

Advanced simulation is key to improving 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-X

When Simulation matches Reality



The highest levels of realism

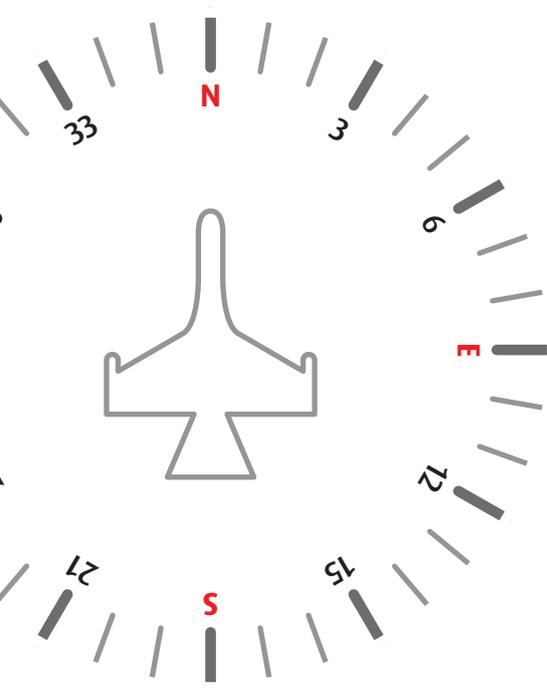
The TREALITY RP-X visual display is the answer to the ever-growing need to reduce training costs by bringing more training tasks to simulated training systems. When a pilot is trained on a simulator, it is important that the procedures used in the “real world” can also be applied in this training environment.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

The TREALITY RP-X 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-X superior system contrast and deep black levels provide unrivaled realism for day night and dusk images and can stimulate NVGs realistically. It consists of an advanced ergonomic seamless dome, a multi-channel projection system, sophisticated alignment and control tools, and dedicated peripheral devices.

A proven solution

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

The RP-Dome systems are complete turn key TREALITY solutions which makes it a risk-free choice. TREALITY has engineered this system to accommodate a variety of projector types and configurations. It perfectly matches any application or visual training requirement.



Networked training

Several TREALITY RP-X 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 area. This simplifies networking of domes, so pilots can train as a group in mission-based exercises.

Most Advanced and reliable Rear Projected Visual Display

The TREALITY RP-X offers the most realistic image quality on the market today. The system achieves superior performance, extended MTBF, an optimized field of view, realistic air and ground target detection, recognition and identification, improved display contrast and advanced scenarios for both day, night and NVG training.

TREALITY RP-X 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's 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.

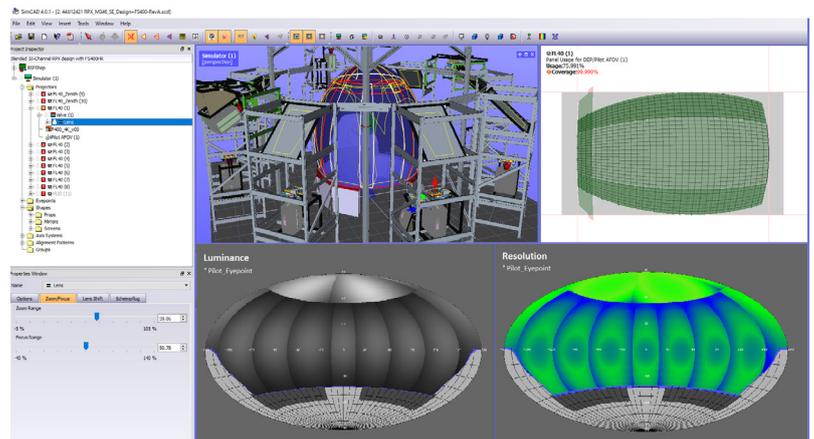
TREALITY's experienced team of engineers and technicians have designed the systems for professional installation and project execution. With systems deployed worldwide, TREALITY's RP-dome solutions are trusted and proven.

Unique Optical Design

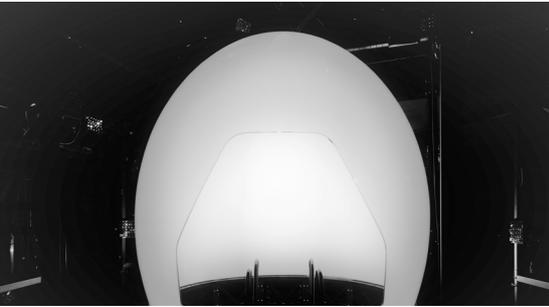
The TREALITY RP-X system is a complete turnkey Visual Display Solution answering to all of the requirements for next-generation high-fidelity simulators for fixed-wing aircrafts.

With TREALITY's propriatary SimCad visual display design tool and the newest projector technology, TREALITY RP-X is able to meet the highest standards for jet fighter training with lowest channel count in the industry. TREALITY has engineered this system to accommodate a variety of projector types and configurations. It perfectly matches any application or visual training requirement.

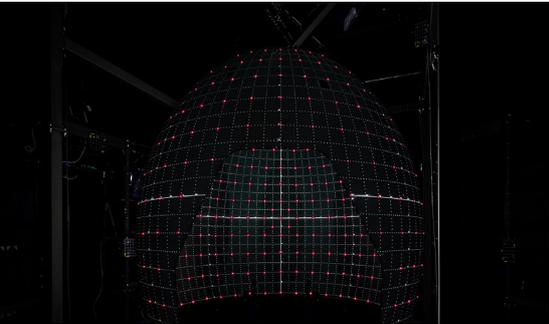
The TREALITY RP-X also enables end-users to save on operational costs by using the latest solid-state projector.



TREALITY SimCad Design Tool



Uniform Brightness



Highest Geometry Accuracy



Custom Screen

Wide range of native 4K and 4K UHD projectors

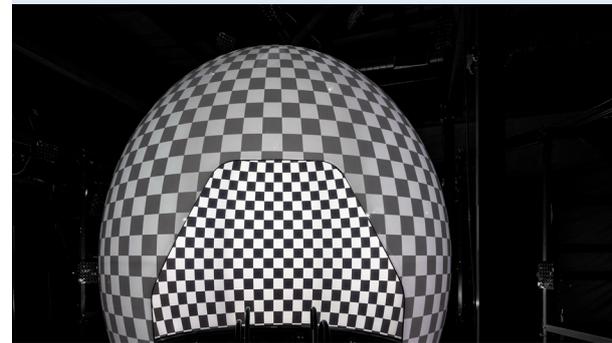


Unique screen tech

TREALITY's RP-X is the next generation of fast-jet trainer visual display systems, combining a compact footprint with cutting edge image performance. The RP-X utilizes a patented aspherical dome that optimizes pixel output from every projector. The TREALITY RP-X screen minimizes eye-relief variance and provides a constant radius for horizontal head sweeps. Pilots experience unparalleled full-immersive training at a level not realized with other technology.

Through its advanced seamless, monolithic 360-degree rear-projected screen TREALITY offers a unique full immersive training experience.

TREALITY developed a special coating to achieve very high system contrast which enables the pilot to pick-up the slightest details.



TREALITY RP-X High-Contrast screen

Multi-channel system tools

TREALITY 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's user-friendly **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.

TREALITY's **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. TREALITY's geometry, color and brightness re-alignment achieve the highest accuracy in the industry, ensuring accurate image quality over time.

The TREALITY RP-X employs TREALITY's advanced **NOCTIS Edge blending** technology for seamless blends between projection channels. TREALITY's NOCTIS uses true greyscale light-attenuation technology that optimizes your training for the best day, night and NVG scenes.

Dedicated customer involvement

From system design, to pre- and full installation support, to full-service project management, TREALITY 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's RP-X domes!

An ever-growing group of pilots is experiencing the fidelity of TREALITY's seamless rear-projected domes!

The TREALITY RP-X is part of the family of RP-Dome series which established a track record in delivering outstanding training and simulation capabilities and are currently used on F16, F15 and M346 simulators. The TREALITY RP-X is fast becoming the standard for rear-projection displays given its low channel count, small footprint and exceptional visual performance. TREALITY 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 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. In a time of ever-shrinking defense budgets the TREALITY RP-Dome 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 is committed to the long-term support and sustainment of those systems, just as we have been for the past 20 years.

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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.

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