



U.S. ARMY
RDECOM

U.S. Army Research, Development
and Engineering Command
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U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND

Aviation and Missile Research, Development and Engineering Center

Overview

- AMRDEC leads the nation in the advancement and sustainment of aviation systems, missile systems and related technologies. AMRDEC certifies airworthiness for Army aircraft.
- AMRDEC conducts basic and applied research, technology development, future systems development, fielded systems support, rapid prototyping, obsolescence management, technology refresh and airworthiness.
- The center supports approximately 20 missile systems, 10 aviation platforms, unmanned platforms and other major weapon systems.
- AMRDEC maintains more than 1.7 million square feet of laboratory space, and manages operations in California, Colorado, Texas and Virginia.
- Core competencies: structures (propulsion, energetics, lethal mechanisms, flight control), guidance/navigation (embedded electronics and computers, infrared sensor/seekers), aerodynamics/aeromechanics (structures, flight control, crew station, survivability), weapons and sensor integration (avionics), propulsion, aviation autonomy and teaming (manned and unmanned).
- Major Partners: Aviation and Missile LCMC, PEO Aviation, PEO Missiles and Space.
- People:
 - 3,140 civilians
 - 2,504 scientists and engineers
 - 102 doctorates, 806 master's degrees, 1,578 bachelor's degrees
 - 22 military
 - 6,326 contractors



2014 Successes

- AMRDEC is developing integrated technologies to improve Army rotary wing aircraft survivability in Degraded Visual Environments and establish new DVE operational capabilities. The objective is to create an advanced capability, enabling commanders to conduct operations deliberately in DVE with confidence that their crews will be safe and their missions successful.
- AMRDEC leads Department of Defense science and technology efforts to develop the next-generation vertical lift aviation fleet. The Joint Multi-Role Technology Demonstrator Program will result in the design, fabrication and test of two advanced rotary wing vehicle configurations, as well as the development of attendant mission systems architecture. The program will allow for the pursuit of significant improvements in performance, survivability, commonality and sustainability.
- AMRDEC personnel developed and integrated the Javelin missile capability to Close Combat Weapon System - Containerized Weapon System, working closely with Program Manager Soldier Weapons and the Common Remotely Operated Weapon Station vendor (Kongsberg).
- AMRDEC completed flight tests for the UH-60L Black Hawk and CH-47 Chinook helicopters on alcohol-to-jet fuel blended with JP-8. These final tests should lead to certification of ATJ fuel blends as a renewable, drop-in alternative fuel for JP-8 – addressing the Army energy security strategy and plans that mandate all Army air platforms be certified for alternative/renewable fuels by 2016.
- The Transportable, Reconfigurable, Integrated Crew Trainer is a fully immersive crew trainer for the Mine-Resistant Ambush-Protected vehicle, known as the MRAP. Commissioned by U.S. Special Operations Command, the TRICT supports training individually or collectively for the skills required to operate features of several variant MRAP vehicles.