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A Beginners Guide to SUPER GT

# **SUPER GT**

# **FUN BOOK**



# Introduction to SUPER GT



**S**UPER GT is the Japan's premier touring car series featuring heavily-modified production cars (and cars that are scheduled to be commercially available). GT stands for Grand Touring - a high-performance car that is capable of high speed and long-distance driving. SUPER GT is a long-distance competition driven by a couple of drivers per team sharing driving duties. The top class GT500 has undergone a big transformation with new cars and regulations. The year 2014 is an inaugural season in which the basic technical regulations is unified with the German touring car series DTM (Deutsche Tourenwagen Masters). The 3.4-litre V8 engines used until last year have been replaced with 2-litre inline-four direct injection turbochargers. On top of that, all cars have common monocoque (the frame of the vehicle body), and with left-hand drive, ushering in a new era of SUPER GT.

## ■ Full of world-class star drivers and team directors in SUPER GT

Drivers participating in SUPER GT are well be ranked among the world top drivers. Many of them started their career from junior karting competitions, eventually stepped up into higher racing career categories. Just as with baseball and football, SUPER GT has many world-class talents from both home and abroad. Furthermore, most teams appoint former drivers to team directors who have achieved successful career in the top categories including Formula One and the 24 Hours of Le Mans. This has made the series establish a leading position in the Japanese motor racing, creating even more exciting and dramatic battles to attracts millions of fans globally.

## ■ You don't want to miss intense championship battles!

In SUPER GT, each car is driven by two drivers sharing driving duties. Driver points are awarded to the top ten finishers in each race, and the driver duo who earn the most points over the course of the season become the champion. To maintain parity, a weight handicap is assigned to cars with superior speed according to drivers' points scored. It makes any single car harder to dominate the season, and the championship is highly likely to go down to the wire.



## ■ Two types of motor racing

Motor racing is classified roughly into two groups according to forms of racecar used. One is "formula car racing" featuring open-wheel, single-seated cars designed exclusively for races. F1 is the best-known category in this group. The other is "touring car racing" with heavily-modified street cars. SUPER GT belongs to this group.



### Touring car racing

Cars seen on the streets, with closed cockpit are referred to as "touring cars". Touring car racing has many series worldwide. Some feature production vehicles that remain unmodified, whereas others, such as SUPER GT, involve considerably modified cars.



### Formula car racing

Formula cars come with open-wheel and open cockpit. The cars are lighter than production vehicles and have excellent acceleration and cornering speed. As these cars are primarily intended to produce higher speed, they are single-seated.

## ■ Big race with an over 20-year history. The first Thai round will be held this year!

<b>1994</b>	The All-Japan GT Championship begins with a total of five series races. Regulations include a two-class system (GT1, GT2) and a weight handicap. The first champions are the GT-R (GT1) and Porsche (GT2).
<b>1995</b>	Six series races
<b>1996</b>	Class names changed to GT500 and GT300 to represent expected horsepower of the cars. Having two drivers per car became a requirement starting this year. First all-star race held in addition to the six series races (Central circuit)
<b>1997</b>	With the Honda NSX joining the race officially, the GT500 competition now stretches between three large manufacturers, including Toyota (Supra) and Nissan (GT-R). Six series races and an all-star race (Motegi) held.
<b>1998</b>	Maximum race distance now 500km. Seven races and an all-star race (TI Circuit Aida) held.
<b>1999</b>	Seven races and an all-star race (Autopolis) held.
<b>2000</b>	Japan GT festival in Malaysia special race (first ever abroad) held on top of the seven series races.
<b>2001</b>	Seven series races and a continuation of the special Malaysia race from the previous year.
<b>2002</b>	Eight series races held, one of which is the first regular overseas race in Malaysia (fourth round).
<b>2003</b>	Eight series races.
<b>2004</b>	Seven series races and an all-star race held in California, United States. In GT500, the Fairlady Z appears in place of the GT-R.
<b>2005</b>	Series name changed to SUPER GT. Eight series races.
<b>2006</b>	Nine series races. In GT500, the SC430 appears in place of the Supra.
<b>2007</b>	Nine series races, making a running total of one hundred (The ninth race in Fuji; including special races).
<b>2008</b>	Nine series races. In GT500, the GT-R appears in place of the Fairlady Z.
<b>2009</b>	Nine series races.
<b>2010</b>	All cars in GT500 become FR racecars with 3.4 L V8 engines to meet with basic technical regulations. In GT500, the HSV-010 GT appears in place of the NSX. Eight series races and the JAF GP (Fuji) held.
<b>2011</b>	Eight series races and the JAF GP (Fuji) held.
<b>2012</b>	Eight series races and the JAF GP (Fuji) held. Hybrid vehicles appear in the GT300. The first female driver from abroad participates in GT300.
<b>2013</b>	Eight series races and the JAF GP (Fuji) held.
<b>2014</b>	GT500 introduces new technical regulations in line with the basic specifications used in DTM (2.0 L four-cylinder direct injection turbocharged engines and standardized monocoque chassis). First official race in Thailand.

SUPER GT, originally named the All-Japan GT Championship, launched in 1994. The race mainly featured Japanese sports cars as well as foreign cars such as Porsche, Ferrari and Lamborghini. Its popularity has grown tremendously as the number of participants increased, and the series was expanded into overseas in the 2000s. This internationalization led to the series name change to SUPER GT in 2005. As a large number of racecars under FIA-GT3 regulations have come to participate in recent years, The race has become more internationalized than ever before, with the unification of technical regulations between DTM and GT500



### 1996

The McLaren F1 GTR makes a splashy entrance. Following fan voting, an all-star race (non-title race) is held.

### 2002

The Malaysian leg, which has joined as a special non-title event since 2000, is made an official race.



### 2004

All-star race is held in the US. This marks that a race series of Japanese origin appear for the first time in the US.

### 2012

In the opening round, GT300 specification Prius, the first hybrid in SUPER GT, makes its debut. CR-Z follows in the 4th round in SUGO.



# Tips for Giving an Added Excitement

SUPER GT employs a fairly unique format to give you a buzz. Races would be more fun if you know what it is all about!

## GT500 CLASS

[Participating models]

- LEXUS RC F
  - NISSAN GT-R
  - Honda NSX CONCEPT-GT
- \* Regular 2014 entrants



**LEXUS RC F**

### Classes and Models

SUPER GT is a mixed-class racing competition combining GT500 and GT300 classes. Each class is classified according to the respective horsepower. The horsepower is capped by intake of fuel flow to the engines in GT500 while by intake of air flow in GT300. What makes SUPER GT tremendously exciting is that two classes of different levels of performance racing together, thus fans get to enjoy frequent overtaking. Currently a total of 14 models from both classes take part in 2014 SUPER GT season. There is no such race series as SUPER GT with this diverse types of cars running at the same time.

### Races are Very Competitive

One of the greatest appeals of SUPER GT truly lies in cars of various specs competing against each other. For example, Prius basically is a simple four-door sedan. Regulations allow modifications to engine and chassis to deliver more superior performance than the sedan counterpart. And yet horsepower should be of the same level according to these regulations, high performance sports cars and sedans— completely different types of vehicle— can be mixed together in a single race.

### Weight Handicaps Creates Close Battles

Races must be boring if a single car dominates the season. To avoid this, weight handicaps (success ballast) are assigned in the next race to cars as they accumulate points. Heavier cars have poorer acceleration and braking, meaning the championship battle is expected to go down to the wire. From this year, in the GT500 class if the weight handicap exceeds 50kg, the handicap will be replaced by a fuel flow adjustment for the first 50kg of handicap.



Read the sticker on the side of the car to see how much weight is on the vehicle.

### Weight Handicaps (success ballast)

Weight calculation		Sample points	Weight (points accumulated in previous races x applicable weight value)
Rd. 1	None	5	
Rd. 2	One point = 2kg	3	5pts × 2kg = 10kg
Rd. 3		15	8pts (5+3) × 2kg = 16kg
Rd. 4		20	23pts (5+3+15) × 2kg = 46kg
Rd. 5		13	43pts (5+3+15+20) × 2kg = 86kg
Rd. 6	One point = 1kg	4	56pts (5+3+15+20+13) × 2kg = 112kg
Rd. 7		1	60pts (5+3+15+20+13+4) × 1kg = 60kg
Rd. 8	None		0kg

\* Weight is calculated according to accumulated points the drivers have acquired in all previous races.  
 \* Up to a total of 100kg ballast may be added. (i.e., in the above calculation, cars in Round 6 should have a weight of 112kg, but the additional 12kg are exempted.)

# GT300 CLASS

## [Participating models]

TOYOTA PRIUS  
 NISSAN GT-R NISMO GT3  
 Honda CR-Z  
 SUBARU BRZ GT300  
 Aston Martin V12 Vantage GT3  
 Audi R8 LMS ultra  
 BMW Z4 GT3  
 Lamborghini Gallardo GT3  
 McLaren MP4-12C GT3  
 Mercedes-Benz SLS AMG GT3  
 PORSCHE911 GT3 R

\* Regular 2014 entrants



Honda CR-Z



NISSAN GT-R NISMO GT3

## How to Spot Classes

You can tell the difference between GT500 and GT300 simply by looking at these three points: headlights, car number panels and front windshield decals. GT500 class cars come with clear/white headlights, car numbers and decals, while GT300 are distinguished by color of yellow.



### Front Windshield Decals

White decals are for GT500 and yellow for GT300.



### Headlights

Headlights are also an easy way for spectators to spot the classes even from a distance and in bad weather.

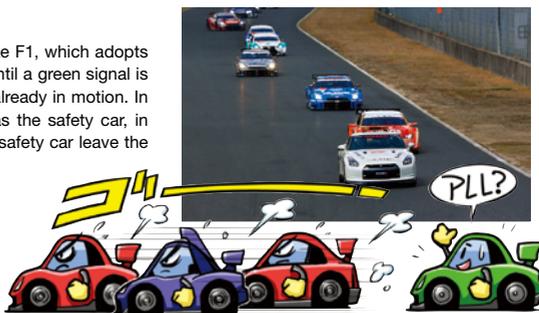


### Car Number Panels

Car number panels with black numbers on either white or yellow background go on display on the side of cars.

## Rolling start

SUPER GT employs a rolling start to initiate a race. Unlike F1, which adopts a standing start with cars remain stationary on the grid until a green signal is given to start the race, SUPER GT races start with cars already in motion. In the rolling start, all cars follow the leading car, known as the safety car, in qualifying order maintaining speed and position until the safety car leave the track and the starting signal turns green. Since overtaking is not allowed until you have passed the start line, the drivers attempt to overtake all at once along the first corner. Don't miss the grueling scramble as they vie for a better position!





# The Path to Victory

Let's have a look at how a race is going during race weekend. Enjoy your time at circuit by learning more.

## ■ Qualifying: Grabbing Pole Position isn't Easy

Qualifying is critical as it is where the starting lineup is determined. SUPER GT employs knockout qualifying format, meaning both two drivers must be quick enough to get into higher position. Everyone makes a desperate attempt to clock the fastest lap in qualifying within the given time limit to get a better position. It really is a breathtaking battle well worth watching.

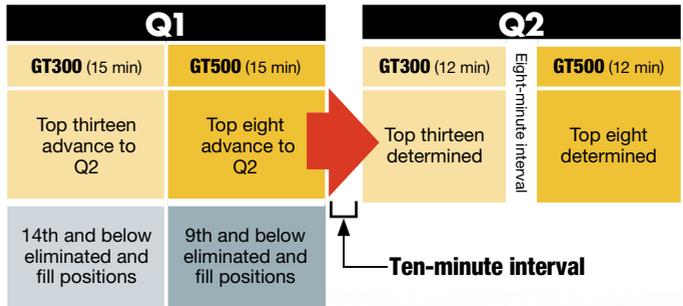
**TIP**

Better qualifying results put you to be way out front in the starting lineup. This brings a great advantage over competitors in the race.

### Knockout Format

Qualifying is run in a two-stage knockout format. The fastest 13 cars (GT300) and 8 cars (GT500) will advance to the second stage (Q2) leaving the rest eliminated in the first stage (Q1) and fill the starting positions. The fastest cars will then have a shootout to aim for pole position.

\* Any driver who takes part in Q1 may not participate in Q2.



## ■ Race: Genuine Speed is Simply Not Enough to Victory

Race strategy is a big key to win races. It includes which driver to be assigned first to driving duty and when to pit. As each team has its own strategy, it could create more exciting races. Both speed and intelligence are vital to victory.

**TIP**

A single driver may only drive up to two-thirds (2/3) of a given race distance.



## ■ Point System: One Point Has Extra Meaning Towards the End

The top ten finishers of each class in each race score points towards both the drivers' and the teams' rankings. Points are accumulated in each race depending on the result. Some drivers in the past have won the title by a single point. One point sure is important.

Driver points										
Classification	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Points	20	15	11	8	6	5	4	3	2	1

Team points										
Classification	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Points	20	15	11	8	6	5	4	3	2	1

No. of laps	Same no. of laps as 1st	One lap behind 1st	Finished race 2 laps or less behind 1st
GT500	3 pts	2 pts	1 pt
GT300	3 pts		1 pt

\* For races with a distance of 700km or longer, points are awarded on a 25-18-13-10-8-6-5-4-3-2 basis.



**TIP**

Race completion points are added to team points corresponding to the number of laps completed.

## Race Week Schedule

Friday is dedicated to preparing for the race. On-track actions begin on Saturday with free practice and qualifying. Sunday is where morning warm-up and actual race take place.

\*Note: In between SUPER GT sessions, there are a variety of events held for all ages. The circuit is bustling with excitement and you can fully enjoy yourself all day long.

**Race week schedule** Drivers on duty Autograph and photo opportunities

	Saturday	Sunday
08:00	Public scrutineering, open pit	Warm-up
09:00	Free practice	
10:00		
11:00		Pit walk
12:00	Pit walk	
13:00		Beginning of starting procedure/grid walk
14:00	Qualifying (knockout)	Race
15:00		
16:00	Polesitter interview	Awards ceremony
17:00	Kids pit walk	Race winner interview

\*Check out the fixed schedule online at [supergt.net](http://supergt.net) or the circuit website.



## Pit Walk

An event for the public to experience walking through the SUPER GT pit lane where you can view the cars and garages up close. Sometimes drivers meet your wishes for autographs and photos if you are lucky. Accessible only to ticket holders.



## Kids Pit Walk

This free event is like the pit walk, but limited to younger kids under 15. It takes place on the afternoon of the qualifying day. Any adults as guardians accompanied by his/her children can also attend, so it's more of a family event to enjoy.



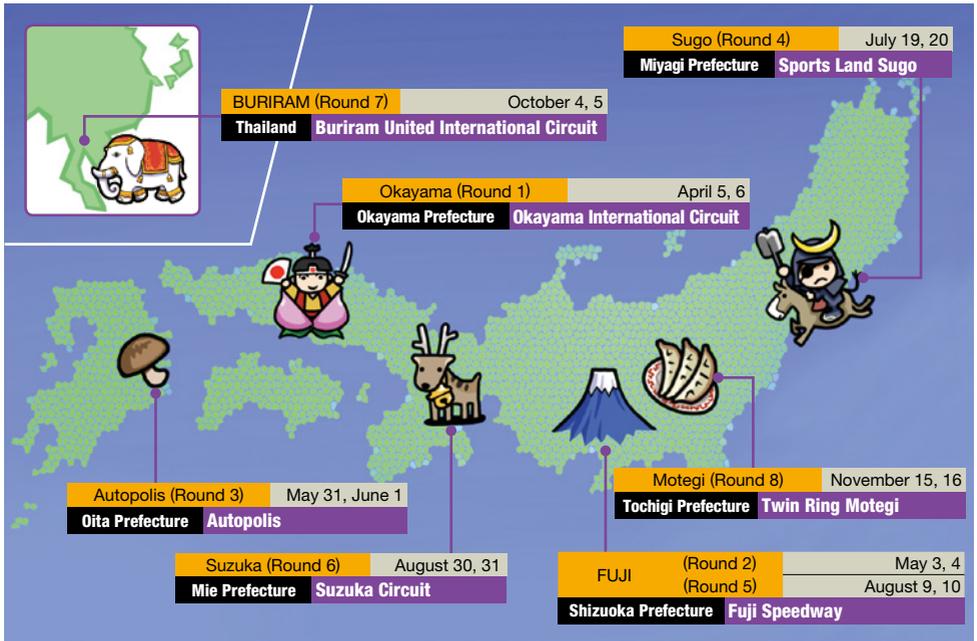
## Grid Walk

The grid walk is an event enables you to catch a glimpse of the starting grid right before the race commences. Experience a tense atmosphere as teams make their final preparations for the start of the race. Accessible only to ticket holders.



## SUPER GT is Held Throughout Japan and Abroad!

SUPER GT covers the nation with one leg in Thailand. It expands SUPER GT's fan base not only within Japan but around the world. SUPER GT will host its first race in Thailand, working steadily to expand into even more fan base around the world.





# Circuits are Filled with Fun!

No wonder circuits have racetrack where races take place. What else do they have? Let's say there are pits where teams do their duties; race control tower to keep races safe, legal and punctual; medical facility for the injured to be cared for. Visit the circuit and you can experience SUPER GT first hand. All those SUPER GT cars are inch away from you and you'll be overwhelmed with how cool their speed and engine sounds are. You'll probably even bump into your favorite drivers. In between sessions, there are many events you don't want to miss. Talk shows, stage events, pit walk... everything keeps you from getting bored!

## **A** Race control tower



The race control is responsible for monitoring and supervising everything that happens on the track. It would include keeping the track safe, providing timing data, and penalizing violations of the regulations.

An enclosed area in which teams' transporters are kept, and also team crews, drivers and other officials do their job. You can see the drivers walking and racecars right there without disturbing them.

## **B** Paddock

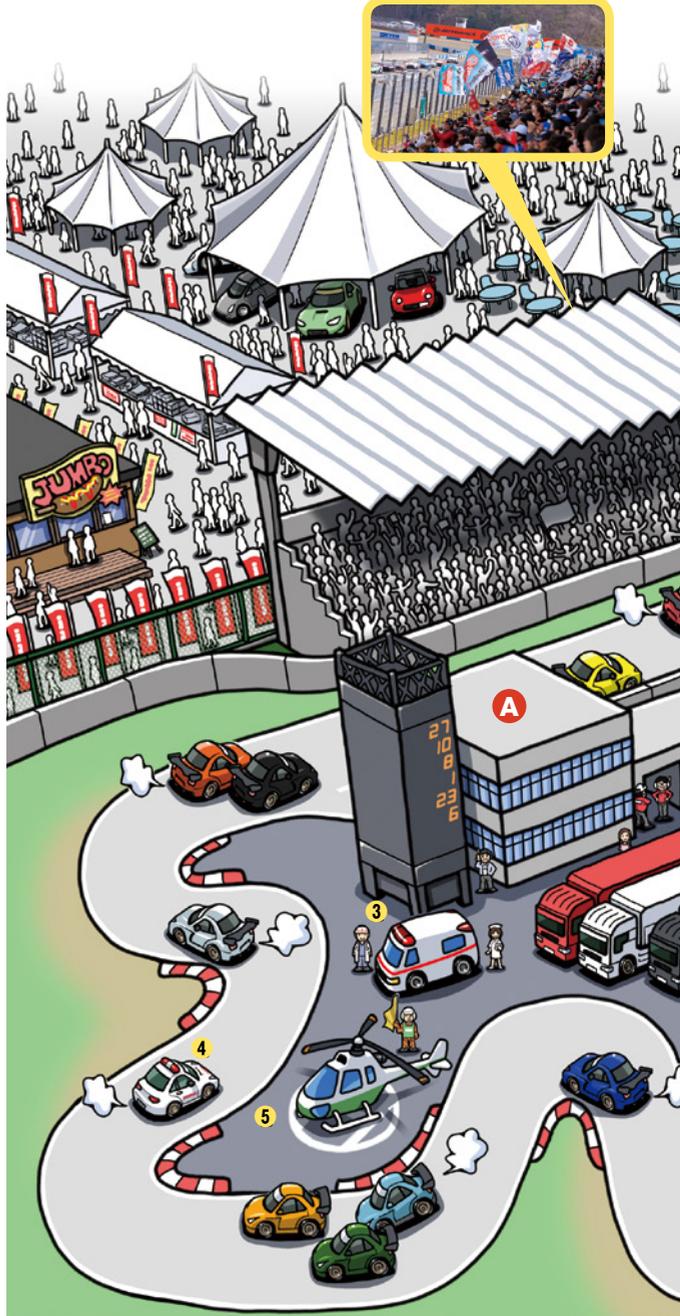


## **C** Pits



An area designated for teams to work on the cars and for the drivers to make pit stops for refueling and/or a driver change during the race. The area is opened up to the public only when the pit walk and kids pit walk takes place.

## Grandstand



## D Event space

A ton of fun events make your day extremely enjoyable! Go look the drivers' talk shows, the Race Queens' appearances on stage and the exhibit of various cars. The SUPER GT official shop is in this area featuring team merchandise, model cars, official SUPER GT merchandise and more. There are also places to eat introducing from snack to yummy local dishes.



©GTA



In 2014, Nissan Skyline Crossover, Lexus RX350 and Porsche Cayenne act as FRO in SUPER GT.

## Professionals working at the circuit

To ensure success in the race, physical infrastructure as the racetrack alone won't do. It can't afford to lose anything anyone such as the following. All assume the positions respectively responsible for the smooth operation of the race.

### Specialists

#### 1 Race director

The race director overall manages the logistics of the race. He is authorized to make every decision about the race control including which flags should be indicated, and whether to issue penalties for each case. In SUPER GT, each circuit has its own race director.



#### 2 Marshals

Marshalls (a.k.a. officials) are observers in the field whose primary role is overseeing the safe running of the race. This can be achieved by waving flags to signal the condition of the track to drivers, and rushing over to the scene of an accident to ensure safety.



#### 3 Medical team

The medical team joins SUPER GT throughout the season to be on stand-by at all times during race weekends just in case of accidents and emergencies. They also serve as a "family doctor" to keep drivers fit.



### Vehicles

#### 4 Pace cars / Marshal cars

A vehicle driven by the official to lead all cars in grid order maintaining speed and position until the starting signal is given. Another major role is to keep the track safe by going on patrol duty to monitor the track for signs of danger.



#### 5 Ambulances and helicopters

Both are on stand-by in case of accidents. Ambulances are posted around the track to rush to the scene of injury. Helicopters are also kept ready outside the circuit at all times for any severe case to transport quickly to hospital.



#### 6 Transporters

Lorries loaded with all the teams' equipment, cars parts and tools, required for the race to transport them from circuit to the other are called transporters. The transporters are mostly in the liveried, and have plenty of fans.



### SUPER GT emergency system: FRO

SUPER GT has its unique emergency one-stop system called FRO (First Rescue Operation). It is made up of an emergency medical specialist, a well-trained rescue worker, a fire warden, and a set of fire extinguishers all located in a single car. Three cars currently serve as FRO in this season. FRO provides strong support for more quick rescue activities.

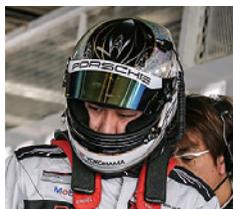


# GT Car Illustrated

Let's take a look at the differences between SUPER GT cars and production cars to find out what modifications are made to GT

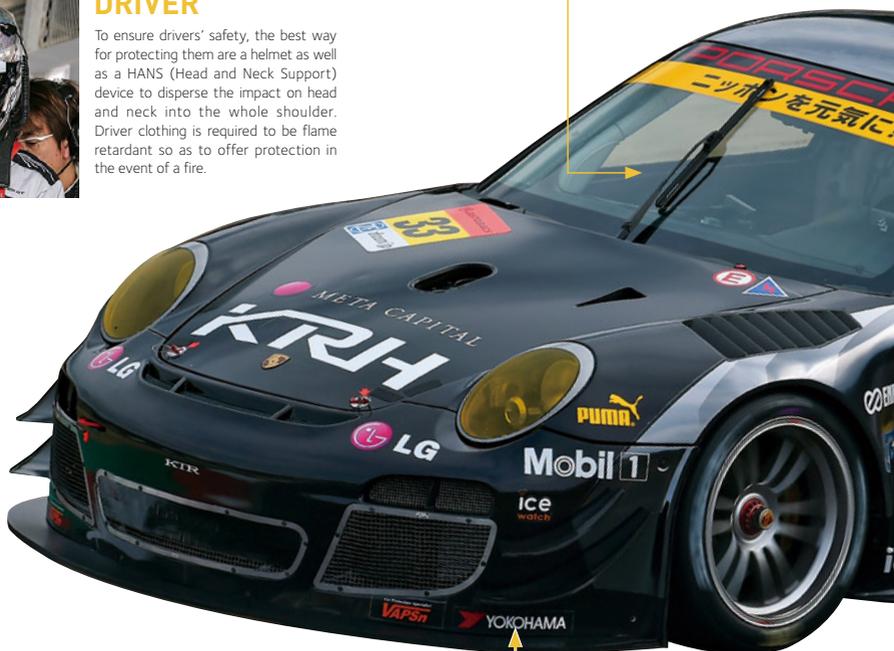
## COCKPIT

The cockpit is a driver's compartment. It is entangled in roll cages to protect the drivers from being injured and the car seat is custom fitted for each driver to achieve optimal fit and comfort. For very hot conditions, some machines have the cockpit which will be air-conditioned to keep the driver cool during the race.



## DRIVER

To ensure drivers' safety, the best way for protecting them are a helmet as well as a HANS (Head and Neck Support) device to disperse the impact on head and neck into the whole shoulder. Driver clothing is required to be flame retardant so as to offer protection in the event of a fire.



## Using Common Technical Regulations to German DTM SUPER GT 500 Class

For the 2014 season onwards, all the GT500 class cars use the same monocoques (main chassis) as those used in the German touring car race DTM. Many other components now have the same basic specifications. As the next step of the internationalization of SUPER GT, a joint race with DTM is being planned.



## BODY

Whereas production cars are made of steel and aluminum, SUPER GT racecars, which aim for higher speeds, use lighter, sturdy carbon-fiber in the bodywork. This means that racing vehicles weight approximately 80% of production cars.

## AERODYNAMICS PARTS

The significance of aerodynamics is to channel the airflows perfectly and generate as much downforce as possible that presses the car down onto the road. This increases the car's grip generated by the tires and permits higher cornering speeds. They are mounted either in the sides of the front or the rear. In the GT500 class, the front spoiler, under-floor, rear diffuser and rear wing have been standardized across all cars. For the body, the development of aerodynamics is limited to specified area shown in blue in the illustration on the right. (However, this is only permitted for two aerodynamic packages

used separately based on race courses.) Above the specified area, the same dimensions as production cars are required. In the GT300 class, the JAF-GT300 subclass permits development within prescribed limits, and the rear wing uses single plane. In the FIA GT3 subclass, designs not allowed in the JAF-GT300 can be used on condition that the basic specifications are followed, but changing the aero parts themselves is not permitted.



## ENGINE

The success in races depends on how good the engine gets tuned for gaining competitiveness. All teams give one of the first priorities to the engine development. GT500 has undergone a drastic change in the engines. They have been standardized to 2-litre inline-four turbocharged engines (the NSX CONCEPT-GT, though, is allowed to come with a hybrid system). GT300 is sub categorized into JAF-GT300 and FIA GT3. The JAF-GT300 cars are free to replace the engines with those from the same manufacturer that made the base chassis while the FIA GT3 cars are not allowed to replace the engines.

## TIRES

SUPER GT employs purpose-built racing tires. These are wider and larger than those of production vehicles. Tires must be optimally chosen according to the track conditions. Grooveless slick tires are best in dry conditions providing far more traction while rain tires should be used in wet weather.



## The World Standard Cars in SUPER GT 300 Class

Cars conforming to JAF-GT and FIA-GT3 regulations are both eligible to participate in GT300 class. You'll see all sorts of cars with different displacements, drive systems, and bodyworks on the same field. FIA-regulated cars seen in other GT races across the globe have a huge fan base worldwide. Such FIA-GT3 cars take part in SUPER GT, and it's exciting to see such diversity in racecars engaged in grueling battles!





# Anatomy of a Pit Stop

SUPER GT has strict regulations about pit work: a maximum of 5 crews are allowed in the working area to conduct all the operations; tire change must be done by no more than 2 crews of the five; the engine must be switched off during any pit stops; tire change is not allowed during refueling. As choosing the optimum pit strategy as well as crews' performance are crucial in having a successful race, they aim to ceaselessly train very hard to pursue as quick and accurate as possible pit works to gain an advantage over competitors. Let's find out how it works.

## Tire Change

Though tire change is not mandatory, it is sensible to replace them with fresh rubbers at the right time because tires are getting worn out as the race goes on and thus slowing the car down. Tire crews effortlessly lift heavy wheels, remove the old ones and fit the new ones instantly.



## Refueling

Even if cars start the race with a full load of fuel, it doesn't cover the whole distance. Refueling is needed to completed the race. Although rigs used in SUPER GT are designed to allow for rapid refueling, flow rate has been programmed in to provide enough time for a driver switch.

## Fire Extinguisher

As the SUPER GT cars run on petrol, pit works must be performed with extreme care to avoid fires caused by fuel leakage or spark. Just in case a crew is on standby with a fire extinguisher.



## Impact Wrench

A tool designed for quickly winding off and on wheel nuts, allowing pit crews to change tires breathtakingly fast. Crews often customize their wrench to fit comfortably in their hands and improve work performance.



## Team Members

### Team director ◀

The team director has total control over the race making every strategic decision, including when to pit, rationally and instantly in each phase. He is the main pillar of the team leading all members.



### Engineer ▼

The engineer's main role is to analyze data obtained from racecar as well as drivers' feedback. He then shares with mechanics every strategic decision to achieve the best performance.



### ▶ Race Queens

With adding glitz and glamour to circuits, the race queens serve as an important symbol of promoting teams and its sponsors' products. They play an irreplaceable role as belles of SUPER GT.

### ◀ Coordinator

The coordinator covers a wide range of duties; arranging media schedules and sponsor commitments are of particular significance to this job. There are a number of women valued in this professional field.



### Pit board man ▶

A man who holds out a board on the pit wall to inform a driver of the time interval to competitors and instructing him to pit. As the driver streaks across the main straight, it is absolutely crucial to hold the board up to him easily viewable.



### Driver change

In the race, each car is required by the regulations to be driven by at least 2 drivers sharing driving duties. A driver may not drive for more than two-thirds (2/3) of the whole distance. The color of the light on the upper left corner of the front windshield indicates which driver is at the wheel - red for the No. 1 driver, blue for the No. 2 driver and green for the No. 3 driver.



### Air Jack

A pneumatically driven device for lifting a car off the ground while changing tires. By injecting compressed nitrogen into four pistons mounted alongside of the wheels, the pistons project downwards to promptly lift the car off the ground.





# What Makes GT Cars So Fast? Engine, the Heart of the Car

Engine is considered the most critical part of the vehicle.  
A variety of engine types can be seen in SUPER GT.



## How Engine Works

Engine is one of the most vital components which are said to be the “heart” of automobiles. The mechanism is quite intricate but, put simply, its purpose is to burn a fuel to create heat into motion so that the car can move.

Engines come in many different types, and all have their distinctive characteristics, such as having good acceleration, capable of reaching top speed and/or lightweight. In SUPER GT, there are a plethora of vehicle types, and thus engines are also naturally quite diverse. Giving great attention to the engines might be another good idea for you to enjoy the race more.



## Engine Types Seen in SUPER GT

### Straight/Inline

**Standard in production vehicles, suitable for small displacement and 2, 3, or 4 cylinder engine**

The main type of standard vehicle engine generates power by moving pistons up and down. Among these types, inline engines have cylinders arranged in a straight line. These engines are often used in small displacement vehicles. Well-known cars equipped with engine are LEXUS RC F, Nissan GT-R and Honda NSX CONCEPT-GT.

### V Type

**Keeps down the overall length when there are a large number of cylinders**

When viewed from the front, the cylinders of this engine type form a “V”. This engine is often used in cars that require large horsepower, such as sportscars and full-sized cars, as the engine becomes longer when many pistons are set inline. Well-known cars equipped with this engine are BMW Z4 GT3 and Mercedes Benz SLS AMG GT3.

### Horizontally Opposed

**Keeps down engine height and lowers the center of gravity**

Horizontally opposed engines have pistons facing away from each other in a 180° symmetrical layout around the crankshaft. The length and height of this engine layout can be kept shorter, and lower the center of gravity. As the piston movements resemble boxing, they are also referred to as “boxer engines”. Well-known cars with this engine is Subaru BRZ and Porsche 911 GT3.

## Subaru Engine Benefits and Characteristics

Subaru enters a BRZ in GT300 class. The car comes with the horizontally opposed (HO) engine in its power unit. Excellent vehicle balance is achieved through the lightness of weight, compactness, and the low center of gravity compared to standard engines. These advantages allow for a smooth and shudder-free feel to

deliver driving stability. Additionally, since the design philosophy for the location of GT car engine and mounting arrangements are shared with that of production vehicles, it delivers high-level and good balanced driving experience you can enjoy with Subaru vehicles.

# What is the secret of making GT Cars So Fast?

## Engine Oil, the Lifeblood of Vehicle

Do you exactly know what engine oil is for? It makes a big difference in performance.

### How Engine Oil Works

Engine oil serves to ①lubricate the engine parts to prevent friction and wear; ②cool the engine down; and ③take in unburned fuel generated from the engine. It acts like “blood” going through a cycle inside the engine.

We asked a racing driver Kazuya Oshima about the importance of oil in a SUPER GT car.



### Just Changing the Oil Greatly Improve Driving! An Important Element for Victory

It is amazing that just by changing the engine oil you'll get a better driving performance. We use the best oil that makes the most of the engine capabilities, such as revolutions, mileage, durability and hydrothermal conditions. The optimum

choice of the oil enables you to drive fast with higher power and better fuel efficiency. More fuel loaded into your car gains weight and cause poorer acceleration. This is why fuel efficiency is incredibly important to win SUPER GT.



## ENEOS SUSTINA is an oil that is beneficial to your engine, employed on the ENEOS SUSTINA SC430

Oil not only keeps the engine clean, but maximizes the engine's capabilities and improves fuel efficiency. ENEOS SUSTINA is chosen by LEXUS TEAM LeMans in its quest for victory. ENEOS SUSTINA is a fully synthetic oil made from WBASE as base oil with the highest viscosity exponent, together with ZP technology, a new antiwear additive chemistry that does not contain sulfur. It is designed to improve your fuel efficiency for a lengthy period, and to prevent dirt particles sticking together to form sludge. ENEOS SUSTINA provides strength and durability and is perfect for those who want to take good care of his car.



### Outstanding Drivetrain Fluids that Increase Power Transmission Performance and Achieve a Good Driving Feel and High Fuel Efficiency!

AT and CVT fluids are composed of a base oil and a variety of additives. ENEOS SUSTINA AT and CVT fluids employ the WBASE technology as base oil used in SUSTINA motor oil. What's more, the application of Friction Control technology, ENEOS' unique additive processing technology that emphasizes power transmission performance, to additives in the WBASE ensures both an enjoyable driving and environmental care. Go green and go clean with ENEOS SUSTINA!



ENEOS SUSTINA Premium Motor Oil is available at ENEOS service station near you.

Click here for more about ENEOS' motor sports activities ▶ <http://www.noe.jx-group.co.jp/gt/>



# What Makes GT Cars So Fast? Tires, a Big Performance Differentiator

**Tires are the only point of contact between car and track. It is vitally important to select the right ones for great performance.**

## ○○○○ How Tire Works

Tires provide fundamental motions. They play a key role in driving stability and optimum braking distance. As SUPER GT cars are designed to go much faster than production vehicles, the tires tend to wear very quickly. For this reason tires used in SUPER GT are all from proven and trusted manufacturers. There are five tire suppliers competing in SUPER GT this season. Teams can partner up with whichever supplier as they think the best match with their cars. You'll sometimes see the same models on track with different tires on for a strategic reason that makes the race more intriguing and unpredictable.



## Four Primary Functions of SUPER GT Tire

### ① Supporting Car's Weight (Load Support)

Even though GT car is lighter in weight than production vehicles, it weighs over one ton. With a driver and success ballast added on, tires must be strong enough to withstand considerable load.

### ② Transmitting Propulsion and Braking (Traction & Braking)

Tires must transmit braking force onto the track surface accurately. SUPER GT tires are carefully designed to reduce braking distance allowing for tire-road friction. It works well especially in pit stops.

### ③ Changing and Maintaining Direction of Travel (Steering & Stability)

SUPER GT tires provide excellent steering precision on corners and good stability on straights responding to a wide variety of demands of drive and road.

### ④ Absorbing Shocks from Road (Comfort)

As GT cars run at high speed, drivers are subject to impact from obstacle and bumps in the track. SUPER GT tires absorb such shocks and offer comfort.

## Bringing SUPER GT-proven Technology to Commercial Tires

Bridgestone's sports tire range "Potenza" draws heavily on vast experience in SUPER GT and other motorsport categories. The product lineup includes RE11-S, a premium performance tire exclusively for circuit use with lap time benefit; RE11-A for racetrack to everyday driving tuned for both dry and wet conditions; and S001 provides the superior driving performance for an exciting ride.



POTENZA  
RE-11S



POTENZA  
RE-11A



POTENZA  
S001

For more information on Bridgestone motorsport: [http://ms.bridgestone.co.jp/hp/bsms\\_index](http://ms.bridgestone.co.jp/hp/bsms_index)

# Helmet, the Driver's Identity

More than just a protection. It is also distinctive characteristic of the driver.

## How Helmet Works

Helme is primarily a protective gear for the head and brain of the driver against impacts. Only authorized helmets that meet the strict safety standards, including shock-absorbing capacity, penetration resistance and fire retardancy, can be used in SUPER GT. Helmets also are something uniquely personal to drivers with iconic designs and livery. You can therefore spot a driver from his helmet. Do you have a favourite artwork?



## A racing helmet with a proven track record at the world's top races

The GP-6, a lightweight auto racing helmet, maintains high safety levels through a proven structure for racing and is of the same basic structure as that of the GP-6RC, a carbon helmet used in F1. The GP-6 comes equipped with M6, a terminal to attach anchors for connecting the HANS with the helmet. This headgear has all the functionality that is enough to satisfy professionals demands.



■ Price: ¥108,000 (tax included)

For more information on  
Arai helmets:  
<http://www.arai.co.jp>

# Safety Belts, the Best Lifesaver

Safety belts are indispensable items in hard races and balance performance that lead to victory as keeping driver safe

## How Safety Belt Works

Safety belts are critical elements to save lives. It supports drivers when experiencing cornering G-forces and acceleration and braking. SUPER GT drivers are strapped in the cockpit by a six-point harness - two shoulder straps, two pelvic straps and two leg straps. It differs vastly from the one seen on your car. The strict safety standards for these safety belts are governed by FIA, with accreditation valid for five years. Though the safety belts' buckles keep getting smaller and lighter, their usability has been improved. The belt can be released by the driver with a single hand movement. During a pit stop, one of the race's most thrilling parts, the quick driver changes are made possible thanks to this functionality.





# Other Good Solutions to SUPER GT

Many parts used for SUPER GT cars are commercially available. Let's find out...

## Mobil 1

Mobil 1 protects the ARTA NSX CONCEPT-GT high performance engine. No special designs are used. It is the same Mobil 1 available in stores. Mobil 1 has outstanding engine protection performance.

## Holts

Founded in the UK in 1919, Holts has always been the leading supplier of chemical paint, delivering a consistent "repair & maintenance" service to your car.

## PITPRO

PITPRO provides all sorts of maintenance services that professionals put their trust on. They cover everything from applying protective coating to deodorizing air.

#8 2014 ARTA NSX CONCEPT-GT



#55 2014 ARTA CR-Z GT



## BOSCH

ARTA CR-Z comes with the Aerotwin Wiper Blades from BOSCH. They are superbly effective even at high speeds and under critical conditions.

## PRO STAFF

Prostaff CC Water (all-round car coating spray) keeps your car clean. The repeated use of CC Water to the windshield makes your car more durable.

## BP vervis

BP vervis' Sport Full Synthetic has been working well with many motorsport teams to win. A low friction design achieves distinction of acceleration response.



Companies participating in the amsc are all engaged in the development of various automotive products. And such products, which are generally available for purchase at the shops, are used in the GT machines as well.



Enable Inc. ANZEN MOTOR CAR CO.,LTD. IYASAKA LIMITED Weds Co.,LTD. F Design Office KURE Engineering Ltd. Cores International, Inc., SAIUNION INC. Sanko Inc. SUNTECH CO.,LTD. GS Yuasa Battery Ltd. Shonan Leotech Co.Ltd Nisikori Co.,Ltd. NISSEI INDUSTRIES CO.,LTD. BANZAI,LTD. BRIDE CO.,LTD. HOTSTUFF CORPORATION Mitsubishi Heavy Industries,Ltd. Yupiteru Corporation WATT'S

**Motorsports is supported by numbers of business corporations and companies.**

**GRAN TURISMO® 6**  
THE REAL DRIVING SIMULATOR

## GRAN TURISMO 6

(PlayStation 3 Exclusive Software)

### The Real Driving Simulator “GRAN TURISMO 6” is Now Available



Now the acclaimed PlayStation 3® (PS3) software GRAN TURISMO 6 is available. This is the latest edition of the GRAN TURISMO series, which has achieved accumulated series sales of 70 million. The excitement of real driving simulator GRAN TURISMO has been taken to a new level as we approach the 15th Anniversary of the series launch. In addition to 1,200 cars, several thousand customized parts and more than 70 varied courses, in the latest version the graphics and vehicle dynamics have become more real than ever thanks to a new game engine and working partnerships with real automakers. What's more, you can use online updates to download new cars data designed specifically for GRAN TURISMO by automakers and to add new functions, allowing the game to continue evolving even after your purchase.



## GRAN TURISMO 6

- Suggested retail price:
- GRAN TURISMO 6  
¥6,648 (and tax)

■ Information:  
<http://www.gran-turismo.com/jp/>

Gran Turismo 6: TM & ©2013 Sony Computer Entertainment Inc. Developed by Polyphony Digital Inc.



**SUPER GT OFFICIAL miniature model**



**New Models for 2014!  
Enjoy Ingenious 1/43 Scale Models**

EBBRO's 1/43 scale models show attention to the minutest detail in the pursuit of perfect realism that can only be found in the SUPER GT official models. We feature a huge selection and surely you'll get what you're looking for. A series of new models is scheduled to be released for the 2014 season. Visit our website for the latest information.

**EBBRO**

Die-cast models

- Prices: 7,800 yen (excluding tax) and up
- Inquiries: MMP  
Tel: 054-272-4797
- URL: <http://ebb-ro.jp>

**News, race reports, photo gallery, ticket info...  
SUPER GT Official Website**

SUPER GT official website is easy to navigate and has full of useful information featuring a selection of news, teams and drivers profiles, race reports, photo gallery and ticket information. Here you will find everything you need to know SUPER GT. Visit today and learn more about SUPER GT!

SUPER GT Official Website <http://supergt.net>



**Enjoy the race even more with  
SUPER GT Official Mobile Site**

SUPER GT official mobile site is something you can't do without in watching races. Now available for smartphone as well. You'll find live timing, race reviews, interviews and more – all hottest news and info from the circuit. The mobile site has exclusive contents including hot tips and fun quizzes to win prizes. The service is available for only 315 yen a month.

**Mobile Menu Access**

<b>I-mode</b>	Menu List -> Hobbies/Sports -> Motor Sports -> SUPER GT
<b>EZweb</b>	au one -> Category -> Sports/Leisure -> Cars/Motorcycles -> SUPER GT MOBILESITE
<b>Yahoo! Mobile</b>	Menu List -> Sports -> F1/Motor Sports -> SUPER GT MOBILE



## TV PROGRAM & WEB

### Enjoy SUPER GT on Your Television

#### 1 Get to Know More about SUPER GT through SUPER GT+!

SUPER GT+ is presented by Akiyoshi Nakao, famous for his roles in movies, dramas and on the stage, and TV Tokyo's Eri Kano. They are joined this year by model Rina Takamatsu as a new reporter. The program shows all fun and enjoyment of SUPER GT, providing detailed reports on what goes on behind the scenes and in the pits.



**Scheduled  
broadcast**

**Sundays 23:30 – 24:00 on**

■ TV Tokyo ■ TV Osaka ■ TV Aichi ■ TV Hokkaido ■ TV Setouchi ■ TVQ Kyushu

#### 2 SUPER GT Live Broadcasts on J SPORTS!

J Sports, a sports satellite channel, broadcasts live coverage of all qualifying and races. Even if you miss the live broadcasts, reruns are available as well! The channel also presents “on-board plus”—a recorded race program with onboard footage—and “GTV”, a talk show with invited guest drivers on any cool and interesting stories about SUPER GT!



#### 3 View Qualifying Live Online on Nico Nico Douga!

You can watch all live qualifying of the SUPER GT's eight official rounds and a special non-title race for the 2014 season online free on Nico Nico Douga. Viewers can add comments overlaid directly onto videos, and it lets you enjoy sharing watching experience with other viewers. For some races, free practice is also scheduled to be available free.



**GT SQUARE**



**SUPER GT OFFICIAL SHOP**

**SUPER GT Official Shop**

SUPER GT official shop has a large selection including top sellers, merchandise featuring ever popular weight handicap, T-shirts, towels, stationary and more. The online shop is also proving to be a big hit. Search for "SUPER GT SHOP mu-mo" for more details.



ticket holder / strap

**SUPER GT KIDSKART**

**Complimentary SUPER GT Kids Kart Event**

Young children aged 6 and older of between 100-135cm in height can have a free trial of driving Kids Kart. As class size is limited, please make as early reservations as possible if you are interested in attending.



**SUPER GT OFFICIAL STAGE**

**SUPER GT Official Stage**

Many participatory events take place on the SUPER GT official stage, including drivers' talk shows, team sponsor events with race queens, gift lotteries for kids under 15. We even have a podium ceremony for you to get a taste of what it's like to be the winner. For detailed schedule of the events, check out the schedule board in front of the official stage.



**SUPER GT SUPPORTERS CLUB**

**SUPER GT Supporters Club**

Joining the Supporters Club grants membership privileges available only here!

**Now Accepting New Supporters Club Members!**

New applications, renewals, and charges are available at the SUPER GT Supporters Club booth!

**Membership Privileges**

- ① Season Pass (Annual Credential) available for purchase!
- ② Original Supporters Club original Guest Pass available for purchase! (Up to two tickets, including the member.)
- ③ Advance ticket sales of up to 20% off! (Up to two tickets, including the member.)
- ④ Final race day pit walk tickets equivalent to purchased advance tickets for free!
- ⑤ Free qualifying day entrance!! (Free qualifying day tickets).

■ New/Renewal membership: ¥4,120 ■ Expire date: December 31, 2014

**2014 Membership Privileges**

- 2014 SUPER GT Regulations Book
- Special 30-kg weight handicap pin
- Weight handicap sticker
- Free qualifying day tickets



And what's more!

**On-site registrants receive a 5% discount coupon to be used at the official shop!**

**Membership applications also accepted online!**

For details on benefits and how to apply, visit the following website:

SUPER GT SUPPORTERS CLUB COMMUNITY SITE

<http://www.super-gt.jp/>

## SMARTPHONE APP

### iPhone/iPad App

## SUPER GT 2014 Timing App

The app gives you instant access to grueling SUPER GT battles in real time. Available as a free download. Purchasing additional content enables you to access live timing data view and track positioning for the entire 2014 SUPER GT. Get it now on the App Store!



- In-App Purchase: ¥ 1,000 (tax included)
- Compatible with iOS version 5.0 and later.

## QUESTIONNAIRE

### Take Our Survey and Win Prizes!

SUPER GT is always keen to hear from you to find out what we can do to make the sport even better for fans. Tell us what you think about SUPER GT by taking our quick online survey and you will be entered to win prizes.

\*The survey is available in Japanese only.

**Mobiles and Smartphones**




Scan the QR code to access.

**PCs**



Click the banner seen on the right side of the SGT Official Website's top page.

▶ Each of the six surveys opens on the qualifying day and closes on the following Sunday (in domestic rounds only).

\*Survey is open for both who have and haven't watched races at the circuit.

## CIRCUIT EXPERIENCE

### Experience What It's Like to Be a Racing Driver!

The Circuit Experience offers you a firsthand experience riding in the hugely attractive cars of manufacturers competing in the SUPER GT or the GT3 base cars used in the GT300 class, driven by a current or former driver. The events are scheduled to take place at each SUPER GT race.\* Why not apply to take part in this amazing Circuit Experience, which is already attracting great interest from the fans?

\*The Circuit Experience may not be held in some races.



#### ■ Conditions of Application

- Fans who have paid to register on the SUPER GT official mobile website and who possess a race day ticket that permits entry to the paddock. Supporters' club members who possess an annual credential are also eligible to apply.
- Fans must be able to send an e-mail within one week setting out their impressions/report of the car they rode in and the experience as a whole, or be able to update this on their own Facebook, Twitter or SNS account.
- At least 20 years old    ● At least 130cm tall



\*Sales of Supporters Club Annual Credentials for this year have now closed (April 2014).



SUPER GT FUN BOOK SPONSORS



GT ASSOCIATION