

Advanced simulation is key to improve modern fast-jet pilot training. The continuous push towards greater realism and training effectiveness drives the need for visual display systems with high image quality, a full seamless 360-degree field of view and eye limited resolution.

TREALITY RP-Series

When Simulation matches Reality



The highest levels of realism

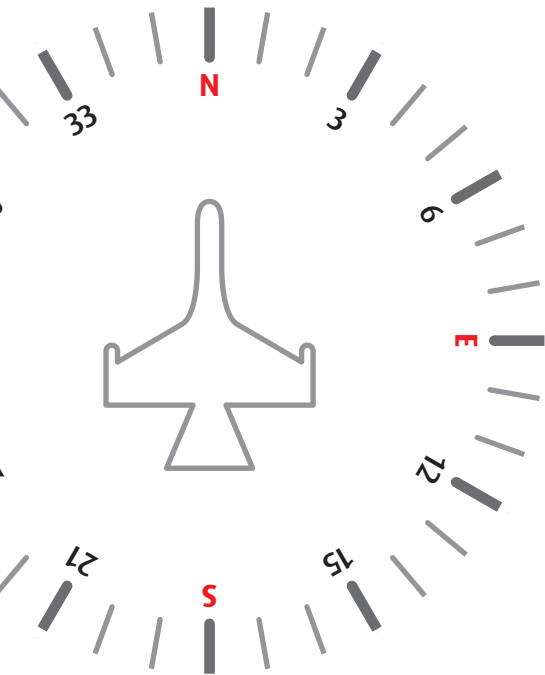
The TREALITY RP-Series visual displays are the answer to the ever-growing need to reduce training costs by bringing more training tasks to simulated training systems. When a pilot is trained on a simulator, it is important that the procedures used in the "real world" can also be applied in this training environment. The visual ergonomics of the TREALITY RP-Series systems make pilots feel comfortable and the realistic images enable them to train as if he/she were flying in reality.

The TREALITY RP-Series is developed for immersive flight training applications for in full Mission flight simulators and can be used for Air-to-Air or Air-to-Ground training, Close Air Support and Aerial Refueling. The TREALITY RP-Series superior system contrast and deep black levels provide unrivaled realism for day and night images and stimulate NVGs realistically. The TREALITY RP-Series systems consists of an advanced seamless dome, available in both spherical and aspherical screen shapes, a multi-channel projection system, sophisticated alignment and control tools, and dedicated peripheral devices.

A proven solution

With the first TREALITY RP-Series dome visual display installed in 2011, the solutions are tried and tested.

The TREALITY RP-Series dome systems are complete turnkey TREALITY SVS solutions which makes it a risk-free choice, designed to support various projector types and configurations. It perfectly matches any application or visual training requirement.



Most Advanced and reliable Rear Projected Visual Display

The TREALITY RP-Series offers the most realistic image quality on the market. The system achieves up to 20/20 visual acuity, extended MTBF, a maximum field of view, realistic air and ground target detection, orientation, recognition and identification, improved display contrast and advanced scenarios for both day, night and NVG training.

A TREALITY RP-Series dome screen is self-standing and monolithic which makes the system much more stable than systems with multiple pieces or segments.

Each component has been designed with system integration in mind. Its projector management software, mechanical structure, unique seamless screen and automated alignment tool guarantee consistent performance over time.

TREALITY SVS dome simulators feature the latest in projection technology. We offer a wide range of solid state illuminated projectors which answers to the simulation market's specific requirements, including longer lifetime, cutting edge image quality and dedicated simulation features.

TREALITY SVS experienced team of engineers and technicians have designed the systems for professional installation and project execution. With systems deployed worldwide, the TREALITY's RP-Series dome solutions are trusted and proven.

Unique Optical Design

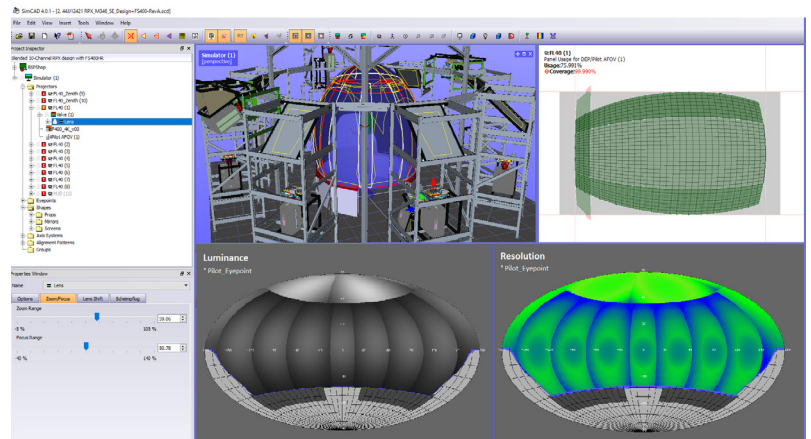
The TREALITY RP-Series dome system is a complete turnkey Visual Display Solution answering to all of the requirements for next-generation high-fidelity simulators for fast-jet, advanced trainer and attack helicopter aircrafts.

With TREALITY SVS' propriatiarey SimCad visual display design tool and the newest projector technology, TREALITY RP-Series solutions are able to meet the highest standards for simulation training with lowest channel count in the industry. TREALITY SVS has engineered this system to accommodate a variety of projector types and configurations. It perfectly matches any application or visual training requirement.

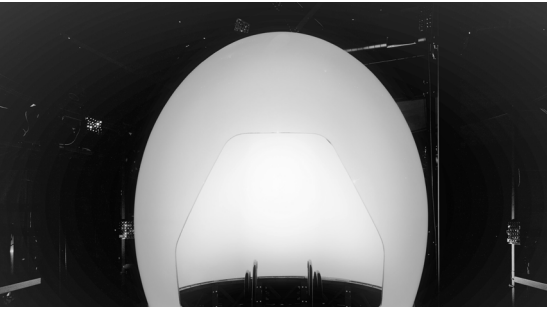
The TREALITY RP-Series also enables end-users to save on operational costs by using the latest solid-state projector.

Networked training

Several TREALITY RP-Series dome systems can be linked together for networked flight training to increase training effectiveness. The compact footprint allows them to be situated in close proximity to one another in the same training facility. This simplifies networking of domes, so pilots can train as a group in mission-based exercises.

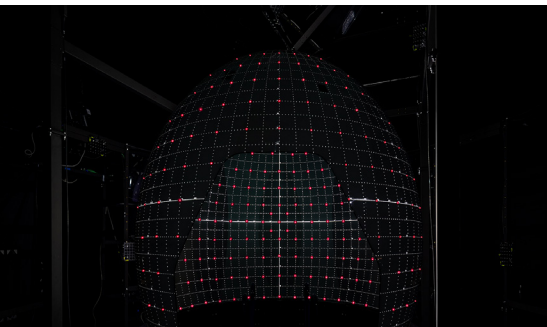


TREALITY SimCad Design Tool

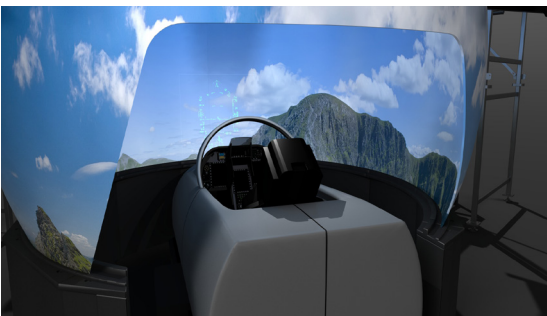


Uniform Brightness

Wide range of native 4K and 4K UHD projectors



Highest Geometry Accuracy



Custom Screen Cockpit Cut-Out

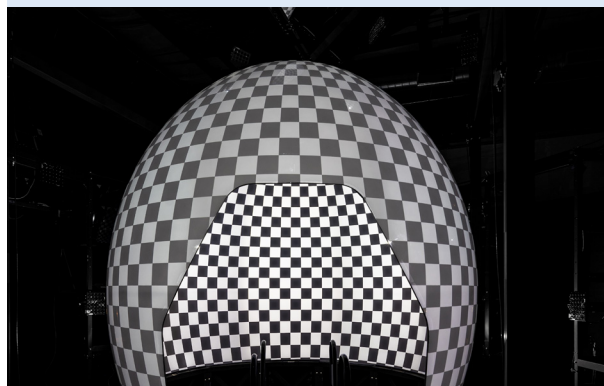


Unique screen tech

The TREALITY RP-Series deliver next-gen simulation visuals with a compact footprint and cutting-edge performance. Featuring spherical (RP-360c) and patented aspherical (RP-X) rear-projection domes, they optimize pixel output for every projector. The RP-360c ensures constant eye relief, while the RP-X minimizes variance for seamless horizontal head sweeps.

Through its advanced seamless, monolithic 360-degree rear-projected screen, TREALITY SVS offers pilots a unique immersive training experience at a level not realized with other technology.

TREALITY SVS also developed a special screen coating to achieve the highest system contrast on the market which enables the pilot to pick-up the slightest details.



TREALITY RP-Series High-Contrast screen

Multi-channel system tools

TREALITY SVS offers the widest range of visual display solutions and system tools to simplify the operation and maintenance of the simulator display.

Simulation-specific projector optimizations can be managed quickly and easily with TREALITY SVS user-friendly TREALITY XDS RACU controller. DynaColor and linked Constant Light Output (CLO) match color and brightness differences between projectors to give the image the same composed image quality, and guarantee a realistic training experience in dusk and night scenarios. They offer unparalleled visual performance for fast moving imagery.

The TREALITY Automated Alignment Suite is a powerful tool that minimizes the inputs required by a technician and shortens service interventions resulting in longer uptime of the simulator. The geometry, color and brightness re-alignment achieved by the TREALITY alignment suite delivers the highest accuracy in the industry, ensuring accurate image quality over time.

The TREALITY RP-Series employs the advanced TREALITY NOCTIS Edge blending technology for seamless blends between projection channels. TREALITY NOCTIS blend plates use true greyscale light-attenuation technology that optimizes your training for the best day, night and NVG scenes.

Dedicated customer involvement

From system design, over pre- and full installation support, to full-service project management, TREALITY SVS is ready to serve your entire system implementation needs. We also offer a complete portfolio of industry-leading maintenance contracts and spare parts programs. Our global network for system support provides professional, accurate, and timely responses.



Experiencing the fidelity of TREALITY RP-Series domes!

An ever-growing group of Air Force pilots is experiencing the fidelity of TREALITY SVS seamless rear-projected domes!

The TREALITY RP-Series established a track record in delivering outstanding training and simulation capabilities and are currently used on F16, F15, F-2, KF-21 and M346 simulators. The TREALITY RP-Series has become the standard for rear-projection displays given its low channel count, small footprint and exceptional visual performance. TREALITY SVS is the only producer of spherical and aspherical contiguous domes, allowing customers options to satisfy training objectives and physical footprint requirements for their training programs.

The TREALITY RP-Series dome is certified by the USAF for F-16 and future F-35 pilot training. The compatibility and high performance of the TREALITY RP-Series enables the support of the most advanced 4th and 5th generation fighter jet training requirements. These systems have been used for the last 12 years and are very reliable. The TREALITY SVS RP-Series domes delivers outstanding simulation to improve operational readiness while reducing costs.

In addition to fielding the latest projector and display management technologies with our displays, TREALITY SVS is committed to the long-term support and sustainment of those systems, just as we have been for the past 25 years.

APPROVED FOR PUBLIC RELEASE;

TREALITY SVS is an ISO 9001:2015 registered company.
The information and data given are typical for the equipment described.
However any individual item is subject to change without any notice.
The latest version of this brochure can be found on www.trealitysvs.com.

SVS-RP-Series-25-00

www.trealitysvs.com

TREALITY SVS LLC
Simulation Visual Systems
600 Bellbrook Avenue
Xenia, Ohio 45385-4053
USA: +1 937 372 7579

TREALITY SVS BELGIUM
Pieter Verhaeghestraat 44
B-8520 Belgium
Europe: +32 19 60 04 03

