

Training in the sanctuary

As digital aids, driving simulators can support the work of driving instructors and facilitate the first steps in learning to drive. What new products are there from the manufacturers? An overview.

TEXT: THOMAS CYGANEK



© Verlag Heinrich Vogel

The simulator from the Heinrich Vogel publishing house is available with automatic module

More relaxed on the road with the simulator: driving instructors can use this to teach the students to the basics

of driving. This is how the manufacturers present the purpose of the digital driving school aid. The simulator introduces the learner driver to all the important operating elements of a vehicle and eventually makes him or her gradually familiar with the most important hand movements. They go through their first driving tasks: With the driving simulator, the students also practise dangerous real-life situations that are difficult to bring about in "real" driving lessons. They train in a "safe space", without danger to life and limb,

Life or vehicles. Examples: At the simulator, the student performs overtaking manoeuvres or turns at motorway junctions until the individual steps are correct. With many simulators, these situations can only be controlled by an office worker - who can also be refinanced by the income from simulator hours.

EXERCISE ON CAR PEDALS

What are the special features of the products of the individual manufacturers? In the case of the Heinrich Vogel simulator, for example, the learner driver learns on a special car pedal, according to the manufacturer: Driving

In this way, students can build up realistic braking pressure and thus brake sensitively, just like in a car. The clutch's slip point can be easily adapted to the real training vehicle by the software. The pupil becomes realistically familiar with the gearstick and steering (with power feedback) typical of a car. During the development, attention was also paid to true-to-the-original operation and optimal connecting points for further training.

INCREASING LEVEL OF DIFFICULTY IN THREE SUBJECT AREAS

The bird simulator guides the student through the first driving exercises with increasing difficulty. There are three subject areas: Basic Skills, Turning and Right of Way. Each of these three subject areas is divided into two units of 45 minutes each. The basic skills in particular (subject area 1) are often tedious and wear-intensive and can be practised on the simulator.

train well. The software guides, corrects and recognises when the start-up goes well. Several stop-and-go exercises follow. The learner driver practices shifting up and down as well as braking without using the clutch until the handles are right.

From the training area, we move onto the road (topic 2 "Turning"). There, in unit 1, the aim is to form the first automatisms. If the pupil omits a step, it is pointed out to him. The speaking instructions are gradually reduced. In the second unit, the level of difficulty increases. The pupil practises all scenarios related to turning and further consolidates the hand movements and sequences.

// DIFFICULT SITUATIONS CAN BE PRACTISED SAFELY UNTIL EVERYTHING IS RIGHT //

In unit 1 of topic 3, the learner driver is confronted with typical right-of-way situations. The correct behaviour at roundabouts is also practised in detail. In unit 2, the level of difficulty increases further and the student practices complex right-of-way situations. The advantage: Many of these "special cases" cannot be practised in the car with every pupil.

AUTOMATIC EXTENSION MODULE

The extension modules can be used to train what is often not always possible safely in a real driving situation, for example overtaking on country roads or driving onto the motorway. In the "Automatic" module, clutch and gear shifting are omitted on the simulator. These exercises have been tailored and revised to meet the requirements of automatic transmission. The advantage: If the concentration is not on "finding the slip point", "shifting gears" and the like, there is more time for anticipatory driving and applying knowledge of the rules.

In this way, exactly those contents are taught that are important for the automatic learner. The "basic skills" are shortened accordingly, so that the units together take about 45 minutes (instead of 90 minutes). The instructions and error texts are also adapted to the automatic requirements. The simulator remains as it is and can continue to be used in switching operation without having to be rebuilt. The module is also ideal for refresher lessons or for driving tests with physically impaired persons. Further information: www.fahrenlernen.de

TENSTAR: SPECIALISTS FOR CONSTRUCTION, AGRICULTURE AND FORESTRY

The Swedish simulator manufacturer Tenstar Simulation AB specialises in the development of simulators in the areas of

The training is specialised in construction, agriculture and forestry, traffic and transport, and rescue services. 23 vehicles or machines can be trained at Tenstar on just one hardware. More are already being developed. "This means that almost everything can be trained with the acquisition of just one driving stand," Tenstar's press release states. "From forklift trucks to ambulances or from tracked excavators to public buses. The simulator can be converted in just a few seconds with a few simple steps. Thus, every student has a realistic learning environment, precisely adapted to his or her needs."

With the size of a Euro pallet and according to the company, the Tenstar simulator is very mobile and can be quickly moved to other training rooms or easily transported to customers, presentations or trade fairs. It is designed in such a way that it can be assembled and disassembled by only one person. Due to its small size, it fits in smaller vans as well as in almost all elevators.

This makes mobile use very convenient, Tenstar emphasises.

SELF-SUFFICIENT SYSTEM

No matter which machine or vehicle is being trained for, it continues, "the simulator works completely autonomously". There is no need for an instructor to be present. The student logs in via a touch screen and then continues where he left off the last time. All exercises are explained in text and language by the "virtual trainer". "The exercises are structured from an explanation of the vehicle to complex driving manoeuvres. A rating system reflects the success of the completed training. All driving exercises are recorded so that both students and teachers can watch them again."

TRAIN WITH SEVERAL SIMULATORS AT THE SAME TIME

According to Tenstar, "unique in this segment" is the possibility to train with several simulators at the same time in the same environment. For example, two students are driving on a country



Manufacturer Tenstar allows training with several simulators simultaneously in one environment

practise overtaking together. Or they work together on a construction site with four simulators: one student operates the excavator, one a dumper, a third the bulldozer and the trainer can watch this scenario as an avatar with VR glasses and give instructions. In the field of agriculture, it can be trained that one student drives the combine harvester and another has to drive alongside with the tractor and pick up the crop on the trailer.

"Specially developed VR applications The VR goggles immerse students in the virtual world," Tenstar writes. "With the VR goggles, daily downhill controls can be conducted without having to get to the vehicle. When driving with the VR goggles, one has a complete all-round view, which creates an almost real environment when parking with a car or training with a forklift. Website: www.tenstarsimulation.com

SIFAT: OVER 20 VEHICLES

With the simulators of SiFaT Road Safety GmbH, more than 20 vehicles can be trained on one simulator, for example cars, trucks, buses, ambulances, fire brigade trucks, forklifts, loading cranes, tractors and many more. The SiFaT software records

// TENSTAR: ONE STUDENT DRIVES A COMBINE HARVESTER, ANOTHER DRIVES A TRACTOR ALONGSIDE //

1/2023 Fahrtschule 20



© SiFaT und SifaT 2

According to the manufacturer, SiFaT simulators offer "a didactically optimally prepared learning and control system".

According to the manufacturer, the system is characterised by "optimal user guidance". Numerous exercises that build on each other guide the students from the first explanation of the vehicle to mastering the most difficult scenarios. "The students are thus optimally prepared for the practical training," says SiFaT. In addition to original components from trucks and cars, SiFaT also offers a

Simulator software with a "didactically optimally prepared learning and control system", as they say. The system offers many short, coordinated learning units as well as practice units for several hours, plus unlimited driving in the city and in the country. Hours of practice are evaluated and analysed. With the replay function, exercises can be viewed and saved as a video. Due to the user-friendly operation, no additional personnel is required. This system also runs completely autonomously, and many languages are possible. VR goggles are optional, as is the DBOX movement system. There is no need for any additional commitment to learning material or apps. Further information is available at: www.sifat-roadsafety.de

DEGENER: 360 DEGREE SIMDRIVE III

According to the manufacturer Degener, the Simdrive III is exclusive to a completely new



© Degener

The 360 degree Simdrive III can also be driven in an e-car

city design, flexibly adjustable screens, improved all-round visibility thanks to a fixed reversing screen and easy switching between automatic and manual mode. The Simdrive III is also available with the e-car function. Further information on the product is available at the manufacturer's link: www.degener.de //

Sie suchen einen Fahrlehrer?

Wir haben den LKW-Simulator für Sie! *



* ab 32.000 € zzgl. MwSt.

SiFaT
Road Safety GmbH



Profitabel

Schüler trainieren am Simulator, ohne das ein Fahrlehrer dabei sein muss



Effizient

Deutlich kürzere Wartezeiten auf Fahrstunden durch den Simulatoreinsatz



Maximaler Lerneffekt

Schüler üben gezielt Gefahrensituationen und Grundfahraufgaben



Kostensparend

kein Verschleiß, weniger Abnutzung und Beschädigungen an den Fahrzeugen, hoher Deckungsbeitrag

SiFaT RoadSafety GmbH
Brunsbütteler Damm 448
13591 Berlin

