

PRESS RELEASE

Pfronstetten-Aichelau, 8th December 2020

Joystick Racer**With 200 km/h over the race track
A childhood dream becomes reality for Janis McDavid**

The International Day of Persons with Disabilities has been celebrated every year since 1993 on December 3rd. It aims to raise awareness of the concerns of people with disabilities. PARAVAN and Schaeffler Paravan Technologie impressively demonstrate how inclusion can also work in motor sports - an action that encourages other people to become mobile and overcome barriers. Janis McDavid's drove more than 320,000 km in the past years without any accidents. Now the native of Hamburg gets into a racing car.



The next step for Janis McDavid in mobility: from Space Drive 1 to Space Drive 2 and from the Mercedes Sprinter to the BMW M3 at the Hockenheimring race track Photo: PARAVAN

The dream of driving a car has always played a major role in Janis McDavid's life. For him, this freedom means being able to decide for himself where he wants to go and when. But there is much more behind this freedom, "that I am just like everyone else on the road. It doesn't matter that I don't have arms and legs. That's a great feeling." A good ten years ago, Janis McDavid was able to make this dream come true with a Mercedes Sprinter customized for him and has since been on the road 320,000 kilometers without an accident, just with a 4-way joystick and the Space Drive driving and steering system.

"As a child, I actually always dreamed of cool sports cars," he says. This dream has now also come true in a BMW M3. In a professional way, and in line with the official safety regulations, equipped with a fireproof racing suit and helmet, Janis McDavid takes his seat. As is customary in racing for every driver, the seat has also been specially adapted for him. He has mastered a first test at the Hockenheimring with flying colors.

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The idea of turning a childhood dream into reality was born during Janis' visit to the PARAVAN Mobility Park a good year ago. Actually, it was about his new car, which will be a minibus again, but which is supposed to be much more agile and faster than the old Sprinter. Janis McDavid asked the question, "Can't we go even faster?" "Sure we can," said PARAVAN Managing Director Roland Arnold and showed Janis his latest project, an Audi R8 LMS GT3, the world's first sports car that manages completely without a mechanical connection between the steering unit and steering gear - approved by the German Motor Sport Association (DMSB). Why not test this technology on the race track with a 4-way joystick?

"When I see that Janis is now driving on the race track, it's incredible for me," says Roland Arnold enthusiastically. For him, this innovative project is a matter close to his heart and at the same time an important sign of inclusion. "With this project, we want to encourage other people to overcome boundaries, with a technology that will play a very central role in the development of future autonomous vehicle concepts and will benefit everyone".

The challenge of vehicle adaptation

Janis McDavid enthusiastically accepted the driving challenge, in which there were two decisive innovations for him at once: to accelerate properly for the first time with a powerful car. Secondly, it is a premiere for Janis McDavid to be on the road with the 2nd generation of the driving and steering system Space Drive. The first tests made it clear: "I felt many differences, if only because the car is lower. In addition, it drives through the curve much more precisely, a decisive difference to Space Drive 1".

Three critical points had to be mastered in advance by the PARAVAN technicians: joystick and suit, the curves and speed. The challenge here: the 4-way joystick, completely integrated into the customized seat shell, must remain firmly under Janis' armpit even at higher speeds and with the corresponding centrifugal forces on the race track. "The joystick must simply fit 1,000 percent. I must never lose contact. That would really be fatal. This is what we focus on," says Janis. "First and foremost, it was important that Janis sits firmly and that safety is always guaranteed. He must feel comfortable and safe. That is the basic requirement," says Alexander Gräff, who was responsible for the technical implementation of the project and as drift world champion has petrol in his blood himself.

After the conversion was completed, the first tests followed, accompanied by driving instructor Ralf Buhmann, first on the road, then on the PARAVAN practice course doing some drift manoeuvres and finally on the airfield with the necessary speed. This enabled the mobility specialists to check whether Janis had the necessary grip in his seat. "Breaking the 200 km/h barrier for the first time was an awesome feeling. Ralf said to me: "Hey kid, don't focus on the speedometer, look at the road!"

Janis has to be in control of the car at all times on the track as well as on the road, just like everyone else. "Adjusting the parameters so that he can safely control the car at all times, even at these speeds, was our challenge," reports mobility expert Arnold.

From the road to the race track

Janis McDavid had respect before the first tests on the Hockenheimring. "I don't want to go for a drive, I want to hit the accelerator," says Janis. "I like testing limits, but I'm still careful and of course I don't want to damage anything. For this he has a prominent coach, Bernd Schneider, five-time DTM winner, who himself sat in the Space Drive Cockpit of the Mercedes-AMG GT3 this season and has also tried his hand at the joystick. "And here on the inside you canter a little bit because you simply need less distance if you include the left curb", the professional explains expertly as he guides Janis through the racing line on the track, "then on the inside you go in and after the apex you go slightly to the gas and then accelerate out".

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"He mastered this phenomenally today. Janis didn't just drive easily, he managed to drive the perfect racing line. I told him exactly from where to where to turn in, apex and he mastered it perfectly! Goose bumps in the car for me," the experienced driver said afterwards. "I still can't realize what that means in the end," says Janis, completely blown away by his first drive. "This is a childhood dream of mine that has now come true. We have taken a big step forward in terms of mobility and for Space Drive. Who would have thought that you don't even need arms and legs to drive a race car on the race track here?"

Now Janis McDavid is eagerly awaiting his first official assignment, which had to be postponed until spring due to corona conditions. Then he will hopefully - before the safety car - be able to drive the formation lap in his BMW in a really big race.

Independent mobility as the key to a self-determined life

In addition, Janis McDavid will be able to take a seat in his Mercedes V-Class, which has been individually adapted to him. After 320,000 kilometres in the Mercedes Sprinter, he is really looking forward to his new vehicle, which is almost like a second home to him. "To be a little quicker on the road than with the Sprinter, that would be great", in his interview with PARAVAN mobility consultant Joachim Glück. His expectations are high.

In addition to the technical progress that has made driving much more comfortable and safe over the last ten years, other things are extremely important to him: "I definitely want to pay attention to looks, sounds and performance," he says - especially after his first use on the race track. But most of all he is looking forward to the technical features. "PARAVAN Touch, voice control, Magic Key and the app that allows me to open the car from the outside, for example. These are my highlights that I am looking forward to".

Especially when travelling, the car is sometimes a substitute for a hotel room. No matter whether it's a spontaneous trip to Amsterdam eight years ago or a trip across Italy, all the way down to Sicily. "We had exciting experiences with Italian policemen," he reports, when he accidentally camped in the wrong car park.

Basically, the option of being able to drive was a life-changing experience for Janis. No matter whether in his free time or at work. "I sometimes hold lectures in places where there is no train at all and usually at inopportune times," reports the sought-after speaker and motivator. Janis McDavid likes to share his experiences in front of an audience and wants to encourage others to overcome limits and see setbacks as an incentive to find solutions. "Otherwise I could not do my job at all if I didn't have a car."

"How can we live our lives in such a way that we do not limit ourselves? An incredible amount is possible if we trust ourselves to do it," Janis McDavid motivates others with his attitude to life. And in his life there are many of these supposed limits. It's all about the reactions of outsiders, who all too often turn away and think that this or that is not possible anyway. "The only thing that really interests me is the solution. That is why I find it exciting to be part of this project and to show that we can push the boundaries further outwards. PARAVAN tries out a lot of things and then makes them perfect; we need this pioneering spirit much more often in our society".

Box on the person of Janis McDavid

Technology has always played a decisive role in the life of Janis McDavid (* 1991). At the age of 19 months, the native of Hamburg was already sitting in an electric wheelchair which he controlled himself. Driven by the fear of becoming an outsider, he tried prostheses as a teenager. But he found it incredibly difficult to keep his balance. Although the technology is now much more advanced, McDavid voluntarily refrains from using it: "No technology comes close to my routines". Today he leads a largely normal life. In his apartment, a lot of things work by voice control, but if he wants to take notes, he sometimes clamps the pen between his teeth. Janis McDavid studied economics and is touring the country as a successful author and speaker. His core topics: encouraging, motivating and - of course - overcoming personal boundaries.

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The next step for Janis McDavid in mobility: from Space Drive 1 to Space Drive 2 and from the Mercedes Sprinter to the BMW M3 at the Hockenheimring race track Photo: PARAVAN



Last check, Bernd Schneider checks the correct fit of the equipment Photo: PARAVAN

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A dream comes true when he drives over the Hockenheimring in a BMW M3 adapted to Janis needs Photo: PARAVAN



Talking shop among Space Drive racers, Janis McDavid on the right with a 4-way joystick, the 5-time DTM winner Bernd Schneider with Focfeedback steering wheel. How does it feel on the race track and how do I optimally approach a curve? Photo: PARAVAN

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First in convoy and via radio, the five-time DTM winner Bernd Schneider leads Janis McDavid over the racing line at the Hockenheimring and gives him valuable tips. Photo: PARAVAN

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About the Paravan GmbH:

The Paravan GmbH is world market leader for highly individual handicapped accessible vehicle solutions. Approximately 180 employees develop and produce individually adapted automobile conversions, power wheelchairs. Paravan pursues a holistic approach with the "everything-from-one-hand concept". The technological highlight is Space Drive, an intelligent digital control system based on the drive-by-wire principle. Thanks to the active redundancy of the servo motors, it is completely fail-safe and is the first in the world with road approval. With the help of this innovation, severely handicapped people, some of whom have no arms or legs, can drive independently and safely. These drivers cannot simply reach into the steering wheel. Over the past 18 years, Space Drive has proven itself on over one billion kilometers of road worldwide and is used by numerous industrial customers for test vehicles in the field of autonomous driving. The system is available as a retrofit kit with open interface for all known vehicle types. www.paravan.de

About Schaeffler Paravan Technologie GmbH & Co.KG

The Schaeffler Paravan Technologie GmbH & Co. KG is a company specializing in the development of fail-safe drive-by-wire systems - "Space Drive" - and chassis system solutions. It is based in Herzogenaurach with a production facility in Pfrontstetten-Aichelau. Schaeffler Paravan Technologie is a joint venture (90 percent Schaeffler and ten percent Roland Arnold) and was founded in October 2018. The space drive system developed by Paravan founder, Roland Arnold, has been completely transferred to the joint venture and will be industrialized there. Schaeffler Paravan is also developing a "rolling chassis" with intelligent corner modules for vehicles that will drive autonomously in the future - with integrated Schaeffler wheel hub motors, brakes, Space Drive steering (90 degrees) and suspension in one system. www.schaeffler-paravan.de