running their vehicle out of the specified area and time and doing some other irrelevant activity will be counted as serious safety violation. If any team or its member found doing any such act may be charged as per the rules and regulation of the event. Organizers reserves the right to take any action in such cases. Teams may be penalized or may ask to leave the event area immediately.

SECTION-13

EVENT SCHEDULE

DAY	ACTIVITIES	TIME
DAY-1	REGISTRATION, TECHNICAL, INSPECTION, DRIVER BRIEFING & TRACK WALK	0:9:00-19:00 HRS
DAY-2	PRACTICE SESSIONS & DYNAMIC EVENTS	0:9:00-19:00 HRS
DAY-2	DYNAMIC EVENTS, NIGHT ENDURANCE RACE & VALEDICTORY CEREMONY	0:9:00-00:00 HRS

PRIZE STRUCTURE

PRIZE	AMOUNT	REMARKS
TOTAL PRIZE MONEY	5 LAKH RUPEES 5 LAKH ONLY	DISTRIBUTED CASH
CASH PRIZES	3 LAKH RUPEES 5 LAKH ONLY	DISTRIBUTED CASH
OTHER BENEFITS AND GIFTS	2 LAKH RUPEES 2 LAKH ONLY	DISTRIBUTED CASH
SPECIAL AWARDS FOR FACULTIES & COACHES	DR. APJ ABDUL KALAM AWARD FOR BEST FACULTY/COACH	3 AWARDEE NON-CASH 3-DAY, 4-NIGHT TOUR PACKAGE TO GOA, IN AUTOSPORTS INDIA'S FACILITY

ALL AMOUNT SAID AND AWARDED TO THE TEAMS WILL BE DISBURSED TO THEM WITHIN 30 DAYS OF THE COMPLETION OF THE EVENT.

MEGA E-BIKE CHAMPIONSHIP EVALUATION SYSTEM FOR DR. APJ ABDUL KALAM AWARD FOR BEST FACULTY

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1. CRITERIA

Active involvement in team preparation and participation.
Innovative approaches in teaching and guiding the team.
Contribution to the overall performance and success of the team.
Feedback from team members and peers.

2. EVALUATION PROCESS

A panel of judges will review the performance and contributions of the faculties/coaches.
Scores will be based on a combination of team feedback, peer review, and judges' assessment.
The faculty/coach with the highest cumulative score will receive the award.

3. AWARD

The winner will be awarded the Dr. APJ Abdul Kalam Award for Best Faculty/Coach.
The award includes a 3-day, 4-night tour package to Goa, Hosted at Autosports India's Facility.



SECTION-14

VIRTUAL EVENT

INTRODUCTION The virtual event for the **Mega E-Bike Championship** competition is designed to evaluate teams on their vehicle design and development process. This event is independent of the dynamic events and will not impact the final on-site event results. It provides an opportunity for teams to showcase their planning, design, and analytical skills through various reports and presentations. The virtual event has a total score of 1000 points.

CRITERIA FOR VIRTUAL EVENT

1.PRESENTATION (PPT)

Teams must prepare a virtual PowerPoint presentation that provides an overview of their **E-Bike** project. The presentation should include:

- Introduction to the team and their roles.
- Project objectives and goals.
- Key design features and innovations.
- Challenges faced and solutions implemented.
- Summary of the project timeline and milestones.

Example

Slide 1: Team Introduction

Slide 2: Project Objectives

Slide 3: Key Design Features

Slide 4: Challenges and Solutions

Slide 5: Project Timeline and Milestones

VIRTUAL EVENT

2. DESIGN REPORT

The design report should detail the technical aspects of the E-Bike design. It must include:

- Detailed design drawings and schematics.
- Explanation of material selection and engineering calculations.
- Justification for design choices and trade-offs.
- Safety features and considerations.

Example

Section 1: Design Drawings
Section 2: Material Selection
Section 3: Engineering Calculations
Section 4: Design Justification
Section 5: Safety Features



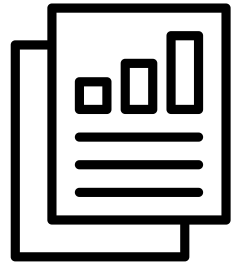
3. COST REPORT

The cost report should provide a detailed breakdown of the expenses involved in the E-Bike project. It must include

- Itemized list of components and materials with costs.
- Labor costs and other expenses.
- Total project cost.

Example

Section 1: Components and Materials
Section 2: Labor Costs
Section 3: Other Expenses
Section 4: Total Project Cost



VIRTUAL EVENT

4. SALES REPORT

The sales report should outline the marketing and sales strategy for the E-Bike. It must include:

- Target market analysis.
- Unique selling points (USPs) of the E-Bike.
- Sales projections and pricing strategy.

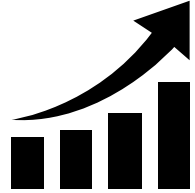
Example

Section 1: Market Analysis

Section 2: Unique Selling Points

Section 3: Sales Projections

Section 4: Pricing Strategy



5. MARKET ANALYSIS

The market analysis should assess the potential market for the E-Bike. It must include:

- Analysis of the current market trends.
- Competitor analysis.
- SWOT analysis (Strengths, Weaknesses, Opportunities, Threats).

Example

Section 1: Market Trends

Section 2: Competitor Analysis

Section 3: SWOT Analysis



6. INNOVATION

Innovation in sector of automobile demonstrated practically on the vehicle.

which can be

SCORING SYSTEM



70

SL. NO.	CRITERIA	POINTS
1	PRESENTATION (PPT)	200
2	DESIGN REPORT	200
3	COST REPORT	100
4	SALES REPORT	100
5	MARKET ANALYSIS	100
6	INNOVATION	300

*THE VIRTUAL EVENT WILL BE EVALUATED SEPARATELY AND WILL NOT AFFECT THE FINAL ON-SITE DYNAMIC EVENT RESULTS. THE SCORING IS PURELY BASED ON THE QUALITY AND COMPREHENSIVENESS OF THE SUBMITTED REPORTS AND PRESENTATIONS. EVALUATION AND AWARDS

The virtual event will be judged by a panel of experts in the field of automotive engineering and business. The top three teams will receive special awards and recognition. **1. WINNER** Award-Certificate of Excellence *The complete cost of the vehicle will be sponsored by Autosports India as per the budget in the cost report, subject to valuation by experts.* **2. RUNNER-UP** Award-Certificate of Achievement

3. 2ND RUNNER-UP

Award-Certificate of Merit

FINAL ON-SITE EVENT

The final on-site event will consist solely of dynamic events and will be evaluated based on the performance of the teams in these events. The virtual event scores will not have any impact on the final on-site event results. Teams must focus on their dynamic performance to secure their positions in the final rankings.



SECTION-15 AUTOSPORTS INDIA POLICY STATEMENT

NON-ENDORSEMENT AND INDEPENDENCE POLICY 1.

INDEPENDENCE FROM AGENTS AND SUPPLIERS

Autosports India does not promote or endorse any specific agent, agency, spare part supplier, or accommodation provider. Our organization maintains a strict policy of independence to ensure fair competition and transparency.

2. FREEDOM TO PROCURE SUPPLIES

Participating teams are free to procure their necessary spare parts, gears, and other equipment from any source in the open market. There are no mandatory suppliers or brands required by Autosports India.

3. FRAUD AWARENESS

We advise all participating teams to be vigilant and aware of potential fraudsters. Autosports India is not responsible for any fraudulent activities by third parties falsely claiming association with our organization.

4. NO PRODUCT SALES OR ASSOCIATIONS

Autosports India has a consistent policy from the very beginning of our operations: we do not sell, distribute, or associate with any products related to race equipment. If any company claims such an association, it is fake, and we do not have any relationship with them.

AUTOSPORTS INDIA POLICY STATEMENT

5. DISCOUNT AND NEGOTIATION IN REGISTRATION FEES

Autosports India does not offer any discounts or negotiate the registration fees under any circumstances. This policy applies equally to all teams, including all-girls teams. We request that participants do not approach us with requests for discounts or negotiations.

6. REFUND OF REGISTRATION FEES

Registration fees are non-refundable under any circumstances. However, in the event of a clash between the competition dates and academic exams, teams will be eligible to carry forward their registration to the next season of the event or make adjustments for participation in another event organized by **Autosports India**.

7. SUPERVISION AND COMPLIANCE

All of our competitions are supervised by the **Federation of Motor Sports Clubs of India (FMSCI)**. No manual entry or stopwatch is used; all timing and scoring are conducted with advanced electronic systems. The rules and regulations approved by **FMSCI** and the **Fédération Internationale de l'Automobile (FIA)** will be applicable throughout the event.

AUTOSPORTS INDIA POLICY STATEMENT

8. JUDGES AND RESULTS PROTOCOL

Judges, inspectors, and stewards will be appointed by **FMSCI**, ensuring impartiality and adherence to international standards. All results and regulations will be issued following standard protocol. Teams must familiarize themselves with and adhere to all rules and regulations, as no exceptions will be made for rule violations.

9. REPORTING FRAUD

If participants encounter any entities falsely claiming to be endorsed by or associated with Autosports India, they should report these instances to our official communication channels immediately for further investigation and action.

***THIS POLICY ENSURES THAT ALL PARTICIPATING TEAMS HAVE EQUAL OPPORTUNITIES AND CAN COMPETE IN A FAIR AND TRANSPARENT ENVIRONMENT. AUTOSPORTS INDIA REMAINS COMMITTED TO MAINTAINING THE INTEGRITY AND INDEPENDENCE OF OUR EVENTS.**



SECTION-16

RULES OF CONDUCT

All **Mega E-Bike Championship** participants can be proud of the excellent sportsmanship and cooperation among teams that are two of the hallmarks of the series. Good conduct and compliance with the rules and the official instructions are expectations and requirements for every team member.

An incident of unsportsmanlike conduct, the organizer is authorized to impose an appropriate penalty.

Unsportsmanlike conduct can include arguments with officials, disobedience of official instructions and the use of abusive or threatening language to any official or other participant. Depending on the seriousness of the infraction the penalty for such actions can range from a **deduction of up to fifty percent (50%) of the team's points** to expulsion of the entire team. Penalties of this type will only be imposed after a complete review of the incident by the organizer.

Alcohol and Illegal Material Alcoholic beverages, firearms, weapons of any type and illegal materials are prohibited at **Mega E-Bike Championship** site during the competition. The penalty for violation of this rule is the immediate expulsion of the entire team, not just the individual(s) involved. This rule applies to team members, advisors and any individuals working with the team on-site. **SMOKING - PROHIBITED**
Smoking is prohibited in all competition areas.

RULES OF CONDUCT

PARTIES

Disruptive parties either on or off-site must be prevented by the faculty advisor or team captain.

TRASH CLEAN-UP

Clean-up of trash and debris is the responsibility of the teams. Please make an effort to keep your paddock area clean and uncluttered. At the end of the day, each team must clean their work area.

SITE CONDITION

Please help the organizers keep the site clean. The sites used for Mega Karting Championship is generally private property and should be treated as such. Competitors are reminded that they are guests of the owners. All trash should be placed in the receptacles provided. Glass is not allowed on the grounds. Failure to clean the premises will result in an unsportsmanlike conduct penalty. Competitors are encouraged to police their areas after meals.

MOTORCYCLES, BICYCLES, ROLLERBLADES - PROHIBITED

The use of motorcycles, quads, bicycles, scooters, skateboards, rollerblades or similar person-carrying or motor driven devices by team members and spectators in any part of the competition area, including the paddocks is prohibited.

RULES OF CONDUCT

SPECTATOR RULES

GENERAL The organizers typically do not have a direct line of communication with spectators other than on-the-spot at the competition; thus, the competitors, faculty and volunteers are expected to help inform the spectators of the safety rules and help restrict spectators to the spectator areas. **ALCOHOLIC BEVERAGES** Spectators may not drink or possess alcoholic beverages at any competition location.

ACCESS RESTRICTIONS

Spectators must keep a specified distance back decided by the organizers, from any area where vehicles are operating under power. Motor vehicle competitions are potentially dangerous and safety rules will be strictly enforced.

CHILDREN

A competition site is not a safe place for children and unsupervised young people. Spectators who fail to strictly control their children will be asked to leave the site.

REMOVAL OF SPECTATORS

The course officials and organizers have the absolute right to restrict spectator access to any parts of the site and to eject anyone who violates safety rules or ignores the instructions of officials.

RULES OF CONDUCT

UNSAFE PRACTICES AND CONDUCT

All participants are required to exercise safe practices and avoid unsafe activities at all times during the competition. The event organizer has the discretionary authority to impose a just penalty for any conduct deemed unsafe. All team members will be held to this responsible.



SECTION-16

DISCLAIMER

DRIVER EQUIPMENT

Drivers must wear all of the equipment specified in "Driver Equipment Requirements" and a properly fastened restraint system at all times when the vehicle is running in any event or on the practice track. Drivers not wearing the proper equipment will not be permitted to drive, and may have their competition driver's privileges revoked.

WATER COMPETITIONS ONLY

Driver equipment rules for water events may be adjusted by the organizer.

TEAM RESPONSIBILITY

Driver equipment rules for water events may be adjusted by the organizer.

SAFETY

Safety is the primary consideration in the design of **Mega ATV Championship** vehicles and the conduct of the competitions. Teams need to include safety considerations in all parts of their program. At all performance events, it is the responsibility of the team to ensure both the vehicle and driver meet and follow all the requirements and restrictions of the rules.



MEGA E-BIKE CHAMPIONSHIP

EVENT REGISTRATION

2024

Register your team for Autosports India events easily through our official website:

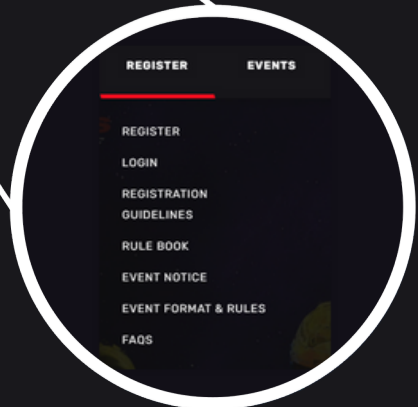
www.autosportsindia.com



1

CREATE AN ACCOUNT

Visit the website and click on Register. Provide basic details like your Name, Phone Number, Email, College Name, and Address. Once your account is created, you can manage your team and profile through the Dashboard.





MANAGE TEAM MEMBERS AND PROFILE

After registration, you can add and edit team member details at any time. The team member information and other details can be updated up to 1 month before the event date through the dashboard.

2

3

CAR NUMBER SELECTION & PROFILE

Car numbers and pit positions can only be selected after completing the payment process. The portal for car number and pit position selection will open 3 months before the event, and teams will receive a notification.



PAYMENT OPTIONS

Payment can be made through various methods available in the Dashboard. We've ease the financial burden, introduced a new EMI option, which can be selected during payment. Teams opting for the EMI option must have a credit card to complete the transaction through this flexible plan.

4

5

HOME

REGISTER

EVENTS

MEDIA

GALLERY

ABOUT US

CONTACT US

STAY UPDATED

For any queries or assistance, all communication is to be done through our official website contact page.

HAVE A QUESTION? SHOOT AWAY!

Reach us for any query or support at the following details or fill up the form.

✉ info@autosportsindia.com

☎ +91-9702627176 +91-9702625527

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Your Name

Your Address

Your Message...

SEND

MEGA E-BIKE CHAMPIONSHIP
SPONSORS & ASSOCIATES



CELEBRATING
THE 10TH
ANNIVERSARY



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