



# Formula Student Germany

August 6th — 10th 2008 Hockenheim

# Event Handbook



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#### **Emergency information** 1.

#### Slight injury

#### **Medical Center:**

Please accompany the injured person to the Medical Center. Emergency aid is provided there.

The Medical Center is occupied each day round-the-clock.

#### Severe injury

#### Contact someone with a two-way radio:

Every Official and Security has two-way radio. Ask them to call the Medical Center or an ambulance.

#### Call an ambulance yourself:

Call an ambulance yourself if someone is severely injured and needs urgent help. The Emergency Number for every phone and mobile phone is 112. (See also information about emergency calls below.)

#### **During dynamics:**

On Saturday and Sunday an ambulance is on site during the dynamic events. To contact them ask someone with a two-way radio (Official, Security) to call them.

#### Hospital:

Main Hospital, Kreiskrankenhaus (Schwetzingen), Bodelschwinghstrasse 10, 68723 Schwetzingen phone: +49 (0) 6202 / 84-30 (See also directions in chapter 1.1)

#### **Emergency Numbers**

In case of an emergency beyond competition times call 112. This number works with each phone, also with mobile phone or coin-operated telephone as international GSMstandard. It is alway free of charge.

#### **Officials**

Pit Marshal Konrad Paule: +49 (177) 7513185 Pit Marshal Sebastian Seewaldt: +49 (175) 5249739 **Event Control Daniel Ahrens:** +49 (172) 5328399

(In case of an emergency please call one of them, no matter what time it is.)

## **Emergency Call Dictionary**

The emergency control center will ask you some questions to ensure proper help for you. To support you at your call, here are some standard questions and some hints for your answers in English and German.

Who is calling? (Wer ruft an?)

Say your name and your telephone number for callbacks. Digits in German: 1 (eins), 2 (zwei), 3 (drei), 4 (vier), 5 (fünf), 6 (sechs), 7 (sieben), 8 (acht), 9 (neun), 10 (zehn)

**Where** did it happen? (**Wo** ist es passiert? / Wo ist es geschehen?) the event site has the adress "Hockenheimring, Sachshaus, Am Motodrom", make it more precise!:

pit lane (Boxengasse), dynamic area (Fahrerlager);

the adress for campsite C2 near the Motodrom Hotel " Hockenheimring, Zeltplatz C2 beim Motodrom Hotel" and for campsite C3 on the other site of the highway "Hockenheimring, Zeltplatz C3 an der Continental Straße'

What happened? (Was ist passiert? / Was ist geschehen?)

accident (Unfall), traffic accident (Verkehrsunfall), fire (Feuer), fall (Sturz), explosion (Explosion)

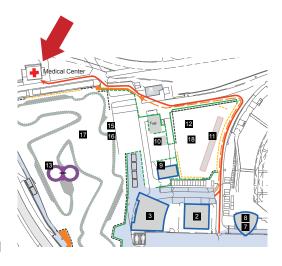
How many people are affected? (Wie viele Personen sind betroffen?)

1 (eins), 2 (zwei), 3 (drei), 4 (vier), 5 (fünf), 6 (sechs), 7 (sieben), 8 (acht), 9 (neun), 10 (zehn)

What kind of injury has happened? (Welche Verletzung liegt vor?)

fracture (Knochenbruch), bleeding (Blutung), unconsciousness (Béwusstlosigkeit), burn (Verbrennung), electric shock (Stromschlag), suffocation (Ersticken), heart attack (Herzinfarkt), shock (Schock)

Don't hang up after answering these questions! Wait if the control center has further questions!



#### 1.1 Directions to the hospital

You start at the Hockenheimring. After **32 m you turn left into the Ernst-Wilhelm-Sachs-Straße**, for 216 m you go straight ahead. Then you enter Hockenheim but continue following the Ernst-Wilhelm-Sachs-Straße for another 129 m.

Turn right to the **Nordring** and follow it for 1.02 km.

Enter the **roundabout** and leave it at the **first exit to the Schwetzinger Straße**. You leave Hockenheim. Follow the Schwetzinger Straße for 54 m. Then turn right and get on the **federal road B36** which you stay on for 5.13 km until you enter Schwetzingen.

Continue following the B36: the first 577m after entering Schwetzingen the street is called Hockenheimer Landstraße, after turning half right the next 363 m are called Zähringer Straße.

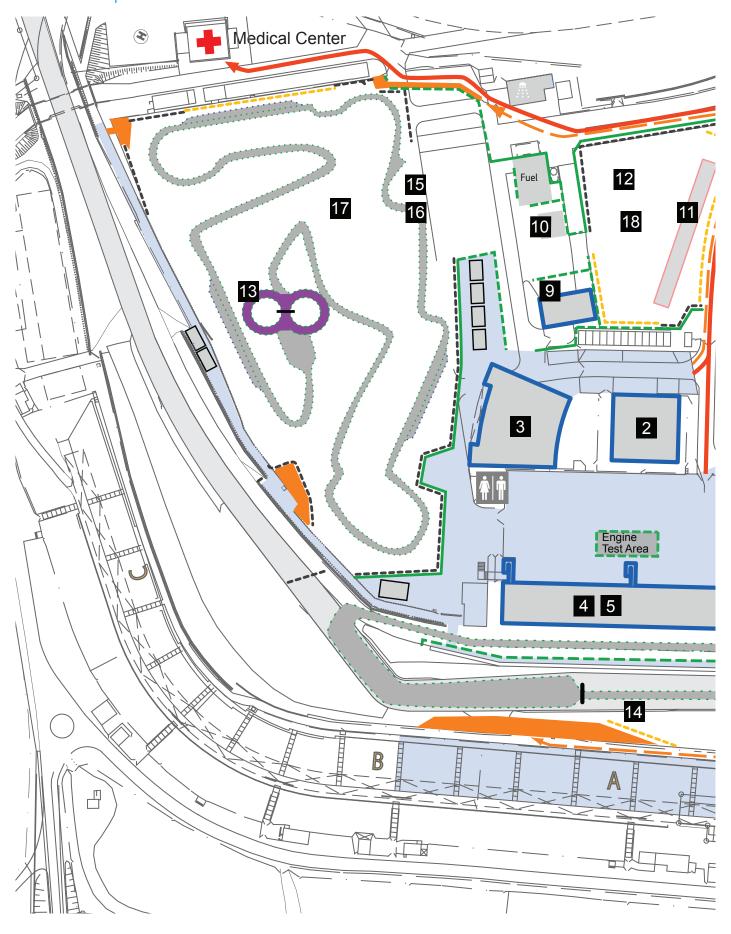
**Turn right into the Bodelschwinghstraße**. After 123 m you have reached the hospital.

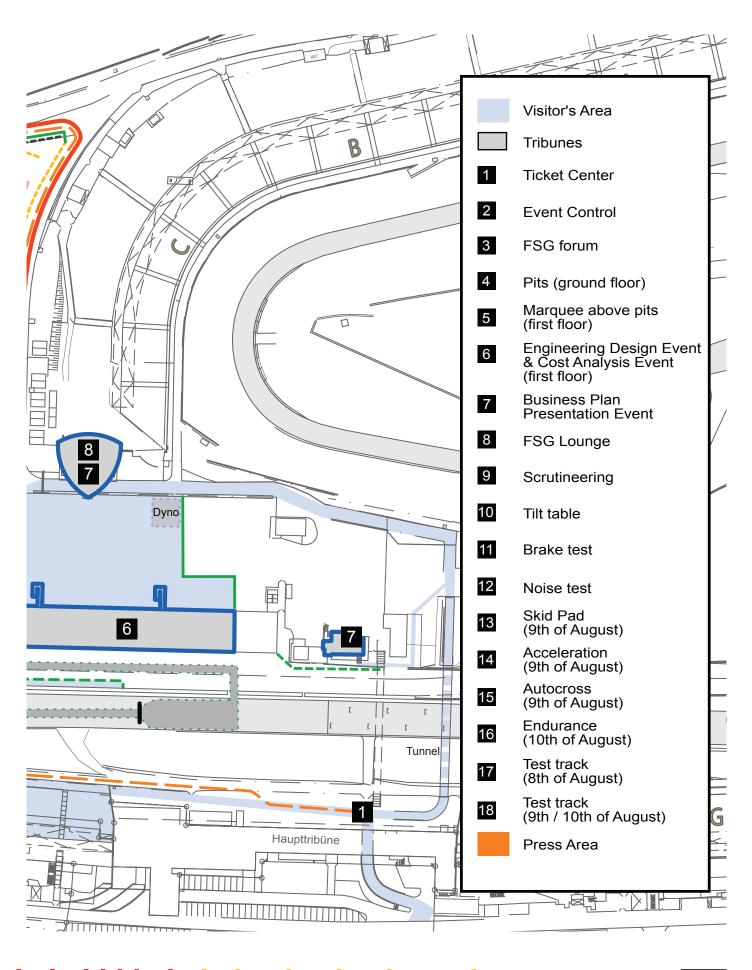
Altogether you will drive 7.82 km in about 10 minutes.



## 2. Event Details

## 2.1 Site Map





### 2.2 Schedule

## Wednesday, 6th of August 2008

13:00 – 21:00	Ticket Center & Team Registration	1 Ticket Center
14:00	Pits available	4 Pits (ground floor)
14:00 – 21:00	Event Control & Driver Registration	2 Event Control
15:00 – 19:00	Scrutineering (Tech Inspection)	9 Scrutineering
20:00	Team Welcome	5 Marquee above pits

## Thursday, 7th of August 2008

07:30 - 19:00	Ticket Center & Event Control	1 Ticket Center 2 Event Control	
08:00 - 08:30	Team Briefing	5 Marquee above pits	
09:00 - 18:00	Fuel Station		
08:30 - 19:00	Scrutineering (Tech Inspection)	9 Scrutineering	
09:00 - 18:00	Scrutineering (Tilt table, Break test, Noise test)	10 Tilt table 11 Brake test 12 Noise test	
09:00 - 18:00	Engine test area		
09:00 - 18:00	Style Event	3 FSG forum	
10:00 - 16:00	Best Suspension Design Awards Judging (ZF)	3 FSG forum	
12:00 - 13:00	Staging for Panoramic Photograph of teams and cars	18 Test track (9th / 10th of August)	
12:00 – 18:00	Chassis Dyno		
20:00 – 21:00	Reception for Faculty Advisors, Team Captains & Judges powered by Bosch	3 FSG forum	

### Friday, 8th of August 2008

	3	
07:30 - 19:00	Ticket Center & Event Control	1 Ticket Center 2 Event Control
08:00 - 08:30	Team Briefing	5 Marquee above pits
07:30	Cars for Engineering Design or Cost Analysis Slot at 9:00 have to be lined up at the lift	
09:00 - 18:00	Fuel Station	
08:30 - 19:00	Scrutineering (Tech Inspection)	9 Scrutineering
09:00 - 18:00	Scrutineering (Tilt table, Break test, Noise test)	10 Tilt table 11 Brake test 12 Noise test
09:00 – 18:00	Engineering Design, Cost Analysis, Business Plan Presentation	<ul><li>6 Engineering Design &amp; Cost Analysis</li><li>7 Business Plan Presentation Event</li></ul>
09:00 - 18:00	Test tracks open	17 Test track (8th of August)
09:00 - 18:00	Engine test area	
09:00 - 18:00	Chassis Dyno	
19:00	Business Plan Presentation Finals	5 Marquee above pits
20:00	Awards Ceremony – Part I	5 Marquee above pits

## Saturday, 9th of August 2008

07:00 - 19:00	Ticket Center & Event Control	1 Ticket Center 2 Event Control
<b>07:30</b> – 08:00	Team Briefing	5 Marquee above pits
07:50 - 19:00	Fuel Station	
08:30 - 13:00	Skid Pad and Acceleration	13 Skid Pad 4 Acceleration
08:30 – 18:00	Test track open	18 Test track (9th / 10th of August)
08:30 – 18:00	Engine test area	
11:30 - 12:30	Press & VIP Reception with guided tour	8 FSG Lounge
14:00 - 14:30	Coursewalk	15 Autocross
14:30 - 19:00	Autocross	15 Autocross
20:15	Engineering Design Finals (not public)	3 FSG forum

## Sunday, 10th of August 2008

07:00 - 17:00	Ticket Center	1 Ticket Center
07:00 - 19:00	Event Control	2 Event Control
<b>07:30</b> – 08:00	Team Briefing	5 Marquee above pits
07:50 - 18:00	Fuel Station	
08:00 - 08:30	Coursewalk	16 Endurance
08:30 - 18:00	Endurance	16 Endurance
08:30 - 18:00	Test track open	18 Test track (9th / 10th of August)
08:30 - 18:00	Engine test area	
18:30 - 19:30	Design Review	3 FSG forum
20:00 - 21:00	Awards Ceremony – Part II	5 Marquee above pits
21:00 - 02:00	Party powered by Mahle International GmbH	5 Marquee above pits

#### 2.3 Contact information

#### 2.3.1 Ticket Center

#### **Dates/Times:**

 Wednesday, 6 August
 13:00 – 21:00

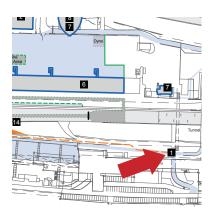
 Thursday, 7 August
 07:30 – 19:00

 Friday, 8 August
 07:30 – 19:00

 Saturday, 9 August
 07:00 – 19:00

 Sunday, 10 August
 07:00 – 17:00

**Location:** at the entrance



Both teams and spectators receive their passes for entering the venue at the Ticket Center.

The Event Team Captain ONLY is allowed to pick up all the passes for distribution to the rest of his team members. No single passes will be handed out to team members. For the detailed procedure see chapter 2.4.1 Registration.

If you are not a member of a team, you may purchase tickets for yourself or any guests at the Ticket Center.

Prices: 10,- EUR for a one-day ticket

25,- EUR for all 4 days of the event (Thursday to Sunday)

#### 2.3.2 Event Control

#### Dates/Times:

 Wednesday, 6 August
 14:00 – 21:00

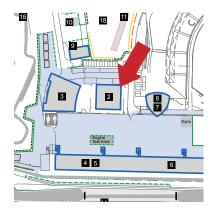
 Thursday, 7 August
 07:30 – 19:00

 Friday, 8 August
 07:30 – 19:00

 Saturday, 9 August
 07:00 – 19:00

 Sunday, 10 August
 07:00 – 19:00

**Location:** Event Control, on the back of the Sachs house



Event Control is the contact point for the teams and all requests concerning the event.

Tasks of the Event Control:

- Information point for all competitors (concerning schedule, general questions etc.)
- Contact interface to the Officials
- Registration of the drivers
- Handing out packages with programmes and T-Shirts to the teams
- Handing out the transponders for time-keeping
- Lost and found
- Feedback

#### 2.3.3 FSG Team

At venue, we will answer your questions in the Event Control directly. For further contact, especially after the event, please contact us via e-mail (you can find the e-mail adresses on our website).

#### Tim Hannig



Chairman Board (Chair) Steering Committee (Chair)

#### Rainer Kötke



Dynamics Board (Member) Steering Committee (Member)

#### Daniel Mazur



Chief Executive Event Manager Board (Member) Steering Committee (Guest)

Frank Röske



Engineering Design Event, Rules Board (Member) Steering Committee (Vice-chair)

Porsche Leipzig GmbH

#### Ludwig Vollrath



Board (President) Steering Committee (Member)

VDI Society for Automotive and Traffic Systems Technology

#### Board

The Board is responsible for the Formula Student Germany and its cooperations as well as for sponsoring, finances and strategy.

#### Jan Helbig



Cost Analysis Event Steering Committee (Member)

#### Peter Jakowski



Scoring, Time Keeping Steering Committee (Member)

2D Debus & Diebold Meßsysteme GmbH

#### Birgit Pattberg



Communications Steering Committee (Member)

an Aerospace Center (DLR)

#### Ulf Steinfurth



Scrutineering Steering Committee (Member)

**Event Support** 

iversity of Applied Sciences Stralsund

#### Steering Committee

The Steering Committee stands for the design of the competition and the rules. Each member is responsible for a field, its preparation and realisation.

mens Transportation Systems GmbH & Co.KG

#### Daniel Ahrens



Event Control (Front Desk)

#### Thomas Ballschmieter



Parking and Outer

Matthias Brutschin





Communications (Guided Tours) Event Support



Daniel Deussen



Dynamics, Scrutineering

Dr. Ing. h. c. F. Porsche AG

Leona Ehrenreich



Registration



Communications (Marquee above pits)

Wenke Friske

#### Ulrike Fröhlich





Robert Fromholz



Günther Riedl

#### Christine Hannig



Communications (Press, Media)

Konrad Paule



Pit Marshal

#### Tim Hanniq



Verein Deutscher Ingenieure e.V. (VDI)



Dynamics



#### Barbara Schlögl



Business Plan Presentation Event

André Schmidt



Scrutineering



Karl Weinreich



Tim Schmidt

**Event Control** (Back Office)

#### Sebastian Seewaldt Pit Marshal



## Karsten Stammen



Dynamics





Michael Zottler



Engineering Design

## Operative Team

The Operative Team completes the management team by bearing responsibility for preparations and smooth processes at the event and during the year.

#### 2.4 Organisational aspects

#### 2.4.1 Registration

Starts on:

Wednesday, 6 August 13:00

Location: Ticket Center

Event Control, on the back of the Sachshaus

Different to last year all team captains received a registration document with standard terms and personal information of all registered members. This document needs to be printed out, signed by ALL team members and brought to registration. Only the team captain has to sign this paper at registration and confirm with his signature the rightness and validity of all other signatures.

#### At the Ticket Center

ONLY the Event Team Captain is allowed to register his team. He can be accompanied by only ONE team member!

The Ticket Center consists of 3 containers: 1 for "guests & press" and 2 for "teams & visitors". The left ticket container for "teams & visitors" will deal with the registration of car numbers 1 - 44, the right one with car numbers 45-99.

The Event Team Captain has to sign the document with all signatures and will then receive all passes for his registered team members, an Event Handbook and a green vehicle entrance pass. The team now is ready to enter FSG.

#### Teams with missing or invalid Health Insurance Certificates (HIC)

The health insurance certificates (HIC) were checked by FSG in advance.

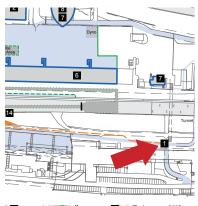
In case a HIC was missing or invalid the team member received an email demanding to provide a valid HIC. This certificate has to be shown at the Ticket Center. There is a separate queue for teams with invalid HIC at the container for "guests & press". Without confirmed HICs there is no way to receive ANY passes for the team! Fix this first - and THEN go to the 'normal' registration container.

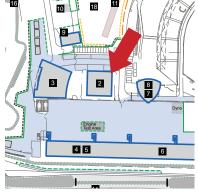
#### In the Event Control

In the Event Control the Event Team Captain will then receive the package of shirts, programmes, etc. Large teams are allowed to bring 1 or 2 extra people to help with carrying.

#### **Driver registration**

Each team has to register 5 drivers. The drivers register themselves in the Event Control where they have to show their valid drivers licenses. They will then receive wristbands marking them as drivers.







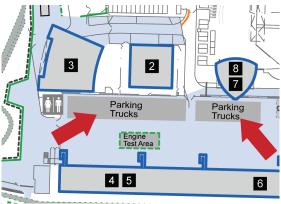
#### 2.4.2 Parking / Vehicle Entrance Pass

You are allowed to enter the venue with a vehicle ONLY with a vehicle entrance pass. At the registration you receive a green vehicle entrance pass for 1 vehicle you want to park permanently during the event. On request you can receive additional yellow vehicle entrance passes that allows you to enter for 1 hour for reasons of unloading or loading it. You will have to fill out the vehicle entrance pass with the licence-plate number, the team name, the driver's name and the mobile phone number of the driver and display it behind the windscreen.

When you enter the gateway, please line up in the queue on the right site at the barrier and wait until there is enough room for more vehicles to come in. Since all teams should get the chance to get on the ground fast please be so kind and unload quickly and follow the instructions of the officials. Don't stay on the ground with the yellow permits longer than necessary!

The parking area is opposite the pits. For each team there is one parking lot with approximately  $30m^2$ . If you come with a container or a trailer which needs more than  $30m^2$  you have to deposit this in a parking area outside the venue.





The parking area is open for arrival from Wednesday, August 6th, at 14:00 and for departure from Sunday, August 10th, right AFTER the endurance. The parking area has to be left by Monday, August 11th, until 10:00.

Walking speed is the speed limit on the entire event site.

#### 2.4.3 Announcements

The event will proceed according to the official time schedule as far as it is possible. Listen to the announcements and look out for the placards at the Event Control for changes in the schedule. All announcements can be found on the following webpage as well: http://www.formulastudent.de/events/event-2008/announcements/

#### 2.4.4 Pit and Infield Times

The pits are open from Wednesday, 6th of August 14:00 to Sunday, 10th of August 20:00 24h per day. Thus all teams will be able to work all day and night in their pits. For visitors the infield closes at 00:00 except the Party on Sunday, which is open to Visitors until 02:00.

	<b>PIT 3</b> 5,8x4,4m		<b>PIT 4</b> 5,8x4,4m	
Э	<b>PIT 2</b> 4x6,3m			<b>PIT 5</b> 4x6,3m
	<b>PIT 1</b> 4x6,3m			<b>PIT 6</b> 4x6,3m

#### 2.4.5 Pit equipment

In every pit group there is a washbasin, power supply and light. In the night the pits are guarded from 18:00 to 08:00. You can see which team is in which pit in the team list.

#### 2.4.6 Surveillance

After 18:00 there will be a security company for surveillance of the site, pits and cars. During the day each team is responsible for the security of its car and the equipment in its pits.

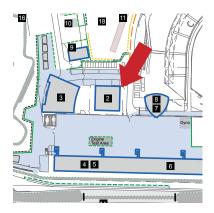
#### 2.4.7 Handing-out of the Transponders for time-keeping

Starts on:

Friday, 8 August 09:00

**Location:** Event Control, on the back of the Sachs house

Transponders for time-keeping must be picked up on Friday, by the Event Team Captains. A deposit of 50 Euros is required. Transponders must then be affixed to the car until Sunday, when they are turned in immediately after finishing endurance.

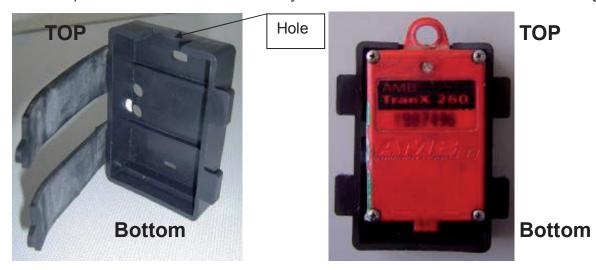


#### **Transponder mounting information**

The transponder mounting requirements are:

#### Orientation:

The transponder must be mounted vertically and orientated so the number can be read "right-side up".



#### Location:

The transponder must be mounted on the driver's right side of the car forward of the front roll hoop. The transponder must be no more than 60 cm (24in) above the track.

#### Obstructions:

There must be an open, unobstructed line between the antenna on the bottom of the transponder and the ground. Metal and carbon fiber may interrupt the transponder signal. The signal will normally transmit through fiberglass and plastic. If the signal will be obstructed by metal or carbon fiber, a 10.2 cm (4 in) diameter opening can be cut, the transponder mounted flush with the opening, and the opening covered with a material transparent to the signal.

#### Protection:

Mount the transponder where it will be protected from obstacles.

#### 2.5 Rules and Guidelines

Everyone (Participants, Volunteers, & Spectators) at Formula Student Germany would like to enjoy an accident free event! These Guidelines have been established to advise teams of potential unsafe practices in the paddock and pit area. The actual Dynamic Events are under the control of each Event Captain and are operated in a very safety-concious manner.

#### 2.5.1 Alcohol

PLEASE NOTE: Alcohol on the event site is strictly forbidden!

Along with the fun of this competition, we want a safe competition. There will be alcohol testing (breathalyzers) during the event. ‰ is the allowable alcohol content during this event.

If ANY team member (driver or not), is tested with an alcohol level higher than ‰, he or she will be immediately disqualified for the rest of the event. The second person of the same team caught consuming alcohol will cause the entire team to be immediately disqualified.

Motorsports are dangerous. Use common sense and let's all have a safe competition together! The prohibition ends with the beginning of the party on Sunday evening.

#### 2.5.2 Working on the car

In case of using angle grinders, wear safety glasses! During the use of all electrical machines like drills or angle driver, please wear ear protection! When using metal cutting equipment that produces metal chips, eye protection is required for the operator as well as any team member assisting. If you are operating loud tools, hearing protection is required.

#### 2.5.3 Jacking

When supporting your car up off the ground you are required to use a safe, stable, load rated support device. The use of Coke crates, piles of wood, four strong team members, will NOT BE ALLOWED.

#### 2.5.4 Running Engines

You are allowed to run engines ONLY in the designated engine test area, manned by official marshals, during the opening times, after passing scrutineering! Engines may not be run in the pit garage! There are several guidelines to follow concerning safety. Please read these guidelines attentively in chapter 3.1.6 Engine test area.

#### 2.5.5 Fires

No open fires are allowed in the Pit area and Engine Test Area. This includes BBQ grilles, oxy-acelylene torches, heaters, cigarettes, etc.

#### 2.5.6 Welding

FSG provides an approved welder (14:00 - 18:00 on Wednesday; 09:00 – 18:00 on Thursday till Sunday). Welding is only allowed in the designated welding area.

#### 2.5.7 Tyres

FSG provides a tyre changing service. The Continental truck is open on Thursday and Friday from 09:00 to 18:00 and on Saturday and Sunday from 08:00 to 19:00.

#### 2.5.8 Fuel and Oil

No open fuel containers. All fuel containers must be DOT approved. Waste oil is to be taken to the fuel station for disposal. No refuelling in the pit and the engine test area. Refuelling is only allowed at the fuel station.

#### 2.5.9 Fire Extinguishers

Your fire extinguishers are to be immediately accessible at all times. All team members must be familiar with their use. At least one fire extinguisher must acompany the car wherever it goes.

#### 2.5.10 Vehicle Modifications

If you make any major modifications to your car, you must re-submit it to Scrutineering for re-approval.

#### 2.5.11 Flagging

All drivers must know the competition-flagging signals. (Rules 5.8)

#### 2.5.12 Behaviour

Alcohol and drugs have no place at this event. Alcohol is only allowed on the camp site and on Sunday at the Mahle-Party. Rollerblades, scooters, bicycles and self propelled vehicles are not allowed.

#### 2.5.13 Driving Practice

Driving practice is only allowed in the designated test areas, during designated times.

#### 2.5.14 How to wheel the car

Whenever a car is moved around, there must be:

- a driver wearing a full safety suit seated in the cockpit.
- a fire extinguisher accompanying the car at all times.
- someone pushing the car with a pushbar.

#### 2.5.15 Special Note for Drivers

All drivers should do a check of critical fasteners and components on their vehicles to assure complete control during the driving events. Fasteners do come loose, parts do break due to fatigue, and occasionally someone forgets to torque a nut – you will be intimately involved if this happens.

REMEMBER: USE THE KILL SWITCH in case of an engine or brake malfunction!

#### HAVE FUN - DRIVE SAFELY - USE COMMON SENSE!

## 3. Dynamic Events

#### 3.1 General information

The dynamics at FSG are compliant with the FSAE rules "Chapter 5".

You will get additional procedures and key aspects on the following pages as well as at the morning briefings on site.

#### 3.1.1 Team/Driver-Briefings

There will be Team briefings every morning of the competition at the Marquee: On Wednesday, Thursday and Friday at 08:00, on Saturday and Sunday at 07:30! All team captains and drivers for the day must attend. The briefing contains general event information and detailed information about the dynamic events of the day. We will hand out extra wristbands to briefed drivers, a new colour every day. Without these additional wristbands participation at the dynamic events of the day is not possible. The coloured wristband is added to the numbered wristband which has to be worn all the time. Missing the briefing means missing the dynamic events.

#### 3.1.2 Access to the dynamic area

Every team receives 4 armlets. With these armlets 4 team members including the driver may enter the dynamic area.

#### 3.1.3 Alcohol

PLEASE NOTE: Alcohol on the event site is strictly forbidden!

Along with the fun of this competition, we want a safe competition. There will be alcohol testing (breathalyzers) during the event. ‰ is the allowable alcohol content during this event.

If ANY team member (driver or not), is tested with an alcohol level higher than ‰, he or she will be immediately disqualified for the rest of the event. The second person of the same team caught consuming alcohol will cause the entire team to be immediately disqualified.

Motorsports are dangerous. Use common sense and let's all have a safe competition together!

The prohibition ends with the beginning of the party on Sunday evening.

#### 3.1.4 Weather

This is one of the factors which can not be influenced by event organisation. So please be aware that we won't change the timetable due to bad weather conditions.

Under normal conditions the track is declared dry. If it is necessary to declare damp or wet conditions, there will be signs and announcements at the dynamic area. Please read the rules for more information.

#### 3.1.5 Car set-up alterations

Teams do not have to use the same car set-up for all the dynamic events and are encouraged to make adjustments (e.g. tyre pressure and suspension settings) to give the vehicle characteristics best suited to each specific event. However, the car must comply with the rules (e.g. ground clearance etc.).

#### NOTE: Teams have to make sure that they refresh their scrutineering after every change on the car!

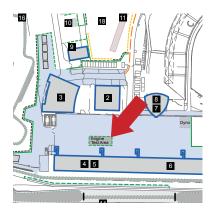
Teams that remove their car from the event site automatically lose all their stickers from technical inspection (Scutineering, Brake, Noise, Tilt Table).

#### 3.1.6 Engine test area

#### Dates/Times:

Thursday, 7 August	09:00 – 18:00
Friday, 8 August	09:00 - 18:00
Saturday, 9 August	08:30 - 18:00
Sunday, 10 August	08:30 - 18:00

There is a designated area, manned by official marshals, which is the only area you will be allowed to test run engines. A driver and up to two additional team members are allowed in the test area, during engine testing. Your car must have passed scrutineering, and you must follow the guidelines below:



#### **!! ENGINES MAY NOT BE RUN IN THE PIT GARAGE !!**

Engines may be run at the concrete area outside your pit provided the car has passed scrutineering and the following conditions are given (Rule 5.11.5):

Whenever an engine is running:

- The car must be in the designated engine test area.
- The car must be adequately supported with the wheels a minimum of 10.2 cm (4") off the ground.
- A driver, wearing a full safety suit must be seated in the cockpit. Driver is to be belted in.
- There must be a fire extinguisher immediately available in case of fire.
- The gearbox must be in neutral, or the drive wheels otherwise dis-engaged. (CVT)
- No one is allowed under the car while the engine is running.
- Re-fueling is only allowed in the designated fuel area.
- Engines are not allowed to be running while the car is pushed through the paddock.
- Engines are only allowed to be run during the designated engine testing hours.

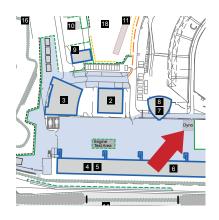
Teams should exercise caution with regard to activation of electrical / ignition systems within these areas.

#### 3.1.7 Chassis Dyno

#### Dates/Times:

Thursday, 7 August 12:00 – 18:00 Friday, 8 August 09:00 – 18:00

**Location:** in front of the BW Tower



Only cars that have passed all technical inspection stages (scrutineering, tilt, brake, noise) are allowed to go on the dyno. When the vehicles are being tested on the dyno, the driver must wear the full safety gear as required for driving the car on the track (fire suite, driving shoes, driving gloves, helmet). Arm restraints are not required on the dyno.

In order to give all teams a fair chance to run on the dyno, the number of dyno runs per team is limited to 3 consecutive runs. If there are no, or only a few, cars waiting in line, then teams might be permitted to make additional runs. This exception will be at the discretion of the responsible FSG official at the dyno. Teams that have already made a dyno run once will not be allowed to go on the dyno again, if there are any cars waiting in line.

Teams that make it to the Engineering Design Finals are strongly encouraged to make a dyno run, and bring the printed results to Finals judging. All finalists that have not been on the dyno during regular opening hours will have the chance to get a run on Saturday, August 9th 8:30 to 19:00. During that time the dyno is booked for another event running in parallel at the Hockenheimring, but the finalist teams will still be able to get on the dyno and will have priority over the cars from the other event.

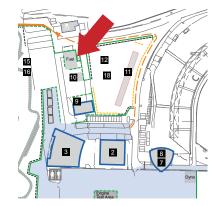
#### 3.1.8 Fuel Station

#### Dates/Times:

Thursday, 7 August 09:00 – 18:00 Friday, 8 August 09:00 – 18:00 Saturday, 9 August 07:50 – 19:00

Sunday, 10 August 07:50 – open (ca 18:00)

**Location:** Dynamic area



The fuel station will provide standard Shell fuel to each car as requested by the team (95, 100 Octane and E85). No other fuel or additives are permitted.

Be aware that no participant is allowed to bring fuel to the competition. FSG will provide all fuel for the competition at the fuelling station.

NOTE: no vehicle will be provided with fuel until it has passed scrutineering.

#### Follow specific safety guidelines while in the fuelling area:

- 1. All engines must be turned off; cars are to be pushed to and from fuelling.
- 2. Only the driver, in driving suit, is permitted in the area as fuel is dispensed.
- 3. No mobile phones in the fuelling area!!
- 4. A marked line or similar identifying mark must be used to indicate the "full" level.
- 5. Tank is to be filled to the max. level line each time car is refueled.
- 6. Re-fueling must be able to be accomplished without the removal of any body parts of the car.

The first time the vehicle receives fuel, the car must proceed (with engine off) to the tilt table.

#### 3.2 Technical & Safety Inspection

Cars have to pass a Technical and Safety Inspection before being allowed to practice or take part in the dynamic disciplines. When you pass Scrutineering, you will get the first inspection sticker. The second sticker will be given at the Tilt Table test, the third at the Brake Test and the fourth at the Noise Test. Then, and only then, you will be allowed to compete in the dynamic events and to practise at the test tracks.

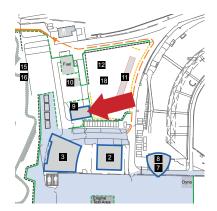
#### 3.2.1 Scrutineering

#### Dates/Times:

Wednesday, 6 August 15:00 – 19:00 Thursday, 7 August 08.30 – 19:00 Friday, 8 August 08.30 – 19:00 Saturday, 9 August on request Sunday, 10 August on request

**Location:** Dynamic Area – DEKRA house

**Rule:** 4.2 (pages 59 - 60)



Before taking part in any of the dynamic events, you must take your car to scrutineering. You can do this at any time during the specified hours and do not need to make an appointment.

To get all the teams through Scrutineering as fast as possible, there will be up to five teams of scrutineers. The Scrutineering takes place at the Dekra house, which is within the dynamics' area. All team members who want to participate at Scrutineering need a dynamic's gate ID.

The waiting queue for Scrutineering will start directly at the dynamic's gate so every team member can guide the car up to the queue.

To Scrutineering you must bring:

- The car (obviously),
- Copies of any Safety Structure Equivalency forms.
- Copies of any Impact Attenuator Data Requirement
- Your Tech. Form
- All the helmets you plan to use at the event
- All the drivers' suits and other safety gear
- The tallest driver of the team must be in attendance for roll bar height and egress checks.
- All the tyres you plan to use at the event.
- 2 Fire Extinguishers
- Quick Jack + Push bar
- Some Tools

NOTE: Four team members maximum (incl. the tallest registered driver) in the inspection box.

When you pass the Scrutineering, you will get the first inspection sticker. The second sticker you will get at

the Tilt Table test, the third at the Brake Test and the fourth at the Noise Test. Then, and only then, you will be allowed to compete in the dynamic events.

If you pass, the Tech. Form will be retained by the scrutineers and you should proceed to the Tilt Table. If you have items that need to be rectified, the form will be returned to you (the team), you will not get your sticker, and you will have to present your car for scrutineering again.

NOTE: No car will be allowed to practice until it has passed all four parts of the Technical and Safety Inspection. After passing the Scrutineering the team will be allowed to start the engine in the engine test area.

Scrutineering reserves the right to spot check any car at any time during the event.

#### 3.2.2 Tilt Table Testing

#### Dates/Times:

Thursday, 7 August 09:00 – 18:00
Friday, 8 August 09:00 – 18:00
Saturday, 9 August on request
Sunday, 10 August on request

**Location:** Dynamic Area

**Rule:** 4.2 (pages 59 - 60)



Tilt Testing checks if the vehicle complies with the fuel spillage and rollover stability rules. No vehicle is permitted at this station until it has passed scrutineering. The sticker that must be applied to the car will serve as proof of this.

At this point we want to remind the teams to bring the car in 'ready to race' condition. That means that all the liquids of the car should be filled properly, all components of the car are mounted and it is fuelled to the max. We will check this and may ask you to run the engine.

After being fuelled up, the vehicle will be placed upon the table with the tallest driver aboard. The vehicle should be oriented on the tilt table in the direction that is most likely to create spillage. The table will then be titled to an angle of 45 degrees. There must be no fuel (or other fluid) leakage at this angle. If the vehicle passes this test, the angle is increased to 60 degrees. This angle is used to represent a cornering force of 1.5 Gs. If the upper wheels remain on the table the vehicle passes. (Some vehicles may lift one wheel. The station manager(s) should be consulted if this occurs). The person in charge at the tilt table must sign off an inspection form, which travels with the car. A second sticker is applied (on the car) next to the first, to indicate passing the tilt table test.

The vehicle is now free to proceed to the Brake & Noise area. Should the vehicle fail at either of the two angles, the car must be repaired and re-tested.

Vehicles may be asked to return to this station for re-certification at the discretion of the officials. This may be due to work that was performed on the vehicle's fuel system after having passed the tilt test, or due to an incident which results in damage to the vehicle.

#### Safety guidelines for the tilt area:

■ Four team members maximum (incl. the tallest registered driver) in the Tilt Table Area

- All engines off, push car on and off table. Care must be taken to avoid damage to the vehicle when pushed on and off the tilt table.
- Inside wheels are to be placed against the guard of the tilt table.
- Attach a strap to rollover hoop and side of table which is to be elevated. Allow a little slack. (Team members may be asked to hold the car, if a strap is not available).
- Be sure table is clear before raising and especially when lowering. Inform people in area when raising or lowering (e.g. "Coming Down").
- Use absorbent material to soak up leaks. (May be obtained at fuel station). Keep a fire extinguisher at hand.

#### 3.2.3 Noise Testing

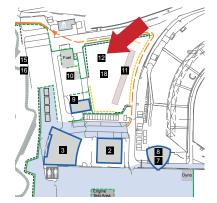
#### **Dates/Times:**

Thursday, 7 August 09:00 – 18:00
Friday, 8 August 09:00 – 18:00
Saturday, 9 August on request
Sunday, 10 August on request

**Location:** Dynamic area

**Rule:** 4.2 SAE Rules (pages 59 - 60)

4.3 FSG Rules (page 8)



The vehicle will be checked for compliance with the sound level restrictions. No vehicle is permitted at this station until it has:

- a) passed scrutineering and,
- b) passed the tilt table test.

Proof of this are the two "tech" stickers, which must be applied to the car.

Teams must bring a laptop for reaching a constant engine speed more precisely and to show the engine rpm monitored from the ecu on the laptop. Sound level must not exceed 110dBA, during running the calculated engine rpm.

If the vehicle passes the test, the person in charge is to sign the approval form and provide the team with the third "tech" sticker. The vehicle is now free to proceed to the brake test.

If the vehicle is unable to pass in three attempts, the car must be repaired and then brought back for retest. The vehicle will not be allowed to compete without passing this test.

The noise level can be measured at any time during the dynamic events. Penalties may be given if the sound level exceeds the mandated maximum. Vehicles may be forced to return to this station for recertification should the officials deem it necessary. Re-certification may be required if work is performed on the vehicle's exhaust system or if the vehicle is involved in an incident which results in vehicle damage.

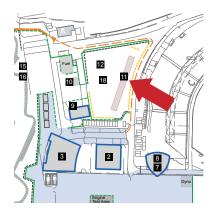
#### 3.2.4 Brake Testing

#### Dates/Times:

Thursday, 7 August 09:00 – 18:00
Friday, 8 August 09:00 – 18:00
Saturday, 9 August on request
Sunday, 10 August on request

**Location:** Dynamic area, behind the DEKRA house

**Rule:** 4.2 (pages 59 - 60)



Brake Testing checks that the vehicle can be brought to a controlled stop. No vehicle is permitted at this station until it has:

- a) passed tech inspection and,
- b) passed the tilt table test and
- c) passed the noise test.

Proofs of this are the three "tech" stickers, which must be applied to the car.

Each driver must be instructed as to the proper procedure for the brake test. With the car at the start line of the station a green flag (or similar signal) should be used to signal the start of each run. The driver must accelerate (typically getting into 2nd gear) until reaching the braking area, which is a box defined by pylons. Once inside this box, the driver must apply the brakes with enough force to demonstrate full lock-up of all four wheels. A second marshal should wave a red flag as the driver enters the box.

If the vehicle passes the test, the person in charge is to sign the approval form and provide the team with the last (fourth) tech sticker. The vehicle is now free to proceed to the practice track or on to the dynamic events.

If the vehicle is unable to pass either of the two tests in three attempts, the car must be repaired and then brought back for retesting. The vehicle will not be allowed to compete without passing this test.

Re-certification may be required if work is performed on the vehicle's brake system or if the vehicle is involved in an incident which results in vehicle damage.

#### 3.2.5 Parc fermé

All vehicles that pass the endurance will go to the parc fermé. They will stay there until 30 minutes after the time limit for appeal.

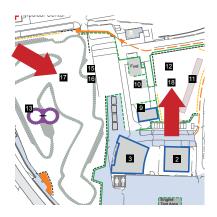
#### 3.3 Testing

#### Dates/Times:

Friday, 8 August 09:00 – 18:00 Saturday, 9 August 08:30 – 18:00 Sunday, 10 August 08:30 – 18:00

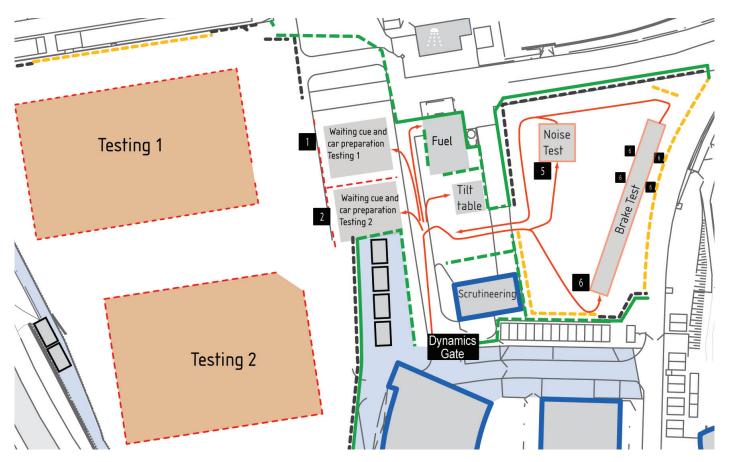
**Location:** Dynamic area:

Friday, 8 August: two tracks left-hand Saturday, 9 August: one track right-hand Sunday, 10 August: one track right-hand



On Friday there will be two vehicle test areas located on the Dynamics track area. The surface is asphalt. In these test areas you may set up and test your car, simulating any driving conditions you might need. The testing time per team depends on the waiting queue and will be 3 to 5 minutes per run. If you want to test more, please get in the queue again.

On Saturday and Sunday we will use the smaller dynamics area for testing. Unfortunately the surface of this area differs a lot from the one what is on the large dynamics area. It is concrete with colour on some spots and provides less grip and small bumps. Please keep that in mind when you set up your car for the events.



Dynamics Area on Friday - Testing / Technical checks

### 3.4 Dynamic Events – disciplines

#### 3.4.1 Skid Pad

Date/Time:

Saturday, 9 August 08:30 – 13:00

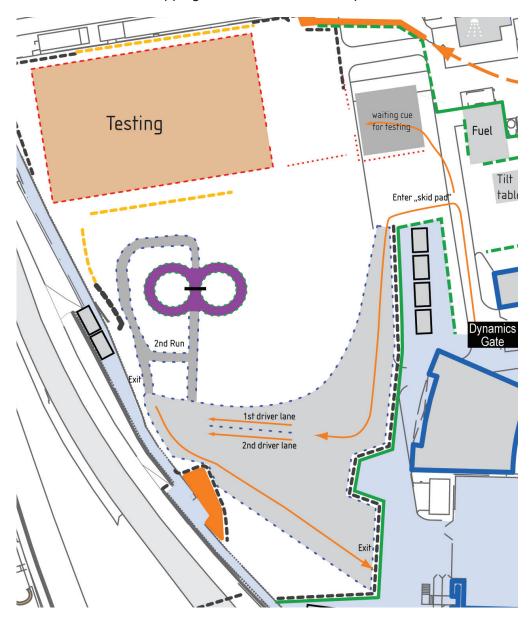
**Location:** Dynamic area

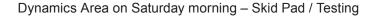
**Rule:** 5.5 (page 85 – 87)

The Skid Pad event runs simultaneously with the Acceleration event. As described in the rules Chapter 5.5 there will be a two lane queue for this event. Lane one is for the first driver of the team, lane two for the second.

The queue closes 15-30 minutes before the end of the event, depending on cars already waiting.

Each driver can choose to drive one or two runs in a row. The second run may be done immediately after the first run without stepping back to the end of the queue.







#### 3.4.2 Acceleration

Date/Time:

Saturday, 9 August 08:30 – 13:00

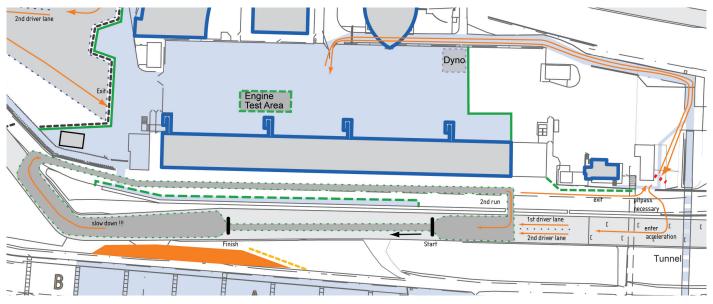
**Location:** Start/Finish Line of the Hockenheimring

**Rule:** 5.4 (page 83 – 84)

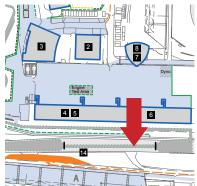
Similar to the Skid Pad event, the waiting queue for the Acceleration event is a two lane queue. Lane one is for the first driver of the team, lane two for the second. The queue closes 15-30 minutes before the end of the event, depending on cars already waiting.

Each driver can choose to drive one or two runs in a row. The second run may be done immediately after the first run without stepping back to the end of the queue.

This year's acceleration event is located at the Start/Finish line of the F1 circuit. Waiting cue and warm up area is situated on the track. After passing the finish line of the Acceleration there is a big slow down area (Nordkurve) before you have to turn into the "F1 pit lane" to return to the start for the second run. In case of passing the spectator area while driving through the pit lane a slow car speed is recommended and controlled by the officials.



Dynamics Area on Saturday morning - Acceleration



#### 3.4.3 Autocross

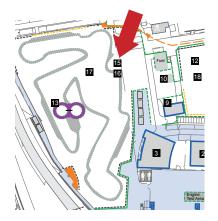
Date/Time:

Saturday, 9 August 14:00 – 14:30 Course walk (for all interested)

14:30 - 19:00 Autocross

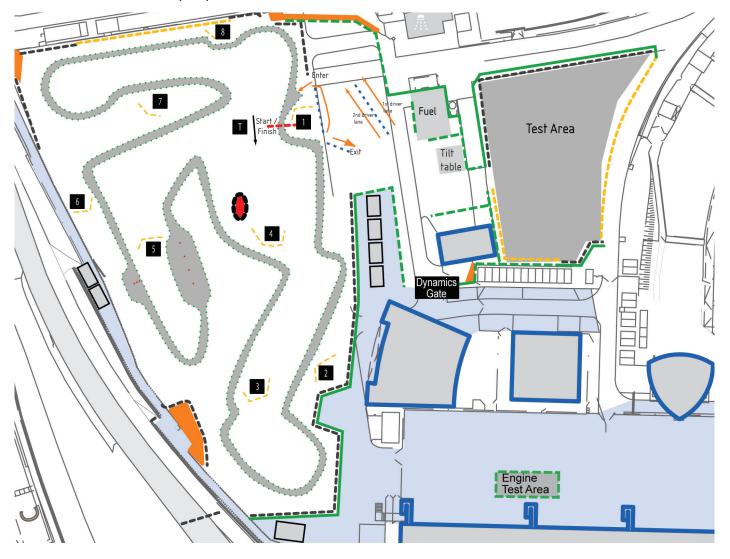
**Location:** Dynamic area

**Rule:** 5.6 (page 90 – 92)



The autocross is installed on the paddock of the Hockenheim GP Racetrack therefore the track is lined with cones. Green cones are used for the track boundary, orange cones are slalom cones and blue cones are used for entrance and exit of the course. Track direction is clockwise. Each run is only one lap with a flying start. There will be two cars at a time on the track with an offset of half a lap. Each driver can choose to drive one or two runs in a row. The second run may be done immediately after the first run without stepping back to the end of the queue. After the first run the driver must exit the course and drive slowly through the driver change area and back to the start for the second run. A two lap run is permitted.

Due to the fact that two cars are on the track simultaneously, a stalled car can influence the lap time of the other car. In this case the run for the stalled car is lost. For the other car this turn does not count and an immediate rerun of this lap is possible.



Dynamics Area on Saturday afternoon - Autocross / Testing

#### 3.4.4 Endurance

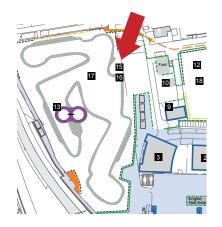
Date/Time:

Sunday, 10 August 08:00 – 08:30 Course walk (for all interested)

Sunday, 10 August 08:30 – 13:00 Endurance Sunday, 10 August 13:30 – 18:00 Endurance

**Location:** Dynamic area

**Rule:** 5.7 (page 91 – 97)



The endurance track will be set up late Saturday evening. Everybody can visit the track after the team briefing on Sunday morning until 8:30. The colouring of the cones is similar to the Autocross event. The three additional overtaking lanes are marked with blue cones. Race direction is CLOCKWISE.

The starting order for this event results from the Autocross times. The slowest car starts at 8:30. The following car starts 3 minutes later. We will have the maximum number of three cars on course at one time. Due to weather conditions the starting order may change. The valid order will be annonced at the drivers' briefing on sunday and will be displayed at the FSG forum.

During the driver change two scrutineers will check your car. After successful driver change the second driver drives to the entrance gate. If the marshal stops the car through no fault of one's own, this stopping time will be subtracted from a possible exceeding of the 3 minutes of driver change time. Timekeeping will be watching for these incidents.

Cars who get a blue flag please drive into the next overtaking lane. You do not have to slow down before the overtaking lanes. Please start breaking / slowing down when you are in the overtaking lane NOT before. For the faster car it is necessary to not follow the car in front too closely. Otherwise it may cause serious damage if the cars contact each other. Rear-ending a slower car will definitely lead to a disqualification of the

Sarty Oriver Fuel Driver Test Area

Erit Titt table

Dynamics
Gate

faster car!

All vehicles that successfully finish the Endurance Event must report to the Parc ferme. They will stay there until 30 minutes after the time limit for appeal.

Dynamics Area on Sunday - Endurance / Testing

## 3.5 Static Events

## 3.5.1 Static Events Schedule

Car	Team	Engineering Design	Cost Analysis	Bay	Business Plan Presentation	Room
1	Stuttgart U	9:00 - 9:50	10:00 - 10:50	10	13:15 - 14:00	3
2	Graz TU	9:00 - 9:50	10:00 - 10:50	1	13:15 - 14:00	4
3	Graz UAS	9:00 - 9:50	10:00 - 10:50	2	13:15 - 14:00	5
4	Helsinki PT	9:00 - 9:50	10:00 - 10:50	5	13:15 - 14:00	1
5	Rochester IT	9:00 - 9:50	10:00 - 10:50	9	13:15 - 14:00	6
6	Darmstadt TU	9:00 - 9:50	10:00 - 10:50	6	13:15 - 14:00	9
7	Stralsund UAS	10:00 - 10:50	9:00 - 9:50	19	14:10 - 14:55	5
8	Oxford Brookes U	10:00 - 10:50	9:00 - 9:50	20	16:55 - 17:40	4
10	Karlsruhe U	14:00 - 14:50	15:00 - 15:50	13	9:00 - 9:45	4
11	Birmingham U	14:00 - 14:50	15:00 - 15:50	14	9:00 - 9:45	7
12	Loughborough U	16:10 - 17:00	17:10 - 18:00	10	11:45 - 12:30	5
13	Toronto U	11:10 - 12:00	12:10 - 13:00	5	15:05 - 15:50	3
14	Berlin UAS	11:10 - 12:00	12:10 - 13:00	1	15:05 - 15:50	2
15	Dortmund UAS	17:10 - 18:00	16:10 - 17:00	8	10:50 - 11:35	3
16	Padova U	10:00 - 10:50	9:00 - 9:50	3	14:10 - 14:55	7
17	Ulm UAS	10:00 - 10:50	9:00 - 9:50	4	14:10 - 14:55	8
18	Aalborg U	10:00 - 10:50	9:00 - 9:50	8	14:10 - 14:55	6
20	Berlin UCE	10:00 - 10:50	9:00 - 9:50	7	14:10 - 14:55	2
21	Mumbai Somaiya	12:10 - 13:00	11:10 - 12:00	4	16:00 - 16:45	5
22	Cambridge U	11:10 - 12:00	12:10 - 13:00	6	15:05 - 15:50	6
23	Amberg UAS	11:10 - 12:00	12:10 - 13:00	9	15:05 - 15:50	1
24	Offenburg UAS	11:10 - 12:00	12:10 - 13:00	13	15:05 - 15:50	9
25	Ravensburg UCE	11:10 - 12:00	12:10 - 13:00	18	16:55 - 17:40	6
26	Budapest TU	14:00 - 14:50	15:00 - 15:50	9	9:00 - 9:45	1
27	Paderborn U	14:00 - 14:50	15:00 - 15:50	10	9:00 - 9:45	9
28	Kempten UAS	9:00 - 9:50	10:00 - 10:50	13	13:15 - 14:00	2
30	Esslingen UAS	12:10 - 13:00	11:10 - 12:00	16	16:00 - 16:45	2
31	München TU	14:00 - 14:50	15:00 - 15:50	17	9:00 - 9:45	3
32	Mittweida UAS	10:00 - 10:50	9:00 - 9:50	11	14:10 - 14:55	1
33	Zürich ETH	14:00 - 14:50	15:00 - 15:50	18	16:55 - 17:40	3
34	Konstanz UAS	10:00 - 10:50	9:00 - 9:50	12	14:10 - 14:55	9
35	Wolfenbüttel UAS	9:00 - 9:50	10:00 - 10:50	14	13:15 - 14:00	8
36	Bari PT	9:00 - 9:50	10:00 - 10:50	17	13:15 - 14:00	7
38	München UAS	15:00 - 15:50	14:00 - 14:50	12	9:55 - 10:40	5
39	Belfast Ulster	12:10 - 13:00	11:10 - 12:00	3	16:00 - 16:45	3
40	Eindhoven TU	11:10 - 12:00	12:10 - 13:00	2	15:05 - 15:50	5
41	Wien TU	12:10 - 13:00	11:10 - 12:00	11	16:00 - 16:45	4
42	Aachen RWTH	16:10 - 17:00	17:10 - 18:00	2	11:45 - 12:30	8
44	Dresden TU	12:10 - 13:00	11:10 - 12:00	19	16:00 - 16:45	6
45	Bangalore RVCE	17:10 - 18:00	16:10 - 17:00	16	10:50 - 11:35	6
46	Turin PT	14:00 - 14:50	15:00 - 15:50	1	9:00 - 9:45	5
48	Bayreuth U	15:00 - 15:50	14:00 - 14:50	11	9:55 - 10:40	2
50	Lisboa IST	15:00 - 15:50	14:00 - 14:50	20	16:55 - 17:40	2
51	Espoo TU	15:00 - 15:50	14:00 - 14:50	15	9:55 - 10:40	3
53	Kiel UAS	14:00 - 14:50	15:00 - 15:50	5	9:00 - 9:45	8

Car	Team	Engineering Design	Cost Analysis	Вау	Business Plan Presentation	Room
54	Wuppertal U	15:00 - 15:50	14:00 - 14:50	3	9:55 - 10:40	9
55	Moscow MAMI	17:10 - 18:00	16:10 - 17:00	3	10:50 - 11:35	1
56	Alwar LIET	17:10 - 18:00	16:10 - 17:00	7	10:50 - 11:35	4
57	Barcelona UPC	17:10 - 18:00	16:10 - 17:00	11	10:50 - 11:35	5
58	Nevers ISAT	9:00 - 9:50	10:00 - 10:50	18	16:55 - 17:40	1
60	Saarbrücken UAS	12:10 - 13:00	11:10 - 12:00	7	16:00 - 16:45	1
61	Braunschweig TU	14:00 - 14:50	15:00 - 15:50	6	9:00 - 9:45	2
62	Regensburg UAS	12:10 - 13:00	11:10 - 12:00	15	16:00 - 16:45	7
63	Aachen UAS	17:10 - 18:00	16:10 - 17:00	12	10:50 - 11:35	2
64	Kaiserslautern TU	17:10 - 18:00	16:10 - 17:00	4	10:50 - 11:35	7
65	Wiesbaden UAS	15:00 - 15:50	14:00 - 14:50	16	9:55 - 10:40	1
66	Diepholz UAS	15:00 - 15:50	14:00 - 14:50	19	9:55 - 10:40	8
67	Osnabrück UAS	11:10 - 12:00	12:10 - 13:00	17	15:05 - 15:50	8
68	Uxbridge U_Brunel	15:00 - 15:50	14:00 - 14:50	8	9:55 - 10:40	4
69	Hamburg UAS	16:10 - 17:00	17:10 - 18:00	14	11:45 - 12:30	6
70	Frankfurt am Main UAS	16:10 - 17:00	17:10 - 18:00	17	11:45 - 12:30	7
71	Stockholm KTH	16:10 - 17:00	17:10 - 18:00	1	11:45 - 12:30	3
72	Hamburg HSU	16:10 - 17:00	17:10 - 18:00	18	10:50 - 11:35	9
74	Erlangen U	12:10 - 13:00	11:10 - 12:00	12	16:00 - 16:45	8
76	Freiberg TU	12:10 - 13:00	11:10 - 12:00	8	16:00 - 16:45	9
77	Hatoyama TDU	11:10 - 12:00	12:10 - 13:00	10	15:05 - 15:50	4
78	Montreal ETS	10:00 - 10:50	9:00 - 9:50	15	14:10 - 14:55	4
80	Berlin TU	16:10 - 17:00	17:10 - 18:00	6	11:45 - 12:30	4
81	Coburg UAS	17:10 - 18:00	16:10 - 17:00	15	10:50 - 11:35	8
83	Cottbus TU	16:10 - 17:00	17:10 - 18:00	9	11:45 - 12:30	2
84	Glasgow U Strathclyde	12:10 - 13:00	11:10 - 12:00	20	16:55 - 17:40	5
85	Delft TU	10:00 - 10:50	9:00 - 9:50	16	14:10 - 14:55	3
86	Patras U	14:00 - 14:50	15:00 - 15:50	2	9:00 - 9:45	6
88	Hatfield UH	11:10 - 12:00	12:10 - 13:00	14	15:05 - 15:50	7
90	Köln UAS	15:00 - 15:50	14:00 - 14:50	4	9:55 - 10:40	6
96	Zwickau UAS	16:10 - 17:00	17:10 - 18:00	5	11:45 - 12:30	1
97	Schweinfurt UAS	16:10 - 17:00	17:10 - 18:00	13	11:45 - 12:30	9
99	Karlsruhe UAS	15:00 - 15:50	14:00 - 14:50	7	9:55 - 10:40	7

#### 3.5.2 Engineering Design and Cost Analysis Event - procedure

The engineering design event and cost analysis will be back to back. On one hand this means 2 hours of judging for the teams. On the other hand it gives the teams more freedom for planning the rest of the day for scrutineering and testing. As a team you will have 10 minutes to setup your car and all presentation devices like charts, boards etc. once in the Judging bay assigned to you. Your team will stay in this Judging bay for both events. After finishing the first event, you will have a 10 minute break, before the second Static Event. The Judges will come to your Judging bay. After the second event you are done and your car will be let down to the ground level. To find out your Judging bay and your judging times please check the schedule.

**Team & Car photo:** After these two static events we will take a photo of your team and car while you are waiting for the elevator which carries your car car down to the ground level. Please ensure that any team members who did not participate in the static events are available for the picture.

#### 3.5.3 Engineering Design Event

Date/Time:

Friday, 8 August 09:00 – 18:00 Engineering Design Event Saturday, 9 August 19:30 Engineering Design Finals

**Location:** Marquee above pits (Design Event)

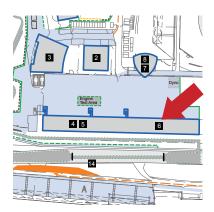
FSG forum (Design Finals)

**Rule:** 4.5 FSAE Rules (pages 75 – 78)

5.2 FSG Rules (pages 10 - 11)

Chief Judges: Pat Clarke

Steve Fox Rudolf Dittrich



Formula Student Germany is an international Design Competition. This means the Design Event is the most important static event. The winner of the Design Event will get 150 points.

Here are some tips to help you score higher in the Engineering design Event: Be on time! Make sure your car is in race-ready condition, and your team members are well prepared. Bring all engineering documentation with you. Read, and understand the rules.

#### **Judging Sequence**

At Formula Student Germany, Design Judging will involve two parts:

- 1. Initial judging of all vehicles
- 2. Final judging ranking the top 6-8 vehicles.

You should start with a 3-5 minute overview presentation of the car. It is up to you how you use this presentation time, introducing the team, the car or the design goals etc. This presentation time will be followed by a 40 minutes discussion with the judges. You are done after 45 minutes.

The Design Finals take place on Saturday evening. The Top 6-8 teams from Friday will participate in the Finals. In this Round only 2 team members are allowed to stand by the car. They are the moderators for the team and will forward the questions to the responsible team members, which will then go to the car to explain the design and answer the question. There is no time limit in the Design Finals.

The Design Finals are not public. Only team members of the design finalists have access to the FSG Forum.

To score high in the design event we would suggest bringing all necessary papers with you, which underline your engineering work. If you do any tests bring the results with you, Judges only believe what they have seen, not what you are telling them. Read the Caroll Smith "Everything You Wanted to Know about Design Judging" paper, available on the Formula SAE website.

The Judges will be around on Saturday and Sunday, feel free to ask them about your car. They will be more than happy to answer all your questions.

#### 3.5.4 Cost Analysis Event

Date/Time:

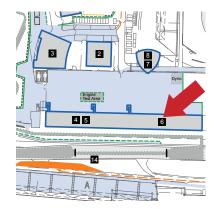
Friday, 8 August 09:00 – 18:00

**Location:** Marquee above pits

**Rule:** 4.3 FSAE Rules (pages 61-72, 110-114)

5.3 FSG Rules (pages 11-14)

Chief Judge: Jan Helbig



#### Overview

Each team will prepare a report of their car's cost to be evaluated by the cost judges. The concept of the cost event is to obtain an accurate estimate of cost of the car. The report is in effect your cost proposal to the senior management of a company to get them to invest in your car. The more information that you can supply to them, and the more professional the look of your materials, the more likely the company may be willing to look at the product itself. This is the goal of the cost report itself. Additionally, the teams will also prepare an electronic Bill of Materials and a detailed process description. This evaluates not only the cost of the car, but also the team's ability to prepare an accurate engineering cost estimate and know exactly how the vehicle would be built. The car with the lowest corrected cost and the best report will win the event. The event can be divided in to four separate sections - the cost report itself, visual inspection, the "Real Case Situation" and the prototype costs.

#### The Cost Report

The actual cost report is due into the judges approximately six to seven weeks prior to the event at the venue. Reports must be mailed before the specified deadline or the report will incur a penalty of 10 points per day after that date. The cost report is judged on the basis of the cost of the car and quality of the cost report. The cost of the car is determined by the cost of the parts and fabrication using established manufacturing practices. The report will follow the guidelines set forth in the published rules. From this analysis the judges (in 8 distinct areas of expertise) will determine if all parts and processes were included and if unreasonably low (determined by the experience of the judges) - the judges will add penalties if there are errors, items omitted, or have costs below reasonable estimates by giving points for the event discussion. The costs and penalties will then determine the cost score. The report score will be given based on the quality of the report and its overall presentation. The report score ranges from 0 to 10 points.

#### "The "Real Case Situation"

Like any other situation in real life, nobody knows what's coming next. Teams will be given a specific task after the submission of their cost reports. This task is developed by the judges and Steering Committee members of Formula Student Germany. The teams have to present their solutions in a 10 minute presentation during the cost event.

#### **TOTAL COST SCORE =**

Price Score (max 10) + Report Score (max 10) + Event Day Discussion Score (max 40) + "Real Case Situation" (max. 40)

Addenda to the report can be taken into consideration to cover any necessary changes made in the car. These addenda will only be accepted at the time of registration at the event and must be in the format proscribed by the rules.

The final scores are tabulated and presented at the end of the judging day to the statisticians and are posted on the evening for the students viewing. Once posted, the scores may be protested for only one hour, after which time, all scores become final.

#### Tips for a Good Cost Report:

- Follow the rules put the items and processes where the guidelines tell you to put them.
- Include an EBOM (Electronic Bill of Material) on disk (CD-ROM or USB-Stick)) that follows the format in Appendix A-5.
- Receipts should be no older than three years.
- Catalogue pages used should be no older than three years as well.
- If using catalogue pages, please highlight the parts purchased, so we don't have to guess what parts were used.
- Be careful to detail the processes that are listed with an asterisk in the rules (Appendix A-4).
- Include any photographs, pictures, drawings, blue prints, receipts, etc. in the appropriate sections of the book to help us understand the design processes used in manufacturing the parts.
- There will be no Price limit!!
- Don't forget to include labour costs as well as set-up times and jigging this is one of the biggest areas where we find problems. Remember that you must account for every person used in the manufacturing process. If you must err on the high side rather than cut yourself short.
- Please, read the rules!

#### 3.5.5 Business Plan Presentation Event

Date/Time:

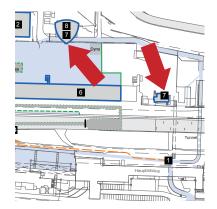
Friday, 8 August 09.00am – 08.00pm

**Location:** Baden-Württemberg-Tower

**Mobil Tower** 

**Rule:** 4.4 FSAE Rules(pages 73 - 74)

5.1 FSG Rules (page 9 - 10)



#### Overview

After a year of planning, fabricating, and testing a new, prototype vehicle, the team aspires to sell their vehicle design to a make-believe racing manufacturer. The competitors in this 2-step event will be judged on their ability to create and deliver a presentation that clearly explains the merits of their package. The winner of the event will score 75 points.

#### The Presentation

Competitors are to make a presentation to upper level executives of an imaginary manufacturer. The presentation should tie together all factors that would influence the marketability and manufacturability of their design. The technical aspects of the vehicle design should be presented to reinforce or support performance claims but should be reduced to the maximum necessary for an investment decision. The competitors should show an understanding of the marketplace and the targeted customer, and show how their design fits into its expected market and is completed to a business model. Competitors must convince the judges that their prototype and the related concept represents a profitable enterprise for the manufacturer and simply an attractive investment.

#### The Vehicle

The racecar is designed for the nonprofessional weekend autocrosser. It should have high performance characteristics in handling, accelerating, and braking. Knowledge of the customer should dictate a design that is a compromise between cost and performance while also being safe, reliable and easy to maintain. The car's marketability is enhanced by other factors such as aesthetics, comfort, use of common parts, and high tech features. All of the vehicles are required to conform to safety regulations as defined in the FSAE rulebook. The goal is to produce 4 cars per day for a limited production run.

#### **Presentation Tips from Previous Experience**

- Spell check all overheads, hand-outs, slides etc.
- There is no dress code; however, bad first impressions are difficult to remedy.
- Remember that equipment has been known to fail, copies can be ruined in transit, etc.
   Consider other alternatives in case something should go wrong.
- Have someone from your team videoing your presentation and the judges' comments for your team's future FSG efforts.
- The most technically knowledgeable person on the team may not be the best person to lead the presentation team. Choose someone who is charismatic and good at public speaking.

#### **Process**

The Presentation Event will be conducted in two parts. In the first round, all teams will compete. The second round will consist of the top 4 finalists.

#### **First Round**

During the first round each team will get the opportunity to present to the judges. Therefore the overall group of judges will be divided into 9 small groups (of 3 judges each), who will together visit the team presentations. These judge groups will change during the day. At the end of each presentation, the judges are requested to ask questions.

#### Schedule for each presentation:

- Maximum 10 minutes for set-up & preparation
- 10 min for presentation
- 5 min maximum for surplus-time
- 5 min for questions
- 5 min for De-briefing and scoring decision of the judges
- 5 min for instant feedback to the teams
- 5 min de-installation
- → 45 minutesmaximum for each presentation

This time schedule needs to be followed strictly; otherwise the overall time schedule for the whole day will be disrupted.

During the presentations, only judges and the presenting team participate. Guests may be allowed to attend at the discretion of any Steering Committee member or the team.

#### **Scoring**

The scoring will be carried out according the scoring scale attached in the appendix. Each team is to be scored directly after giving their presentation. The teams receive between 0 and 50 points. The relevant score for all teams who do not reach the finals will be calculated by (carried out by the organisation team):

Score = 
$$\frac{\text{Number of points of team}}{\text{Highscore of best team without top 4}} \times 70$$

#### **Finals**

The best 4 Teams will reach the presentation finals. These finals will be held in the evening in the Marquee above the pits. The teams will present to the complete group of judges and to all others interested (i.e. other team etc.).

The 4 teams will present directly one after the other without any questions/interruptions by the judges. Afterwards the judges will hold a short de-briefing and decide on a ranking of the 4 finalists.

The scores of the finalists will be:

Top 1: 75

Top 2: 74

Top 3: 73

Top 4: 72

If a team will not attend the finals despite its nomination, it will automatically receive 71 points.

If a team misses their allocated period, the team will receive zero (0) Presentation points. The team that makes the best Business Presentation (regardless of the quality of the car) will win the event.

#### 4. Results

The results will be posted on the results board in the FSG Forum as soon as they are available.

Endurance Scores will be posted in 2 steps. Before publishing the times the penalties will be posted, because these are finished before the data of the 2 timing systems are cross checked.

In the second step the endurance times will be published.

The time slot for the protests will be printed on the results page.

Please note that the protest time for the overall results could be on Monday morning from 9:00 – 10:00.

Please visit the Result board regularly and listen to the announcements.

#### 5. Protest

- (A) Required Review Any team that intends to protest a rule, score, judge's decision or any other aspect of the competition, must present the issue to the FSG Rules Organizers, represented by Frank Röske for discussion, and possible resolution before the protest is filed. If you cannot locate Frank Roske, contact Event Control.
- (B) Cause for Protest A team may protest any rule interpretation, score or official action (unless specifically excluded from protest) which they feel has caused some actual, non-trivial, harm to their team, or has had a substantive effect on their score. Teams may not protest rule interpretations or actions that have not caused them any substantive damage.
- (C) Protest Period Protests must be filed within one (1) hour after the action being protested has occurred or the scores for the activity involving the protest subject are posted.
- (D) Protest Format Protests must be handed in in a written form and submitted by the team captain to Peter Jakowski. In case of not finding Peter Jakowski, contact Event Control.
- (E) Protest Bond The protesting team must post a twenty-five (25) points bond to be deducted from their score if the protest is denied.
- (F) Decision The decision of the officials regarding any protest is final.

## 6. Participating Teams 2008

Car no.	City	Country	Pit no.
1	Stuttgart	Germany	53
2	Graz	Austria	45
3	Graz	Austria	67
4	Helsinki	Finland	58
5	Rochester	United States	71
6	Darmstadt	Germany	64
7	Stralsund	Germany	42
8	Oxford	United Kingdom	50
10	Karlsruhe	Germany	48
11	Birmingham	United Kingdom	11
12	Loughborough	United Kingdom	68
13	Toronto	Canada	63
14	Berlin	Germany	20
15	Dortmund	Germany	32
16	Padova	Italy	23
17	Ulm	Germany	77
18	Aalborg	Denmark	38
20	Berlin	Germany	4
21	Mumbai	India	33
22	Cambridge	United Kingdom	49
23	Amberg	Germany	72
24	Offenburg	Germany	52
25	Ravensburg	Germany	74
26	Budapest	Hungary	16
27	Paderborn	Germany	65
28	Kempten	Germany	22
30	Esslingen	Germany	70
31	München	Germany	17
32	Mittweida	Germany	51
33	Zürich	Switzerland	15
34	Konstanz	Germany	29
35	Wolfenbüttel	Germany	37
36	Bari	Italy	25
38	München	Germany	56
39	Belfast	United Kingdom	78
40	Eindhoven	Netherlands	21
41	Wien	Austria	6
42	Aachen	Germany	19
44	Dresden	Germany	69

Car no.	City	Country	Pit no.
45	Bangalore	India	44
46	Turin	Italy	13
48	Bayreuth	Germany	27
50	Lisboa	Portugal	26
51	Espoo	Finland	3
53	Kiel	Germany	5
54	Wuppertal	Germany	66
55	Moscow	Russia	14
56	Alwar	India	40
57	Barcelona	Spain	1
58	Nevers	France	75
60	Saarbrücken	Germany	60
61	Braunschweig	Germany	2
62	Regensburg	Germany	54
63	Aachen	Germany	18
64	Kaiserslautern	Germany	57
65	Wiesbaden	Germany	35
66	Diepholz	Germany	55
67	Osnabrück	Germany	41
68	Uxbridge	United Kingdom	62
69	Hamburg	Germany	73
70	Frankfurt a.M.	Germany	24
71	Stockholm	Sweden	34
72	Hamburg	Germany	43
74	Erlangen	Germany	76
76	Freiberg	Germany	59
77	Hatoyama	Japan	36
78	Montreal	Canada	61
80	Berlin	Germany	31
81	Coburg	Germany	7
83	Cottbus	Germany	30
84	Glasgow	United Kingdom	46
85	Delft	Netherlands	47
86	Patras	Greece	8
88	Hatfield	United Kingdom	10
90	Köln	Germany	28
96	Zwickau	Germany	39
97	Schweinfurt	Germany	12
99	Karlsruhe	Germany	9

## 7. Awards 2008

Formula Student Germany Champion	The team that has the highest total score in all Events	
Formula Student Germany – 2nd place	The team that has the 2nd highest total score in all Events	
Formula Student Germany – 3rd place	The team that has the 3rd highest total score in all Events	
Engineering Design Award – 1st place	The team that receives the best score in the Engineering Design Event.	
Engineering Design Award – 2nd place	The team that receives the 2nd highest score in the Engineering Design Event.	
Engineering Design Award – 3rd place	The team that receives the 3rd highest score in the Engineering Design Event.	
Cost Analysis Award – 1st place	The team that receives the best score in the Cost Analysis Event.	
Cost Analysis Award – 2nd place	The team that receives the 2nd highest score in the Cost Analysis Event.	
Cost Analysis Award – 3rd place	The team that receives the 3rd highest score in the Cost Analysis Event.	
Business Plan Presentation Award – 1st place	The team that receives the best score in the Business Plan Presentation Event.	
Business Plan Presentation Award – 2nd place	The team that receives the 2nd highest score in the Business Plan Presentation Event.	
Business Plan Presentation Award – 3rd place	The team that receives the 3rd highest score in the Business Plan Presentation Event.	
Endurance Winner	The team that finished best in the Endurance.	
Acceleration Winner	The team that finished best in the Acceleration.	
Skid Pad Winner	The team that finished best in the Skid Pad.	
Autocross Winner	The team that finished best in the Autocross.	
Most Fuel Efficient Car powered by Kautex	The car which has the lowest fuel consumption to finish endurance. (Car must fulfil rule 5.7.2)	
1st place Overall Dynamic Events powered by VDI	The team that has the highest total score in the 4 dynamic events.	
Best Newcomer Award powered by Formula Student Germany Academiy	Best finish for a first competition entry.	
Formula Student Germany Sportsmanship Award powered by Formula Student Germany Steering Committee	The team that shows the most sportsmanship will receive a Free Entry for FSG 2009	
Style Award	For the car with the best optical design.	
Most Innovative Use of Electronics Award powered by Bosch Engineering GmbH	The team that shows the most innovative use of electronics in its car development phase.	
Most Innovative Powertrain Award powered by BMW Group	The team which shows the best powertrain concept.	
Best Suspension Design Award powered by ZF Group	Innovation and excellence in suspension engineering.	
Best Lightweight Concept Award powered by AUDI AG	The team which shows the best lightweight concept.	
Best Dynamometer Performance Award powered by Bosch Engineering GmbH	Team with the best dynamometer performance result on the FSG dynamometer.	
Best Prepared Car for Scrutineering powered by DEKRA	The team with the best prepared car for scrutineering.	

#### 8. Additional Information

#### 8.1 Internet

#### Free Internet access - powered by Brunel

In the FSG Forum there is free WLAN internet access for all teams. The FSG forum will be closed at 20:00 every day.

#### 8.2 Pharmacies

Alte Apotheke (Hockenheim)

Untere Hauptstr. 5, 68766 Hockenheim, Tel.: 06205/18472

Central-Apotheke (Hockenheim)

Karlsruher Str. 11, 68766 Hockenheim, Tel.: 06205/7238

Engel-Apotheke (Hockenheim)

Heidelberger Str. 3, 68766 Hockenheim, Tel.: 06205/7173

Linden-Apotheke Gabriele Schotter e.K. (Hockenheim)

Schwetzinger Str. 18, 68766 Hockenheim, Tel.: 06205/15544

Löwen-Apotheke (Hockenheim)

Reilinger Str. 2, 68766 Hockenheim, Tel.: 06205/288928

Stadtapotheke Gabriele Müller e.K. (Hockenheim)

Heidelberger Str. 11, 68766 Hockenheim, Tel.: 06205/4277

Wasserturm-Apotheke (Hockenheim)

Karlsruher Str. 25, 68766 Hockenheim, Tel.: 06205/4542

#### 8.3 Supermarkets

Aldi Süd (Hockenheim)

Lußheimer Str. 10, 68766 Hockenheim

LiDL Filiale (Hockenheim)

Lußheimer Str. 6, 68766 Hockenheim

Lidl-Märkte (Hockenheim)

Duttweiler Str. 2, 68766 Hockenheim, Tel.: 06205/18274

Mini Mal-Markt (Hockenheim)

Lußheimer Str. 2, 68766 Hockenheim, Tel.: 06205/283539

miniMAL (Hockenheim)

Lußheimer Str. 2, 68766 Hockenheim

PENNY-MARKT Filiale (Hockenheim)

Hirschstr. 1, 68766 Hockenheim, Tel.: 06205/923207

PENNY-MARKT Filiale (Hockenheim)

Ernst-Brauch-Str. 64-66, 68766 Hockenheim, Tel.: 06205/923218

PENNY-MARKT Filiale (Hockenheim)

Auweg 3, 68766 Hockenheim, Tel.: 06205/923227

real,- SB Warenhaus Hockenheim (Hockenheim)

Speyerer Str. 1, 68766 Hockenheim, Tel.: 06205/2070

#### 8.4 Restaurants / Take Aways

#### Italian

Holzofen-Pizzeria Pinocchio (Hockenheim)

Schwetzinger Str. 11, 68766 Hockenheim, Tel.: 06205/14766

Pizzeria Cortina (Hockenheim)

Untere Hauptstr. 20, 68766 Hockenheim, Tel.: 06205/101747

#### Greek

Delphi (Hockenheim)

Schwetzinger Str. 1, 68766 Hockenheim, Tel.: 06205/6780

Gaststätte Symposium im Güldenen Engel (Hockenheim) Heidelberger Str. 1, 68766 Hockenheim, Tel.: 06205/104680

#### Chinese

China-Restaurant Kanton (Hockenheim)

Untere Hauptstr. 8, 68766 Hockenheim, Tel.: 06205/13361

Chinarestaurant Kanton (Hockenheim)

Untere Hauptstr. 8, 68766 Hockenheim, Tel.: 06205/13361

#### **Local Food**

Bistro Karibik (Hockenheim)

Hirschstr. 5, 68766 Hockenheim, Tel.: 06205/17709

Café Bistro Monokel (Hockenheim)

Karlsruher Str. 27, 68766 Hockenheim, Tel.: 06205/286363

#### Coffee & Ice-cream

Eis-Cafe Cortina (Hockenheim)

Untere Hauptstr. 20, 68766 Hockenheim

Eiscafe La Perla (Hockenheim)

Ottostr. 2, 68766 Hockenheim, Tel.: 06205/16441

#### **Fast-Food**

McDonalds Restaurant (Hockenheim)

Gleisstr. 8, 68766 Hockenheim, Tel.: 06205/189344

BURGER KING (Karlsruhe), distance: 50.3 km

Kaiserstr. 64, 76133 Karlsruhe

BURGER KING (Heilbronn), distance: 63.5 km

Neckarsulmer Str. 36-38, 74076 Heilbronn, Tel.: 07131/950220

#### 8.5 Motorcycle Dealers / Parts

Kawadrom GmbH (Hockenheim)

Speyerer Str. 12, 68766 Hockenheim, Tel.: 06205/15054

Walz Motorräder (Hockenheim)

Pfälzer Ring 15, 68766 Hockenheim, Tel.: 06205/7101

Zweirad Zieger (Hockenheim)

Kollmerstr. 1, 68766 Hockenheim, Tel.: 06205/9467-0

#### 8.6 Automotive Parts Suppliers

Autodrom Gekeler & Hahn Kraftfahrzeughandels- GmbH (Hockenheim)

Ernst-Brauch-Str. 68, 68766 Hockenheim, Tel.: 06205/18145

Autohaus Arno Ziegler GmbH (Hockenheim)

Dresdener Str. 22, 68766 Hockenheim, Tel.: 06205/7678

Autohaus Gehl GmbH & Co. KG (Hockenheim) Gleisstr. 2, 68766 Hockenheim, Tel.: 06205/2023-0

Pit-Stop Auto Service GmbH (Hockenheim)

Speyerer Str. 1, 68766 Hockenheim, Tel.: 06205/17550

Autohaus Ibikli Meisterbetrieb e.K. (Hockenheim)

Duttweiler Str. 14, 68766 Hockenheim, Tel.: 06205/922486

Autohaus Krauth GmbH & Co. KG (Hockenheim)

Mannheimer Str. 2, 68766 Hockenheim, Tel.: 06205/9788-0

Autohaus Ruder GmbH (Hockenheim)

Gleisstr. 8, 68766 Hockenheim, Tel.: 06205/2926-0

Ahmad El Dor (Hockenheim)

Pfälzer Ring 7, 68766 Hockenheim, Tel.: 06205/286960

Arvelus Gümüsköyü-Cambuldu (Hockenheim) Schulstr. 22, 68766 Hockenheim, Tel.: 06205/8840

ASG Kraftfahrzeuge Stefan Grafenhorst GmbH (Hockenheim)

Gleisstr. 16, 68766 Hockenheim, Tel.: 06205/4779

Auto Friesen GmbH (Hockenheim)

Mannheimer Str. 9, 68766 Hockenheim, Tel.: 06205/2929-0

Auto Gauch GmbH (Hockenheim)

Mannheimer Str. 8, 68766 Hockenheim, Tel.: 06205/2927-0

#### 8.7 Building centers

Haas-Baumarkt (Reilingen)

Hauptstr. 79, 68799 Reilingen, Tel.: 06205/283246

toom BauMarkt GmbH (Schwetzingen)

Rudolf-Diesel-Str. 3-7, 68723 Schwetzingen, Tel.: 06202/57494-0

Hornbach-Baumarkt Aktiengesellschaft (Leimen) Riedwiesenweg 9, 69181 Leimen, Tel.: 06224/52493

Der Praktiker Bau-und Heimwerkermärkte AG (Heidelberg)

Englerstr. 10, 69126 Heidelberg, Tel.: 06221/36325-0

#### 8.8 Tips for websearch in Germany

Bi-directional translation English-German: http://dict.leo.org/

Yellow Pages: www.gelbeseiten.de

Map: www.map24.de

http://maps.google.de/

## **EMERGENCY INFORMATION**

## Slight injury

#### **Medical Center:**

Please accompany the injured person to the Medical Center. Emergency aid is provided there.

The Medical Center is occupied each day round-the-clock.

## Severe injury

#### Contact someone with a two-way radio:

Every Official and Security has two-way radio. Ask them to call the Medical Center or an ambulance.

#### Call an ambulance:

Call an ambulance yourself if someone is severely injured and needs urgent help. The Emergency Number for every phone and mobile phone is 112. (See also information about emergency calls below.)

#### **During dynamics:**

On Saturday and Sunday an ambulance is on site during the dynamic events. To contact them ask someone with a two-way radio (Official, Security) to call them.

#### Hospital:

Main Hospital, Kreiskrankenhaus (Schwetzingen), Bodelschwinghstrasse 10, 68723 Schwetzingen phone: +49 (0) 6202 / 84-30 (See also directions in the Event Handbook in chapter 1.1)

#### **Emergency Numbers**

In case of an emergency beyond competition times call 112. This number works with each phone, also with mobile phone or coin-operated telephone as international GSM-standard. It is alway free of charge.

#### **Officials**

Pit Marshal Konrad Paule: +49 (177) 7513185 Pit Marshal Sebastian Seewaldt: +49 (175) 5249739 **Event Control Daniel Ahrens:** +49 (172) 5328399

(In case of an emergency please call one of them, no matter what time it is.)

## **Emergency Call Contents**

The emergency control center will ask you some questions to ensure proper help for you. To support you at your call, here are some standard questions and some hints for your answers in English and German.

**Who** is calling? (Wer ruft an?)

Say your name and your telephone number for callbacks. Digits in German: 1 (eins), 2 (zwei), 3 (drei), 4 (vier), 5 (fünf), 6 (sechs), 7 (sieben), 8 (acht), 9 (neun), 10 (zehn)

**Where** did it happen? (**Wo** ist es passiert? / Wo ist es geschehen?) the event site has the adress "Hockenheimring, Sachshaus, Am Motodrom", make it more precise!:

pit lane (Boxengasse), dynamic area (Fahrerlager); the adress for campsite C2 near the Motodrom Hotel " Hockenheimring, Zeltplatz C2 beim Motodrom Hotel" and for campsite C3 on the other site of the highway "Hockenheimring, Zeltplatz C3 an der Continental Straße"

What happened? (Was ist passiert? / Was ist geschehen?)

accident (Unfall), traffic accident (Verkehrsunfall), fire (Feuer), fall (Sturz), explosion (Explosion)

How many people are affected? (Wie viele Personen sind betroffen?)

1 (eins), 2 (zwei), 3 (drei), 4 (vier), 5 (fünf), 6 (sechs), 7 (sieben), 8 (acht), 9 (neun), 10 (zehn)

What kind of injury has happened? (Welche Verletzung liegt vor?)

fracture (Knochenbruch), bleeding (Blutung), unconsciousness (Béwusstlosigkeit), burn (Verbrennung), electric shock (Stromschlag), suffocation (Ersticken), heart attack (Herzinfarkt), shock (Schock)

Don't hang up after answering these questions! Wait if the control center has further questions!

