

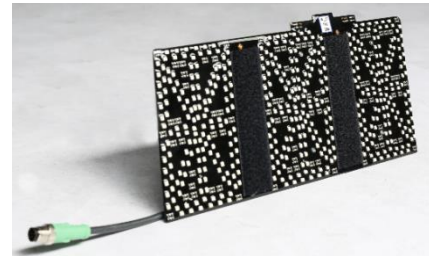
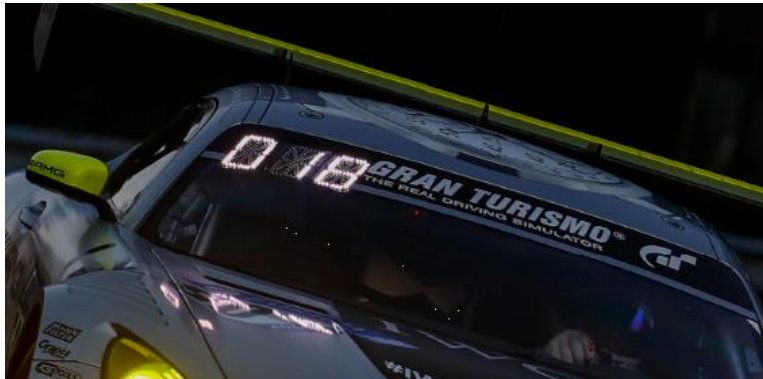
## FAQ LED POSITION SYSTEM

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This document is designed to answer general and technical questions regarding the LUMIRANK Led-Position-System that shall be used at the ADAC 24h Nürburgring Qualifiers and at the ADAC RAVENOL 24h Nürburgring.

### General Information

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**LUMIRANK**  
LED POSITION SYSTEM

#### – What is the purpose of the system?

- LUMIRANK is a system that should make the race easier and more enjoyable for the spectators. The purpose of the system is to indicate the position of the cars or the current driver during the race with the assistance of an LED technology. The system is permanently connected with the timekeeping system and is updated in each lap.

#### – How big is the display?

- The display is 310mm wide and 150mm high and shall be attached to the upper right side of the inner windshield. It is only 3.5mm thin, very light (190 Gramm) and flexible. This facilitates an easy positioning and installation in the race car. To communicate the exact size of the display to the teams in time, a template (LR\_CUT\_Schablone) is available for download at <https://24h-information.de/>. This must be printed out in DIN A3 to ensure the correct size proportion of the display.

**The display shall be fixed directly in the Gran Turismo windshield sticker (compare following sticker instruction).**

- Around the Display is a **free space from min. 10mm to all other Parts / Sticker etc. on the windshield required!**



#### – Where can the system be collected?

- The systems will be distributed at the ADAC 24h Nürburgring Qualifiers on **Friday, the 12<sup>th</sup> April 2024 / 9:00 AM - 18:00 PM** as well as at the ADAC RAVENOL 24h Nürburgring on **Tuesday, 28<sup>th</sup> May 2024 / 9:00 AM - 18:00 PM** and on **Wednesday, 29<sup>th</sup> May 2024 / 9:00 AM - 12:00 PM** at the **anteroom time keeping / first floor of the Race Control Tower**.
- Alternatively, the systems can also be sent in advance as an insured DHL package within Germany from March 14, 2024 on (The loan slip must be sent to [info@sas-sas.de](mailto:info@sas-sas.de) with the order). **LINK: [PRE-Delivery](#)**

#### – What must be observed for the collection?

- The teams are requested to present a credit card for a safety deposit when collecting the systems (the credit card holder must be present in person!).  
The amount will not be blocked on the credit card!  
Cash deposits are unfortunately not possible.  
The teams are required to fill out a loan agreement for the LED system there.  
The loan agreement is available on page 5 in this document.

#### – Is there a requirement for additional cables?

- **Yes.** Each team is requested to acquire a connecting cable in advance online under <https://sas-sas.de/LumirankShop/de/> or directly on-site, if not already available from previous years.  
The electrical connection can be prepared in advance.  
The cables will be the property of the teams.

#### – When must the system be installed in the car and how is it to be installed?

- The system / the display must be installed in the car **before the car is presented at scrutineering**. Installation instructions will be issued together with the cable and the

display.

**In case of any questions, Stefan Sack SAS-Technologies is also available under +49 172 8289977.**

- **Will the proper operation of the system be checked before the start?**
  - **Yes.** During scrutineering of the individual cars, the proper operation and the visual appearance of the systems with regard to correct installation, the attachments as well as the position will be checked.
- **What happens with the system after the race?**
  - The LUMIRANK displays must be removed from the cars after the 24h Race (after Parc Fermé) and be returned with the corresponding softshellbag in the anteroom time keeping in the first floor.
  - Returning is possible at **02<sup>nd</sup> June 2024 until 18:00 PM**. After this time, the display and softshellbag must be send back **via DHL** (covered by insurance) **until 17<sup>th</sup> June 2024** at the latest.
  - In all cases the following terms <https://www.sas-sas.de/tos-agb/> are valid.

## Technical Information

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- **Installation**
  - Install the display to the inside of the windscreen with the supplied self-adhesive VHB strips (compare assembly instruction). It is important to use new VHB strips each time from manufacturer SAS Technologies so as to ensure the proper adhesion of the system. Before presenting the car at scrutineering, the teams must ensure that the display cannot drop off the windscreen.
- **Operating instructions**
  - Before attaching the system to the windscreen with the self-adhesive tape, you should in all cases clean the screen (recommendation: 95% alcohol). Please bear in mind that NANO products (anti fog / rainX) reduce the adhesive characteristics of the product.
  - Then remove the adhesive tape on the Velcro and press it at least 15-20 seconds firmly to the windscreen.
  - **Important:** If you leave the Car in the bright Sun longer then 10min. please cover the Display, the direct sunlight overhead the black PCB surface up to 90-110 Degrees and can melt the Velcro Glue, and the Display can then detach from the windscreen.

→ **Visual appearance requirements** (for TV and media pictures)

- We recommend to attach the display only using the VELCRO tape. As an additional protection, you should use cable retainers to tie the display cable to the A-pillar of your race car.
- If you nevertheless wish to additionally fix the display, you should exclusively use clear paint protection film, which is not to be seen. Please refrain from using tape or similar materials.\*
- If you use *Racing Tearoffs*, please make sure that it does not cover or overlay with the LED system **the free space of 10mm around the Display is required!**

→ \*the optical requirements are examined during scrutineering (adhesive line) and must be conform to the sticker instruction and the general instructions (see image above).

→ **Connection / Power supply**

- Please use only the included power cables of LUMIRANK as well as the associated connections.

WHITE	+	12V / 4,5A switched
BLACK		GROUND
BROWN		NC (not in use, please isolate them)
BLUE		NC (not in use, please isolate them)

- Detailed installation instructions are enclosed with the system and must be observed.
- The requirement of the display is a separate and constant connected 12V / 4,5A power supply. When the main switch is activated, the system should automatically start to illuminate (Power LED > blue on).
- To re-start the display during the race, if necessary, we recommend the integration of an ON/OFF button with the possibility to be operated by the driver.

→ During a pit stop, the display must in all cases remain switched on so that the current position can be indicated.



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**RECEIPT FOR LUMIRANK SYSTEM DEPOSIT**

**System Owner** SAS-Technologies e.K  
**Address** Heckenweg 12 / 90469 Nürnberg / GERMANY

The Team mentioned below receives the following systems by way of a loan. The signator guarantees to have full capacity to sign this agreement on behalf of the Team acknowledges the provisions set out in this receipt and in the actuell Version of General Terms and Conditions to view [www.agb.sas-sas.de](http://www.agb.sas-sas.de)

**TEAM:** \_\_\_\_\_

	<b>Start #</b>		<b>Start #</b>		<b>Start #</b>		<b>Start #</b>
<b>CAR 1:</b>	<input type="text"/>	<b>CAR 2:</b>	<input type="text"/>	<b>CAR 3:</b>	<input type="text"/>	<b>CAR 4:</b>	<input type="text"/>
LR System Ser. No.	<input type="text"/>	LR System Ser. No.	<input type="text"/>	LR System Ser. No.	<input type="text"/>	LR System Ser. No.	<input type="text"/>

**SERIES:** \_\_\_\_\_ **EVENT:** \_\_\_\_\_

ARTICEL (with Bag deliver)	Qty.	serial number / number's	DEPOSIT per System
LUMIRANK POS SYSTEM		see above	1000 Euro
<b>TOTAL</b>			

**DEPOSIT INFORMATION**

Type of Card : VISA  MASTER

Name / Company: \_\_\_\_\_

Card Number: \_\_\_\_\_

Expire Date: \_\_\_\_\_

Security Number: \_\_\_\_\_

Signature Cardholder: \_\_\_\_\_

Authorized Signature for the acceptance of these form and conditions and SAS General Terms and Conditions

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Signature: \_\_\_\_\_

Print Name of Authorized Signature

Cardholder and or System collector

Direct TEAM Contact E-Mail: \_\_\_\_\_



**SAS-Technologies e.K.**  
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