

The H145 helicopter full-flight simulator to be used to train emergency medical air rescue pilots and crews in civil urban traffic environments and in offshore scenarios at the ADAC HEMS Academy in Bonn, Germany, has just been qualified to meet the EASA requirements for a Level D training device – the highest possible certification for synthetic flight training devices.

Congratulations are extended to Reiser Simulation and Training GmbH (“RST”) by project: syntropy GmbH for the successful certification.

The system provides a fully immersive virtual training environment based on a 240 x 80 degree field of view display using 15 dual-channel (daytime + stimulated NVG) high resolution Barco FS35 IR projectors. As in real operations the crew can train realistically with night vision goggles (NVG) alternating with having them on or off.

Following extensive evaluation of European Visual Display System providers, Reiser Simulation and Training GmbH has selected project: syntropy to design and commission the visual display system. It was not only the expertise in visual system design, its track record in high- end simulation visuals and advanced in- house design tools that convinced Reiser. Since NVG training is a core feature of the simulator, demanded by the customer, project: syntropy’s extensive research and development effort in managing blending and black level of a 15 channel visual system in RGB but also in the IR channel convinced Reiser of project: syntropy being the right partner for the project.

project: syntropy teamed up with domeprojection.com GmbH for its camera-based auto-calibration which delivers unprecedented accuracy in terms of geometry, blending and linearity to meet the demanding Level D criteria’s for the visual system.

In close collaboration with Reiser’s visual team - Quantum3D and domeprojection.com - project: syntropy managed to deliver a system for NVG and night scene training without optical blend masks. It allows training scenarios in which the pilot is flying into the night without any need for a manual change to a night scenario. Realtime control of the projectors’ LED profiles was one of the requirements to achieve this feature.

Barco projectors were chosen after meticulous shoot-outs of six different brands. The unique combination of size, performance and exceptional realistic reproduction of imagery whilst using NVG were key contributing factors to selecting Barco’s FS35 IR LED projectors for this task. “We are very pleased that Reiser has again chosen Barco’s LED projectors to secure the performance of ADAC HEMS Academy’s helicopter simulators. Barco’s dedicated effort towards designing and building the most reliable and robust projectors for this market are realized in projects like this one. Our mission focuses on strong support of our partners, and we will continue to work hard alongside Reiser and project: syntropy to ensure we always deliver on tomorrow’s training tasks”, says Dave Fluegeman, VP Simulation at Barco.

project: syntropy and Barco are happy to have worked side by side with the technical team of Reiser in delivering this cutting edge of systems to the market.