# Marines Get New V-22 Operational Flight Trainer

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A new motion- based operational flight trainer for the first cadre of U.S. Marine and Air Force V-22 instructor pilots was delivered by Raytheon three months ahead of schedule to the U.S. Marine Corps April 2. It will be used by the Marine Corps' V-22 flight training squadron, VMMT-204.

The delivery of this trainer signals the forming of an initial Marine Corps and Air Force instructor pilot training cadre.

"This represents the first time the Marine Corps has ever had a trainer in place before an aircraft," said Maj. Mitch Bauman, assistant program manager for V-22 Training Systems.

The V-22 Integrated Product Team (IPT) effort involved software, hardware and systems engineers, as well as other experts from avionics, airframes, cockpit/crew stations, logistics and contracts in both government and industry, according to Bauman.

"The mission of the MV-22 operational flight trainer/cockpit procedures trainer IPT is to update the existing training devices to be ready for the U.S. Marine Corps and Air Force instructor pilots by June 30 within the agreed performance and cost expectations. It was a long, hard struggle, but we beat our own goal and the product was delivered ahead of schedule."

The operational trainer's cockpit and its simulated multi-function displays, computer system and electronic display unit make it representative of the V-22 engineering and manufacturing development aircraft now used in the flight test program. In addition to its high-fidelity cockpit, the operational trainer provides the pilot with computer-generated horizontal and vertical visual scenes within a 24-foot diameter dome. Both out-of-window visual scenes and forward-looking infrared imagery are made possible by the six-channel visual display system. The full motion also allows pilots to get the feel of acceleration and deceleration and the ability to train in various environments.

"The MV-22 operational flight trainer has the fidelity and realism to support the MV-22's dynamic training tasks," said Bauman. "Today's image generation and display systems support simulated low level terrain flight operations as well as high-altitude flight. Even the demanding night vision goggles, forward-looking infrared and aerial refueling training can be accomplished penalty free in this device."

Twenty pilots, including the V-22 developmental test pilots, and pilots from various helicopter squadrons, will be certified as instructors by March 2001. To be certified, pilots must have 38 flight hours in the MV-22 aircraft and 68 hours in the operational trainer.

The first MV-22 training squadron is scheduled to be ready in March 2001 with 12 V-22 production aircraft. The first low rate initial production V-22 aircraft is scheduled to be delivered to the Marine Corps next month.

The Bell Boeing Tiltrotor Team, comprised of Bell Helicopter Textron, Inc., in Fort Worth, Texas, and The Boeing Company in Philadelphia, developed the V-22 tiltrotor for the U.S. Marine Corps, Navy and U.S. Special Operations Command. Bell Helicopter Textron, Inc., is a wholly owned subsidiary of Textron, Inc. of Providence, R.I.

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