



# MAESTRALE

ADVANCED FLIGHT SIMULATORS



NextMR-22

# NextMR-22

Experience flight training as never before with the most Immersive, Realistic and Cost effective Robinson R22 simulator.

**M**aestrale's NextMR-22 is its most versatile and cost effective solution; it can serve as a demonstrator or as a qualified simulator. Its compact design is ideal for reduced environments, yet its level of realism and immersion, thanks to the mixed reality integration, is outstanding and breathtaking. The mixed reality experience enables you to see and interact with the actual cockpit of the Robinson R22, complete with all its physical instruments. Moreover, you can turn your head and gaze through the window into the virtual world.

**Why the R22?** The R22 is a best seller, emblematic and well known basic helicopter where many pilots have achieved their wings. This iconic helicopter served as a base for Maestrale to introduce and experiment with the latest technologies, like the mixed reality or custom 2 DOF motion platform. The

R22 just serves as an example and proof of concept, as the same technology, from the motion to the mixed reality, can be easily integrated into other aircrafts.

## Mixed Reality & Eye tracking

Integrating Mixed Reality (MR) technology into a high-end helicopter simulator combines virtual and real-world elements, offering unparalleled immersion and dynamism. Trainees can authentically and effectively hone their skills in this environment.

Some of the advantages that mixed reality offers over traditional simulators include:

- No Parallax Error:** Each pilot and copilot have their own headset, eliminating parallax error associated with relative positioning, as seen in classic dums and displays.

- 360-Degree Field of View:** Immerse yourself in a fully interactive virtual environment while maintaining access to a real, touchable, and responsive cockpit.

- Eye Tracking System:** Monitor and accurately control the pilot's gaze, facilitating corrective actions and streamlining training processes.

- Enhanced Immersiveness & Realism:** Our mixed reality (MR) simulator offers a fully immersive and realistic experience, allowing you to interact with your hands, instruments, and partner.





## Key Features

- R22 Full-size cockpit enclosure.
- R22 Replica cockpit and commands.
- Interactive Pilot & copilot training.
- Accurate R22 flight model based on measured data from the real aircraft used in replicating aerodynamics modelling (ground effect, airframe and rotor icing effects, etc.).
- Airport modelling—You choose where you want to fly.
- Upgradeable to FNPT III, FTD 2, or FTD 3.
- Pair of state-of-the-art Mixed Reality headsets for pilot & copilot.
- High-fidelity sound system for realistic helicopter and instrument sounds.
- Automated & easy to use QTG Maestrale Software.
- Instructor Operation Station (IOS) and software that allows monitor and control of system variables and insert abnormal and emergency conditions into the helicopter.
- Manuals and documentation.
- 2 Degrees of Freedom Compact Motion platform (Upgradeable to 4 DOF).
- Vibration system.
- Anti torque custom pedals.
- Worldwide visual scenery with easy updatable local navigation data.





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