

# Virtuix

## Omni Mission Trainer (OMT)

### Revolutionizing Dismounted Soldier Training

OMT is a mixed-reality simulation system that revolutionizes training for infantry and special forces, including CQB, SMC, active shooter responses, or mission rehearsal. Thanks to its patented omni-directional treadmills, OMT lets soldiers move in the virtual environment like they do in real life, with their feet.



### Key Features

#### 360 Degree Freedom of Movement

Walk, run, crouch, and turn with no physical boundaries.

#### Up to 12 Soldiers

Train in coordinated scenarios for team-based tactical readiness.

#### Real Weapons & Equipment

Utilize actual weapons and gear, seamlessly integrated through mixed-reality passthrough technology.

#### After-Action Review (AAR)

Capture and analyze training performance with replay tools.

Watch the OMT  
demo video



<https://youtu.be/WPii117Qk8>



U.S. AIR FORCE

"The OMT system is set to revolutionize the military training landscape. We look forward to collaborating on the development of this groundbreaking system."

*Adrian Sinclair, COO at US Air Force YokoWERX*

### Train Like You Fight In a Fully Immersive Environment

Each OMT station surrounds the soldier with a 360-degree blue screen, creating an immersive simulation in which they can move freely.

**Real Objects in Virtual Worlds** – Soldiers see and interact with their authentic weapons and equipment, maintaining tactile realism.

**Authentic Firearm Simulation** – Weapons feature electromechanical recoil, high-precision tracking, and full sensory feedback.



# FAQ

## **How does Virtuix's system enhance military training compared to traditional methods?**

Traditional methods are either static (no movement) or require transporting soldiers to a physical and live training environment, costing time and money. Thanks to the Omni treadmill technology, OMT enables soldiers to walk and run around in 360 degrees inside virtual training environments, without physical boundaries or the risk of running into walls or other people. OMT lets soldiers move around in the virtual training environment like they do in real life, with their feet. Thanks to OMT's blue-screen technology, soldiers can see and use their assigned weapons or other equipment, providing for realistic training for up to 12 soldiers at a time.

## **What kind of physical movement does the Omni treadmill allow?**

The Omni treadmill allows you to walk, run, back up, crouch, kneel, and jump, all in 360 degrees.

## **What equipment can be used in conjunction with OMT?**

OMT is currently functional with a surrogate M4 rifle that looks and feels the same as an actual M4, using electric recoil. Development is underway for M17/18 surrogates and drop-in kits for actual M4 guns. Additional equipment can be integrated upon request.

## **Can military members use their assigned weapons for more realistic training?**

Yes, our partner Haptech is currently developing drop-in kits that can be used to modify a soldier's own assigned weapon. The drop-in kits provide sensors for tracking as well as electric recoil.

## **Can any scenario or environment be simulated, including in digital twin environments?**

Yes, we can simulate any scenario or environment, including digital twins. However, the complexity of the scenario will determine the development time required to create the simulation.

## **What specific military applications is OMT best suited for?**

OMT is best suited for any dismounted soldier training that requires the soldier to move around inside the training environment, e.g., CQB, SMC, active shooter responses, shoot house drills, or mission rehearsal for infantry and special forces. While OMT does not replace live training, it allows for additional training at a much lower cost as well as the opportunity to train in a large variety of scenarios and environments.

## **Does the system support multi-user training and networked simulations for team-based exercises?**

Yes, OMT supports up to 12 soldiers to train and maneuver together in the virtual training environment.

## **How difficult is it to set up and maintain the system in a DoD environment?**

The Omni treadmill is highly compact and mobile. It can be assembled and disassembled in just a few minutes without the use of any tools. Thanks to wheels, the treadmill can be easily moved around by a single person.

## **Can the platform integrate with existing DoD simulation and training systems (e.g., VBS, Unreal Engine, Unity)?**

Yes, the Omni treadmill integrates with Unity and Unreal Engine. VBS is not supported at this time.

## **What are the hardware and software requirements for running the system?**

The OMT system is a complete training system that includes all hardware and software. The end customer does not need to provide any additional equipment.

## **Does Virtuix offer training and support for military personnel to operate and maintain the system?**

Yes, Virtuix will train military personnel on how to use and maintain OMT. The Virtuix support team is also on standby, and U.S. based, to help right away when needed.

## **Is Virtuix's system compliant with DoD cybersecurity and data protection standards?**

Yes. OMT's headset, the Varjo XR-4 Secure edition, is fully TAA compliant. OMT has no online connectivity requirements (OMT operates without internet connection), suited to high-security situations and closed-loop network environments.

## **Who are your current government and DoD customers?**

YokoWERX, an innovation cell of the U.S. Air Force, has already bought two single-user OMT stations and is collaborating with Virtuix on the development of the complete, 12-user OMT system.