

## GENERAL INFO

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Every driver will get a special ETS T-shirt at his first event of the season. Every driver who participates in 5 or 6 races in the season will receive a special gift at the final race of the season.

### ENTRY FEE

The entry fee for every ETS racing class is calculated at **90, --€**, and every racer must pay his entry fee in advance via Bank transfer. People from different countries can pay their entry fee trackside to prevent from expensive transaction costs. In this case, racers must inform the ETS Orga team about it when making their entry for the race.

### CONDITIONS OF PARTICIPATION IN FWD, 21.5 STOCK AND 40+ MASTERS

If a driver has reached an A-Main in the Modified class in the past two ETS seasons, he may not compete in the 40+ Masters, 21.5 Stock and FWD classes in the new season.

If a driver reaches the A-Main in the Modified class during the current season, he is also no longer allowed to start in these 3 classes.

### DOUBLE STARTS

It is not allowed to race in 21.5 Stock **AND** 40+ Masters at the same ETS event.

It is also not allowed to combine Pro Stock with the class 21.5 Stock **OR** 40+ Masters at **ETS INDOOR EVENTS**.

### PRACTICE

All racers are only permitted to put down 1 car onto the track during each practice run. The use of 2 cars per practice run has once gotten out of hand and will no longer be allowed. This rule counts for all open practice rounds on Thursday, as well as for all practice runs on Friday (free and controlled). The rule is the same for all classes, all racers, and all teams. For sure you can use different cars in your practice runs - but only 1 car per run.

### FRONT WHEEL DRIVE (FWD) - GENERAL RULES

All cars must comply with overall 1:10th Touring Car dimensions. Prototype cars, which are not available to the public, are not allowed. Cars must be available in hobby shops one week before the next ETS race weekend starts!

Only the front wheels of the car are allowed to receive the power from the motor and transmission – the rear wheels are not connected to the drivetrain in any way. An independent suspension must operate on all four wheels. All electronic components (including motor, ESC, and battery) must be contained entirely within the bodyshell, but otherwise the position of these items within the car and the general chassis layout is free.

## TECHNICAL GUIDELINES

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### POWER SUPPLIES

We have seen the use of small computer power supplies by many racers, and this cannot be allowed. The insurance we carry for ETS states that the equipment we use must be CE certified. As these kinds of power supplies are not certified electric components, we cannot allow them. The risk of using these devices is too big and we always must concern about everybody's safety.

## **BATTERIES**

- The ETS allows any hard case Li Po battery packs featuring the CE sign.
- The LiPo must be charged in a special charging bag.
- Max. Battery voltage: 8.40 Volts
- Max. Charging current: 12 Amps
- Max. Discharging current: 20 Amps

These maximum charging and discharging currents are counting for the whole charger, not for a single channel of a charger. So, if you use two channels in simultaneous mode, the total current arriving at the lipo battery is limited to a maximum of 12 amps for charging and 20 amps for discharging - and not more! It is not allowed to use two channels at 12 amps each to charge one lipo battery- that would be a charging current of 24 amps in total and is strictly forbidden.

It is also not allowed to use any kind of battery warmers to lower the internal resistance of the lipo pack before and during the charging process. If a driver comes to technical inspection with **8.44** volts or more he is not allowed to start in his next heat. When the battery voltage is from **8.41** to **8.43** volts the driver is allowed to discharge the battery down to **8.40** volts by accelerating and braking the car while holding it in his hands until the battery voltage is down to **8.40V**.

## **ELECTRONICS AND SPEED CONTROLLERS**

The use of a Gyro or other electronic driving aids are strictly forbidden. It is only allowed to use the following electronics in the car: motor, speed controller, servo, receiver, transponder, LiPo battery, cooling fans and BEC capacitors.

Drivers must use the original power capacitor on the Speed Controllers for all ETS classes (excluding Modified). Cutting the power switch from the ESC is not clearly forbidden, but the warranty of the ESC will expire immediately when doing so. The power wires are not allowed to be thicker than 13AWG in all stock touring car classes. In the FWD class, the wires are not allowed to be thicker than 14 AWG. It is allowed to use a cooling fan on every ESC.

## **MOTOR-RULES FOR STOCK CLASSES**

Motors are handed out in a raffle, meaning you will not receive the same motor at each race. Between races, we will check all used motors on a special motor tester guaranteeing that "your" motor has nearly same power as all motors. It is absolutely forbidden, to open the motors. Following the race, the motors must be returned. At the end of the season, every driver can buy a motor for a special price, but quantities are limited.

## GEARING

If a maximum gearing is defined in a racing class (FWD and all stock touring car classes), there is no room for interpretation. **For Example:** If the maximum gearing is at 4,5 then you cannot run something which is 4,49 or 4,48. It **MUST** be at least 4,50 when you calculate the final gear ratio. We will not round a number of 4,49 into 4,50 at the technical inspection!

## RENTAL OF MOTOR

The rental fee for all Stock class motors is included in the Stock classes entry fee. The motor must be returned to the ETS crew at the end of the event.

## TIRE RULES

The ETS only allows the removal of the center rubber mold line on the tire surface. Therefore, you can use a small cutter or any other tool. Electric powered tire sanders are not allowed to use for removing the center line! Any further grinding or sanding of the tire's surface or sidewalls to lighten the tire, change the diameter or affect its structure is strictly forbidden. It is also forbidden to change the tire characteristics with other weird methods such as microwaves or ovens. Racers are allowed gluing up the sidewalls of the tires to prevent cars from traction rolling.

It is only allowed to clean the tires with the brake cleaner and the tire additive available at the event. The use of other tire cleaners or brake cleaners is strictly forbidden. The only additive which is allowed to use is the additive which gets provided from the ETS on the tire additive tables in the pit area.

For qualifying and finals, only ETS marked handout tires are allowed. As the required tire quantities for carpet and asphalt are different, please check the "Technical Requirements Overview" which is posted below. There you can see how many sets of tires you are allowed to use during the race.

### Additional FWD tire rule

With the use of the Ride tire, the use of tire warmers is allowed in the FWD class. Every driver must return his race tires after his last FWD heat on **Friday** and **Saturday**. If a driver is breaking the rules, the race director can delete his best run or disqualify him from the complete event as well.

## TIRE PRICING

There is always one complete set of tires included in the entry fee of every class (4 tires on wheels – pre glued). Depending on the rules of every class (see below), every driver can buy an additional amount of tire sets for the race.

The prices for these additional sets of tires are:

- Touring Car: 25 € per set of tires (4) – must be paid trackside (cash only)
- FWD: 20 € per set of tires (4) – must be paid trackside (cash only)
- Formula 1: 25 € per set of tires (4) – must be paid trackside (cash only)

It is also possible to pre-order practice tires for the event. A lot of drivers are doing this especially for our outdoor races. The quantity of practice tires must be declared in the registration form when signing up for the race. If a driver has pre-ordered practice tires, he must take and pay them at the event as well.

## OVERVIEW TECHNICAL REQUIREMENTS

	PRO STOCK	40+ MASTERS	21.5 STOCK	MODIFIED	FWD	FORMULA
Tires Handout Outdoor	Matrix EP 36R EPA-036	Matrix EP 36R EPA-036	Matrix EP 36R EPA-036	Matrix EP D36 EPA-D36	Ride Belted 36086	Matrix Front MX-10A50F1 Rear MX-10P35F1
Tire Quantity for Outdoor Race	2 Sets + 1 Set A-Main	2 Sets	2 Sets	3 Sets + 3 Sets A-Main	1 Set	2 Sets
Tires Handout Indoor	Matrix EP 28R EPC-028	Matrix EP 28R EPC-028	Matrix EP 28R EPC-028	Matrix EP 28R EPC-028	Ride Belted 36086	Matrix Front MX-10A50F1 Rear MX-10P35F1
Tire Quantity for Indoor Race	2 Sets	2 Sets	2 Sets	2 Sets	1 Set	2 Sets
Additive Indoor	MR33 V4	MR33 V4	MR33 V4	MR33 V4	MR33 V4	MR33 V4
Additive Outdoor	MR33 V3	MR33 V3	MR33 V3	MR33 V3	MR33 V3	MR33 V3+V4
Motor	ORCA ETS 17.5T	ORCA ETS 21.5T	ORCA ETS 21.5T	open	HW ETS 17.5T	HW ETS 21.5T
Speed Controller	ORCA BP1001 ETS (OR-BP1001- 17.5T)	ORCA BP1001 ETS (OR-BP1001- 21.5T)	ORCA BP1001 ETS (OR-BP1001- 21.5T)	open	HW ETS Justock G2+G3 (HW-30112003- ETS)	HW ETS F1
Speed Controller Software	Orca ETS 17.5T V3.0	Orca ETS 21.5T V3.0	Orca ETS 21.5T V3.0	open	HW 17.5K	HW F1
Gear-Ration Indoor	max. 4.5	max. 4.5	max. 4.5	open	max. 5.0	open
Gear-Ration Outdoor	max. 3.8	max. 3.8	max. 3.8	open	max. 4.5	open
Overall Weight Indoor	min. 1300 g	min. 1300 g	min. 1300 g	min. 1280 g	min. 1250 g	min. 1010 g
Overall Weight Outdoor	min. 1320 g	min. 1320 g	min. 1320 g	min. 1300 g	min. 1250 g	min. 1010 g

## TECHNICAL INSPECTION

The technical inspection checks all cars to comply with the ETS rules before every heat (qualifying and finals). The technical inspection will **ALWAYS** check these things:

- Correct battery voltage
- Minimum weight
- Wing cutted at lowest cutline, no shims under the wing
- Number of tires to match correct driver
- Correct blinky mode in all classes (not in Modified)
- Ride height at indoor races (min. 5mm for touring car and FWD)

## BODY SHELL GUIDELINE

For our Touring Car classes (Modified, Pro Stock, 40+ Masters, and 21.5 Stock) and the FWD class we want to make sure, our body shell rules are fair and easy to handle for all our racers. In the past, we saw many new body shells being released, meaning that people often had panic to get them in time for our races while having no time to paint them nicely. We believe that the following rules will keep our racing fair and competitive throughout the whole ETS championship.

### GENERAL TOURING CAR BODY SHELL RULES

Only 190mm 4-door commercially available saloon bodies are allowed at the ETS. All bodies must have lights and grill (front), and they must be painted (from inside). It is not allowed to race with a body that has no front lights and grill (stickers or painted)!

Only Lexan rear wings are allowed, and the winglets can be made from Lexan or a thin carbon fiber material without having any sharp edges. The wing must be cut at the lowest marked cutline. If you like you can cut it even more down. It is not allowed to leave the wing bigger than the lower cutting line. It is also not allowed to use any kind of shims between the wing and the wing mount surface to increase the wing height. A minimum roof height will not be checked at the technical inspection.

## ETS ALLOWED BODY SHELLS AND MANUFACTURERS








### MODIFIED AND PRO STOCK

The Pro Stock and Modified racers can select their bodies from the list of ETS body shells which gets prepared before the first race of the season in cooperation with the supporting body shell manufacturers. All supporting companies can list **THREE** body shells for the whole season which drivers can use in all available weight options if these body shells are available at official hobby shops. At the start of the season, every company must list a minimum of two body shells. The third body shell must be listed at least 4 weeks ahead of the third race of the season. This rule gives companies the chance to develop at least one new body shell during an ETS season for Pro Stock and Modified. Companies can only list **ONE** third body shell for Pro Stock and Modified ahead of race three. It must be the same body for both classes.

## 21.5 STOCK, 40+MASTERS AND FWD

If you race in one of those classes, you can select the body you like to use from the ETS body shell list as well. The ETS supporting manufacturers can list ONE regular weight body shell to the list which will show the bodies of choice for the whole season. The reason for this is to limit the body shell options and to keep the costs lower for the drivers in these classes. Lightweight bodies are NOT allowed in these classes - we will randomly check the thickness and the weight of body shells at the technical inspection. If somebody is breaking the rules he can get disqualified from the ETS event.

## OFFICIAL ETS BODY SHELL LIST FOR SEASON #16 2023/24

	PRO STOCK	40+ MASTERS	STOCK 21.5	MODIFIED	FWD
	Eptron BDTC-190ETR Hyper HR BDTC-190HYPHR M410 BDTC-190M410	Eptron BDTC-190ETR	Eptron BDTC-190ETR	Eptron BDTC-190ETR Hyper HR BDTC-190HYPHR M410 BDTC-190M410	CA45 BDFWD-CA45
	TCN-S 60233 TCN 60230 CLA 60231	TCN-S 60233-07	TCN-S 60233-07	TCN-S 60233 TCN 60230 CLA 60231	YRS 60229-07
	ZERO2 023-004 EVO2 022-006 TBA	TBA	TBA	ZERO2 023-004 EVO2 022-006 TBA	Civic MB-023-001
	Twister MTB0413 Twister Speciale MTB0415 Redhawk MTB0424	Twister MTB0413-ETS	Twister MTB0413-ETS	Twister MTB0413 Twister Speciale MTB0415 Redhawk MTB0424	ITALIA MTB0422-07
	Wolverine MAX ZR-0015 GOAT ZR-0016 TBA	Wolverine MAX ZR-0015-07	Wolverine MAX ZR-0015-07	Wolverine MAX ZR-0015 GOAT ZR-0016 TBA	Gorilla MAX ZR-0017-07
	Ghibli HRELB10GHL Ghibli 2.0 HRELB20GHL	Ghibli 2.0 HRELB20GHL-S	Ghibli 2.0 HRELB20GHL-S	Ghibli HRELB10GHL Ghibli 2.0 HRELB20GHL	/
	TBA	TBA	TBA	TBA	e-TCR24 eTCR24-07

## **FORMULA 1 RULES BODY SHELL RULES**

All Formula cars must comply with the following rules:

Maximum Width: 190mm

Minimum Weight: 1010g

Minimum Ride Height at Indoor Races: 4,0mm

The front suspension is only allowed to get dampened by a kingpin system. Other dampening systems with oil filled shocks or tubes is not allowed on the front of the car. The lower arms must be connected to chassis plate all the time. The inner mounting positions of the centre shock must be completely covered by the body shell. The chassis plate cannot be wider than the body shell when looking onto the car from above.

In the rear of the car, a solid axle must be used which can be equipped with a gear- or a ball-differential. Independent suspension systems are not allowed!

## **FORMULA 1 BODY SHELLS AND WINGS**

Only the **Mon-Tech F23 (022-013)** and **Mon-Tech F22 (021-009)** body shells are allowed to use during ETS Season #17 2024/25. This decision was made to ensure that every racer can buy the body shells on the market (which was not always possible in the last years).

Only Formula 1 body styles are allowed. The body must be painted in a race inspired theme. Single color themes are allowed but you must use the included sticker sheet to detail the car. All cars must have a driver's figure installed in the cockpit.

Body must be used as designed. No additional material may be added to alter the body unless it is included in the original design. Body must be cut-out and used as designed and no additional folding or bending of the body is allowed.

In the Formula class, all front and rear wings which are available to the market are allowed to get used on the cars. These wings must be used as designed.

No grinding, sanding, or cutting of any part of the wing is allowed. You do have the option to not use part of the wing like front add-on winglets, but you cannot remove any material from the original part of the wings.

Using any kind of diffuser on the car is not allowed.

## **IMPORTANT**

If we see anybody breaking the rules by racing with a wrong set of tires, with the wrong gearing, a wrong software, or with a wrong body shell, we will delete the best qualifying or final run.

Every driver is responsible for using the equipment according to the rules of the racing class. Excuses like: "I didn't know", or like "I just took the wrong body shell from my bag" are not acceptable for us as there is enough time for everybody (on Thursday) to make sure that everything is set up according to the rules!



## CHAMPIONSHIP

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### VIDEO ANALYSIS

Due to the camera equipment, we have on hand trackside for live streaming and video recording, we are able to analyze races and controverse situations by watching these right after the race from different camera angles. Therefore, we reserve the right to analyze difficult situations or crashes right after the race to decide if a penalty is needed or not. Only the race director, the referee, and (if called by them) the involved drivers will be in charge to review the race and to find a decision. External drivers, teammates, friends, or spectators will not get involved in the video analyzing process. There is no general right of review by video analysis. Only the race director and the referee are responsible to decide if a video analysis is necessary or not.

If such a situation appears, the review of the scenes will be done as quick as possible after the run. Penalties or a change of a result is not possible in the days after the event – it must be done immediately. The video analysis will be **ONLY** done in A-Main finals if needed.

### CLASSIFICATION

If points between championship contenders are tied at the end of the championship, we check the following things in exactly this order:

1. Who has more podiums  
We check in this way:  
Who has more **1st** places?  
Who has more **2nd** places?  
Who has more **3rd** places?
2. If the drivers are still tied, then we will check who has more **TQ's**
3. If still tied, then we check who has more 4th, 5th, 6th, 7th, 8th, 9th, 10th places
4. **Important:** If you **TQ** a race, and the overall result of the race ends up being a throw out round your TQ point will be added to your championship points total. That means, we will count **ALL TQ** points of a driver for his championship rankings at the end of the season.