

CM Labs Releases Groundbreaking Excavator Simulator Training Pack

29 August 2018 by CM Labs Simulations

Training pack features innovative earthmoving graphics developed by CM Labs' award-winning simulation team

CM Labs Simulations today announced the release of an Excavator Simulator Training Pack that features the world's first commercial application of an innovative new method of soil simulation.

CM Labs' new Excavator Simulator Training Pack leverages simulation and visualisation research that received the top presentation award at I3D, the international conference for real-time 3D computer graphics and human interaction.

This realism immerse trainees in a virtual environment that promotes rapid skills acquisition – from excavating and trenching, to trailer loading, safety corridor management, and more. By training operators in this virtual world, organisations will see reduced wear and tear on their equipment, while simultaneously reducing risks to trainees and other personnel.

Designed for deployment on any Vortex simulator, CM Labs' Excavator Simulator Training Pack has been approved by professional excavator operators as a learning platform that behaves and reacts just like the real equipment.

"Operator safety training is all about developing respect for the machine," says Drew Carruthers, CM Labs' Construction Line Manager. "Our Training Pack exposes operators to the real sights, sounds, and feel of a 21 ton excavator. It'll push you around. You'll feel it dig and rattle like you're out in the yard."

The Excavator Simulator Training Pack focuses on the three training pillars of safety, technique, and efficiency. While it automatically detects safety violations – including contacts with power lines or people, hazardous load trajectories, and turnovers – it also captures objective scores to indicate technical proficiency, including completion time, movement efficiency and accuracy, bucket efficiency, and more.

The training pack's high-quality visuals include realistic worksite and machine graphics, as well as award-winning soil graphics that are the result of decades of academic research. This realism engages trainees in a learning experience that translates directly into worksite skills, explains Lisa Barbieri, CM Labs' VP Marketing.

“To learn real operating skills, you need real-life conditions,” she says. “That’s why CM Labs continually invests in R&D that’s geared toward advancing the construction industry’s leading training visuals — this is of course just one ingredient of a world-class training solution, but if it doesn’t look right, the training won’t feel right either.”

The training packs’ advanced learning tools include a Grade Quality Sensor (GQS) overlay, which provides visual indications to operators as a reminder to maintain a safety corridor on both sides of the trench. The GQS can be activated at any time during the exercise. In addition to real-time feedback on excavation height, slope, and consistency, the GQS will also provide an overall excavation performance score to operators.

The new training pack also introduces a “sandbox” exercise that allows operators to refine their skills by excavating near a water pipe or manhole, lifting tires, or manipulating a trench box or gravel box.

In addition, operators and instructors can change the time of day at any moment during the exercise in order to practice for nighttime operations. They can also introduce inclement climate conditions, which can be difficult or impossible to recreate in a training yard.

The Excavator Simulator Training Pack is part of CM Labs’ extensive product line of earthmoving and lifting crane training packs, all of which can be run from a single Vortex simulator. Solutions range from training packs for crawler crane, flat-top tower crane, luffing tower crane, and mobile crane, to backhoe, wheel loader, motor grader, and more.

Source: CM Labs Simulations Inc.