



STEAM EDUCATION

**GRAND
PRIX** PRO

OFFICIAL RULEBOOK 2023/2024



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GENERAL RULES AND CONDITIONS

H2GP PRO aims to promote student-oriented racing. Any unruly, violent or unsportsmanlike conduct will therefore not be tolerated.

Teams judged by the Race Officials or Race Director to be in violation of the spirit of this rule will be disqualified and be required to leave the race area.

H2GP PRO is an international series of student competition races, that distinguish three different tiers: qualifiers' – national/state – world.

The race time length for a H2GP event is between 2 – 6 hours. The exact length of the national race will be announced 3 months in advance by the local Race Director. The length of the world final race is 6 hours.

The maximum teams allowed on one racetrack is limited to 20. This rule applies to all race tiers. In case of more teams, the race event should include additional races.

Clarification of all rules and conditions can be made with the local Race Director prior to the event or anytime at: support@h2gp.com

COMPETITION RULES

H2GP PRO is an international series of student competition races. In order to secure fair condition across our growing community, the following format has been established:

STATE/NATIONAL QUALIFIERS

- Subject to the rules in this rulebook in full extent.
- The number of teams is limited to 20/race.
- A maximum of 20 teams will qualify to the next race tier.
- Qualification standards will be announced a minimum of 60 days before the race event.
- Top teams will be **directly qualified – Q** to the next race tier.
- Other teams can be **additionally qualified – q** based on their overall results according the qualification key valid in your region*.
- The allowed energy limits must be used worldwide
- Recharging of batteries is not permitted
- Recharging of Hydrostiks is not permitted

NATIONAL/STATE FINALS

- Subject to the rules in this rulebook in full extent.
- The execution of the H2GP event is the full responsibility of the regional Race manager.
- Recharging of batteries is not permitted
- Teams must qualify within the energy regulations in order to receive an invitation to the World Finals
- Recharging of batteries is not permitted
- Recharging of Hydrostiks is not permitted

**The exact number of the teams that will be additionally qualified/qualification key to the national/state finals will be announced once the final number of the Teams attending is confirmed by the regional Race manager or at least 2 months in advance.*

COMPETITION RULES

WORLD FINALS

- Subject to the rules presented in this rulebook and agreed on by international jury.
- The rules for the international competition, qualification key and location will be announced at least 6 months in advance.
- Recharging of batteries or Hydrostiks is not permitted
- The organizer has the right to invite teams to support the growth of the H2GP PRO program.

AWARDED CATEGORIES

ENDURANCE

Award is dedicated to the team that finishes the race with **the most laps**.

ENERGY

Award is dedicated to the team **with the lowest Hydrostik use (H2 STOCK class) or the battery usage (H2 HYBRID class) per laps driven**. I.e. team, that finishes the race with the most laps and lowest difference in used mAh.

DESIGN

Award is dedicated to the team whose **body and overall design** was chosen by the jury as the best.

INNOVATION

Award is dedicated to the team that used **modifications or innovative features** found by the jury to be the most **advanced**.

PROMO

Award is dedicated to the team whose **oral presentation** was chosen by the jury as the most engaging and well explained.

PIT STOP

Award is dedicated to the best organized team. i.e. the team with the best time and collaboration **during a fuel change**. Each team will have 2 attempts during the race to demonstrate a pitstop and be judged .

TEAM SPIRIT

Team Captains will have one vote to award to another team recognizing them for their teamwork, spirit and best collaboration. Votes will be made during the race with the race director.

AWARDED CATEGORIES

CATEGORY	AWARD	CRITERION
ENDURANCE	1 st place 2 nd place 3 rd place	The total number of laps after the race.
ENERGY	1 st place	Stock: The total number of laps / used Hydrostiks Hybrid: The total number of laps / used mAh
DESIGN	1 st place	The best score from expert jury: 80% overall look 20% own fabricated body
INNOVATION	1 st place	The best score from expert jury: 80% oral presentation 20% technical report*
PROMO	1 st place	The best score from expert jury: 80% oral presentation 20% video**
PIT STOP	1 st place	The quickest cooperating team during time-controlled fuel change.
TEAM SPIRIT	1 st place	The most votes from team captains.

***Technical report** in the maximum range of 3 A4 pages including pictures. Submitted electronically at least one day before the race.

****Video** in the maximum length of 60 seconds in a .mp4 format. Can be submitted on the day of the race for evaluation by an expert jury.

Please note that all awarded categories are part only for state/national/world level races. All regional races serve as qualifiers for state/national finals, therefore only the endurance category is awarded.

VEHICLE COMPETITION CLASSES

VEHICLE CLASSES

In the next years we are splitting the H2GP PRO competition into 3 Racing Classes:

- a) H2 Stock Class
- b) H2 Hybrid Class
- c) H2 Prototype Class

Starting in the **2023/24 season**, the competition will include only 2 classes: H2 Stock Class and H2 Hybrid class.

H2 STOCK CLASS

This racing class includes cars that are powered by hydrogen and batteries. These teams have access to the same amount of Hydrostiks and batteries as previous years. Starting in 2023/24, teams in the H2 Stock Class are eligible to become both the H2 Stock Champion in the national tier races, and Stock Class World Champion.

H2 HYBRID CLASS

This racing class includes cars that are powered by hydrogen and batteries. These teams have access to more Hydrostiks but have reduced **permitted** Watt Hours than the H2 Stock Class. Starting in 2023/24, teams in the H2 Hybrid Class are eligible to become both the H2 Hybrid Champion in the national tier races and Hybrid Class World Champion.

H2 PROTOTYPES (coming soon)

This racing class includes cars that are powered by hydrogen only. These teams have access to a larger quantity of Hydrostiks but are not permitted to use batteries.

CLASS QUALIFICATION

Teams can choose which Class they would like to compete in.

Please inform your local Race Director which Class you are competing in prior to the first race. Each team can compete in only one Class.

In case of multiple teams in one school, all teams must compete in the same Class.

All teams from H2GP PRO WORLD FINAL 2023 are automatically nominated to H2 Hybrid class, but are eligible to appeal and compete in the lower class.

VEHICLE DESIGN RULES

GENERAL

- During the whole race, all vehicles must comply with the dimensional requirements contained in this rulebook. Any failure of this requirement during the race will result in a time penalty.
- All vehicles must use **H-Cell 2.0 and Hydrostiks/Hydrostiks PRO**. Other types of fuel cells and Hydrogen storage are not permitted.
- Modification or customization of H-Cell 2.0 is allowed, but it will void the warranty. It is recommended to consult with the Race Director before making modifications.
- Modification or use of own fuel cell controller is allowed, but it will void the warranty of H-Cell 2.0. It is recommended to be first consulted with the Technical Director.
- It is the team's responsibility to provide details about the customization of H-cell 2.0, if modifications were made during technical inspection.
- All vehicle parts, batteries, Hydrostiks, and the H-Cell 2.0 must be securely mounted
- Telemetry is allowed.
- The use of electronic gyroscopes is not allowed.
- Hazardous bumpers, nerf bars, chassis extensions or other objects protruding from the vehicle are not allowed.
- The provided chassis can be used but is not required. Teams may customize, build or use any chassis that meets the dimensional requirements.
- Having multiple complete chassis at the racing venue is strictly forbidden. Each team can bring spare parts for their chassis. All vehicle parts except for the chassis plate can be replaced without supervision during the race. The race chassis plate will be marked by the Race director upon the initial technical inspection.
- In the event that the chassis plate needs to be replaced during the race, it must be completed only under technical staff supervision and the old chassis plate must be handed over to the technical team until the completion of the event.
- The car must be in a safe condition to participate in the race to prevent any safety issues.

VEHICLE DESIGN RULES

DIMENSIONAL PARAMETERS

During a technical inspection, the car will be checked as one whole piece. All parameters must remain unchanged throughout the race.

List of allowed dimensional parameters is given in **millimeters or grams** in the following table:

H2 STOCK CLASS		
DIMENSION	MINIMUM	MAXIMUM
Vehicle Length	360	470
Vehicle Width	180	220
Vehicle Height	-	170
Wheelbase	230	270
Vehicle Weight (g)	1200	2000
Chassis Ground Clearance	4	-
Front Wheel Diameter	60	66
Front Wheel Width	20	30
Rear Wheel Diameter	60	66
Rear Wheel Width	20	55

- All car dimensions are measured with the car body.
- Car weight is measured as the weight of a ready-to-race car without fuel. i.e. excluding Hydrostik(s) and battery.
- Dimensions of the wheels are measured including tires (natural wear of the tire can be tolerated after the race).

VEHICLE DESIGN RULES

DIMENSIONAL PARAMETERS

During a technical inspection, the car will be checked as one whole piece. All parameters must remain unchanged throughout the race.

List of allowed dimensional parameters is given in **millimeters or grams** in the following table:

H2 HYBRID CLASS		
DIMENSION	MINIMUM	MAXIMUM
Vehicle Length	360	470
Vehicle Width	180	220
Vehicle Height	-	170
Wheelbase	230	270
Vehicle Weight (g)	800	2000
Chassis Ground Clearance	4	-
Front Wheel Diameter	60	66
Front Wheel Width	20	30
Rear Wheel Diameter	60	66
Rear Wheel Width	20	55

- All car dimensions are measured with the car body.
- Car weight is measured as the weight of a ready-to-race car without fuel. i.e. excluding Hydrostik(s) and battery.
- Dimensions of the wheels are measured including tires (natural wear of the tire can be tolerated after the race).

VEHICLE DESIGN RULES

BODY

- Sharp or otherwise dangerous features on a body are not permitted.
- All vehicles must have a readily removable body. The body and chassis must always be securely joined while the vehicle is on the track. Rubber bands or zipties are not allowed for this purpose.
- Multiple bodies are not permitted. All vehicles must finish the race with the same body they started with.
- If a body comes off of a vehicle during a race, the vehicle must be taken off of the track and the body properly replaced before the car may re-enter the race.
- A body can be made of Lexan, plastic or any durable material and formed by 3D printing, injection molding or vacuum forming. Bodies must meet all dimensional requirements. (Bodies not using Lexan or Plastic must be approved by the race director prior to the race)
- Hard bodies made out of materials such as wood and metal are not permitted.
- Cutting holes in the body is only allowed for the wheel wells, antenna and body posts. Any other holes (e.g. for air ventilation) cannot exceed a total area of **10cm²** and must be covered by mesh or grid.
- The body must keep space for the number stickers (W 50mm, H 60mm) distributed by the Race Director. Up to three stickers can be used during the race, one on the left and on the right side of the body, and one on the front windscreen or roof.

BUMPERS

- Front bumpers are required. They must be shock absorbing and non-metallic, with no sharp edges. For safety, rigid bumpers such as fiberglass and composites are not permitted.
- Front bumpers must be at least 1/8" (3mm) thick. Bumpers may not extend past the frame of the body, or beyond the outer edge of the tires.
- Rear bumpers are allowed and must be made of shock absorbing material with rounded edges. They may not extend to the side beyond the outer edges of the tires and may not extend beyond the rearmost part of the body.

VEHICLE DESIGN RULES

RADIO

- Radio control systems are limited to 2.4GHz DSM/DSS Systems.
- Transmitters are limited to the manufacturer's recommended voltage. External transmitter battery packs are not permitted.

MOTOR

- Brushed or brushless motors are allowed.
- There is no limitation to motor turns, but 17.5t, 21.5t, or 25.5t motors are recommended. Other motors are also allowed but must be cleared with Race Director.

WINGS & SPOILERS

Wings are aerodynamic devices attached to vehicles to increase downforce and traction when a vehicle is traveling at speed.

For the purposes of these rulebook, a spoiler is a flat plate attached to a body or to the trailing edge of a wing.

- Wings or spoilers can not extend beyond the width and height of the body (i.e. wings or spoilers can not be wider or taller than the car).
- Wings must be mounted to the rear of the car using at least 2 screws, bodyclips or otherwise be integrated into the body design.

WHEELS & TIRES

Driven wheels are not specified. It is up to the students' decision whether their vehicle will be rear/front 2WD or 4WD.

- Rubber or Foam tires are allowed.
- The use of any tire treatment product for increasing the traction is prohibited.

Rubber: A tire molded using rubber or similar synthetic material. Tires may be smooth or treaded.

Foam: A tire composed solely of foam rubber. Tires may be bonded to the wheel.

ALLOWED ENERGY LIMITS

ENERGY LIMITS

The teams are allowed to use energy stored only in batteries and Hydrostiks. The maximum allowed energy per each racing class is defined below, with regards to the race tier:

H2 STOCK CLASS

RACE TIER	RACE LENGTH	MAXIMUM ALLOWED ENERGY	
		BATTERIES*	HYDROSTIKS
QUALIFIERS	2 hrs	52** / 30 Wh	10
	3 hrs	78** / 55 Wh	12
STATE NATIONAL WORLD	4 hrs	78** / 55 Wh	18
	6 hrs	104** / 82,5 Wh	22

H2 HYBRID CLASS

RACE TIER	RACE LENGTH	MAXIMUM ALLOWED ENERGY	
		BATTERIES*	HYDROSTIKS
QUALIFIERS	2 hrs	20 Wh	15
	3 hrs	30 Wh	18
STATE NATIONAL WORLD	4 hrs	30 Wh	22
	6 hrs	55 Wh	26

*Watt Hour is calculated by Nominal Voltage multiplied by the Battery Capacity
 $Wh = V \times Ah$,
 example: 55 Wh corresponds to 2x3600 mAh LiPo/LiHV battery,

**This limit applies only to NiMH batteries. Use of the NiMH batteries is limited to the batteries provided by the program: 6-cell, 7.2V, 3600 mAh batteries.

ALLOWED ENERGY LIMITS

HYDROSTIKS

- Each team must bring charged Hydrostik cartridges to the race, and hand them over to the Race Director during the technical inspection before the race.
- Any modifications of Hydrostiks are not permitted. Modifications are allowed to the holders and tubing only.
- Each team must use the Hydrostiks provided by the H2GP PRO organizers for the World Finals event and any events related to the race week.
- If the Race Director provides Hydrostiks, all teams are obliged to use them.
- Recharging of Hydrostiks and batteries on an external charger during the race is strictly prohibited and will lead to the team being disqualified.
- Charging batteries on your car with the race Hydrostiks is permitted using the H-Cell 2.0 mounted on your vehicle only.

ALLOWED ENERGY LIMITS

BATTERIES

- Each team must use batteries in the form:
 - a) Nickel-Metal Hydride (NiMH)
 - b) Lithium Polymer (LiPo/LiHV)
 - c) Lithium Iron Phosphate (LiFePo)
 - d) Lithium-ion (Li-Ion)
- Other types of batteries are not allowed. Teams must use only one selected battery class throughout the race.
- Total energy stored in batteries (in Wh) cannot exceed (0,1% tolerance).
- All batteries must be charged prior to inspection.
- Any battery found to be overcharged will not be tolerated:
 - a) NiHM - nominal voltage is 1.2V/per cell; max charge is 1.43V
 - b) LiPo - nominal voltage is 3.7V/per cell; max charge is 4.2V.
LiHV - nominal voltage is 3.8V/per cell; max charge is 4.35V
 - c) LiFe - nominal voltage is 3.3V/per cell; max charge is 3.6V
 - d) Li-Ion - nominal voltage is 3.7V/per cell; max charge is 4.2V
- Recharging batteries during the race with an external source is strictly prohibited and will lead to the team being disqualified.
- All “practice“ or other batteries not used for the race will be collected by the race personnel for the duration of the race.
- All batteries must have a hardcase protective cover. When using Li-Ion batteries, the car must be equipped with a battery holder case. Only a combination of single-cell batteries or commercially available multipacks are allowed. Soldering multiple Li-Ion batteries is not permitted.
- All batteries must have original stickers and clearly visible information about battery type and capacity. Any battery that is suspected of being tampered with in any way will be confiscated at any time by the race director.
- If any team has intentionally tried to switch stickers or disguise a higher capacity battery, that team will be disqualified immediately from all aspects of the H2GP PRO competition, including disqualification from awards.

RACE DAY RULES

DAY SCHEDULE

All H2GP PRO races will follow the same day format. However the exact day schedule may differ from race to race. Final day schedule will be announced by the Race director or organizer at least one month prior the event:

PRIOR TO THE RACE

- Teams registration 15 minutes
- Driver's practice/Open track 30 minutes
- Technical check, battery and Hydrostik collection 60 minutes
- Drivers Information meeting 10 minutes

DURING THE RACE

- Loop check (if required) 5 minutes
- Race 2 – 6 hours
- Technical check 1 – 3 minutes

AFTER THE RACE

- Technical check 15 minutes
- Posting of unofficial results and appeals 15 minutes
- Award ceremony 30 minutes

RACE DAY RULES

TEAMS REGISTRATION

- All teams must first approach to the Race director/registration desk when entering the venue. Teams will receive all information about the day schedule, allocated team space, etc.
- Teams must identify the team captain at check in.

PRACTICE

- All teams must wait until the track is officially open for practice. All teams will have a sufficient amount of time for the practice and final preparation of the car.
- Driving outside of the track or on a closed track is strictly permitted.

TECHNICAL CHECK

- All vehicles must pass technical check prior to and after every race. Any vehicle found to be illegal during a pre-race check will not be allowed to race until all violations are corrected. Vehicles found to be illegal during a post-race check will be disqualified.
- All teams must submit charged batteries and Hydrostiks at the pre-race technical check.
- Technical check includes but is not limited to checking the vehicle's height, length and width. No other parts of the car other than the tires may be at less than the minimum ground clearance for a specific class.
- There is no tolerance above any maximum specification for all dimensions.
- All vehicles must have the correct number, assigned to them by the Race Director, attached in a visible spot on the body, preferably on the roof.
- The designated Official, Technical Inspectors, Track Marshals and the Race Director have the right to subject any vehicle to mechanical or visual inspection (including photographing) or impound at any time. It is the Team's responsibility to tear down a vehicle for inspection if required to do so. Failure to abide by this rule will lead to disqualification.

RACE DAY RULES

LOOP CHECK

- Race Director will call for loop check 5 minutes before Race Start (unless it has been done during technical check) in order of seeding. Failure to complete loopcheck when called will result in a penalty. Once cars enter the loop check no work may be completed on the car unless a loop check fails.

RACE DAY RULES

DURING THE RACE

All teams are allowed to have 5 students in total and 1 team leader per team. The roles of the students and race personnel is described below.

TEACHER / TEAM LEADER

Only students are allowed to work on the car. Students may consult with their teacher(s) during the race, but teachers are not allowed in the pit area or to work on the car. No teachers or coaches are permitted in the pit area during a race. Coaches found in the Pits during the race will result in disqualification of the team.

TEAM CAPTAIN

Team captains will be the communicator between race management and teams. Team captains are the only ones who will address the Race Director and other Race Managers. Team captains are the only team members allowed to address the timing and scoring staff. No other team members, coaches or parents are permitted to question, challenge or appeal with the race staff. Team captains are responsible for ensuring their car arrives on time for loop check. Team captains are required to attend the team meeting prior to the race along with their drivers.

Team Captains will be responsible for yellow and red cards. Only team captains can make an appeal at the end of the race.

MECHANIC

Servicing and maintenance of vehicles are permitted in the team's pit area only. Any repair or amendment to the vehicle on the track is strictly prohibited. Vehicles must be taken off the track entirely for any work or energy changes.

TEAM SPOTTER

Each team will have a dedicated spotter along the side of the track. Only the spotter is allowed to walk on the track when the car needs assistance during the race (e.g. after collision). If the Race Director provides Track Marshals, the Team Spotter is not allowed on the track.

DRIVER

The driver is not allowed to interfere with their team's vehicle by any means while they are driving. Only team members /mechanics are permitted to interfere with the vehicle. Every team is advised to have at least 2 drivers who can alternate during the race.

RACE DAY RULES

DURING THE RACE

TECHNICAL ASSISTANT

Technical assistants will be available for teams. The technical assistant will not be allowed to work on the car (unless that person deems it necessary).

TRACK MARSHAL

Marshals are authorized to give a warning to the driver/team before an official penalty from the Race Director. Track Marshalls may be provided by the Race Director and are responsible for assisting crashed cars. EVERY TEAM will be assigned a Track Marshall time and coaches or a parent volunteer can complete this assignment.

RADIO COMMUNICATION

Radio communication is allowed between driver, mechanics and the team leader. We encourage all the teams to learn how to work independently and use the help of the teacher only when using the red cards instead of any other communication during the race.

- Radio communication can only be used by the driver and their pit crew while the driver is in the drivers' area.
- A single ear piece or one sided headset that is not audible to others and does not reduce the ability to hear the Race Director's calls must be used.
- Any 2.4 GHz radio equipment is not allowed.

RED CARD/YELLOW CARD

Team Captains can pull a Red Card for teacher/coach support at one time during a race. The red card will allow for 5 minutes of coach support. Coaches may not touch the car or work on the car during this time. All red card support must be completed in the technical work zone and under supervision of a race management delegate. **The use of the red card is limited to single use only.**

Yellow cards can be pulled by the team captain at any time for technical support from the Horizon H2GP Technical team. All yellow card work must be completed in the technical work zone. **The use of the yellow card is unlimited throughout the race.**

RACE DAY RULES

EVENT ZONES RULES

All H2GP PRO events will be physically divided into different zones based on their use. The actual layout of the event can differ at each race, but the rules for individual zones will remain unchanged.

The general rules in each of them are summarized below:

RACE ZONE

Only track marshals are allowed to enter the track. Vehicles are obliged to exit/enter the track in the dedicated area (pit-lane).

Pit lane can only be entered for pit stops or penalties given by the Race director. Pit lane cannot be used to drive through.

Any modification or addition of own devices to the racetrack is prohibited and will be penalized accordingly.

DRIVERS' ZONE

If the venue allows, there will be a designated Drivers' Zone that all drivers are obliged to use. If no driver zone exists, drivers must be in their team zone.

Only one driver is allowed in the Drivers' Zone at a time. Drivers can change during the race anytime they need/want.

TEAM ZONE

Zone dedicated to the student teams only. Each team will have a designated pit area, in which students are obliged to fix their vehicles. Students need to stay in the area dedicated to their team. No electricity is allowed in the team zone.

Each team must work independently in their dedicated team area - pit stop. Multiple teams cannot share, combine or merge their pit-stops together.

TECH ZONE

Students are obliged to pass the tech inspection and change their batteries and Hydrostiks here. Electricity and shared power tools are allowed in the tech zone.

The tech table(s) for work on the car may be provided by the Race Director. This is also the table where coaches are permitted to instruct, but not perform work, during a red card.

A table will be provided in this zone for all Energy exchanges (i.e. batteries and Hydrostiks). Energy changes cannot be made in any other location.

RACE DAY RULES

FLAGS

GREEN FLAG / NATIONAL FLAG

- The green or national flag indicates the beginning of the race

CHECKERED

- Displayed at the start/finish line to indicate that the race is officially finished.

YELLOW FLAG

- Danger on the track. All drivers must slow down their vehicles.
- No passing is allowed under a Yellow Flag.

BLACK FLAG – TEAM ISSUES

- When a team is given the Black Flag, it means that the driver must pull their vehicle off the track immediately into the pit-lane.
- Any vehicle that loses its body or that cannot be controlled properly due to radio problems, has extensive race damage or missing parts will be black-flagged.
- A black flag ruling may be used at any time for unsportsmanlike conduct or abusive language to other drivers or race officials.
- Failure to comply with any of these rules, not limited to items covered in this section, may result in penalty or disqualification by the Race Director
- The first uses of Black flag will result in a Team warning. Each team can receive 3 warnings throughout the race.
- After 3 warnings, the next 3 uses of Black flag will result in a 1st grade time penalty of 3 minutes each.
- The following 2 uses of Black flags will result in a 2nd grade time penalty of 15 minutes each.
- If a team collects more than 3 warnings, 3 1st grade penalties and 2 2nd grade penalties. The team is disqualified for the rest of the race.

RACE DAY RULES

FLAGS

BLACK AND WHITE FLAG – DRIVER ISSUES

- A black and white flag will be given to a driver whose driving, vehicle operation or performance constitutes a hazard to the other vehicles in the race. This includes insufficient skills to compete in the race, unsportsmanlike driving, intentional hitting of other vehicles, short coursing, intentional blocking when being overtaken, illegal or improper vehicle numbers and other such acts.
- The first uses of black and white flag will result in a Driver's warning. Each driver can receive 5 warnings throughout the race.
- After 5 warnings, the next 5 uses of black and white flag will result in a 1st grade time penalty of 30 seconds each.
- The following 3 uses of black and white flags will result in a 2nd grade time penalty of 60 seconds each.
- If a driver collects more than 5 warnings, 5 1st grade penalties and 3 2nd grade penalties. The driver is disqualified for the rest of the race.

RACE DAY RULES

PENALTIES

- Race Director may assess “stop and go” penalties, with or without delay to an act of rules violation. During a “stop and go” penalty, the vehicle must enter the pit lane and stop at the designated area until the Race Director permits the car to continue in the race.
- Failure to comply with any H2GP PRO rules, not limited to those items covered in this section, may result in a penalty being assessed by the Race Director.
- The Race Director will distinguish two different groups of penalties: driver penalty given to a driver violating the rules, and team penalty given in the event that any other member or whole team violated the rules.
- The Race Director will distinguish three different grades of penalties according to the seriousness of the rules violation.
- The Race Director at their own discretion may provide a warning prior to giving the first penalty.
- The Race Director can address the penalty automatically without a warning in case of a severe or intentional accident (deliberate hit from behind of the vehicle, hitting of standing vehicle from any direction, etc.).
- Repeated violations lead to a higher graded penalty.
- The „stop and go“ penalty system during the race is shown below:

PENALTY	DRIVER	TEAM
1 st GRADE	30 seconds	3 minutes
2 nd GRADE	60 seconds	15 minutes
3 rd GRADE	Driver DQ*	Team DQ

**repeated penalization of the driver will lead to driver DQ, which is administered with one team penalty*

PENALTY LOG

Organizers will maintain a copy of the Penalty Log during the race and can be reviewed by the Team Captain.

RACE DAY RULES

EXAMPLES OF DRIVER PENALTIES

- Corner cutting is any deliberate or accidental maneuver that shortens the length of the course for a vehicle traveling around the track.
- Improper re-entry is any maneuver that adversely affects the ability of other drivers in the race to safely operate their vehicles.
- The vehicle re-entering the racing surface, from a point other than the pit lane.
- Driving in the opposite direction to the racing direction during the race.
- Disturbing and any other interfering behavior to other drivers in drivers' area.
- Failure to stop and allowing the other car to restart when a driver has caused a crash.

EXAMPLES OF TEAM PENALTIES

- Any technical violation during a technical inspection during the race.
- Any unmarked batteries or Hydrostiks in the pit stop area.
- Presence of a teacher or any other adult in the pit stop area, unless there is technical assistance allowed by the Race Director, will result in immediate Disqualification:
- Repairing or servicing a vehicle in the pit lane or on the track.
- Disobeying the Race Director's instructions.
- Deliberately modifying, changing, blocking, or otherwise interfering with the racetrack.
- Ignoring the black flag.

RACE DAY RULES

DISQUALIFICATION

Any of the following actions on the part of a driver or member of their team will result in mandatory disqualification from the event.

- Collecting 3 2nd grade team penalties
- Subjecting a Race Officials to improper language or other demeaning actions.
- Subjecting other contestants to improper language, other demeaning actions or unsportsmanlike behavior.
- Repeated deliberate bumping or blocking.
- Not submitting the vehicle for technical inspection prior to, during and after the race.
- Failure to abide by charging specifications with LiPo batteries (i.e. overcharging).

SPORTSMANSHIP

Great sportsmanship starts with respect for yourself, your team, the opponent and the decisions of the race officials. Great fans are enthusiastic for their team and sportsmanlike with their behavior towards the opponent and the decision of the race officials.

- Stopping for the opponent when causing them to crash or spin out during an attempt to pass. Once they restart, you may continue the race as well.
- Supporting other teams when they are working on their cars.
- Cheering for clear and clean racing and passes

This document has been developed as a part of H2GP SERIES.

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