

Helicopter Simulator

SCE has developed a line of customizable, high fidelity rotary-wing (helicopter) simulators.

The first unit - a Bell 206B replica-has been installed at the FAA CAMI Facility at Oklahoma City. The FAA is using it for training and human factors research.

These simulators are typically build-to-suit but typically include a realistic shell, an instructor's station, configurable displays with high resolution graphical maps, including operational Garmin screens, NAV aids, etc. System has ability to control multiple pseudo vehicles, persons, aircraft, and ground vehicles; in programmed or real time scenarios. The OTW display is typically provided or specified by the customer.

Other Features

- Real time video recording / playback
- Ability to create canned scenarios
- Ability to record and reply scenarios
- Ability to interface to industry-standard IG systems
- Refresh rate 100/sec
- Extensive suite of SAS, autopilot, navigation systems available

Very realistic pilot control panel with trippable (and remotely resettable) push-pull circuit breakers, switches, indicator lamps, etc. The operation of all these controls and how they affect the model is completely controllable.

The pilot input controls-pedals, collective, cyclic and throttle are absolutely first class; stiff and smooth as glass. Twelve bit encoders precisely report control position. A (tbd) variety of collective and cyclic-mounted auxiliary controls and switches expand the systems capability.

Helicopter Mathematical Model

The helicopter model is a modern, medium sophistication package. It uses a blade-element-rotor-model (BERM), the Pitt-Peters rotor downwash, Bailey tail rotor. Ground-to-under carriage interaction is by finite element analysis.

The turbine engine model is realistic and fully customizable and will accurately simulate startup, shutdown, etc.

-This is not your Microsoft / FLYTE sim.

Soon-to-be Announced Enhancements

1. Pilot Control force feedback/control position that precisely simulated 750H auto pilot and NAV systems.
2. Additional Garmin screens (modeled from Garmin 750)
3. Air traffic controller subconsole
4. Limited 2 degrees of motion (6 DOM at later time)