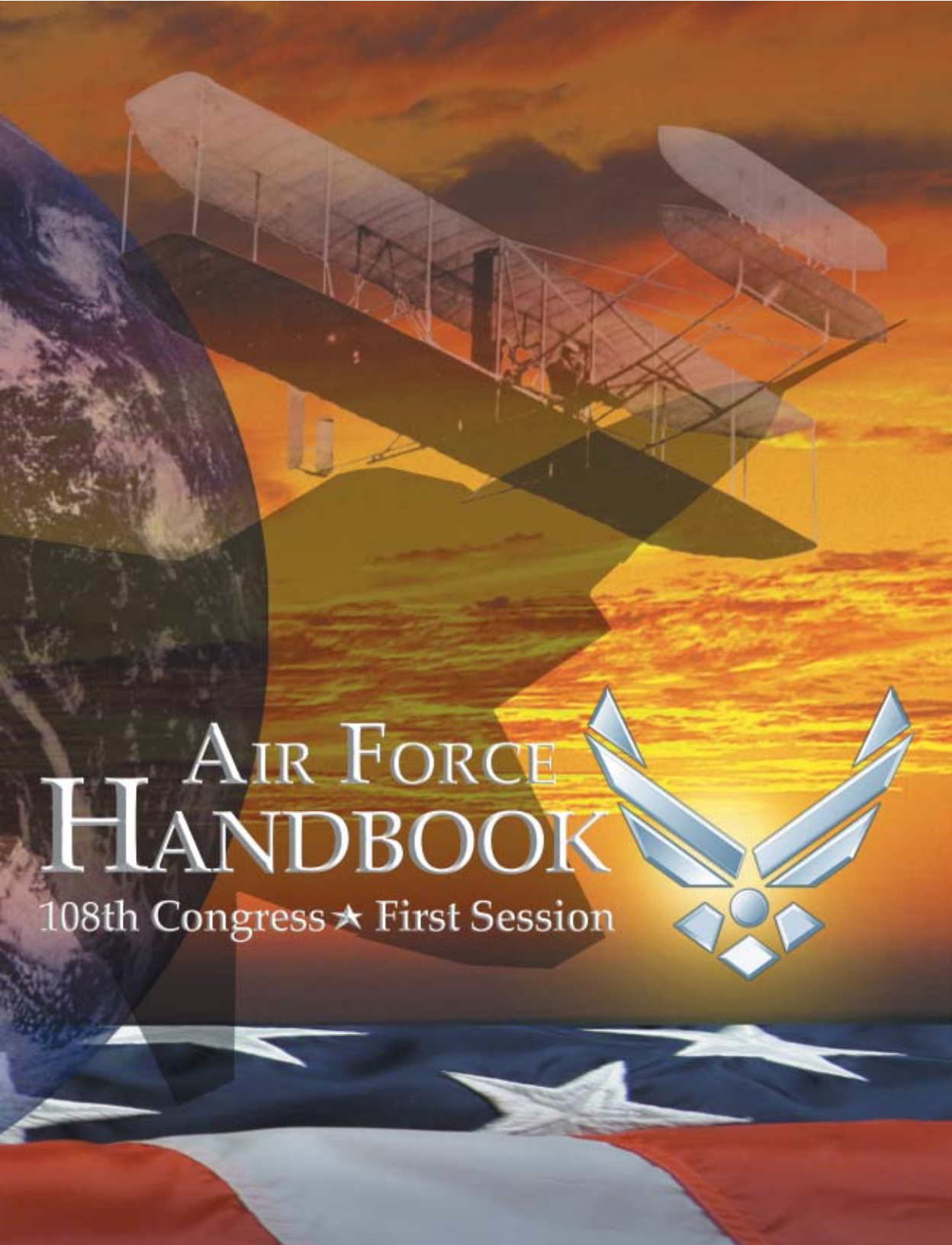
AIR FORCE
HANDBOOK
108th Congress ★ First Session

Department of the Air Force
Washington, DC

The United States Air Force remains the preeminent air and space force in the world today. Born from the ingenuity of the Wright Brothers a century ago, we continue to evolve by capitalizing on the innate creativity and innovation of our airmen. As our vision is limitless, we will pursue every avenue and integrate with every Service, to secure *preeminent* capabilities for future joint warfighting.

Today's international security environment presents daunting, but surmountable obstacles to America's military forces. With steadfast resolve, unrelenting effort and critical congressional patronage, the Air Force faces these challenges with continued confidence. In coalition with ground, naval and marine forces, we will continue to ensure America's security and its national interests by delivering unmatched air and space capabilities to the joint battlefield—in whatever means, at whatever time, and in whatever manner is required.

As a resource for the Members of the 108th Congress, this handbook features a convenient almanac format while outlining a selection of some of your Air Force's major priorities. In conjunction with the 2003 Air Force Posture Statement, we hope you find it useful to understand our vision for the future. As always, we remain eager to discuss our strategy for securing unprecedented air and space capabilities for the United States.

John P. Jumper
General, USAF, Chief of Staff

Dr. James G. Roche
Secretary of the Air Force

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SELECTED KEY AIR FORCE ISSUES

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MUNITIONS

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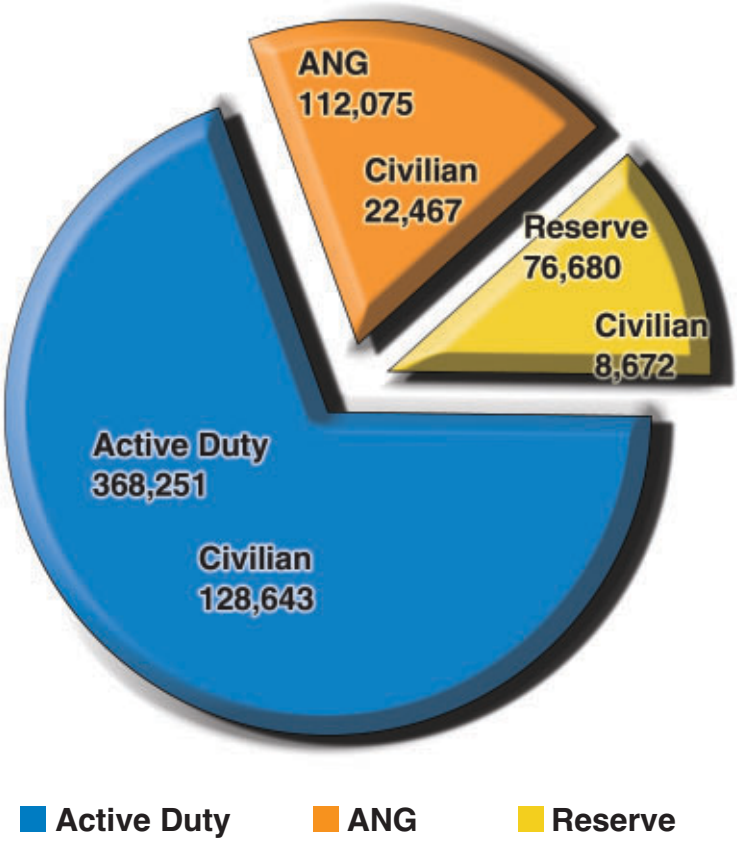
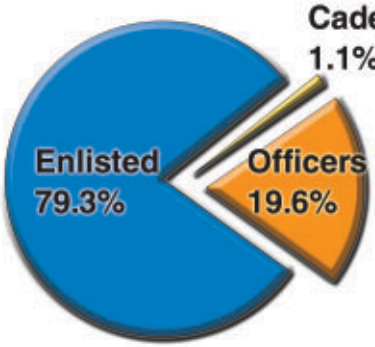
US Air Force Demographics



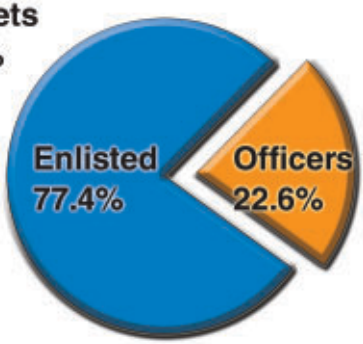
Total Force: 716,788

Military
Officer/Enlisted Breakout

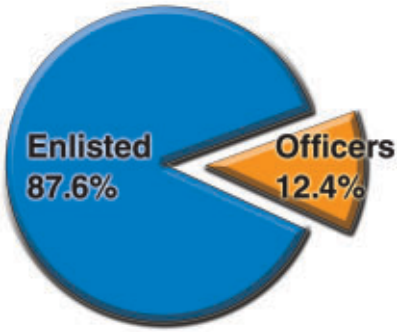
Active Duty



Reserve

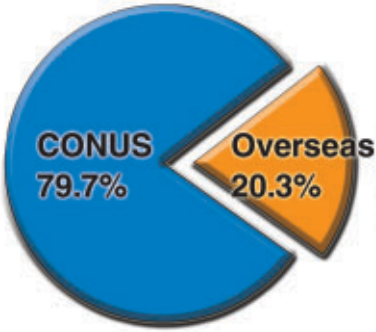


Guard



Military Assignment

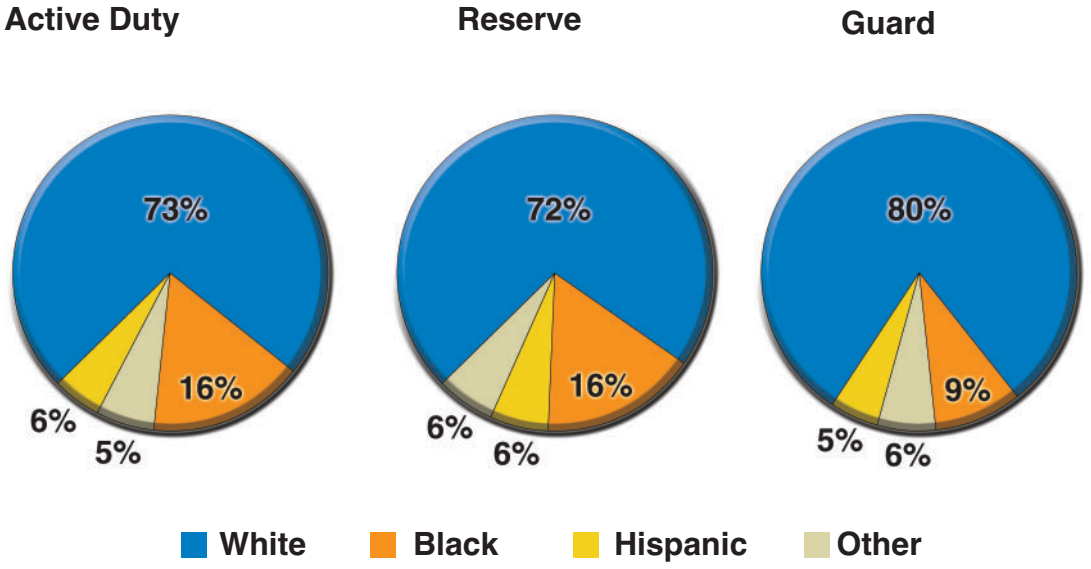
Active Duty



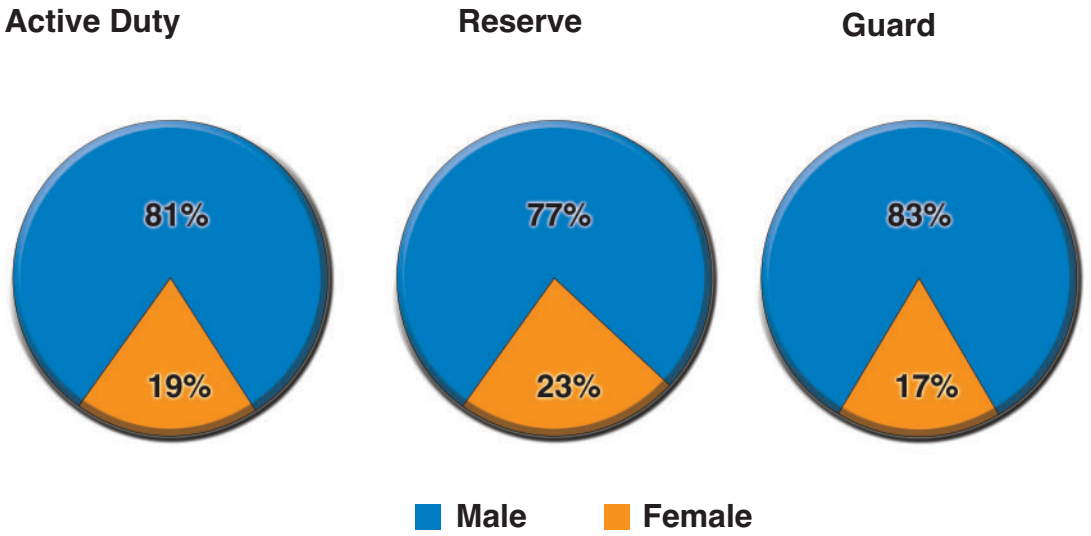
Reserve

Guard

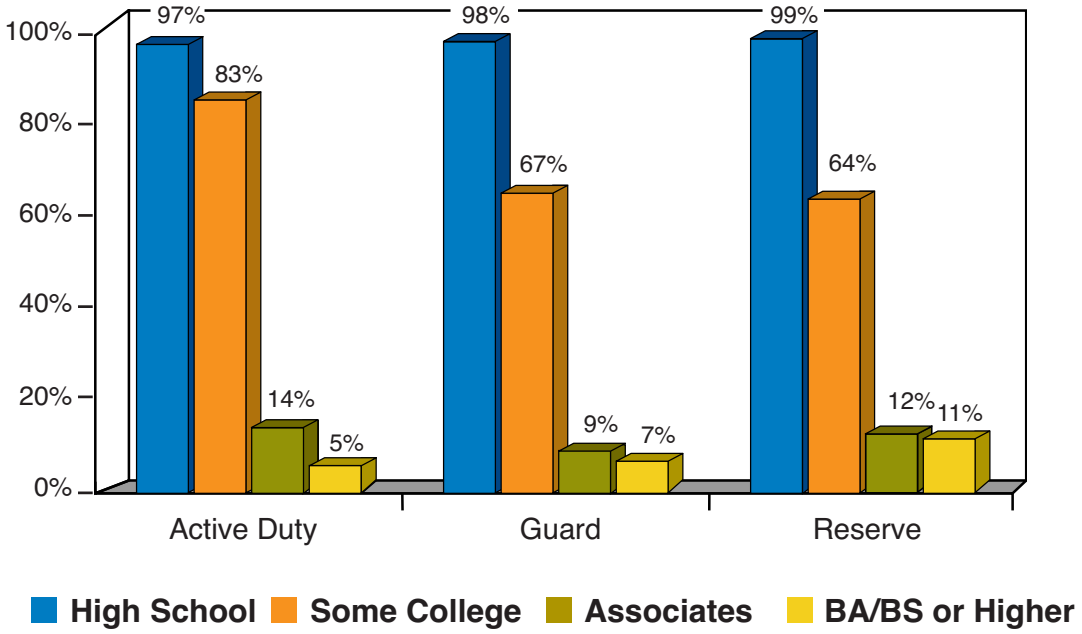
Military Race/Ethnicity



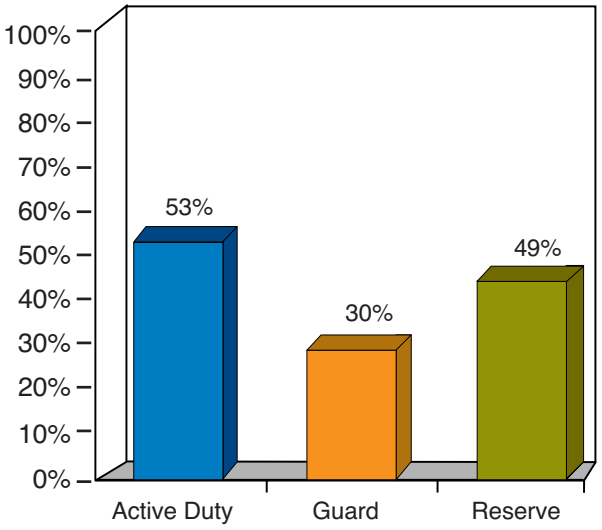
Military Gender



Education Level - Enlisted



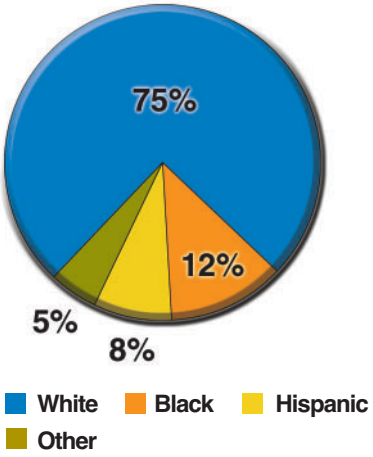
Advanced Degree - Officers



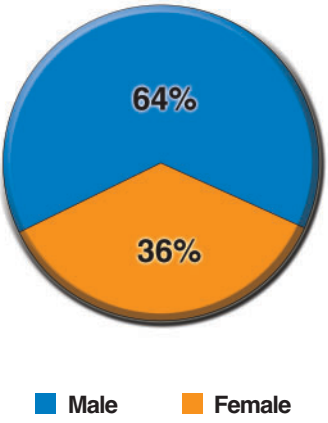
Civilian

Total Civilians = 159,782

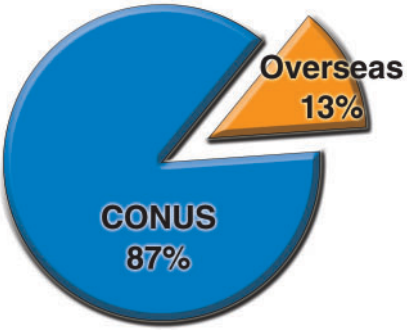
Race/Ethnic Characteristics



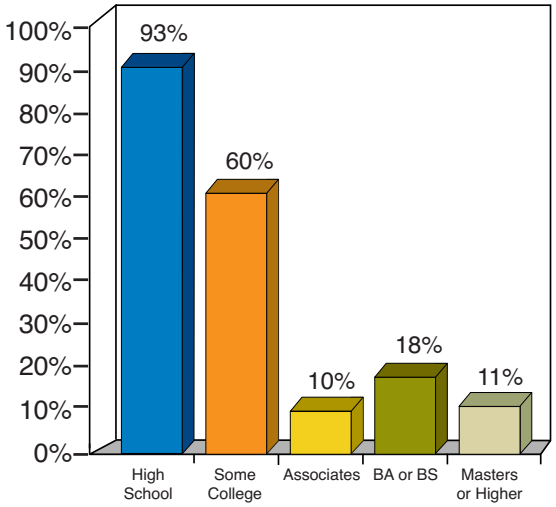
Gender



Civilian Assignment



Civilian Education Level




SELECTED KEY
AIR FORCE ISSUES

Adjusting Our Force Mix — Not Force Size

Workforce Reshaping

- Workforce Reshaping—create authorities for seamless movement across the Total Force: Active, Civilian, Guard, Reserve — enables Air Force to flexibly flow personnel and workload among Total Force components.
- Simplify competitive sourcing rules to facilitate strategic partnerships with industry—Enables smoother transition of non-core competency workload to experienced industry service providers.
- Secure Service autonomy to meet statutory intent with maximum innovative flexibility.
- **Review Core Competencies of Air Force**
- In Apr-Jul 02, the Air Force conducted a General Officer-led review of 366K Active Duty (AD) and 124K civilian positions to determine positions directly contributing to core competencies.
- Preserve capabilities, reallocate resources, relieve stressors — defined 3 new Air Force Core Competencies:
  - **Developing Airmen** (The heart of combat capability); **Technology to Warfighting** (The tools of combat capability); **Integrating Operations** (Maximizing combat capability).
  - Identified (based on meetings w/ the Major Commands); 6,100 Active Duty military positions that require AF civilians due to inherently governmental nature of tasks; 11,700 AD military positions as non-core — convert to "best source" [Most Efficient Organization (MEO) or contract]; 8,900 Air Force civilian positions as non-core — convert to "best source."
- 17,800 military positions could be reapplied to help stressed career field problem associated with the global war on terrorism (12-14K people).
- Core Competency Review (CCR) would solve about half of the total military manpower problem, but drives a bill — funding estimated to exceed $15B across FYDP— 6.3K position increment ($2.4 B) was identified as #1 unfunded in FY04 POM.
- CCR construct, and concomitant efforts to shape our force content, are absolutely imperative to meet our future missions and emerging threats— must free up resources to realign to stressed/core/warfighting areas and align our force structure and content with the development and maturing of the Air Expeditonary Force (AEF).
- **Human Capital Task Force—Systematic Challenge to Organizational Status-Quo**
  - Human Capital Task Force - systematically challenge organizational status-quo — follow-on to CCR, established in Aug 02 — tasked to focus on the CCR implementation strategy, and to develop other initiatives to reduce AEF/post 9-11 stress.
  - Currently has 17 "potential" initiatives to help solve Air Force's critical manpower problems by realigning resources. Initiatives range from small Technology Enhancements to major Business Process Transformation.
  - Examples are: AF contribution to Defense Agencies; Review Southwest Asia requirements/use of sustainment contracts; Further technology investments to save manpower.

Main Points

- Challenge: Adapting to New Steady State Workload and TEMPO.
- Solution: Adjusting Our Skill Mix.
- The Air Force is taking a multi-prong approach to meet force mix/size challenges impacting the Total Force.

Assured Access To Space

Background

- The Evolved Expendable Launch Vehicle (EELV) Program is a partnership with industry to reduce the cost of space launch by at least 25%, and to make access to space a more standard, repeatable and reliable process.
  - The EELV development and launch services contracts were based on 1998 projections of large future demands for commercial launch services.
  - Originally, EELV included a $1.5B development program with a down-select to one launch provider.
  - However, because of a large projected commercial demand, the AF investment in development was decremented by $500M, two competitors were retained, and the AF envisioned multiple commercial launches occurring prior to any Government payloads.
  - Over the past few years, the decline of the commercial launch market has caused extremely tight competition in an environment of increasing launch service supply and decreasing demand.
  - Impact of this low demand, high supply market has made it increasingly more difficult for both EELV launch providers to maintain a viable launch business.

Discussion

- The Government is now the primary anchor for the Atlas V and Delta IV business base for the foreseeable future.
- EELV Atlas V and Delta IV launch systems are essential elements of national security space activities; maintaining existing heritage launch systems is not a viable cost option or long-term solution.
- This is a National Security Space approach that includes industrial base and additional value added engineering investments. The industrial base investment ensures two launch service providers during the near-term critical period of government vulnerability, i.e., early EELV flight activity — through 2009, by investing in infrastructure sustainment, and dual mission integration /analysis.
- "Goal is to guarantee U.S. access to space in the future. The steps to achieve that end could include additional financing for the companies building new rockets and bolstering the U.S. rocket engine production capabilities" Mr Teets(Under Secretary of the Air Force), Defense News - Feb. 22, 02.
- It is critical to maintain two financially stable launch providers who can back each other up for both East Coast and West Coast launches, in the event of a major problem with one of the two systems (Delta IV & Atlas V).

Main Points

- Assured access to space is best achieved by maintaining two viable, financially stable launch service providers.
- The Air Force's EELV program strategy to have two robust space launch service sources is at risk.
- Near term investment is required to ensure both providers continue in the launch business and can provide national security launch services to the U.S. Government.

Air Force Science and Technology (S&T)

Background

- The S&T Program develops and demonstrates affordable innovative technologies to provide superior warfighting capabilities for the 21st century. These technologies:
  - Meet near- and far-term military needs in acquisition and sustainment.
  - Support a changing defense posture and affordable technical modernization.
  - Prevent technology surprise from potential adversaries.
- The S&T Program consists of:
  - Basic Research: primarily university and in-house laboratory-based—identifies, develops, and transitions militarily-relevant knowledge, principles, and products.
  - Applied Research: in-house laboratory, university, and industry-based—determines technical feasibility in a laboratory environment of advanced, militarily important technologies.
  - Advanced Technology Development: mainly industry-based—develops and demonstrates advanced technologies in an industrial and/or near-operational military environment.
- The S&T Program:
  - Is managed corporately—covers core Air Force mission areas—linked to AF Strategic Plan.
  - Is customer-focused on quality and relevance to meet warfighter needs.
  - Seeks operational/technical expert input to maintain a balanced technology investment.
  - Promotes rapid transition through contracts/grants with industry and universities.
  - Coordinates with Services/Defense Agencies through Defense Reliance.

Discussion

- In recognition of strong, continuing Congressional support for a robustly funded Air Force S&T Program, the Air Force is striving to ensure S&T is funded at a level that addresses future warfighter capability needs.
- The FY04 S&T budget lays the foundation for the continuing Air Force transformation to an Air Expeditionary Force (AEF) that can react rapidly, with decisive force, to worldwide contingencies.
- Significant FY04 technology investment includes: multi-disciplinary basic research; turbine engines; microsatellites; space weather forecasting; small munitions; directed energy weapons; agile laser eye protection; aging aircraft; learning effectiveness of distributed mission training; missile countermeasures for large aircraft; information technology for global reach; panoramic night vision devices; effects-based operations; automatic target recognition; automated aerial refueling of unmanned air vehicles; and affordable space access.
- In response to Section 253 of the FY02 National Defense Authorization Report, the Air Force, in cooperation with the National Research Council of the National Academy of Sciences, is conducting a study to independently review and assess how changes to the Air Force S&T Program implemented during the past two years affect the future capabilities of the Air Force.
  - The National Research Council is in the final stages of completing the study, after which results will be presented to the Air Force for forwarding to Congress no later than May 1, 2003.

Main Points

- Air Force S&T is funded at a level that addresses future warfighter capability needs and lays the foundation for the Air Force vision of transforming into an AEF.
- In response to Congressional S&T Review language, the Secretary of the Air Force, in cooperation with the National Research Council, is conducting a study to determine how past changes to S&T affect future Air Force capabilities.
- Air Force S&T discovers, develops, and demonstrates affordable, innovative warfighting technologies that multiply the combat effectiveness of our aerospace forces and provide superior warfighting capabilities.
- U.S. industry and academia execute the majority of S&T funds while Air Force performs selected in-house research in technology areas not being addressed by others.

Business Initiatives

Background

- The Air Force continues transforming to achieve our vision of a flexible, responsive, and agile capability-based Air and Space force.
- Business transformation includes daily operations and enterprise processes that provide the Combatant Commanders with Air and Space capabilities.
- The Business Transformation Task Force is directing and integrating the process transformation, called Business Transformation in two main groups: Core (Core Competencies) and Support Combat Operations (Combat Support).
- Operations and Business & Operations Support (acquisition, logistics, maintenance, training, medical/dental, etc) are processes that ultimately determine our overall enterprise effectiveness and directly produce our Air and Space combat capabilities.
- Enablers (Business Management Support) complete the Air Force enterprise and are equally critical to supplying capabilities. Enablers facilitate the Core Competencies and determine the overall efficiency of our enterprise.

Discussion

- Business Transformation will be accomplished from an integrated enterprise perspective. We're examining our Core Competencies and Combat Support processes to produce and employ effective, efficient, integrated, and agile Air and Space combat capabilities. The Assistant Secretaries and the Air Force Chief Information Officer (CIO) will champion our business transformation efforts in partnership with the MAJCOMS.
- Business Transformation will: leverage industry best practices to make needed improvements in process efficiency without degrading our enterprise effectiveness; expand our customer's self-service management capability and free up needed resources for the operational communities; provide real-time, accurate financial data for better decision making; and identify management metrics for effectiveness, timeliness, and efficiency of operation.

Main Points

- Specific acquisition business initiatives include:
  - Streamlining our acquisition and contracting regulations, replacing detailed, highly prescriptive sets of rules with brief documents that emphasize speed, innovation, and sensible risk management.
  - Fully utilizing Acquisition Centers of Excellence to help program managers overcome acquisition roadblocks.
  - Development and deployment of comprehensive training programs to teach our managers to lead, be innovative and accept reasonable risk.
  - Creation of a Program Executive Office for Services is bringing efficiency to the growing area of services contracts.
  - Development and deployment of SMART (System Metric and Reporting Tool) — real-time, web-based application providing direct visibility into the health of acquisition and modernization programs.
  - "High Powered Teams" (HPTs) of requirements and acquisition professionals collaborate on spiral development plans for new systems.
  - Reformed Supply Support Program will improve the spares acquisition process by integrating the support contractor into the government supply system.
  - Expansion of Reduction in Total Ownership Cost (R-TOC) program addresses significant cost savings and cost avoidance.

Challenges in Facilities Infrastructure

Background

- Facilities infrastructure refers to bases, installations, real property, and their associated physical plants including buildings, utilities, runways, and other fixed structures.
- Aging fleet and higher ops tempo are putting a strain on facilities infrastructure.
- Constrained topline forces Air Force to take risk in Military Construction (MILCON) and infrastructure maintenance.
  - MILCON facility investment program is only large enough to cover new mission and transformation requirements, fact-of-life requirements, and some quality-of-life initiatives…leaving little for large-dollar restoration and modernization requirements.
  - O&M facility maintenance and restoration accounts are funded at the maintenance level only, with little available for small-dollar facility repair and restoration requirements or to attack the maintenance backlog that has accumulated in the last decade.
- As a result, the rate at which we recapitalize our facilities infrastructure is well below the industry standard.
- 2001 Installation Readiness Report (IRR) to Congress reflects that 63% of the Air Force's facility classes are rated C-4 or C-3… costs to "fix" to acceptable level is $18.3B.
  - C-4 and C-3 ratings mean that facilities in those facility classes are not able to perform the mission for which they were designed and constructed.

Discussion

- We have built a balanced program that accepts some short-term risk in facilities while meeting the most critical needs of the Air Force.
- We are making significant investment in our facilities across the Future Years Defense Plan, placing us on funding trajectories to meet a 67-year infrastructure replacement cycle and to buy out our backlog of critical infrastructure repair requirements over the next decade.
- Air Force infrastructure investment priorities:

  1). Beddown of new missions and weapon systems supporting transformation.

  2). Fact-of-life requirements (i.e., project planning and design, emergency construction requirements, legal and treaty requirements).

  3). Quality-of-life facility investments (i.e., dormitories, fitness centers).

  4). SECAF, CSAF, Major Command Commander highest priorities.
- We have made significant increases to our facility maintenance programs over the last two years…with the intent of "keeping our good facilities good" and halting the premature facility and infrastructure decay that results from recurring under-funding.
- We continue to eliminate excess infrastructure through our O&M funded demolition program and will use the 2005 BRAC round to identify any further savings to improve our remaining infrastructure.

Main Points

- The Air Force is taking a steady, measured approach to recapitalizing its aging facilities infrastructure, while at the same time taking care of other high-priority requirements.
- This fix can't happen overnight. It took over a decade of under-funding to get where we are today…it will take a number of years of adequate funding to eliminate the backlog of deficient facilities.

Civilian Personnel Management Improvement Strategy

Background

- To meet needs of an increasingly technical force, need right mix of junior, mid-level and senior civilian employees in right skills.
- A decade of downsizing, impacting over 100,000 slots, has produced a civilian workforce that needs refreshing and reskilling; while taking care of displaced civilians, hiring was seriously constrained.
- Within five years, approximately 42% of the civilian officer equivalent force will be eligible to retire, either through voluntary retirement or early out—an estimated 20% of this force will retire by 2005.
- Civilians overwhelmingly comprise our scientists, engineers, acquisition and financial management officers, and aircraft maintainers.
- Proper civilian force-shaping tools are critical to providing"reachback" expertise necessary to support deployed troops and current homeland security mission.

Discussion

- Air Force has developed a four-prong workforce shaping strategy—validated through benchmarking with private industry and focus groups with over 400 AF participants at 12 CONUS bases over two years.
- Accession Planning - developing and implementing methods to attract and recruit quality employees at right number and with right skill mix.
- Workforce Development - achieving a better trained and agile workforce with skills needed to lead and support the Air Force mission, today and tomorrow.
- Retention/Separation Management - developing methods to help retain employees while at the same time creating vacancies in a controlled manner.
- Enablers - activities that reinforce the strategic direction, to include marketing the civilian element and enhancing data captured to ensure initiatives have the desired effect.
- Strategy implementation focuses on three outcomes - legislation, funding and policy changes.
- **Legislative Agenda**
  - Streamline hiring process —"on-the spot" (direct) hiring and category ranking have been OSD's #1 priority.
  - Pursue permanent and flexible authority to offer Separation Incentives for force shaping.
  - Need to pursue performance-based compensation - OPM/OMB proposed alternate legislation for streamlined demonstration projects authority and alternate personnel system, which includes modified broadbanding.
- **Funding Strategy**
  - FY02 POM (Phase I) included a plus-up for doubling the number of interns (up to 1,450) by FY07 and an increase in civilian leadership training and development.
  - FY03 APOM (Phase II) included recruiting incentives for interns, student loan repayment, and central funding for cooperative education students (up to 500 college students).
  - FY04 POM (Phase III) included funds for >11K mission readiness training occurrences and updated supervisory training.
- **Policy/Regulatory Changes**
  - Changes focus on maximizing candidate pools (separating military, retired annuitants, college students), implementing quality of life initiatives, and developing communication and marketing plans.
  - Freedom to Manage initiatives will restructure recruitment and retention incentives.
  - Provide authorities for recruitment, relocation, and retention bonuses.

Main Points

- The Air Force has a long-term strategy to fix our "aging workforce."
- Air Force is fully executing funding allocated for force renewal; need to maintain our overall strategy, constancy of purpose.
- Civilian force development and sustainment is essential for the Air Force to meet the Air & Space mission of the future.

Deployment Health Surveillance

Background

- Deployment Health Surveillance (DHS) has received increased emphasis following the Gulf War and service members' concerns about their unexplained illnesses.
- Presidential Review Directive 5 mandated that the health of all troops be protected during deployments and that all Services implement a deployment health surveillance program; Joint Staff Memo, Updated Deployment Health Surveillance and Readiness, dated 1 Feb 02, directs service implementation; the program has been implemented since November 1998.

Discussion

- The Air Force Medical Service (AFMS) conducts four activities that ensure career-long, comprehensive health surveillance of its airmen:
  - Preventive Health Assessments (PHA). Each airman receives an annual review of clinical preventive services and individual medical readiness (IMR) requirements. PHAs are conducted globally in the AFMS and recorded in an AFMS-wide database; therefore, the health of each airman can be tracked throughout their service and in any location.
  - Predeployment Medical Assessments. Predeployment assessments are performed on every airman who will deploy for 30 or more days to overseas locations without a fixed medical facility. Serum samples are extrapolated from HIV samples drawn prior to deployment and forwarded to the serum repository. This process is currently under review to expand the definition of deployment to include troop movements to any austere location, including national disasters and terrorist attacks.
  - The health of each airman is also monitored throughout the duration of his or her deployment.
  - Post-Deployment Medical Assessments. Post-deployment assessments are conducted in-theater prior to redeployment (returning home); abnormal findings are evaluated in-theater and referred to the airman's home station.
- The Air Force participates in the Defense Medical Surveillance System (DMSS) and the Deployment Health Center, two joint deployment health initiatives.

Main Points

- Deployment Health Surveillance (DHS) was created to protect the health of all troops during deployments; program was first tested in 1998.
- The AFMS' DHS activities ensure the health of our airmen is monitored throughout their entire careers with particularly in-depth attention provided before, during, and after deployments.

Depot Maintenance Strategy and Master Plan

Background

- Congress, along with the Secretary and Chief of Staff of the Air Force, identified depot capabilities as a priority necessary to support readiness and sustainability requirements for contingency scenarios. In order to maintain a ready and controlled source of depot maintenance, the Air Force published a Depot Strategy and Master Plan and sent it to Congress on 30 Aug 02.

Discussion

- Air Force depot maintenance strategy retains organic depot maintenance capability required to support expeditionary task force combat.
- Objective of plan is to ensure that Air Force equipment is safe and ready to operate across the operational spectrum, from training to rapidly deploying and sustaining forces that can decisively defeat any adversary.
- Strategy and master plan provide a roadmap to retain world-class depot capabilities through world-class people, processes, and facilities.
- Air Force funded an additional $150M a year for depot facilities and equipment modernization.
- In addition to facility improvements, the Air Force created a new "Depot Modernization" appropriation line to fund new technology and equipment to modernize the depots.
- New appropriation line provides the visibility needed to ensure a corporate, enterprise-wide approach to supporting depot capabilities.
- Plan incorporates a fundamental review of organic depot processes, including workload and production management, materiel support, workforce development, organization, financial management, information technology, infrastructure modernization and metrics.
- Partnering with private industry is a key element of the plan and provides the best value approach to maintaining our depots.
- Partnering is the method by which we will bring in technologies to support core capability requirements in the future.
- The strategy and master plan provides military strength by ensuring the Air Force possesses an organic "core" capability sized to support all potential military operations.

Main Points

- The Air Force Depot Maintenance Strategy:
  - Retains organic depots required to execute Air Force mission.
  - Re-capitalizes organic depots--capital investment in plant, equipment and personnel.
  - Funds an additional $150M a year for depot modernization/recapitalization.
  - Revitalizes workforce training and recruitment.
  - Reengineers and improves processes.
  - Develops strong partnership with industry--a key element.

Expeditionary Medical Operations

Background

- Air Force expeditionary medical operations have two main components: ground units called EMEDS (Expeditionary Medical System) teams to provide preventative, primary, surgical, and critical care in the field; and aeromedical evacuation (AE) units to provide timely and in-flight care to patients being evacuated from the theater.
- EMEDS are highly portable field clinics/ hospitals. Composed of incremental manpower teams and lightweight modular structures that can be flown into the theater and quickly assembled.
  - EMEDS Basic, the first increment of 25 medics, cares for 500-2000 in the field; additional manpower and equipment can be added until unit is capable of 25-bed inpatient capabilities, two OR tables with surgical staff, and is capable of serving 3,000-5,000.
  - All EMEDS configurations can be hardened for chemical/biological weapon protection; this configuration is termed "collective protection" for EMEDS (CP-EMEDS).
- Aeromedical Evacuation operations ensure continuity of care from the Theater of Operations to CONUS.
  - Incrementalized AE teams provide quick-response insertion capability that can build as requirements increase; 10-bed Mobile Aeromedical Staging Facility (MASF) with 15 personnel and two HUMVEES ("light and lean" with increased medical capability) proved to be a viable solution in austere settings.
  - Critical Care Air Transport Teams (CCATTs). AE Care in the Air provides flexible, fast-response air transport of stabilized patients shortly after surgery; combined EMEDS/ AE/CCATT action stabilized and evacuated a critically injured troop from Afghanistan to US within just 48 hours of injury.
  - AE Liaison Teams place Air Force medics on the ground with other services' medical units to coordinate Aeromedical Evacuations.
  - AE ability to rig mobility aircraft that are already transiting area into AE platforms saves lives/resources (80% of patients moved during OEF in C-130 or C-17s).
  - TRAC2ES computer system capable of tracking any AE patient worldwide in near real-time; system brilliantly accurate and successful during OEF, the first major contingency in which it has been tested.
  - Seamless integration of AE Control Team into Air Mobility Division of Air Operations Center provided capability to coordinate prompt airlift for sick/injured personnel.
- AFMS also has 35 deployable "Biological Augmentation Teams" (BAT) to identify bacteriological pathogens (including anthrax, plague and tularemia) using a polymerase chain reaction system, known as RAPIDS.
  - The AF deployed two BATs to NYC in October 2001, to assist civilian authorities in analyzing anthrax samples from the October bioterrorist attacks. High correlation of the RAPIDS results with subsequent cultures of the anthrax samples proved RAPIDS' viability.

Discussion

- Multiple EMEDS were deployed for Operations Infinite Justice, Noble Eagle, Enduring Freedom, and Anaconda.
  - AFMS is ready to assist/advise public (state and local) and private partners in assembling similar rapid response capabilities.
- AF medics are located in the theater, positioned with other services, and in the air to ensure worldwide continuum of care from battlefield to home base.

Main Points

- The AFMS responds effectively when the nation calls through the use of EMEDS and AE, two flexible programs that depend on their modularity to increase their capabilities as the mission demands.
- The incremental nature of EMEDS and AE teams contributed significantly to successes in OEF and the War on Terrorism.
- Ability to configure most mobility aircraft to support AE, and dramatic improvements in worldwide patient tracking with TRAC2ES, ensure evacuees receive rapid and precise AE.

Exploiting Space for Joint Warfighting

Background

- The military relies heavily on the exploitation of space to elevate our asymmetric advantage over any adversary. The Joint Force Commander is provided the highest decision-quality information required to find, fix, track, target, engage, and assess (F2T2EA) – "the kill chain."
- With determined exploration and exploitation of space capabilities we will widen our asymmetric advantages to guarantee America's Global Vigilance, Reach and Power – establishing powerful national mechanisms to assure, dissuade, deter or defeat.
- Space superiority ranks with air superiority as a top priority. As the ultimate high ground, space provides America with military advantages that cannot be duplicated.

Discussion

- From the ultimate high ground, space-based ISR will provide near continuous overflight of enemy targets. Space-Based Radar (SBR) will revolutionize battlespace awareness by providing deep-look, wide-area surveillance and targeting support unaffected by political sensitivities and most denial efforts.
- Achieving information superiority depends greatly on the availability of robust, worldwide communications capability. MILSATCOM systems such as Advanced EHF and Wideband Gapfiller Satellite will meet these needs in the near term. However, the demand for bandwidth and services is growing dramatically as the DoD transforms into a network-centric fighting force. In response, the Air Force is developing the Transformational Communications Architecture (TCA) to fulfill these requirements and remove limited communications as a constraint on the warfighter. The TCA will be an integrated suite of programs including MILSATCOM, user terminals and ground stations, terrestrial communications and commercial services necessary to maintain our information superiority.
- The Global Positioning System (GPS) navigation signal used by sensors and shooters is key to precision engagement, assisting in the targeting of the enemy with pinpoint accuracy. Comprehensive upgrades to both satellites and warfighter equipment are currently in work to protect the ability of American and allied forces to employ the GPS signal on the battlefield, and deny it to our adversaries while preserving civil use.
- Currently we are transforming our space situational awareness with a much needed improvement to America's missile detection and warning capability. The Defense Support Program (DSP) was developed over 30 years ago to provide strategic warning. Modernization to meet 21st Century warfighter needs is critical. The Space Based Infrared System (SBIRS) High is replacing our current DSP satellite system.
- Air Force weather satellites enable information superiority every day during joint operations around the globe. In partnership with the Department of Commerce, the Air Force is modernizing environmental data collection with the new National Polar-orbital Operational Environmental Satellite System (NPOESS).

Main Points

- The Air Force goal is to use space power to apply the right effects to achieve battlespace dominance.
- Maintaining and developing space superiority is critical to the transformation of the U.S. military to meet the challenges ahead.

F/A-22

Background

- The F/A-22 fighter jet is the next-generation air dominance multi-mission fighter. Its combat capability includes inherent air-to-ground capability to counter emerging worldwide threats. The F/A-22 will penetrate enemy airspace and achieve a first look, first kill capability. It is a critical component of the Global Strike Task Force (GSTF). The F/A-22 is designed to rapidly project air dominance at great distances, countering and defeating threats that attempt to deny access to the battlespace.

Discussion

- Contractors: Lockheed Martin (prime), Pratt and Whitney (engines)
- Engineering & Manufacturing Development is nearing completion
- Dedicated Initial Operational Test and Evaluation (DIOT&E) expected to begin in CY03
- Low Rate Initial Production (LRIP) Defense Acquisition Board (DAB) (Aug 01) approved buy-to-budget approach for USAF and projected a total buy of 339 aircraft
- 31 aircraft on contract thru Lot 2; 308 aircraft remain to be procured
- Initial Operational Capability (IOC) expected in December 2005
- Future upgrades enhance GSTF capabilities, including enhanced air-to-ground radar and integration of Small Diameter Bomb (SDB)

Main Points

- F/A-22 is leading the Air Force's transformation efforts by providing the warfighter with unmatched capability.
- The F/A-22's combination of stealth, supercruise, advanced maneuverability, and integrated avionics enables it to penetrate airspace in anti-access theaters while finding, fixing, tracking, and targeting enemy air-to-air and surface-to-air threats

Force Development

Background

- The Force Development Construct grew out of a Chief of Staff of the Air Force initiative launched in July 1999 to examine and recommend actions necessary to prepare the Air Force Total Force for leadership into the 21st Century.
- The construct envisioned a transition in Total Force development from rigid, "one size fits all", functionally independent career path pyramids to a flexible, competency based, deliberate development model that rests on institutional needs and requirements and responds to corporate guidance.
- The Force Development construct is focused on the systematic, deliberate development of the necessary occupational skills and enduring competencies required to be an effective leader in tomorrow's expeditionary air and space force.

Discussion

- Force Development will be executed in three parts — Officer, Enlisted, and Civilian across the active and reserve components. Force Development is doctrinally based and focuses on three levels:
  - Tactical - gaining knowledge and experience in primary skill, combined with education and training experiences.
  - Operational - continued widening of experience and increased responsibility within a related family of skills.
  - Strategic - developing a full breadth of experience and leadership perspective at the joint, inter-governmental, and international levels.
- Force Development provides individuals with tailored, connected education and training to appropriately prepare them for an additional Air Force Speciality Code (AFSC). These AFSC pairings are based on Air Force requirements, providing the Air Force its necessary leadership talent and the individual with a higher level of mission competence.
- Developmental education will be modular under this construct. The modules will focus on leadership, Joint Professional Military Education, warfighting, and familiarity in developmental skill sets.
- Structure involves all levels of the Air Force but the primary mechanism will be an Individual Development Plan developed as a collaborative effort between the officer, their supervisor/ commander, and a Professional Development Team.
- Budget Issues: Currently drafting proposed '04 and beyond POM initiatives/ costs.
- Implementation: Currently underway with a planned completion date by the end of FY04.

Main Points

- Force Development will provide a competency based development process by connecting the depth of expertise in the individual's primary career field (AFSC) with the necessary education, training and experiences to produce more capable and diversified leaders.
- Success depends upon cultivating institutional understanding of and interest in Force Development, promoting an understanding of the competency requirements of leaders, and funding for the associated developmental initiatives.

Health Care

Background

- FY03 NDAA authorized Enhanced Sub-acute and Long-term Care Program benefits:
  - Skilled nursing facility benefit is remodeled to be identical to Medicare, but includes unlimited length of services (implementation Aug 03).
  - Authorization of home health care services (expected implementation Dec 03) and rehabilitative therapy when prescribed by a physician (implementation TBD).
  - Authorization of enhanced/comprehensive sub-acute care services for dependents; also authorizes home health services beyond TRICARE basic program, custodial care, and respite care for the beneficiary's caregiver (expected implementation TBD).
  - Provides hearing aids and prosthetics for dependents. Also authorizes provision/ rental of medical equipment (i.e. wheelchairs) to improve, restore, maintain, function, or minimize deterioration of beneficiary's condition (implementation TBD).
  - All Non-Availability Statements (NAS) requirements (statements from military facilities authorizing beneficiaries to receive civilian care) are eliminated with the exception of mental health.
- FY2003 NDAA authorized expansion of TRICARE Prime Remote to eligible family members who do not live near their sponsor. It also reformed the TRICARE claims process to resemble that of Medicare. This will make it easier for providers to bill TRICARE since most providers already possess a Medicare billing mechanism.
- Primary Care Optimization program equips providers with staff, facilities, and equipment needed to deliver "optimal" care. Deemed successful in CY02, CY03 will expand optimization to specialty care at selected test sites.
- Force Health Protection is a critical goal of the Air Force Medical Service (AFMS). From vaccines to pre and post deployment counseling, to individual preventive health assessments, members are given every tool available to protect their health for the mission. An effective Integrated Delivery System is also in place to nurture their emotional/mental health.

Discussion

- AFMS is a key to the Air Force's Integrated Deliver System that unites base resources to help members/families cope with life crises, trauma, and deployments. An example of success: Air Force suicide rate decreased to lowest in nearly 20 years.
- Force Health Protection--especially during contingencies--remains a top AFMS priority. Anthrax/smallpox vaccine programs operating and on track. Bio/chemical weapon surveillance protects deployed troops.

Main Points

- AFMS has focused on implementing FY03 NDAA legislation that greatly enhanced sub-acute and long-term benefits. It also authorizes payment for prosthetics/medical equipment, which can be a significant out-of-pocket cost to beneficiaries.
- Primary care optimization has demonstrated success as a health care delivery methodology. It focuses medical resources to provide patient access to comprehensive health care. AFMS will build on this success by optimizing some specialty care clinics in CY03.
- At home and in the field, the AFMS provides comprehensive care to members and families.

Health Care Optimization

Background

- Health Care Optimization (HCO) is an initiative to efficiently deliver a fit fighting force and improve the health of our population. The Air Force Medical Service (AFMS) is optimizing health care by focusing on preventing disease/injury. When diseases/injuries do occur, optimization transforms all aspects of the AFMS (training, staffing, equipping, facilities, business practices, etc.) to ensure outstanding and timely care.
- HCO has three fundamental activities. Providers have fully trained and equipped teams including nurses, technicians and administrative support. Teams have adequate facilities/space. Beneficiaries are enrolled to specific teams, enhancing continuity of care.
- The AFMS began optimizing our readiness platforms in the 1990s to deliver a portfolio of light, lean, capable assets to the line. It began optimizing our primary care teams in 2000 and will optimize specialty care product lines in FY04.

Discussion

- Today, 100 percent of TRICARE Plus and Prime patients have their own primary care manager. Primary care teams have the necessary resources to provide and coordinate their enrolled beneficiaries' healthcare.
- Primary care optimization delivered a dramatic improvement in many health indicators, including childhood immunizations, and screening for cervical and breast cancer. There is continuing improvement in patient satisfaction and the number of people enrolled.
- A civilian healthcare consultant recently recognized the AFMS as one of the two US healthcare organizations on the cutting edge of transforming health care delivery.
- A recent Air Force Audit Agency report showed a slower increase in primary care costs in the AFMS compared to the TRICARE network. As demonstrated by Kaiser and other benchmark civilian organizations, the fiscal return on investment for improving clinical preventive services are not immediately realized.

Main Points

- The AFMS is implementing HCO to efficiently improve the health of our entire population. This will require fully recapitalizing the direct care system.
- Optimization efforts have yielded improvement in readiness and peacetime health care delivery. This on-going initiative is being applied to every AFMS product line.

Housing

Background

- Air Force leaders are committed to providing for the unique needs of our people, both on and off duty.
- The quality of our housing, for both our military families and unaccompanied members, impacts morale, retention, and readiness and remains a high priority for the Air Force.

Discussion

- Dormitories
  - Air Force policy is to house all E-1s through E-4s on base, as a means "to blue them" to the Air Force way of life.
  - Unaccompanied enlisted personnel want and deserve privacy…privacy has been at the top of their issues list in each of the recent Chief of Staff (CSAF) Quality of Life Surveys.
  - In 1997, the Air Force began a multi-year program to replace unsatisfactory dormitories with facilities meeting the new DoD standard of private rooms for our unaccompanied enlisted members.
  - This program, outlined in the Air Force Dormitory Master Plan, requires an annual investment of $130 - 195 million to meet the following three goals:

    1). Replace all permanent-party central latrine dorms (complete with FY99 program).

    2). Build new dorms to eliminate dormitory room deficits (goal - FY07).

    3). Replace or renovate the worst existing dormitories (goal - FY07).
- Housing
  - 40,000 of our 104,000 housing units need revitalization; their average age is 32 years.
  - The Secretary of Defense has established a goal for the Services to eliminate all inadequate military family housing by 2007.
  - We cannot rely on military construction alone to upgrade our inadequate units by 2007.
    - Privatization allows the Air Force to attract private-sector capital to build new and replace inadequate housing, thereby leveraging our construction dollars and revitalizing our inventory sooner.
  - The Air Force has established a comprehensive program that will:
    - Eliminate inadequate family housing at all bases in the United States by 2007, with the exception of four locations where inadequate units will be eliminated by 2008.
    - Eliminate all inadequate overseas family housing by 2009.
    - Increase planned privatization to achieve a notional end state of privatizing 60-percent of the Air Force inventory in the United States and its territories.

Main Points

- Housing impacts morale, retention, and readiness; it remains a high priority for the Air Force.
- We are on a positive track to eliminate deficits and revitalize our inadequate housing and dormitory inventory well before the end of this decade.

Multi-Sensor Command and Control Aircraft (MC2A)

Background

- The Multi-Sensor Command and Control Aircraft (MC2A) will provide a near real-time, horizontally integrated view of the air and surface battlespace using advanced sensors, network centric warfare, and high-speed, wideband communications systems. MC2A is a key enabler for the Global Strike Task Force, Cruise Missile Defense (CMD), and Time-Sensitive-Target (TST) engagements.

Discussion

- MC2A capability objectives will be achieved through development spirals:
  - Spiral 1 fields MP-RTIP, the next generation Ground Moving Target Indicator (GMTI) sensor; a focused Air Moving Target Indicator (AMTI) capability supporting CMD; and an open system architecture to facilitate dynamic battle management in addition to command and control functions.
  - Future spirals (currently unfunded) envision integrating a Air Moving Target Indicator (AMTI) radar for 360 degree air surveillance, incorporating multi-sensor fusion, an Air Operations Center (AOC) execution cell and adding enhanced battle management capabilities.
- MC2A is a key element in transforming legacy systems into a Multi-sensor Command and Control Constellation (MC2C). MC2C is an overarching architecture integrating the capabilities of air, ground and space assets to allow seamless data exchange and processing of intelligence information.

Main Points

- MC2A Spiral1 fields a next-generation GMTI sensor enabling CMD and TST prosecution.
- MC2A provides the “growth” vehicle for developing future combat capabilities through dynamic battle management and sensor fusion.

Quality of Life

Background

- People are our most critical readiness component. Quality of life issues are addressed within the framework of the Total Force: Active, Guard, Reserve, Civilian retirees, and the family members of each.

Discussion

- Air Force is taking proactive approach to Quality of Life (QoL) by addressing readiness drivers directly.
- Necessary manpower: Global war on terrorism impacts already stressed force—updating wartime planning factors and validating real-world operations.
  - Conducting Core Competency Review (CCR)— identified 17,800 military positions which could be reapplied to help stressed career fields (12-14K people).
- Improve workplace environment: fully fund facility sustainment and increase funding for restoration and modernization of our facilities.
- Pursue fair and competitive compensation and benefits for Total Force: pay raises, special and incentive pays, travel and transportation allowances and reduced out-of-pocket housing costs.
- Balanced TEMPO: implemented AEF to balance impacts and provide greater predictability and stability. Requires more usage of the Active Reserve Component (ARC) and a Total Force focus for QoL initiatives.
- Due to civilian nature of ARC, support systems, medical, and other QoL issues must be responsive to needs of all reservists, families, and their employers.
  - Recently held DoD mobilization symposium to address complexities of ARC usage.
- Provide access for all to quality health care: emphasis on prevention programs, affordability, and readiness with TRICARE as backbone. Currently developing TRICARE next generation contracts (T-Nex) to further improve TRICARE for beneficiaries, DoD, and contractors.
- Provide access to safe, affordable and adequate housing through sustained investment levels, privatization (when feasible) and market-based housing allowances.
- Enhancing community and family programs: a crucial link between members, families and leadership creating necessary support to optimize retention.
- Taking a more collaborative approach to community and family service delivery—created Community Action Information Boards (CAIB) and Integrated Delivery System (IDS) working groups at Air Staff, Major Commands, and Installation levels.
  - The CAIB brings together senior leaders to review and resolve individual, family and installation communities that impact military readiness and quality of life.
  - The IDS working group brings together all community and family agencies together to ensure our military members and their families have access to the services and activities they need.
- Family Support Centers enhance recruiting and retention initiatives by meeting individual and family needs by offering information concerning deployment, reunion, financial readiness, life skills education, relocation, transition, spouse employment.

Main Points

- Investing in Quality of Life pays off in recruiting and retaining quality people.
- Enhanced community and family programs are a crucial link between members, families and leadership for Total Force—creates the necessary support to optimize retention.
- The Community Action Information Boards (CAIB), Integrated Delivery System (IDS) working groups, Family Support Centers (FSC) are working collaboratively to address and meet needs of the Air Force community.

Encroachment

Background

- The ability of the Air Force to effectively train, test, and operate requires a finite set of natural and manmade resources. Encroachment occurs when Air Force access to, or use of, these resources is denied or limited such that training, test, and operational activities are constrained or made financially burdensome to carry out, thus impeding or negatively impacting military readiness. Access to these resources is often controlled or limited by statutes, regulations, or local laws designed to conserve resources or manage economic development.
- Many different resource needs or uses can lead to encroachment of military readiness. Examples include:
  - Competition for airspace in and around military installations from commercial and general aviation can limit training, test, and launch activities. Loss of access to training airspace can affect the type and timing of critical training, test, and launch activities.
  - Conservation of natural resources such as endangered or threatened species, cultural resources, restrictions on noise levels, caps on air emissions, and controls on water quality, restrict the activities that the Air Force may conduct on land, water, and in the surrounding airspace.
  - Increasing competition with commercial users for radio frequency spectrum can interfere with command, control, communications, computer, intelligence, surveillance, and reconnaissance (C4ISR) capabilities intended to link the 21st Century warfighter to real time combat data, and may impact the next generation of weapon systems that depend upon such data.

Discussion

- National security requirements must be able to compete fairly and effectively with other important needs or users for valuable and sometimes scarce resources. The Air Force is currently working to define and quantify the resources needed to support mission requirements, and to measure and communicate the impacts of encroachment on mission readiness. The ability to measure encroachment and inform decision makers about impacts provides a focused, informed dialogue within the Services on resource needs, communicates with other agencies and lawmakers, and identifies trends or lessons learned that can prevent or minimize the negative effects of encroachment on future force restructuring and as well as future operational requirements.

Main Points

- The Air Force's Strategy to address encroachment issues:
  - Identify the resource base needed to perform the AF mission, and quantify the readiness impairments resulting from resource denial (encroachment).
  - Institute dialogue with other federal resource management agencies to develop regulatory or administrative improvements that can relieve military resource encroachment.
  - Communicate with states, local governments, and interested organizations regarding how unintended consequences of resource management programs can impair military readiness.
  - Explore the possible need for statutory modifications to prevent unintended impacts to military readiness from resource denial or degradation.

Recapitalization

Background

- Original Recapitalization effort during Summer and Fall 2000 highlighted these issues:
  - Constrained top-lines and near-term readiness demands forced under-funding of modernization and infrastructure, thus placing mid- and long-term readiness at major risk.
  - Stressed need to buy 170 aircraft per year (120 small, 50 large) until 2017 to fix readiness and recapitalize the force, then buy 150 per year (110 small, 40 large) to retain status quo.
  - Additional funding required for physical plant (includes military construction, real property maintenance, support vehicles, support equipment & bare basing, and comm), recruiting and retention programs (to increase end-strength to 370,000 by FY07), Defense Health Program (DHP) costs, plus start-up for over-65 TRICARE for retirees.
- DoD procurement requirement validated by multiple independent studies:
  - CBO estimate to maintain today's force is $90B with Air Force share of $35B annually.
  - CSIS estimate to replace QDR force is $121B with Air Force share of $51B annually.
  - CSIS estimate to modernize the force is $163B with Air Force share of $69B annually.
  - On 27 Sep 00, CSAF testified before the HASC and SASC that the Air Force required an additional $20 to $30B per year in order to fix readiness and recapitalize the force.

Discussion

- Events of 11 September 01 have altered the landscape of defense spending.
  - Dramatic increase in FY03 budget funded near-term readiness costs identified in recap study; but made only a down payment on recapitalization.
  - High purchase quantities of the 1980s and earlier, coupled with very low purchase quantities of the 1990s means large numbers of aircraft are getting old at the same time.
  - Average age of Air Force aircraft is now past 22.5 years and rising, in spite of new fiscal guidance—our fleet is vulnerable to a host of aging aircraft problems, including technical surprise.
  - Current procurement projections would leave most of our fighters over 20 years old by 2015.
  - By 2020, a large percentage of our tanker fleet will be approaching 60 years of age.
  - If the Air Force continues to fly at its current rate, as dictated by homeland defense needs and Operation Enduring Freedom, our aircraft will wear out more quickly than planned.

Main Points

- Air Force's challenge is to meet the near-term needs of our Nation, while at the same time ensuring that future airmen inherit an Air Force that is relevant, capable, and sustainable.
- The Air Force Recapitalization problem cannot be fixed in the near term—To support transformation, fix force structure and reverse aging trends, the AF must receive increased funding streams well beyond the FYDP.

Recruiting

Background

- The Air Force has only missed its goal one time (FY99) in the past 23 years.
- World events and end-strength issues have caused our goal to fluctuate.
- Goals: FY98-31,300; FY99-33,800; FY00-34,000; FY01-34,600; FY02-37,283; FY03-37,000
- Challenge continues to be attracting the right people, with the right skills, at the right time.
- Air Force has not lowered its standards to meet recruiting requirements.
- Accessions needed to replace normal retirements/separations and help meet AF end-strength.

Discussion

- Since missing goal in FY99, the Air Force has implemented several new initiatives:
  - Increased Recruiting Service's Advertising budget from about $17M in FY98 to approximately $89M in FY03, the majority of which is used for TV ads.
  - Increased recruiter authorizations from 1,209 in FY99 to 1,650 in FY03.
  - Implemented new recruiter selection process virtually ensuring 100% manning.
  - Expanded Prior Service / Sister Service Program.
  - Increased accessions from 605 in FY99 to 1,571 in FY02.
- Expanding Air Force Junior ROTC Program.
  - Creates Air Force awareness at an earlier age.
- Greatest recruiting competition is from companies offering numerous financial incentives.
- General public with less military experience makes recruiting more challenging.

Main Points

- Recruiting Service is well on its way to ensuring it meets Air Force accession needs both now and in the future.
- Efforts underway to continuously expand the target market and offer an attractive option for today's youth.

Retention

Background

- The Air Force cannot exceed personnel end strength on an annual basis as directed by Congress.
- Numerous intangible and tangible factors are critical to meeting retention goals.
  - Intangible Factors: Leadership, job satisfaction, self-worth.
  - Tangible Factors: Pay and benefits, retirement program, TEMPO, assignment system, medical and dental care, housing.

Discussion

- Of the enlisted force, 77% are eligible to make a reenlistment decision from FY03-05.
  - Need to closely monitor our stressed career fields: security forces, firefighter, PJ, CCT, Linguist, EOD, Aircrew, Armament, Munitions (to name a few) and continue to target with Selective Reenlistment Bonus (SRB).
  - Significantly expanded SRB program from 135 specialties in FY99 to 161 in FY02.
- For officers, we expect significant rated shortfalls to continue thru at least 2010. Legislation such as the Permanent Rated Recall program has allowed nearly 260 pilots to return to active duty in FY02, helping to help offset rated shortfalls.
  - Navigators backfilling for pilots raised overall rated HQ level staff manning from 58% to 76%. However, 48% of the current navigator force will be eligible to retire within the next four years. We are closely monitoring navigator retention and distribution, especially large numbers of senior navigators on the rated staffs.
  - Air Battle Managers (ABMs) are one of the most stressed career fields in the AF with an operations tempo at a high temp both at home and abroad.
- To address rated shortfalls, the Air Force has taken a number of steps. We increased the pilot training Active Duty Service Commitment (ADSC) to 10 years (8 years prior to 1 Oct 99) and pilot production to a steady state of 1,100 new pilots per year. For first time we are offering Aviation Continuation Pay (ACP) in FY 03 to select groups of navigators and ABMS and continue to offer aviation continuation pay bonuses to pilots who have completed their initial pilot training ADSC.
- In addition, we plan to implement in FY03 the Critical Skills Retention Bonus (CSRB) authorized by the FY01 NDAA for the "Big 5" officer AFSCs (Developmental Engineers, Scientists, Acquisition Program Managers, Comm/Info, and Civil Engineers). The Air Force now plans to implement the CSRB by offering $10,000 per year to eligible officers who commit to an active duty service commitment contract. It is expected that 15% (or more) improved retention will be the result.
- Re-recruiting: In Apr 02, the Air Force completed its initial "re-recruiting the force" test program. The program concentrated on development engineers entering critical decision points. The Air Force is seeking to institutionalize the re-recruiting program as a retention initiative and expand to other critical Air Force specialties.

Main Points

- 77% of enlisted force eligible to make reenlistment decision during FY03-05.
- Expect rated shortfalls to continue—managing proactively with ADSCs and ACP.
- Re-recruiting efforts and CSRB to address retention of critical skills — bonuses are essential to addressing proper skill mix of force.

Small Diameter Bomb

Background

- The Small Diameter Bomb (SDB) is a 250-pound class weapon that increases load-out and kills per sortie through use of a 4-place MIL-1760-compatible common carriage.
  - The SDB uses Global Positioning System (GPS)/Inertial Navigation System (INS) guidance against fixed relocatable targets.
  - The SDB will provide greater than 40NM standoff range, potential for reduced collateral damage, and increased kills per sortie over legacy munitions.
  - SDB is the critical element to the Global Strike Task Force (GSTF) operational concept of employing F/A-22 and B-2s with multiple miniature munitions to destroy critical targets within the first 1-3 days of a conflict.

Discussion

- Program awarded two Component Advanced Development (CAD) contracts in Sep 01.
  - Boeing and Lockheed Martin competing in two-year CAD phase.
  - Downselect to one contractor will occur in Sep 03.
  - Low Rate Initial Production (LRIP) will start FY05 to support Required Assets Available (RAA) at the end of FY06.
  - Threshold aircraft is the F-15E.
  - FY03 PB funds continue development of the SDB weapon system.

Main Points

- The SDB will provide fighter and bomber aircraft with an air-to-surface, tactically significant standoff capability from outside of point defenses against fixed targets.
- FY03 PB funds continue development of the SDB weapon system.

Smart Tankers

Background

- SECAF and CSAF directed Air Force transformation effort to increase the utilization/effectiveness of tankers that are "always there."
  - Contributes to building Predictive Battlespace Awareness.
- Two Smart Tanker initiatives:
  - KC-135 Roll-on/off Beyond Line of Sight Enhancement (ROBE) — a near term solution that performs a single, critical mission.
  - Multi-Mission Payload (MMP) — a more robust capability to be fielded potentially on the next generation of tanker aircraft.

Discussion

- Smart Tankers will enhance the Multi-Sensor Command and Control constellation while performing their primary air refueling mission; they are not a stand-alone C2ISR (Command & Control Intelligence Surveillance Reconnaissance) platforms.
- KC-135 ROBE will disseminate Link-16 data beyond line-of-sight (BLOS) restrictions.
  - Link-16 relay would send real time information back to the decision makers.
  - 29 Jan 02—CSAF approved a 40 Group A and 20 Group B program.
  - 5 Jun 02—KC-135 ROBE contract awarded.
  - 23 Oct 02—Demo successfully passed tactical data BLOS among numerous assets.
  - Expandable system architecture enables adding capabilities via spiral development.
- Future Air Refueling Aircraft MMP will integrate with dedicated joint manned/unmanned C2ISR aircraft and space assets to provide a communications gateway and cooperative sensing.
  - MMP will have remotely tunable, multi-function transceivers providing comm relay/translators able to receive, reformat, and route similar and dissimilar voice/data links and sensing capabilities.
  - C2ISR functionality onboard will contribute to shortening the find, fix, track, target, engage, assess (F2T2EA) time-critical targeting (TCT) kill-chain.
  - Transmits Link-16 data BLOS over non-Link-16 media.
  - Whereas ROBE is being built with existing hardware, MMP will have a modular, scalable, and open architecture to fulfill a variety of needs which should give it a significant capacity for growth in capabilities.
  - The MMP will have the ability to be dynamically allocated to different missions including communications and networking.

Main Points

- Smart tanker operations will enable current line-of-sight data to be passed BLOS.
- Capability to shorten the find, fix, track, target, engage, assess (F2T2EA) time-critical targeting (TCT) kill-chain.
- Provides real-time information increasing situational awareness among varied users.

Spectrum Protection

Background

- Spectrum is a precious, limited, and finite national resource.
- Spectrum access is essential to warfighter capabilities as well as commercial enterprises.
- Wireless technology explosion generates enormous spectrum demand greater than ever before in history.
  - Civil assault on prime spectrum used by weapon systems.

Discussion

- DoD owns no spectrum - used by permission nationally, borrowed internationally, competed globally.
- National laws govern spectrum access domestically - National Telecommunications Information Administration (NTIA) licenses federal access - FCC licenses civil access.
  - No final adjudication authority; consensus necessary involving rigid allocations.
- NDAA 1999 and 2000 provided some protection to federal spectrum users.
  - Compensation for relocation costs; consensus on alternate bands.
- Past sales of federal spectrum cost the DoD access to 400 MHz in high value bands.
- Internationally, individual nations control spectrum access.
  - US is one voice among many at the International Telecommunications Union.
- Hottest Spectrum Issues:
  - Ultra Wideband - Implement this dual military/civil use technology without negative operational impacts.
  - IMT-2000/3G - Industry eyeing critical federal/military spectrum for future generation personal communication devices.
  - World Radio Conferences - Global spectrum policies must not hinder US military operations.

Challenges

- Need a National Spectrum Policy - current "checks and balances" system is fragmented - must have a framework to balance national and economic security.
- Develop sound spectrum strategies/tactics/processes - warfighter needs greater bandwidth to tighten sensor-to-shooter loop in the "kill chain."
- Partner with national elements from developer to customer - integrate business processes.

Main Points

- Spectrum is a scarce national resource under high demand.
- National policy, processes, technology, and structure must assure DoD spectrum access - anything less threatens national security.

Strategy for Managing Aging Aircraft

Background

- Average aircraft fleet age is over 22 years and rising—it is vulnerable to a host of aging aircraft problems, including technical surprise. Some aircraft are already over 40 years old.
- Difficult to predict aging problems, readiness impacts, and program the appropriate costs across the FYDP. Some examples:
  - Cost of corrosion maintenance for all Air Force aircraft in 1997 around $795 million; current estimate is over $1 billion annually despite 5% reduction in aircraft inventory since 1997.
  - In last 10 years, KC-135 programmed depot maintenance costs tripled, depot work packages doubled, depot flow days more than doubled — mainly due to aging issues. Major structural repairs jumped from 1 per 4 aircraft to 2 per aircraft.
  - F100 engine fleet aging hardware issues this year led to 25 engine holes in aircraft, degrading readiness.

Discussion

- Aging Aircraft Office (ASC/AA), created in 2001, is Air Force's central agency for all aging aircraft and engine issues.
  - Coordinate and facilitate information flow about aging aircraft and engine related technologies and solutions among government agencies, private industry, and academia.
  - Focus on structural fatigue, cracks, and corrosion; parts obsolescence; aging electrical wiring; and diminishing manufacturing sources.
  - Currently assessing problems facing aging systems and will propose policies, procedures, plans and strategies for AF adoption and execution.
- RAND Corporation helping Air Force identify, understand and evaluate challenges associated with retaining aging aircraft.
  - For last 3 years, RAND conducted aging aircraft project reviewing both the Air Force's and commercial airline aging fleet experiences.
  - From the study, RAND developed age-based fleet structure and cost forecasting tools; and developed preliminary tools to forecast future availability levels.
  - Now evaluating workload growth effects on Air Force-wide mission readiness and maintenance and modification expenditures over next 2 or 3 decades.
- Logistics Management Institute is studying relationship between the effects of aging and operations tempo on O&S costs for the C-130H aircraft. They will attempt to develop a statistically sound repeatable methodology to describe the relationship between weapon system aging and support costs.
- Air Force is investing in spare parts, automating certain depot tasks, initiating new repair procedures, modifying subsystems, and making material substitutions to increase reliability across many weapon systems.
- These efforts should improve current situation, however, the long-term fix is to recapitalize aircraft fleets.
- Legacy systems will only get more and more expensive to operate; and there is insufficient funding to continue to fix aging problems on legacy systems and procure new systems at desired rates.

Main Points

- Air Force fleets are getting older and are more difficult and more expensive to maintain.
- Must find innovative ways to maintain aging systems, and predict aging problems.
- Long-term, must recapitalize aging systems to ensure a viable force for the future.

Unmanned Aerial Vehicles (UAV)

Background

- Both the MQ-1 Predator and RQ-4 Global Hawk unmanned aerial vehicles (UAVs) began as Advanced Concept Technology Demonstrations. Today they are key elements supporting persistent intelligence, surveillance and reconnaissance (ISR) due to their endurance over the battlefield. The MQ-9 "Predator B" is a new aircraft that is larger and flies at a higher altitude than Predator.
- MQ-1 Predator operates at altitudes up to 25,000 feet and provides full motion electro-optical/ infra-red (EO/IR) video (streaming video) and synthetic aperture radar (SAR). Current production models have built in laser designators and hardpoints on the wings to support small munitions. It has approximately 24 hours of endurance for long-dwell battlefield persistence.
- RQ-4 Global Hawk operates at altitudes up to 65,000 feet and provides still EO/IR and SAR imagery. It has approximately 35 hours of endurance for long-dwell operations.
- MQ-9 Predator B is envisioned to operate between 30,000 and 45,000 feet, possess the same video and laser designator capability as the MQ-1 but be able to carry up to 3,000 lbs. of ordinance on its wings. We currently have two prototype aircraft and have five advanced prototype aircraft on contract.

Discussion

- Predator is the prime example of how the marriage of new technology with new tactics is transforming the military's ability to wage war. The latest version of Predator, recently redesignated the MQ-1, will begin delivery in early 2003. It is equipped with hardpoints on the wings to accept lightweight weapons such as Hellfire and Stinger. It will also have built in laser designator to self-laze or buddy-laze for fighter aircraft. Predator is currently deployed supporting Operations Enduring Freedom and Southern Watch.
- The MQ-9 Predator B is not, as its name implies, a new version of Predator, but is a completely new aircraft, which flies higher and carries more payload than Predator. Predator B is in spiral development: currently flying two prototypes for aerodynamics characterization, next to build a stronger air vehicle for weapons testing, test with Hellfire, and then evolve to larger weapons such as the 500 lb. Joint Direct Attack Munition.
- Global Hawk is an ISR (Intelligence Surveillance Reconnaissance) only platform for long-range endurance missions. It is a successful example of spiral acquisition with the first production aircraft delivering in 2003. Future spirals include increased payload and power capability, improved radar and electro-optical camera, and a signals intelligence package. Although it was still in development, Global Hawk was deployed in support of Operation Enduring Freedom.

Main Points

- Endurance UAVs provide persistent ISR over the battlefield allowing the commander to watch events unfold on the ground, determine the ideal time to strike, and observe the results of the strike—all in real time.
- The spiral acquisition approach taken with Predator and Global Hawk allow new capabilities to be fielded more quickly.
- The Air Force continues to explore the employment of tactical/sub-tactical UAVs as a force multiplier in force protection.

Unmanned Combat Air Vehicles (UCAV)

Background

- The X-45 UCAV system is a joint experiment between the Air Force and the Defense Advanced Research Projects Agency (DARPA).
- Goals of the experiment are to demonstrate the technological feasibility, military utility, and operational value of a UCAV system to effectively and affordably prosecute missions in the 2010+ high-threat environment.

Discussion

- First flight of the X-45A occurred 22 May 02; additional flight testing underway.
- Starting design of the next iteration X-45B system.
- FY03 PB funds a maximum acceleration X-45 UCAV program to complete experimentation in FY06 and to field 14 Block 10 systems by FY08 for early warfighter assessment.

Main Points

- UCAVs have the potential to provide revolutionary capability against high risk, high priority targets.
- FY03 PB funds a maximum acceleration UCAV program.


KEY AIR FORCE
PROGRAMS
SPACE

Advanced EHF

Acquisition Status

- **Program Status:** System Development and Demonstration (SDD)
  - Milestone B and approval to enter SDDin October 2001
  - SDD Contract: 16 Nov 01; definitized 15 August 02
- **Satellites on Orbit:** 0
  - First Launch Dec 06
- **Satellites in Development:** 2
- **Contractors:**
  - **Sys Def:** National Team (LM, Northrop Grumman, Boeing)
  - **SDD:** Contractor Team (LM & Northrop Grumman)
- **Future Upgrades:** Transformational Satellite (TSAT) System
- **Purchase Requirements:** 3 - 5 (TBD per Transformational Communications Decisions)

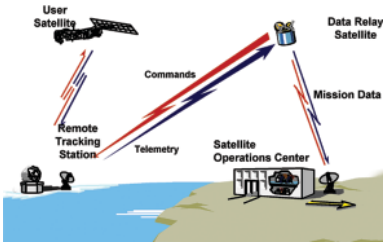
Capabilities/Profile

- **Key Performance Parameters**
  - **Anti-Jam Protection:** Support users exposed to fixed, transportable and mobile jammers
  - **Nuclear Protection:** Provide assured communications for networks supporting critical functions
  - **Access and Control:** Provide users ability to plan, control and reconfigure resources
  - **Interoperability:** Backwards compatible with Milstar; Support joint warfighter

Functions/Performance Parameters

- **Mission Statement:** Replenishes capability currently provided by the Milstar system with additional capability
  - Provides more capacity than Milstar
  - Provides more coverage/ communications options than Milstar
  - Will launch on EELV
- **Mission Parameters:**
  - Low Probability of Intercept (LPI)
  - Low Probability of Detect (LPD)
  - Data Rate increases from Milstar rate of 1.5 Mbps to 8 Mbps
  - Throughput increases to ~12x Milstar capability in MTW scenario

Air Force Satellite Control Network



Acquisition Status

• **Program Status:** Operational/ development

• **Unit Assignment:** AF Space Command

• **Current Inventory:**
  • 8 Remote Tracking Stations (RTSs)
  • 22 Antennas: 15 at the RTSs, 4 Data Link Terminals,1Check-out Facility, 2 Transportables
  • 2 Operations Control Centers
  • Centralized Command and Control

• **Projected Inventory:**
  • 8 RTSs
  • 21-24 Antennas: 16 at the RTSs, 2-3 Data Link Terminals, 1 Check-out Facility, 2-4 Transportables
  • 2 Operations Control Centers
  • Distributed Command and Control

• **Contractors:**
  • Honeywell Technical Services, Colorado

• **Current Upgrades:**
  • Remote Tracking Station Block Change to replace unsustainable, aging antennas and 1960's electronics
  • Orbital Analysis Station Follow/on to replace unsustainable mainframe computer-based command and control system to perform satellite collision avoidance mission
  • Network Ops improvements —automating scheduling, resource management, and orbit analysis system upgrade; interoperability with commercial and civil networks

• **Future Upgrades:** Automation, increased capacity, interoperability with other satellite networks, and improved reliability through modernization

Capabilities/Profile

• Global system of control centers, remote tracking stations and communication links
  • 2 Control Centers (CONUS)
  • 10 Antenna locations (worldwide)

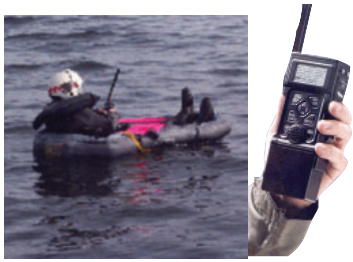
• World's only high-power, 24/7, global network designed to operate DoD, National, Civil, and Allied satellites in any orbit
  • Required for all DoD launch and early orbit operations and first satellite contact after launch
  • Telemetry, Tracking, and Commanding (TT&C)
  • Real-time low data rate mission data transfer for critical missions
  • US Government's best option for anomaly resolution and satellite emergencies
  • Critical for meeting warfighter real-time and near real-time weather, missile warning, navigation, surveillance, and communications requirements

Functions/Performance Parameters

• **Mission Statement:** Deploy, checkout, and fly operational USAF, National, Allied and R&D satellites
  • TT&C operations, relay mission data and communications and provide end-of-life disposal support
  • Provide launch & early orbit tracking operations support for US and allied launches
  • Augment other satellite control networks with additional on-orbit operations reach
  • Provides accurate satellite positioning data for avoiding collisions and radio frequency interference
  • Resolve operating emergencies with high-power uplink—averages 1 satellite rescue/month saving the US economy up to $2B/rescue

• **Performance Parameters:**
  • Over 150 satellites supported
  • Over 162,000 contacts per yr
  • 100% support of all major US (DoD and NASA) launches

Combat Survivor Evader Locator (CSEL)



Acquisition Status

• **Program Status:** Engineering and Manufacturing Development (EMD)—completing Block 1 development and testing
• **Production:** Full Rate Production begins in FY04
• **Current CSEL radio inventory:** 288
• **Purchase Requirements:** 17,800 radios for the Air Force; 53,000 total for all services, four UHF Base Stations, and Joint Search and Rescue Center workstations
• **Future Upgrades:** Block II Demand Assigned Multiple Access (DAMA) and DoD Information Infrastructure Common Operating Environment Level 7 capabilities; 2-way secure line-of-sight data links to rescue forces; M-Code GPS

Capabilities/Profile

• **Precision military GPS positioning/navigation**
  • Jam-resistant operations
• **Over-the-horizon (OTH) 2-way secure data transmission**
• **OTH Low Probability of Intercept/Low Probability of Detection**
• **Line-of-sight voice to rescue forces**
• **Global coverage**
• **Time from transmit to Joint Search & Rescue Center (JSRC) receive:** ≤ 5 min
• **Battery lifetime:** 4-day threshold / 21-day objective requirement
• **Radio dimensions:**
  • 3 1/4 Inches (Width)
  • 8 Inches (Length)
  • 1 3/4 Inches (Depth)
• **Weight:** 30.7 ounces

Functions/Performance Parameters

• **Mission Statement:** An Air Force-led joint program to provide enhanced Combat Search and Rescue (CSAR) communication and location capabilities by replacing antiquated PRC-90/-112 survivor radios with a new over-the-horizon (OTH) end-to-end system. CSEL provides assured OTH two-way secure satellite communications eliminating the line-of-sight requirement.
• **Performance Parameters:** CSEL uses precise GPS positioning and advanced anti-spoofing technologies to provide a reliable and accurate survivor location, an optimized waveform to reduce detectability and increased probability of collection by national assets. In addition, CSEL utilizes the international search and rescue satellite system (SARSAT)for polar-area OTH data communications. With these new capabilities, CSEL will increase rescue force success rates in on-going contingency operations, providing rapid and accurate location and authentication of survivor/evaders in minutes vice what could take days today.

Counterspace Systems

Acquisition Status

• **Program Status:** Counter Communications demonstrator delivered in FY 2001. Acquisition program new start in FY 2002. IOC projected for 2004.

  • Counter Surveillance/ Reconnaissance system acquisition new start in FY 2002.

  • Rapid Attack Identification Detection and Reporting System completed Analysis of Alternatives (AoA) in FY 2002 and system acquisition new start is scheduled for FY 2003.

• **Projected Inventory:**

  • Counter Communications Systems — 3

  • Counter Surveillance Reconnaissance Systems — 5

• **Contractors:**

  • Mission Area Primary Integrating Contractor — TRW

  • Counter Communications Developing Contract — Harris

  • Counter Surveillance Reconnaissance Concept Definition Contract — TBD

Capabilities/Profile

• Air Force's primary source for acquisition, architecture development, and procurement of current and emerging offensive and defensive counterspace capabilities. Provides system development of counterspace capabilities in response to warfighter requirements

  • Current Offensive Counterspace Projects:

    • Counter communications

    • Counter surveillance/ reconnaissance

  • Current Defensive Counterspace Project

    • Rapid Attack Identification and Reporting System

Functions/Performance Parameters

• **Mission Statement:** Develop technology, perform engineering and manufacturing development, integrate and procure both offensive and defensive counterspace systems in support of the Space Control mission

• **Performance Parameters:**

  • Offensive Counterspace currently emphasizes terrestrial-based, small, transportable systems which deny the enemy the use of satellite communications and surveillance/reconnaissance systems. Systems that produce reversible effects are currently being developed as the first priority.

  • Defensive Counterspace emphasis is on providing responsive space system attack warning, threat identification and characterization, and rapid mission impact assessment.

Defense Meteorological Satellite Program (DMSP)

Acquisition Status

• **Program Status:** Operational Sustainment

• **Production:** FY83-FY99

• **Satellites on Orbit:** 2 primary, 2 residuals

• **Satellites to be launched:** 5

• **Contractors:**
  • Lockheed Martin (Prime-Spacecraft)
  • Northrop Grumman (Prime-Sensors)

• **Future Upgrades:** Mini-Inertial Measurement Units for DMSPs F-17 through F-20 provide required redundancy in attitude control system.

• **Purchase Requirements:** None

** The DMSP program will cease operations early next decade at the end of the final DMSP satellite's life. Thereafter, DoD's requirements will be fulfilled by the joint DoD/DOC/NASA National Polar-orbiting Operational Environmental Satellite System (NPOESS).*

Capabilities/Profile

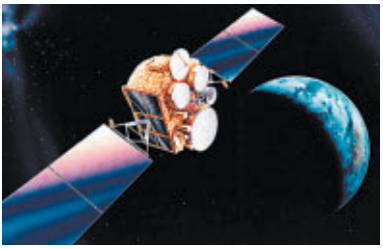
KPPs	Threshold/ Baseline	Actual
Satellite Mean Mission Duration	30 mos	45 mos
Primary Sensor Global Resolution	1.5 km	1.5 km
Theater Resolution	0.3 km	0.3km

Functions/Performance Parameters

• **Mission Statement:** The mission of DMSP is to provide an enduring and survivable capability, through all levels of conflict, to collect and disseminate global visible and infrared cloud data and other specialized meteorological, oceanographic, and space environment data required to support worldwide DoD operations and high-priority national programs.

• **Performance Parameters:** DMSP utilizes sensors that measure surface and atmospheric radiation in the visible, infrared, and microwave bands. In addition, DMSP flies sensors that measure space environmental parameters. Critical regional data is broadcast directly to user terminals in theater to support tactical missions. Global data is downloaded to processing centers to support both tactical and strategic missions.

Defense Satellite Communications System (DSCS) III



Acquisition Status

- **Program Status:** Fielding/ Deployment & Operational Support
- **Satellites on Orbit:** 5 primary, 5 residual
- **Satellites in Development:** 2
- **Contractors:** Lockheed Martin (Missile and Space), Sunnyvale, CA
- **Purchase Requirements:** 14 purchased; no additional satellites required
- **Future Upgrades:**
  - Wideband Gapfiller Satellites

Capabilities/Profile

Key Performance Parameters	
Requirement	**Actual**
30 Channels on 5 primary satellites	30 Channels on 5 primary satellites

Functions/Performance Parameters

- **Mission Statement:** Provides worldwide, responsive wideband and anti-jam satellite communications supporting strategic and tactical C3I requirements.
- **Mission Parameters:**
  - Backbone of the MILSATCOM system providing secure and high data rate SHF
  - Users include National and Senior Leadership, Defense Information System Network, Diplomatic Telecommunications Service, White House, Air Force Satellite Control Network, and Service ground mobile forces.

Defense Support Program

Acquisition Status

- **Program Status:** Operational
- **Unit Assignment:** USSTRATCOM
- **Current Inventory:** On-orbit inventory plus 2 satellites awaiting launch
- **Contractors:**
  - Northrop Grumman
- **Current Upgrades:**
  - Under the Space Based Infrared System (SBIRS) program Increment 1, all DSP mission processing was consolidated at a single CONUS location; IOC declared 18 Dec 01, allowing the closure of overseas bases following a transition period.
- **Future Upgrades:** Transition to SBIRS space constellation begins in FY07.

Capabilities/Profile

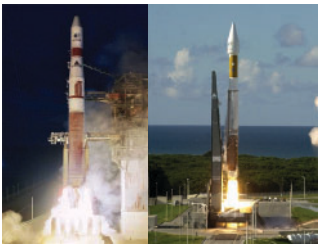
- **Satellites:** Classified number of geosynchronous earth orbit satellites.
- **Dimensions:** The current DSP-1 satellite is 28 feet long stowed and 32 feet long with solar panels deployed; 13 feet in diameter stowed; and generates 1275 watts of solar power.
- **Weight:** 5250 pounds weight

Functions/Performance Parameters

- **Mission Statement:** The Defense Support Program is a space based infrared satellite system providing global coverage and warning of ballistic missile launches, nuclear detonations, and other events.
- **Performance Parameters:** DSP provides:
  - Near-real time detection and reporting of missile launches against US and/or Allied forces, interests, and assets worldwide.
  - Near-real time detection and reporting of endoatmospheric (0-50km), exoatmospheric (50-300km), and deep space (>300km) nuclear detonations worldwide.

Evolved Expendable Launch Vehicle (EELV)

Boeing
Delta IV



Lockheed Martin
Atlas V

Acquisition Status

- **Program Status:**
  - Two $500M Other Transaction Agreements (OTA) for Development to Boeing and Lockheed Martin
  - Two Firm Fixed Price contracts for Initial Launch Services (ILS) FY02-06 for 26 launches
    - Boeing - 19 launches for $1.5B
    - Lockheed Martin - 7 launches for $506M
- Program is on schedule, cost and performance
  - Both systems completed final development reviews
  - First commercial Atlas V launched 21 Aug 02
  - First commercial Delta IV launched 20 Nov 02
  - First Government Delta IV (DSCS) Mar 03
  - First heavy launch on Delta IV (Demo) Sep 03

Capabilities/Profile

	Threshold	Objective
• Standardization		
• Launch Pad	Single Pad	Single Pad
• Payload interface	Std by Class	Std for all
• Mass to Orbit		
• Semi-Sync	2,500-4,725	+15%
• GTO	6,100-8,500	+15%
• Polar-LEO	41,000	+5%
• GEO	13,500	+5%
• Reliability	98%	>98%

Functions/Performance Parameters

- Mission: Partner with industry to develop a national launch capability that satisfies medium and heavy lift requirements for DoD, National, and civil user.
  - Replaces current Delta, Atlas, and Titan space launch vehicles (FY02-20)
  - Expected savings of more than 50% exceeds 25%-50% ORD goal
  - Equates to $12B savings through 2020
  - Purchasing firm fixed priced commercial launch services (CLS), not hardware
  - Competition for life of program
- Enhances U.S. industrial base, poises two competitive launch vehicle families to capture increased domestic and international commercial market share.

Global Broadcast System (GBS)

Acquisition Status

- **Program Status:**
  - GBS Phase 2 passed Milestone II in Nov 1997
  - Program re-baselined to establish:
    - Spiral development
    - 3 incremental IOCs (versus single IOC)
  - IOC 1 expected 4QFY03
- **Payloads on Orbit:** 3 GBS Phase 2 payloads on UHF Follow-on (UFO) satellites
- **Contractors**: Raytheon
- **Future Upgrades:**
  - Equivalent Phase 2 capability being designed into Wideband Gapfiller System
  - Future transition to internet protocol (IP) technology for greater flexibility and capability expansion
- **Purchase Requirements (Phase 2):**
  - 3 primary injection facilities to upload data to satellites
  - 96 receive terminals (initial buy)
  - Services will purchase additional receive terminals (1085 units currently planned)

Capabilities/Profile

- GBS Phase 2 Key Performance Parameters

Requirement	Threshold	Objective
Coverage	65S - 65N	5S - 65N
Spot Beams (per Sat.)	2 500NM; 1 2000NM	2 500NM; 1 2000NM
Simultaneous Uplinks	1 PIP; 1 TIP	1 PIP; 3 TIP
Security	unclas - TS/SCI	unclas - TS/SCI
Terminal Ops	F/T GRT; SRT & SSRT	F/T GRT; SRT & SSRT

Definitions

F/T GRT - Ground Receive Terminal
SRT - Ship Receive Terminal
SSRT - Submersible Ship Receive Terminal
PIP - Primary Injection Point
TIP - Theatre Injection Point

Functions/Performance Parameters

- **Mission Statement:**
  - **GBS Phase 2:** Provide efficient high data rate broadcast capability between many distributed information sources simultaneously to warfighters using small, inexpensive terminals
- **Mission/Performance Parameters:**

GBS Phase 2 satellite provide:

- 96 Mbps capacity (max)
- 4 channels (max of 24 Mbps each)
- 2 spot beams and 1 wide area beam
- Providing 0.9 Terabytes of critical bandwidth to the warfighter in Operation Enduring Freedom

Global Positioning System (GPS)

Acquisition Status

- **Program Status:** Operational
  - Next IIR Launch - Mar 03, Jul 03
  - First IIF Launch - CY 06
- **Unit Assignment:** 2nd Satellite Operations Squadron (2SOPS), Shriever AFB, CO
- **Production:** Ongoing
- **Current Inventory:** 27 operational satellites; 24 required
- **Contractors:**
  - Block II/IIA - Boeing
  - Block IIR/IIR-M - LMMS
  - Block IIF - Boeing
  - Block III – LMMS, Boeing & Spectrum Astro (concept exploration studies)
- **Future Upgrades:** Control and Space Segment Modernization, New Military and Civil Signals, User equipment upgrades, Navigation Warfare (Navwar); Block III addressing system-wide architectural concepts; Flexible Power on Blocks IIR & IIF will deliver higher power and anti-jam to the warfighter starting in 2004

Capabilities/Profile

- 24 Satellite constellation
- 6 Orbital Planes
- Altitude: ~10,898 miles
- 12 Hour Orbit
- 3 Segments:
  - Space
  - Control
  - User
- Secondary Mission
  - Nuclear Detonation (NUDET) Detection System (NDS)

Functions/Performance Parameters

- **Mission Statement:** Provides highly accurate time and three-dimensional position and velocity information to an unlimited number of users anywhere on or above the surface of the earth, in any weather.
- **Performance Parameters:**
  - Constellation Sustainment: 24 satellites
- **Accuracy***
  - Standard Positioning Service (SPS): 10-50 meters
  - Precise Positioning Service (PPS): 16 meters or better
  - Timing: +25 nanoseconds

** User accuracy is dependent on receiver type and number of satellites acquired*

Integrated Tactical Warning/Attack Assessment (ITW/AA)



Acquisition Status

• **Program Status:** Sustainment, Evolutionary Acquisition

• **Units of Assignment:** USSTRATCOM, NORAD, NORTHCOM

  • NORAD Cheyenne Mountain Complex (NCMC), ICBM Radars (BMEWS), SLBM Radars (PAVE PAWS), Mobile Consolidated Command Centers (MCCCs), Alternate Missile Warning Center (AMWC), SPACEAF AOC

• **Current Inventory:** 3 BMEWS, 2 PAVE PAWS, 1 Perimeter Acquisition Radar Characterization System (PARCS)

  • Space Systems: Defense Support Program (DSP) performs ITW/AA and Space Based Infrared System (SBIRS) High will replace DSP in the future.

• **Contractors:** Lockheed Martin Mission Systems (LMMS)

• **Planned Upgrades:**
  • Combatant Commanders Integrated Command and Control System (CCIC2S)
  • Service Life Extension Program (SLEP).

Capabilities/Profile

• **Radar:** 5 Solid State Phased Array Radars and 1 Perimeter Acquisition Radar Attack Characterization System

• **Command Centers:** 2 fixed, 2 mobile

• **Range:** Worldwide

• **Dimensions:** Varies by site

Functions/Performance Parameters

• **Mission Statement:** The Integrated Tactical Warning/ Attack Assessment (ITW/AA) system integrates and correlates missile launch, space object orbit, and air surveillance information to assess the nature of an enemy attack and issue warnings to the President of the United States, the Prime Minister of Canada, United States Secretary of Defense and warfighting Combatant Commanders

• **Performance Parameters:**

  • Cheyenne Mountain Complex (CMC) is the C^4 heart of the ITW/AA system
  • Cheyenne Mountain Upgrade declared fully operational on 29 Oct 98
  • MCCCs provide C2 continuity to Combatant Commanders in event of primary facility incapacitation. Under CCIC2S, the acquisition stratey involves an evolutionary approach to enhance the operational architecture to become more robust and interoperable.

Launch & Test Range System (LTRS)

Acquisition Status

• **Program Status:** Engineering and Manufacturing Development (EMD) and procurement

• **Production:** Ongoing

• **Current Inventory:** Eastern and Western Ranges

• **Contractors:**

  • Lockheed Martin, ITT Industries

• **Future Upgrades:** GPS Metric Tracking; Command Destruct; Communications; Telemetry

Capabilities/Profile

• Launch & Test Range System (LTRS), formerly called the Spacelift Range System, comprised of:

  • Western Range at Vandenberg AFB, CA

  • Eastern Range at Cape Canaveral AFS/Patrick AFB, FL

• Current LTRS assets are based on 1950s/1960s technology

  • Outdated, unreliable, inefficient, and increasingly unsupportable equipment

  • Costly to operate and maintain, with manpower intensive architecture

• LTRS modernization program upgrades multiple range operational capabilities, improving responsiveness, reliability, and supportability

Key Performance Parameters

• **Mission Statement:** Provide responsive, reliable, and cost effective launch scheduling, communications, tracking, telemetry, flight analysis, and emergency termination for DoD, civil, and commercial space launches, ballistic missile tests, and guided weapons and aeronautical tests; also supports space surveillance mission

• **Performance (DoD launches only)**:

  • Launch Coverage: ER: 34-112°; WR: 153-281°

  • Atlas II: 12/12 = 100%

Medium Launch Vehicles

Acquisition Status

• **Program Status:** Operational. Launch vehicle production complete.

• **Production:** Last launch scheduled for FY06

• **Inventory:**

  • One Atlas IIAS mission and one Atlas III mission remain through FY04 (both National Reconnaissance Office satellites).
  • 14 Delta II missions remain through FY06 (all Global Positioning System satellites).

• **Contractors:**

  • Atlas II/III: Lockheed Martin, Denver, CO
  • Delta II: Boeing - Huntington Beach, CA

• **Future Upgrades:** None planned.

• **Purchase Requirements:** All USAF vehicles (Delta II) have been manufactured and are being stored. Launch operations remain.

Capabilities/Profile

• **Lift capability:**

  • Atlas II/IIA/IIAS — capable of lifting between 4,900 - 8,150 lbs to geosynchronous transfer orbit
  • Delta II—capable of lifting over 4,010 lbs to geosynchronous transfer orbit

• **Launch Sites:**

  • Atlas—Launch Complex 36 A/B, Cape Canaveral, FL and Space Launch Complex 3E, Vandenberg AFB, CA
  • Delta II—Launch Complex 17 A/B, Cape Canaveral, FL and Space Launch Complex 2W, Vandenberg AFB, CA

Key Performance Parameters

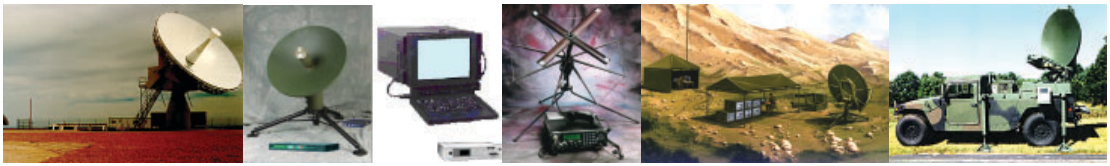
• **Mission Statement:**

  • The Atlas space launch vehicles provide launch capability for National Reconnaissance Office payloads.
  • The Delta II launch vehicle provides a medium space lift capability to support the Global Positioning System constellation.

• **Performance (DoD launches only)**:

  • Delta II: 41/42 = 98%
  • Atlas II: 12/12 = 100%

MILSATCOM Terminals



DSCS | GBS Receive Suite | Spitfire | GMT | SMART-T

Acquisition Status

• **Program Status:**
Development, procurement, upgrade and sustainment efforts:

- Produce & field UHF Demand Assigned Multiple Access (DAMA) air & ground (Airborne Integrated Terminal (AIT and Multi-Band Multi-Mode Radio (MBMMR) and Spitfires).
- Develop, produce & field Ground Multi-band Terminals (GMT).
- Develop, produce & field Secure Mobile Anti-Jam Reliable Tactical - Terminal (SMART-T).

• Develop, produce & field Family of Advanced Beyond Line-of-Sight Terminal (FAB-T).

• Sustain Single-Channel Anti-Jam Man Portable (SCAMP) and Air Force Command Post Terminals.

• Upgrade Defense Satellite Communications System (DSCS) Terminals.

• **Emerging Development**

- Laser Communications Terminal.
- High Data Rate (HDR) Terminals to support Transformational Communications (TC).

• **Current Inventory:** Includes ground, fixed, transportable and airborne:

- Narrowband/UHF (AIT, MBMMR, Spitfire) - 677
- Wideband/SHF (DSCS, GBS, GMT, Lasercom, Airborne (FAB-T HDR) and Ground (GMT HDR) HDR terminals) - 48 Air Force and 96 Joint Service
- Protected/EHF(SCAMP, SMART-T, FAB-T (non-HDR)- 96

• **Contractors**: Multiple Primes—Boeing (CA); Raytheon (MA, FL, IN, VA); Harris (FL); Rockwell (IA)

Capabilities/Profile

Satellite communications terminals for:

• **UHF DAMA air & ground**
- Airborne Integrated Terminal
- Multi-Band Multi-Mission Radio
- Spitfire

• **Wideband SHF Connectivity**
- Global Broadcast Service (GBS) receive suites (RS) and Theater Injection Points (TIP)
- Ground Multiband Terminal (GMT)
- Defense Satellite Comm System (DSCS)

• **Protected EHF (and AEHF) Connectivity**
- Family of Advanced Beyond line-of-sight Terminals (FAB-T)
- Army developed Secure Mobile Anti-jam Reliable Tactical Terminal (SMART-T)

• **Transformational Communications**
- Laser Communication Terminal (Lasercom)
- High Data Rate (HDR) Terminals—derivatives of FAB-T and GMT to support Intelligence, Surveillance, and Reconnaissance (ISR) community

MILSATCOM Terminals, cont.

Functions/Performance Parameters

• **Mission Statement:** Develop, procure, deploy, and sustain multi-band SATCOM terminals utilized by Air & Space Expeditionary Forces (AEF), SIOP, Combatant Commanders, and other users to communicate over current and emerging military and commercial satellite systems.

• **Performance Parameters:** Communications connectivity in the following frequency bands:

- Narrowband/UHF- Secure, mobile, DAMA
- Wideband/SHF- Secure, long-haul,tactical and strategic
- Protected/EHF- Secure, nuclear hardened, Anti-Jam / Anti-Scintillation, Low Probability of Intercept, tactical and strategic
- Terminals will support the Transformational Communications Architecture

Milstar

Acquisition Status

• **Program Status:** Engineering & Manufacturing Development (EMD)

• **Satellites on Orbit: 4**

2 Block I satellites with Low Data Rate (LDR), 2 Block II satellites with both Low and Medium Data Rate (LDR/MDR)

• **Satellites to be Launched:** 1 Block II

• **Contractors:**
  • Lockheed Martin, Missiles & Space (Prime)
  • Boeing, Northrop Grumman (Major Subs)

• **Future Upgrades:** Advanced EHF communications satellites will replenish Milstar satellites with first launch in FY07.

• **Purchase Requirements:** N/A

Capabilities/Profile

• **Key Performance Parameters**

  • **Capacity:**

  • **LDR:** 75 to 2400 bits per second (bps); EHF at 2 GHz bandwidth; SHF downlink frequency at 1GHz bandwidth

  • **MDR:** 4.8 to 1544 Kbps; EHF at 2 GHz bandwidth; Downlink freq. SHF at 1GHz bandwidth

• **Protection:**

  • Low Probability of Intercept/Detection (LPI/D)
  • Anti-Jam (AJ)
  • Anti-Scintillation (AS)

Functions/Performance Parameters

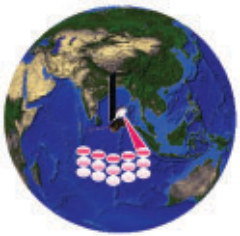
• **Mission Statement:** Provides the President, Secretary of Defense, and Combatant Commanders with assured, worldwide command and control (C2) for tactical and strategic forces.

  • Program will specifically:

    • Maintain operations support for satellites 1, 2, 4 & 5 (#3 did not achieve useful orbit).
    • Complete launch of satellite 6 in FY03.

• **Mission Parameters:** Low Probability of Intercept/Detection (LPI/D), Anti-Jam (AJ), and Anti-Scintillation (AS) protected communications at low and medium data rates (LDR and MDR).

National Polar-orbiting Operational Environmental Satellite System (NPOESS)



Acquisition Status

- **Program Status:** Acquisition & Operations phase
- **Production:** FY02-FY15
- **Current Inventory:** None
- **Projected Inventory:** Six total
- **Contractors:**
  - Northrup Grumman (Prime)
  - Raytheon, Boeing Satellite Systems, Ball Aerospace, ITT, and Saab Ericsson (Instruments)
- **Future Upgrades:** TBD

Capabilities/Profile

KPPs	Threshold
Vertical Moisture	> of 20% or 0.2g/kgclear/cloudy
Temperature Profile	300mb +/- 1.6K/km
Clear/Cloudy	700mb +/-2.5K/km
Imagery refresh	≤ 4 hrs avg, ≤ 6hrs max
Sea Surface Temp	+/- 0.5 deg C
Sea Surface Winds	> of 2m/s or 10%
Soil Moisture	Skin Layer –0.1cm
Data Access	capable of selective denial
Interoperability	100% of top-level IERs designated critical

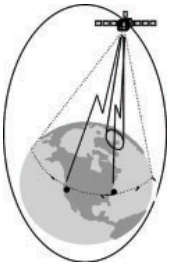
Schedule

Milestone I: Mar 97
Key Decision Point (KDP) C: Aug 02

Functions/Performance Parameters

- **Mission Statement:** NPOESS is a tri-agency program (DoD, DOC, and NASA) that will provide military commanders and civilian leaders assured timely, high quality environmental information to effectively employ weapon systems and protect national resources (safety, life, and property). The converged program will be the nation's primary source of global weather and environmental data for operational military and civil use for a period of at least 10 years.
- **Performance Parameters:** NPOESS will fly a suite of instruments that will provide visible and infrared cloud-cover imagery and other atmospheric, oceanographic, terrestrial, and space environmental information. In all, NPOESS will measure 55 distinct environmental parameters such as soil moisture, cloud levels, sea ice, ozone, ionospheric scintillation, and more.

Polar MILSATCOM



Acquisition Status

• **Program Status:** Interim Polar Program is in the Engineering & Manufacturing Development (EMD) phase. Design, test, and launch of last two packages.

• **Satellites on Orbit:** 1

• **Satellites in Development:** 2

• **Contractors:** Classified

• **Future Upgrades:** Next generation capability to be satisfied by Advanced Polar System (APS). Preacquisition, system definition, and risk reduction starts FY04.

Capabilities/Profile

• **Coverage:** North polar region. 24 hours/day required (takes two satellites).

• **Compatibility:** Milstar compatible Low Data Rate (LDR) service. (Milstar terminals require software modification for Doppler effect).

• **Integration:** EHF packages on three classified host satellites. Polar 1 added to earlier generation host, launched CY 97. Polars 2 and 3 being integrated into design of new generation host available in FY04 and FY06, respectively.

Functions/Performance Parameters

• **Mission Statement:** Provides secure, survivable, communications connectivity supporting peacetime, contingency, and wartime operations in the north polar region. Supports Independent Submarine Operations & Maritime Task Force Operations, Special Operations Forces, Intelligence Collection/Dissemination Activities, and in the future, Strategic Bombers.

• **Mission Parameters:** Same as Milstar LDR connectivity: 75-2400 bps data rates with Low Probability of Intercept/ Detection (LPI/D), Anti-Jam (AJ), and Anti-Scintillation (AS) protection.

Rocket Systems Launch Program (RSLP)

Acquisition Status

• **Inventory:** Over 1,250 stored motors

• **Contractors:**

  • **Orbital/Suborbital (Long-range):**

    • Orbital Sciences (Phoenix, AZ)

  • **Sounding Rocket:**

    • Coleman Research (Orlando, FL)
    • Lockheed Martin (Denver, CO)
    • Orbital Sciences (Phoenix, AZ)
    • Space Vector (Chatsworth, CA)

  • **Advisory & Assistance:**
  • TRW (Albuquerque, NM)

Capabilities/Profile

• **Store Deactivated ICBM Motors:**

  • $3 Billion ($FY02) in Launch Assets

• **Perform Aging Surveillance on stored motors**

• **Provide Cost Reimbursable Launch Services for DoD Flight Tests:**

  • Provide Payload Integration Services
  • Refurbish and Transport Motors/Boosters
  • Conduct Launch

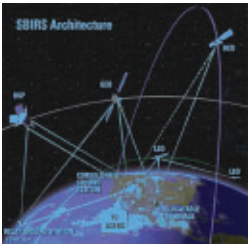
Functions/Performance Parameters

• RSLP will maintain active control and management of Air Force excess ballistic missile assets and will provide, on a cost reimbursable basis, flight test support and operations for national R&D requirements.

• Over 600 launches since 1962.

• Does $75 Million ($FY02) in reimbursable launch business per year - represents about $40 million in launch cost-avoidance for our customers.

Space Based Infrared System High (SBIRS High)



Acquisition Status

• **Program Status:** SBIRS High is in System Development and Demonstration (SDD).

• **Unit Assignment:** USSTRATCOM

• **Projected Inventory:**

  • SBIRS High consists of 4 Geosynchronous Earth Orbit (GEO) Satellites and 2 Sensors in Highly Elliptical Orbit (HEO); a fifth GEO satellite (spare), plus ground elements.

• **Contractors:**

  • Lockheed Martin Space Systems (prime)

  • Northrop Grumman (subcontractor)

Capabilities/Profile

• **Mission Areas:**

  • Missile Warning- North America & Theater

  • Ballistic Missile Defense

  • Battlespace Characterization

  • Technical Intelligence

• **Key Performance Parameters:**

  • Coverage

  • Minimum Threat

  • Report Time

  • Probability of Warning

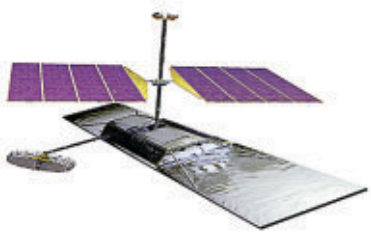
  • Data Availability

Functions/Performance Parameters

• **Mission Statement:** SBIRS consolidates the national and DoD's infrared detection systems into a single overarching architecture that fulfills the nation's security needs in the areas of missile warning, missile defense, technical intelligence, and battlespace characterization.

• **Performance Parameters:** SBIRS enables global, simultaneous surveillance, tracking and targeting of multiple targets in multiple areas of responsibility (AORs) and surveillance of infrared sources of operational, intelligence, or national significance.

Space Based Radar



Acquisition Status

• **Program Status:** Concept and Technology Development:

- Mission Need Statement approved by Air Force and Joint Requirements Oversight Councils (AFROC, Oct 01; JROC, Apr 02).
- System (draft) Concept of Operations (CONOPS) updated in Feb 02.
- OSD SBR Roadmap published in Feb 02.
- Ground Moving Target Indication (GMTI) Analysis of Alternatives (AoA) began in Oct 01, interim results were reported in Nov 02. Completion expected in Nov 03.
- Joint USAF/USA GMTI Capstone Requirements Document (CRD) updated.
- Initial Capabilities Document (ICD) development began in Feb 03. Prior to KDP B, a Capabilities Development Document (CDD) will be developed using GMTI AoA results to determine KPPs and measures of effectiveness (MOEs).

• **Initial Launch Capability:** FY 2012

• **Contractors:**

- Electronically Scanned Array (ESA) Technology Contracts: Northrop Grumman, Raytheon
- Contracts/On-board Processing Contracts: Harris, Northrop Grumman, Raytheon
- Analysis of Alternatives (AoA) Contract: Booz, Allen, and Hamilton
- Concept Development Contracts: Boeing, Lockheed Martin, Northrop Grumman, Raytheon, Spectrum Astro
- Support Contractors: Aerospace, MITRE, CSC

• **Schedule**: Key Decision Point (KDP) A currently planned for 3rd Qtr FY03.

Capabilities/Profile

• **Payload:** Satellites equipped with Electronically Scanned Array (ESA) to provide:

- Ground Moving Target Indication (GMTI)
- Synthetic Aperture Radar (SAR) Imagery
- High Resolution Terrain Information (HRTI)

• **Tasking, Collection Processing, Exploitation, Dissemination:** Direct downlink, designed for theater-based tasking & data processing compliant with communications links and imagery processing standards

Functions/Performance Parameters

• **Mission Statement:** Space Based Radar will provide rapid Battlespace Dominance and Operational Decision Superiority through:

- Day/night, near continuous surveillance with Ground Moving Target Indication (GMTI) and Synthetic Aperture Radar imaging from space.
- Deep-look, wide area surveillance of denied areas allowing for responsive, precision targeting for the warfighter.

• **Performance Parameters:** Exact surveillance capabilities and numbers of spacecraft are subject to technical tradespace considerations. These considerations will be evaluated as part of the ongoing Analysis of Alternatives effort.

Space Surveillance Network (SSN)

Acquisition Status

- **Program Status:** Operational
- **Unit Assignment:** USSTRATCOM
- **Current Inventory:** 7 dedicated sensors (1 space-based), 8 collateral sensors, and 14 contributing sensors
- **Projected Inventory:** 8 dedicated, 8 collateral sensors (with addition of the Globus II radar for deep space tracking), and 14 contributing sensors
- **Contractors:**
  - Raytheon (Sudbury, MA)
  - Northrop Grumman (Colorado Springs, CO)
- **Current Upgrades:**
  - Globus II radar in Norway for deep space tracking
  - GEODSS charge coupled device (CCD) camera; replacement of telescope and dome controllers (TDC).
- **Future Upgrades:**
  - Space-Based Space Surveillance (SBSS) System
  - Eglin Service Life Extension Program (SLEP)
  - Haystack Ultra-wideband Satellite Imaging Radar (HUSIR) Upgrade

Capabilities/Profile

- **Ground Sensors (dedicated):** 4 Optical and 2 Radar
- **Ground Sensors (other):** 8 collateral; 14 contributing sensors
- **Satellites (dedicated):** 1 Midcourse Space Experiment/Space-Based Visible (MSX/SBV)
- **Range:** Near Earth object tracking to 3000 nm, deep space tracking to 22,000 nm from ground-based sensors
- **Dimensions:** Varies by sensor/site

Functions/Performance Parameters

- **Mission Statement:** Maintain space situation awareness by detecting, tracking, identifying, characterizing, and monitoring all man-made objects in Earth orbit. The SSN operates a worldwide network of dedicated, collateral, and contributing electro-optical and radar sensor systems integrated with required C2, data processing, and analysis functions.
- **Performance Parameters:** Provides awareness of all space events and activities such as:
  - Satellite attack warnings and satellite overhead threat warnings
  - New foreign launches and space treaty monitoring
  - Space object break-ups or decays
  - Satellite maneuvers
  - Space object identification/ mission payload assessment (SOI/MPA)
- Supports DoD, NRO and NASA space operations.
  - The space object catalog contains over 9000 objects. Approximately 80% are near Earth objects; 20% deep space. Much of this data is shared with the United Nations, NASA, U.S. allies, and foreign launch agencies.

Space Test Program (STP)

Acquisition Status

• Coriolis mission on Titan II in Jan 03: Risk reduction effort for NPOESS environmental sensor

• Communication/Navigation Outage Forecasting System (C/NOFS) mission on Pegasus in FY04: Forecast ionospheric scintillations that degrade communication, navigation and surveillance systems

• STP-EELV mission with first Evolved Expendable Launch Vehicle (EELV): Secondary Payload Adapter (ESPA) in FY06

Capabilities/Profile

• Conducts space missions for DoD space research community
• Approx $50M RDT&E program
• Flight test new space system technologies
• Improve operational capabilities by characterizing environment, sensor physics
• Perform risk reduction through direct flight test of prototype components
• Develop and test advanced launch vehicle technologies and capabilities

Functions/Performance Parameters

• Conducts mission design, procures launches and spacecraft
• Functions as single DoD liaison for military payloads on Shuttle and International Space Station

• Conducts on-orbit operations
• R&D Experiments selected annually via the DoD Space Experiments Review Board (SERB)
• 20% of payloads fly as secondary payloads
• 50% fly on the Shuttle
• 30% fly on dedicated freeflying satellites

Titan Space Launch Vehicles Program

Acquisition Status

• **Program Status:** Active. Flyout and program closeout activities remain.
• **Production:** Factory Line began shutdown in FY99
• **Inventory:**
  • Titan IV - 5 launch vehicles remain
  • Titan II - 1 launch vehicles remain
  • Inertial Upper Stage - one remains (for DSP-22)
• **Contractors:**
  • **Titan IV/II:** Lockheed Martin, Denver, CO
  • **IUS:** Boeing, Huntington Beach, CA
• **Future Upgrades:** None planned
• **Purchase Requirements:** Launch services remain until flyout. Last USAF launch scheduled for FY04. Final Titan launch scheduled for FY05.

Capabilities/Profile

• **Lift capability:**
  • Titan IVB capable of lifting 12,700 lbs to geosynchronous orbit; 47,800 lbs to polar low earth orbit
• Titan II capable of lifting over 4,200 lbs to polar low earth orbit

• **Launch Sites:**
• Titan IVB - Launch Complex 40 Cape Canaveral, FL and Space Launch Complex 4E Vandenberg AFB, CA
• Titan II - Space Launch Complex 4W, Vandenberg AFB, CA

Functions/Performance Parameters

• **Mission Statement:**
  • Titan IV provides heavy lift capability to deliver the Nation's highest priority satellites into orbit from Cape Canaveral Air Station, FL, and Vandenberg AFB, CA. Remaining payloads include Defense Support Program, Milstar, and National Reconnaissance Office.
  • Titan II provides medium lift capability from Vandenberg AFB using refurbished Titan II ICBMs. Remaining payloads include Defense Meteorological Support Program, National Oceanic and Atmospheric Administration, and Space Test Program.
• Performance**:**
  • Titan IVA/B: 31/34* = 91%
  • Titan II: 12/12 = 100%

** Does not include 4th failure due to IUS malfunction*

Wideband Gapfiller System (WGS)

Acquisition Status

- **Program Status:** Production
  - Satellite 1 launch in Oct 04 (Satellite available for Jun 04 launch)
  - Satellite 2 launch in Feb 04 (Satellite available for Nov 03 launch)
  - Satellite 3 launch in Sep 05
- **Satellites on Orbit:** 0
- **Satellites in Development:** 3
- **Contractors**: Boeing
  - Contract Awarded Jan 01
  - Sole Source, FAR Part 12
  - Development & Production
- **Future Upgrades:** Advanced Wideband System
- **Purchase Requirements:** 3 Satellites currently. A contract option may be exercised for 3 additional satellites, if required in conjunction with Transformational Communications.

Capabilities/Profile

WGS Key Performance Parameters:

- **Coverge:** 24 hours between 65 degrees North & South
- **Capacity:**
  - Threshold: 1.2 Gbps
  - Objective: 3.6 Gbps
- **Access & Control:** Control from Launch and Early Orbit operations through disposal
- **Interoperability:** Interoperable with legacy terminals

Functions/Performance Parameters

- **Mission Statement:** High data rate satellite broadcast system meant to bridge gap between current systems (DSCS & GBS and Transformational Communications)
- **Mission/Performance Parameters:**

Wideband communications at X and Ka Band frequencies

- Two-way X Band
- New two-way Ka Band
- Ka broadcast
- ~12x throughput capacity of DSCS III satellite


KEY AIR FORCE
PROGRAMS
AIRCRAFT

AC-130H Spectre

Acquisition Status

• **Program Status:** Sustainment

• **Current Inventory:** 8

• **Unit Assignment:** Hurlburt Field, FL

• **Contractors:** WR-ALC/LUG

• **Future Upgrades:** Direct Infrared Counter Measure (DIRCM); C-130 Avionics Modernization Program (AMP); Common Avionics Architecture for Penetration (CAAP); ALE-47 Chaff & Flare System; ARC-231 Radio; APN-241 Radar; High Power Fiber Optic Towed Decoy (HPFOTD)

Capabilities/Profile

• **Service Ceiling:** 21,000 Feet

• **Combat Range:** Unlimited (air refuelable)

• **Crew Complement:** 13 — five officers (pilot, co-pilot, navigator, fire control officer, electronic warfare officer); eight enlisted (flight engineer, loadmaster, low-light TV operator, infrared detection set operator, four aerial gunners)

• **Dimensions:**

  • 132 Feet (Wing Span)

  • 99 Feet (Length)

  • 38 Feet (Height)

• **Weight:** 155,000 Pounds (Gross Weight)

Functions/Performance Parameters

• **Mission Statement:** The AC-130H Spectre gunship's primary missions are close air support, air interdiction and armed reconnaissance. Other missions include perimeter and point defense, escort, landing, drop and extraction zone support, forward air control, limited command and control, and combat search and rescue.

• **Performance Parameters:**

  • Power Plant: Four Allison T-56-A-15 turboprop engines

  • Thrust: 4,910 shaft horsepower each engine

  • Speed: 289 miles per hour (464 kilometers per hour) at sea level

AC-130U Spooky

Acquisition Status

• **Program Status:** Sustainment, 4 x AC-130U additional buys planned

• **Current Inventory:** 13

• **Unit Assignment:** Hurlburt Field, FL

• **Contractors:** Boeing, Integrated Weapon System Support (IWSS)

• **Future Upgrades:** Direct Infrared Counter Measure (DIRCM); C-130 Avionics Modernization Program (AMP); Common Avionics Architecture for Penetration (CAAP); ALE-47 Chaff & Flare System; High Power Fiber Optic Towed Decoy (HPFOTD); RF Low Band Jammer

Capabilities/Profile

• **Service Ceiling:** 21,000 Feet

• **Combat Range:** Unlimited (air refuelable)

• **Crew Complement:** 13 — five officers (pilot, co-pilot, navigator, fire control officer, electronic warfare officer); eight enlisted (flight engineer, loadmaster, low-light TV operator, infrared detection set operator, four aerial gunners)

• **Dimensions:**

  • 132 Feet (Wing Span)

  • 99 Feet (Length)

  • 38 Feet (Height)

• **Weight:** 155,00 Pounds(Gross Weight)

Functions/Performance Parameters

• **Mission Statement:** The AC-130U Spooky gunship's primary missions are close air support, air interdiction and armed reconnaissance. Other missions include perimeter and point defense, escort, landing, drop and extraction zone support, forward air control, limited command and control, and combat search and rescue.

• **Performance Parameters:**

  • Power Plant: Four Allison T-56-A-15 turboprop engines

  • Thrust: 4,910 shaft horsepower each engine

  • Speed: 289 miles per hour (464 kilometers per hour) at sea level

Airborne Laser (ABL)

Acquisition Status

• **Program Status:** Being developed by the Missile Defense Agency (MDA)

• **Unit Assignment:** TBD

• **Production:** FY06-FY13

• **Current Inventory:** One test aircraft

• **Projected Inventory:** Two test aircraft (MDA) Seven operational aircraft (Air Force)

• **Contractors**:
  • Boeing (Airframe & BMC4I)
  • Lockheed Martin (Optics)
  • TRW (Laser)

• **Development:** Program transferred to the Missile Defense Agency in FY02 for development and will return to the Air Force for procurement and operation.

• **Future Upgrades:** TBD

• **Purchase Requirements:** Nine a/c total (two MDA test aircraft and seven for operational use)

Capabilities/Profile

• **Service Ceiling:** 45,000 Feet

• **Combat Range:**
  • Max laser range against BMs-hundreds of km
  • A/C: unlimited with air refueling

• **Armament:** Megawatt class high energy laser

• **Dimensions:**
  • 211 Feet, 5 Inches (Wing Span)
  • 228 Feet, 9 Inches (Length)
  • 63 Feet, 8 Inches (Height)

• **Weight**: 800,000 Pounds (Gross Take Off Weight)

Functions/Performance Parameters

• **Mission Statement:** Air-based component of the Ballistic Missile Defense System's Boost Phase Defense Segment that will acquire, track and kill ballistic missiles in their boost phase thus protecting US, Deployed Forces, US Allies, Friends and Areas of Vital Interest from ballistic missile attack.

• **Functions:** On board sensors detect boosting missile, BMC4I systems pass early warning launch & impact data to Ballistic Missile Defense System Elements and Combatant Commanders, and high energy laser destroys the targets.

• **Performance Parameters:** Flight operations above clouds (~40,000 ft), detect BMs at long ranges (hundreds of km), and kill them within seconds. Megawatt class Chemical Oxygen-Iodine Laser (COIL) with full laser fuel load can kill 20-40 BMs.

A/OA-10 Thunderbolt II

Acquisition Status

• **Program Status:** Sustainment

• **Unit Assignments:** Active: Pope AFB, NC; Nellis AFB, NV; Osan AB, ROK; Davis-Monthan AFB, AZ; Eielson AFB, AK; Eglin AFB, FL; Spangdahlem AB, GE; Guard/Reserve: Barnes MA; Bradley CT; Willow Grove PA; Martin State MD; New Orleans LA; Battle Creek MI; Boise ID; Whiteman AFB, MO; Barksdale AFB, LA

• **Production:** Production line closed in 1984

• **Current Inventory:** 360

• **Projected Inventory:** 360

• **Contractors:**

  • Fairchild Republic (Airframe)

  • General Electric (Propulsion)

  • Lockheed Martin (Sustainment)

• **Future Upgrades:** Integrated Flight and Fire Control Computer, J-Series/Smart Weapons, Digital Stores Management System, Joint Tactical Radio System (Enhanced Position Location Radio System & Link-16 Datalinks), Targeting Pod, Wing Structure Service Life Enhancement Program (16,000 Hrs - projected

Capabilities/Profile

• **Service Ceiling:** 37,000 Feet

• **Combat Range:** 400 NM; 5 hours duration (unrefueled)

• **Armament:** 500lb & 2,000lb General Purpose/Cluster/Laser-Guided Bombs, E/O & IR Maverick Missile, Sidewinder Missile, 2.75" Rockets, Covert/Overt Illumination Flares, 30mm Armor-Piercing and High-Explosive Incendiary Rounds

• **Dimensions:**

  • 57.4 Feet (Wing Span)

  • 53.4 Feet (Length)

  • 14.8 Feet (Height)

• **Weight:** Over 50,000 Pounds fully loaded

Functions/Performance Parameters

• **Mission Statement:** The USAF primary Close Air Support (CAS) platform. Secondary roles include: Air Interdiction, Forward Air Control (Airborne), and Combat Search and Rescue and Special Operations Support. Designed specifically for battlefield support of engaged ground forces. The speed, range, loiter time and physical toughness of the airframe provide an outstanding asset to protect friendly forces and devastate enemy forces. The 30mm Gatling gun was produced specifically to destroy armored vehicles and hardened support equipment. The pilot is protected by a "titanium bathtub" manufactured to withstand repeated punishment while the airframe and powerplant incorporate redundant systems designed to ensure airworthiness if engaged by enemy anti-aircraft guns or missiles. Future "Precision Engagement:" package will allow day/night precision attack with targeting pods, GPS guided weapons and digital battlefield connectivity for all missions.

• **Performance Parameters:**

  • Top Speed: 450 KCAS/0.75 Mach

B-1 Lancer

Acquisition Status

• **Program Status:** Sustainment, Conventional Modifications

• **Unit Assignment:** Dyess AFB, TX; Ellsworth AFB, SD

• **Production:** Production complete in 1988

• **Current Inventory:** 92

• **Projected Inventory:** 60

• **Contractors:**
  • Boeing North American (Airframe)
  • General Electric (Propulsion)

• **Future Upgrades:** Avionics Computers, WCMD, JSOW, JASSM, Defensive Upgrade, Radar, Situational Awareness, Datalink

Capabilities/Profile

• **Service Ceiling:** Over 30,000 Feet

• **Combat Range:** Intercontinental (unrefueled)

• **Armament:** Mk-82 (500-lb) & Mk84 (2000-lb) general-purpose bombs, Mk-62 & Mk 65 mines, CBU-87/89/97 cluster munitions, GBU-31 (2000-lb) JDAM. Largest ordnance load-out of any U.S. aircraft (54,000 lbs).

• **Dimensions:**
  • 137 Feet (Wing Span, wings forward)
  • 79 Feet (Wing Span, wings aft)
  • 146 Feet (Length)
  • 34 Feet (Height)

• **Weight:** 477,000 Pounds (Max Weight)

Functions/Performance Parameters

• **Mission Statement:** Long-range, high speed, large payload Global Attack capability. The B-1 provides flexibility of being employed from outside or from within the theater of operations. Force packaging with other strike assets is made possible by the B-1's highspeed capability. Conducts all-weather, deepstrike and night air-to-surface attack.

• **Performance Parameters:**
  • Top Speed: 900-plus mph (Mach 1.2 at sea level)
  • Payload:
    • 84 general purpose bombs/naval mines
    • 30 cluster bombs (CBU-87/89/97),
    • 24 JDAM (GBU-31)

B-2 Spirit

Acquisition Status

• **Program Status:** Post-production Support

• **Unit Assignment:** Whiteman AFB, MO

• **Production:** Production Line Closed

• **Current Inventory:** 21 Block 30

• **Contractors:**
  • Northrop B-2 Division (Prime)
  • General Electric (Propulsion)
  • Hughes, Boeing (Major Subsystems)

• **Future Upgrades:** Smart Bomb Rack (SBRA)/ Mk-82 JDAM, EGBU-28, JASSM, Low Observable materials/ Alternate High Frequency Material (AHFM), UHF SatCom, Link -16, EHF SatCom, Radar Frequency Modification

Capabilities/Profile

• **Service Ceiling:** 50,000 Feet

• **Combat Range:** Unlimited with air refueling

• **Armament:** JDAM, GBU-37/B, Mk 82, Mk 62, Mk 84, M-117, CBU 87/89/97, B-83, B-61/7, B-61/11

• **Dimensions:**
  • 172 Feet (Wing Span)
  • 69 Feet (Length)
  • 17 Feet (Height)

• **Weight:** 336,500 Pounds (Gross Weight)

Functions/Performance Parameters

• **Mission Statement:** Multi-role bomber able to deliver both nuclear and conventional munitions with the added benefits of stealth capability. Ready to attack the enemy's war-making potential, especially those critical targets which, if not destroyed in the first hours of conflict, would allow unacceptable damage to be inflicted on the friendly side. It is the Air Force's only all-weather hard/deeply buried conventional strike capability.

• **Performance Parameters:** High subsonic, 50,000 feet, 40,000 lbs payload, conventional or nuclear, survivable

B-52H Stratofortress

Acquisition Status

- **Program Status:** Sustainment
- **Unit Assignments:** Barksdale AFB, LA (Active & Reserve); Minot AFB, ND
- **Production:** Production Line closed in 1962
- **Current Inventory:** 94
- **Projected Inventory:** 76
- **Contractors:**
  - Boeing (Airframe)
  - Pratt & Whitney (Propulsion)
- ITT (ECM)
- **Future Upgrades:** JASSM, Avionics Midlife Improvement (Replaces INS, Computer and DTUC), Situational Awareness Defensive Improvement (SADI replaces ALR 20 low/mid band receiver), Electronic Countermeasures Improvement (ECMI) upgrades ALQ172 mid/high band jammer), Airborne Wideband Terminal (EHF radio), CALCM In-flight Beyond Line of Sight Rapid Retasker (CIBR2), Internal 1760 Weapons Capability, Link 16, and Airborne Electronic Attack Stand-Off Jammer.

Capabilities/Profile

- **Service Ceiling:** 50,000 Feet
- **Combat Range:** Unlimited with air refueling
- **Armament:** Mk 82/84, M117, CBU 87/89, Mk-56/62/63/65 see mines, CALCM, Harpoon, Have Nap, JDAM, WCMD, ALCM, ACM, B-83, B-61
- **Dimensions:**
  - 185 Feet (Wing Span)
  - 159 Feet (Length)
  - 40 Feet (Height)
- **Weight:** Over 488,000 Pounds fully loaded

Functions/Performance Parameters

- **Mission Statement:** Workhorse of the bomber fleet, supporting both nuclear and conventional operations plans. Only long range bomber employing the long range Advanced Cruise Missile (ACM), Air Launched Cruise Missile (ALCM), and Conventional Air Launched Cruise Missile (CALCM); the Harpoon anti-ship missile; and the Have Nap precision guided missile. Used to attack time-sensitive targets during the critical initial phase of a conflict, using standoff and precision weapons to reduce the effectiveness of enemy air defenses, command and control systems and to eliminate power generation capability. During the build-up and halt phase, aircraft will deploy forward, adding mass and depth in sustained air campaign operations.
- **Performance Parameters:**
  - Top Speed: 390 K/0.84 Mach
  - Weapons Payload: 40,000 lbs.

C-5A/B/C Galaxy

Acquisition Status

- **Program Status:** Sustainment
- **Unit Assignment:** Altus AFB, OK; Dover AFB, DE; Kelly ARB, TX; Stewart IAP, NY; Travis AFB, CA; Westover ARB, MA
- **Production:** Completed in 1988
- **Current Inventory:** 126
- **Projected Inventory:** 126
- **Contractors:**
  - Lockheed Martin (Airframe)
  - General Electric (Propulsion)
- **Future Major Upgrades:** GPS, Avionics, Nav/Safety, GATM, and RERP

Capabilities/Profile

- **Service Ceiling:** 45,000 Feet
- **Range:** 6,300 NM (unrefueled ferry range); unlimited with in-flight refueling
- **Cruising Speed:** 0.74—0.77 Mach
- **Armament:** None
- **Dimensions:**
  - 222 Feet (Wing Span)
  - 247 Feet (Length)
  - 65 Feet (Height)
- **Cargo Compartment:** 121 x 19 x 13.5 ft
- **Maximum Gross Weight:** 840,000 Pounds

Functions/Performance Parameters

- **Mission Statement:** Strategic delivery of outsized and oversized cargo and passengers via airland operations. Strategic special operations platform.
- **Performance Parameters:** (based on 3,200 nm leg)
  - Cruise Speed: 420 knots
  - Cargo Weight: 178,000 lbs (291K max)
  - Passenger Capacity: 73 persons
  - The C-5 can carry maximum cargo while simultaneously carry maximum passengers.

C-9A/C

Acquisition Status

- **Program Status:** Sustainment
- **Unit Assignment:** C-9A: Ramstein AB, GE; Yokota AB, JP; Scott AFB, IL; C-9C: Andrews AFB, MD
- **Production:** Completed
- **Current Inventory:** 23
- **Projected Inventory:** 23
- **Contractors:**
  - Lockheed Martin (Airframe)
  - Aero Thrust (Propulsion, Pratt & Whitney)
  - Raytheon (COMBS)
  - Boeing (Engineering)
- **Commercial Variant of:** DC-9
- **Current Major Upgrades:** Mission Communication/Data Systems

Capabilities/Profile

- **Service Ceiling:** 37,000 Feet
- **Range:** >1,739 NM
- **Armament:** None
- **Dimensions:**
  - 93 Feet (Wing Span)
  - 119 Feet (Length)
  - 27 Feet (Height)
- **Maximum Gross Weight:** C-9A -108,000 Pounds; C-9C - 110,000 Pounds

Functions/Performance Parameters

- **Mission Statement:** The C-9A provides regularly scheduled and emergency no-notice air travel for hospital patients and medical evacuees. The C-9C provides safe, comfortable, and reliable air travel for: U.S. President, Vice President, First Lady, SECDEF, SECSTATE, other cabinet members, Congressional Delegations and Foreign Dignitaries.
- **Performance Parameters:**
  - Top speed: 565 mph (Mach 0.86)
  - Load: 40 litter patients or four litters and 40 ambulatory patients or other combinations

C-12C/D/F/J

Acquisition Status

• **Program Status:** Sustainment

• **Unit Assignment:** Osan AB, Korea; Elmendorf AFB, AK; Edwards AFB, CA; Holloman AFB, NM; Andrews AFB, MD; Embassy Sites worldwide

• **Production:** Commercial aircraft; AF delivery complete

• **Current Inventory:** 27

• **Contractors:**

  • Raytheon Aerospace (Airframe)

  • Raytheon Aerospace (Propulsion, Pratt & Whitney)

  • Raytheon Aerospace (Contractor Logistics Support)

  • Raytheon Aircraft (Engineering Services)

• **Commercial Variant of:** King Air 200 (C, D, & F models); King Air 1900 (J model)

• **Current Major Upgrades:** Global Air Traffic Management/Navigation Safety

Capabilities/Profile

• **Service Ceiling:** 31,000 Feet (J-model = 25,000 Feet)

• **Range:** 1,700 NM (J-model = 1,500 NM)

• **Armament:** None

• **Dimensions:**

  • 55 Feet (Wing Span)

  • 44 Feet (Length) (J-model = 58 Feet)

  • 15 Feet (Height)

• **Max Gross Weight:** 12,500 Pounds (J-model = 16,600 Pounds)

Functions/Performance Parameters

• **Mission Statement:** Provide cargo and passenger airlift over short ranges for Operational Support Airlift and Embassy Support missions. Also used to support test operations at Edwards and Holloman AFBs

• **Performance Parameters:**

  • Top speed: 300 to 340 mph depending on model

  • Load: 8 passengers (J-model = 19 passengers)

C-17 Globemaster III

Acquisition Status

• **Program Status:** Acquisition Phase III, Production, Fielding, & Deployment

• **Unit Assignment:** Charleston AFB, SC; Altus AFB, OK; McChord AFB, WA; Thompson Field, MS; McGuire AFB, NJ; March ARB, CA; Hickam AFB, HI; Travis AFB, CA; Elmendorf AFB, AK; Dover AFB, DE

• **Production:** Last delivery July 2008

• **Current Inventory:** 94 (as of 12 Nov 02)

• **Projected Inventory:** 180

• **Contractors:**
  - Boeing Aircraft (Airframe)
  - Pratt & Whitney (Engines)

• **Future Upgrades:** Global Air Traffic Management (GATM)/ Nav Safety; Onboard Inert Gas Generating System (OBIGGS); Station Keeping Equipment (SKE) Follow-on; Crew Armor Plating; Large Aircraft Infrared Countermeasures (LAIRCM); Operational & Reliability Improvements

• **Purchase Requirements:** 180

Capabilities/Profile

• **Service Ceiling:** 45,000 Feet (at cruising speed)

• **Range:** Global with in-flight refueling

• **Cruising Speed:** 0.74 - 0.77 MACH

• **Armament:** N/A

• **Dimensions:**
  - 169.8 Feet (Wing Span)
  - 174 Feet (Length)
  - 55.1 Feet (Height)

• **Cargo Compartment:** 88 x 18 x 12.3 Feet

• **Maximum Gross Weight:** 585,000 Pounds

Functions/Performance Parameters

• **Mission Statement:** Wide-body aircraft capable of airlifting outsized and oversized payloads over intercontinental ranges, with or without in-flight refueling. Provides rapid direct delivery of forces by airland or airdrop into austere tactical environments. Capable of performing both intertheater and intratheater airlift missions.

• **Performance Parameters:** (based on 3,200nm leg)
  - Speed: 421 knots
  - Payload: 130,000 pounds
  - Passenger capacity: 102 persons

C-20B/H

Acquisition Status

- **Program Status:** Sustainment
- **Unit Assignment:** Andrews AFB, MD; Ramstein AB, GE
- **Production:** Commercial aircraft; AF delivery complete (1992)
- **Current Inventory:** 7
- **Projected Inventory:** 7
- **Contractors:**
  - Sabreliner (Airframe)
  - Sabreliner (Propulsion, Rolls Royce)
  - DynCorp (Flightline at Andrews)
  - Lear Seigler Inc. (Flightline at Ramstein)
  - Lear Seigler Inc. (COMBS)
- **Commercial Variant of:** Gulfstream III and Gulfstream IV
- **Current Major Upgrades:** Mission Communication/Data Systems

Capabilities/Profile

- **Service Ceiling:** 45,000 Feet
- **Range:** C-20B - 2700 NM; C-20H - 3400 NM
- **Armament:** None
- **Dimensions:**
  - 78 Feet (Wing Span)
  - 83 Feet (Length)
  - 25 Feet (Height)
- **Max Gross Weight:** 69,700 Pounds

Functions/Performance Parameters

- **Mission Statement:** Provides transportation for the Vice President, Cabinet and Congressional members, and other high-ranking U.S. and foreign officials
- **Performance Parameters:**
  - Speed: 576 mph (Mach 0.80)
  - Load: 12 passengers

C-21A

Acquisition Status

• **Program Status:** Sustainment

• **Unit Assignment:** Langley AFB, VA; Andrews AFB, MD; Wright-Patterson AFB, OH; Scott AFB, IL; Offutt AFB, NE; Peterson AFB, CO; Randolph AFB, TX; Maxwell AFB, AL; Keesler AFB, MS; Ramstein AB, GE; Stuttgart AB, GE; Yokota AB, JP

• **Production:** Commercial Aircraft; AF delivery complete (1985)

• **Current Inventory:** 76

• **Projected Inventory:** 76

• **Contractors:**

- Learjet (Airframe)
- Learjet (Propulsion)
- Raytheon Aerospace (Contractor Logistics Support)

• **Commercial Variant of:** Learjet 35A

• **Current Major Upgrades:** None

Capabilities/Profile

• **Service Ceiling:** 51,000 Feet

• **Range:** 2,300 NM

• **Armament:** None

• **Dimensions:**

- 39 Feet (Wing Span)
- 48 Feet (Length)
- 12 Feet (Height)

• **Maximum Gross Weight:** 18,300 Pounds

Functions/Performance Parameters

• **Mission Statement:** Provide cargo and passenger airlift over short ranges, into short field. May configure to transport litters during medical evacuations.

• **Performance Parameters:**

- Top speed: 530 mph (Mach 0.81)
- Load: 8 passengers and 42 cubic feet of cargo

C-26B

Acquisition Status

• **Program Status:** Sustainment

• **Unit Assignment:** Alabama, Arizona, California, Florida, Mississippi, New Mexico, New York, Texas, Washington, Wisconson

• **Current Inventory:** 11

• **Projected Inventory:** 11

• **Contractors:**
  • Fairchild (Airframe)
  • Garrett/Allied Signal (Propulsion)

• **Future Upgrades:** Video Downlink

• **Purchase Requirements:** Awaiting ROM from market study being conducted by GTRI in FY02

Capabilities/Profile

• **Service Ceiling:** 25,000 Feet

• **Combat Range:** 1200 Nautical Miles

• **Armament:** None

• **Dimensions:**
  • 57.0 Feet (Wing Span)
  • 59.35 Feet (Length)
  • 16.66 Feet (Height)

• **Weight:**
  • 16,500 Pounds (Gross Weight)

• **Speed:** 250 kts

Functions/Performance Parameters

• **Mission Statement:** The counterdrug C-26 assists local law enforcement agents in detection of illegal drug activities to include (but not limited to): marijuana growth; location of clandestine air strips; drop zones; border crossing points; maritime areas; locations of roads, trails or assembly areas that may be supporting illicit drug activities, etc. This system is capable of providing counterdrug support both day and night.

• **Performance Parameters:** The aircraft is equipped with two framing cameras mounted vertically and obliquely with wet film and digital imagery capability, an infra-red camera, and a video camera with spotter scope. Onboard situational awareness equipment displays current position, altitude, and speed to aid in target acquisition, tracking and photographing.

C-32A

Acquisition Status

- **Program Status:** Sustainment
- **Unit Assignment:** 89AW, Andrews AFB, MD
- **Production:** Commercial Aircraft; AF delivery complete (1999)
- **Current Inventory:** 4
- **Projected Inventory:** 4
- **Contractors:**
  - Boeing (Airframe)
  - Pratt & Whitney (Engines)
  - DynCorp (Flightline)
- **Commercial Variant of:** Boeing 757-200
- **Current Major Upgrades:** Mission Communication/Data System

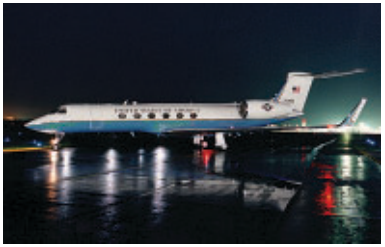
Capabilities/Profile

- **Service Ceiling:** 41,000 Feet
- **Range:** 5,000 NM
- **Armament:** None
- **Dimensions:**
  - 125 Feet (Wing Span)
  - 155 Feet (Length)
  - 44.5 Feet (Height)
- **Max Gross Weight:** 255,000 Pounds

Functions/Performance Parameters

- **Mission Statement:** Provides transportation for the Vice President, Cabinet, congressional delegations, and other senior U.S. officials. Replaced C-137B/C.
- **Performance Parameters:**
  - Top Speed: 530 mph (Mach 0.8)
  - Load: 45 passengers and 16 crew

C-37A



Acquisition Status

- **Program Status:** Sustainment
- **Unit Assignment:** Andrews AFB, MD; MacDill AFB, FL; Hickam AFB, HI; Chievres Air Base, BE
- **Production:** Commercial Aircraft; AF delivery completed (Sep 02)
- **Current Inventory:** 9 (includes four owned aircraft and five leased aircraft)
- **Projected Inventory:** 9
- **Contractors:**
  - Gulfstream (Airframe)
  - BMW/Rolls Royce (Engines)
- **Commercial Variant:** Gulfstream V
- **Current Major Upgrades:** Communication Systems

Capabilities/Profile

- **Service Ceiling:** 51,000 Feet
- **Range:** 5500 NM
- **Armament:** None
- **Dimensions:**
  - 93.5 Feet (Wing Span)
  - 96.5 Feet (Length)
  - 26 Feet (Height)
- **Max Gross Weight:** 90,500 Pounds

Functions/Performance Parameters

- **Mission Statement:** Provides transportation for the Vice President, Cabinet and congressional members, and other senior U.S. officials. Replaced retired C-137.
- **Performance Parameters:**
  - Speed: 530 mph (Mach 0.8)
  - Load: 12 passengers and 5 crew

C-40B/C

Acquisition Status

• **Program Status:** Procurement

• **Unit Assignment:** 89AW, Andrews AFB, MD; 15ABW, Hickam AFB, HI; ANG, Andrews AFB, MD

• **Production:** Commercial aircraft; AF expects complete delivery in FY05

• **Current Inventory:** 4 (AF plans to lease four and purchase three aircraft)

• **Projected Inventory:** 7 [three C-40C (ANG); four C-40B (Active Duty AF)]

• **Contractors:**

  • Boeing (Airframe)

  • CFM International (Engines)

  • DynCorp (Flightline)

• **Commercial Variant of:** Boeing 737-700

• **Current Major Upgrades:** None

Capabilities/Profile

• **Service Ceiling:** 41,000 Feet

• **Range:** 5,000 NM

• **Armament:** None

• **Dimensions:**

  • 112 Feet (Wing Span)

  • 110 Feet (Length)

  • 41 Feet (Height)

• **Max Gross Weight:** 171,500 Pounds

Functions/Performance Parameters

• **Mission Statement:** Provides transportation for the combatant Commanders in Chief and other senior Government officials. Replaces combatant commander support C-135s and ANG C-22B.

• **Performance Parameters:**

  • **Top Speed:** 530 mph (Mach 0.8)

  • **Load:** 26 passengers and 11 crew

C-130E/H Hercules

Acquisition Status

- **Program Status:** Sustainment
- **Active Duty Unit Assignment:** Little Rock AFB, AR; Pope AFB, NC; Dyess AFB, TX; Elmendorf AFB, AK; Yokota AB, JP; Ramstein AB, GE
- **Production:** C-130E/H Closed, C-130J Open
- **Current Inventory:** 514
- **Projected Inventory:** 470
- **Contractors:**
  - Airframe, Lockheed
  - Propulsion, Allison
- **Future Upgrades:** Electrical System Upgrade, Airlift Defensive Systems, Enhanced Traffic Collision and Avoidance System, C-130 Avionics Modernization Program

Capabilities/Profile

- **Service Ceiling:** 33,000 Feet
- **Range:** 3,000 Nautical Miles
- **Armament:** None
- **Dimensions:**
  - 132 Feet (Wing Span)
  - 97 Feet (Length)
  - 39 Feet (Height)
- **Maximum Gross Weight:** 155,000 Pounds

Functions/Performance Parameters

- **Mission Statement:** The C-130E/H provides rapid transportation of personnel or cargo for delivery day or night by parachute or landing. Adverse Weather Aerial Delivery System equipped aircraft have the additional capability of performing airdrops without external assistance in inclement weather. It can also be used for Aeromedical Evacuation of injured troops.
- **Performance Parameters:** The C-130 can takeoff and land on short, unimproved runways normally found during austere operations. Top speed is 374 knots.
- Maximum payload of 45,000 lbs of cargo or 92 ground troops, or 64 paratroops

C-130J

Acquisition Status

• **Program Status:** Phase III, Production, Fielding, & Deployment

• **Unit Assignment:** Keesler AFB, MS; Baltimore, MD; Harrisburg, PA; Quonset, RI; Channel Islands, CA

• **Current Inventory:** 30 accepted: 12 C-130Js, 9 WC-130Js, 4 EC-130Js, 5 CC-130Js); 2 aircraft to deliver in FY03:, 1 WC-130J, 1 EC-130J; 5 CC-130Js deliver FY04

• **Projected Inventory:** 168; FY03 multiyear contract will deliver 43 CC-130Js FY05-FY09

• **Contractors:**
  • Lockheed Martin (Airframe)
  • Rolls Royce (Propulsion)

• **Future Upgrades:** GATM/ Nav Safety/EC-130Js undergo follow-on mod program at Lockheed Palmdale – First deliveries to Harrisburg in CY03

• **Purchase Requirements:** 10 WC-130Js, 8 EC-130Js, 12 C-130Js, 138 CC-130Js

Capabilities/Profile

• **Service Ceiling:** 33,000 Feet

• **Range:** 3,600 Nautical Miles, Global with in-flight refueling (EC-130J)

• **Armament:** N/A

• **Dimensions:** C-130J/CC-130J
  • 132.6/132.6 Feet (Wing Span)
  • 97.8/112.8 Feet (Length)
  • 38.8/38.8 Feet (Height)

• **Weight:** 164,000 Pounds (Gross Weight)

Functions/Performance Parameters

• **Mission Statement:** C/CC-130J provides immediate movement of combat troops & supplies within theaters of operation. WC-130J provides weather reconnaissance and the EC-130J provides psychological operations.

• **Performance Parameters:**
  • Crusing speed: 342 knots
  • Payload:

C-130J vs. C-130J-30

Load Comparisions	C-130E/H/J	C-130J	Increase
Cargo Floor Length	40 ft	55 ft	37%
463L Pallets	5	7	40%
Medical Litters	74	97	31%
CDS Bundles	16	24	50%
Combat Troops	64	92	44%

C-141 Starlifter

Acquisition Status

• **Program Status:** Sustainment

• **Unit Assignment:** Andrews AFB, MD; Jackson ANGB, MS; March ARB, CA; McGuire AFB, NJ; Wright-Patterson AFB, OH; Memphis IAP, TN

• **Production:** Completed in 1968

• **Current Inventory:** Drawing down from 100 total aircraft as of Nov 01.

• **Projected Inventory:** 0 by FY07

• **Contractors:**

- Lockheed Martin (Airframe)
- Pratt Whitney (Propulsion)

• **Current Upgrades:** GPS, TCAS/TAWS, Avionics

Capabilities/Profile

• **Service Ceiling:** 41,000 Feet

• **Range:** 4,600 NM (unrefueled ferry range) (unlimited with in-flight refueling)

• **Cruising Speed:** 0.74 Mach

• **Dimensions:**

- 160 Feet (Wing Span)
- 168 Feet (Length)
- 39 Feet (Height)

• **Armament:** None

• **Cargo Compartment:** 93 x 10.3 x 9 Feet

• **Maximum Gross Weight:** 343,000 Pounds

Functions/Performance Parameters

• **Mission Statement:** Strategic delivery of cargo, passengers, and patients via airland and/or airdrop. Primary strategic special operations and airdrop platform.

• **Performance Parameters:** (based on 3,200nm leg)

- Cruise Speed: 405 knots
- Cargo Weight: 60,000 pounds
- Passenger Capacity: 153 persons

* *Cargo and Passengers are exclusive of one another*

Control and Reporting Center (CRC)

Acquisition Status

• **Program Status:** Sustainment

• **Unit Assignment:** *Active:* Eglin AFB, FL; Hill AFB, UT; Mountain Home AFB, ID; Spangdahlem AB, GE; Aviano AB, IT *Guard:* Orange, CT; Savannah, GA; Gulfport, MS;

• **Current Inventory:** 32 Operations Modules (OM), 16 RADARs

• **Projected Inventory:** No changes predicted

• **Contractors:**

  • Northrop Grumman (RADAR)

  • Litton (MCE OMs)

• **Future Upgrades:** Remote radar and radio (FY03-05), Tracking System (TAD MTS) (pending fielding decision), Common Battle Management System (CBMS) - open system architecture and enhanced operational capabilities (for time critical targeting and sensor fusion) (FY07+)

Capabilities/Profile

• **Service Ceiling:** ~ 99,000 Feet

• **Surveillance Range:** ~240 NM

• **Additional Capabilities:** 24/7 battle management, command, control and communications capability. Performs multiple/ simultaneous data links to include TADIL A/B/C/J, ATDL and NATO Link 1.

• **Unit Composition:** CRC consists of approximately 370 personnel, four Operations Modules (OM), two AN/TPS-75 radar sets, and associated communications/support equipment

Functions/Performance Parameters

• **Mission Statement:** The CRC is a persistent air, land, and sea deployable command and control (C2) battle management (BM) platform employed at the tactical level of war. It supports planning, directing, coordinating, and controlling forces and operations. The CRC may be employed by itself or in combination with other tactical C2 assets and supports a broad range of military operations in all phases of the crisis/ contingency life cycle.

• **Performance Parameters:** Provides the JTF/JFACC a deployable, stand-alone, theater battle management C2 system capable of operating 24/7 with minimal augmentation. Three combat crews execute core competencies of surveillance, identification, data link management, theater air defense and air battle execution (DCA/OCA, Air Refueling, Force Marshalling, etc.).

CV-22 Osprey

Acquisition Status

• **Program Status:** Engineering and Manufacturing Development

• **Unit Assignment:** Hurlburt Field, FL; Kirtland AFB, NM

• **Production:** Initial production begins in FY 2004

• **Current Inventory:** 0

• **Projected Inventory:** 50

• **Contractors:**
  • Bell Boeing (Airframe)
  • Allison (Propulsion)
  • Raytheon (TF/TA Radar)

• **Future Upgrades:** TBD

• **Purchase Requirements:** 50 aircraft beginning in FY04

Capabilities/Profile

• **Service Ceiling:** 26,000 Feet

• **Combat Range:** Unlimited with air refueling

• **Armament:** TBD

• **Dimensions:**
  • 84.6 Feet (Wing Span)
  • 57.3 Feet (Length)
  • 22.1 Feet (Height)

• **Weight:**
  • 34,900 Pounds (Gross Weight Empty)
  • 52,600 Pounds (Max VTO Weight)
  • 57,000 Pounds (Short Takeoff Weight)
  • 60,500 Pounds (Self Deploy Weight)

• **Speed:** 230 Knots cruise

• **Payload:** 18 SOF troops

Functions/Performance Parameters

• **Mission Statement:** CV-22 will conduct long-range, adverse weather, clandestine penetration of medium to high threat environments in politically or militarily denied areas to execute personnel recovery operations, infiltrate, exfiltrate, and resupply Special Operations Forces (SOF).

• **Performance Parameters:** The CV-22 tailors the basic V-22 to meet SOF mission requirements. It maintains the inherent MV-22 characteristics including shipboard compatibility, aerial refueling, external loads, high survivability, triply redundant fly-by-wire flight controls and advanced cockpit displays. CV-22 then adds unique capabilities such as a state-of-the-art radar warning and jamming suite, terrain following/terrain avoidance radar, infrared countermeasures (IRCM), additional fuel tanks, and additional chaff and flares.

E-3 Airborne Warning and Control System (AWACS)

Acquisition Status

- **Program Status:** Sustainment
- **Units of Assignment:** Tinker AFB, OK; Elmendorf AFB, AK; Kadena AFB, JP
- **Production:** Deployed March 1977; Planned modification programs thru end of FY16
- **Current Inventory:** 33 (32 operational, plus 1 test asset)
- **Contractors:**
  - Boeing (Prime Contractor)
  - Northrop Grumman (Radar)
  - Lockheed Martin (Computer)
- **Planned Upgrades:** Radar System Improvement Program (RSIP), Block 40/45 Computers and Displays and Integrated Data GATM

Capabilities/Profile

- **Service Ceiling:** 38,000 Feet
- **Combat Range:** Unlimited with air refueling
- **Dimensions:**
  - 130 Feet, 10 Inches (Wing Span)
  - 145 Feet, 6 Inches (Length)
  - 41 Feet, 4 Inches (Height)
- **Weight:** 347,000 Pounds

Functions/Performance Parameters

- **Mission Statement:** Deployable command and control (C2) battle management (BM) platform employed at the tactical level of war. It supports directing, coordinating, and controlling forces and operations. AWACS may be employed by itself or in combination with other tactical C2 assets. It may be tasked across the broad range of military operations to support all phases of the crisis/ contingency life cycle. AWACS provides all altitude surveillance, warning, and battle management for worldwide air combat operations.
- **Performance Parameters:**
  - Speed: Optimum cruise Mach 0.78
  - Endurance: 8 Hours (unrefueled)
  - Operational Crew Makeup:
    - Flight crew: 4
    - Mission crew: 13-19
      - Officer and enlisted specialists
    - Crew size varies according to mission

E-4B National Airborne Operations Center (NAOC)

Acquisition Status

- **Program Status:** Sustainment
- **Unit Assignment:** Offut AFB, NE
- **Production:**
  - Last E-4A delivered Jul 73
  - Last E-4B delivered Jan 85
- **Current Inventory:** 4
- **Projected Inventory:** 4
- **Contractors:** Boeing Aerospace Operations
- **Future Upgrades:** Modernization upgrades of primary mission equipment and modifications to ensure compliance with global air traffic management navigation requirements.

Capabilities/Profile

- **Service Ceiling:** above 40,000 Feet
- **Combat Range:** 6,000+ NM air refueling capable 72 hours (air refueled)
- **Dimensions:**
  - 195 Feet, 8 inches (Wing Span)
  - 231 Feet, 4 inches (Length)
  - 63 Feet, 5 inches (Height)
- **Weight:** 800,000 Pounds (Gross Weight)

Functions/Performance Parameters

- **Mission Statement:** Most survivable node of National Military Command System (NMCS). Provides SecDef OCONUS C2 mission support. Supports Federal Emergency Management Agency (FEMA) during crisis response.
- **Performance Parameters:**
  - For NCA mission total manifest of 114: 63 crew/ battle staff; 51 passengers
  - For SecDef Mission: 33 crew; 81 passengers
  - Hardened against Electromagnetic Pulse (EMP)
  - Robust communications useful in a nuclear disturbed environment

E-8C Joint STARS

Acquisition Status

• **Program Status:** Production/ Operational

• **Unit Assignment:** Robins AFB, GA

• **Production:** Through March 2004

• **Current Inventory:** 14 E-8Cs delivered to ACC

• **Projected Inventory:** 17 E-8Cs

• **Contractors**:

- Northrop Grumman (prime)
  - Motorola (prime for Army CGSs)
- CUBIC (sub for secure data link to Army ground stations)
- Raytheon (sub for general purpose computers and prime for aircraft contractor logistics support)

• **Future Upgrades:** Computer Replacement Program (CRP), Radar Technology Insertion Program (RTIP), SATCOM, Link16, Global Air Traffic Management (GATM) Upgrades, and ABCCC mission software

• **Purchase Requirements:** 1 in FY02 (P16) 1 in FY03 (P17)

Capabilities/Profile

• **Aircraft Type:** Modified 707-300 Series

• P17 -Modified 767 airframe

• **Aircraft Performance:** (707-300 Series)

- Service Ceiling: 32,000 Feet
- Range/Duration: 9hrs, 20hrs w/inflight refuel
- Max Airspeed: .84 Mach

• **Dimensions:**

- 130 Feet, 10 Inches (Wing Span)
- 152 Feet, 11 Inches (Length)
- 42 Feet, 6 Inches (Height)

• **Weight:** 336,000 Pounds (Gross Weight)

Functions/Performance Parameters

• **Mission Statement:** Joint STARS is a joint Army/Air Force program designed to enhance battle management by providing air/land component commanders with near real-time wide-area surveillance and targeting information on moving and stationary ground targets, slow moving rotary and fixed wing aircraft, rotating antennas and Theater Missile Defense targets of interest.

• **Performance Parameters:**

- Multi-mode, phased array radar; equipped with both Moving Target Indicator (MTI) and Synthetic Aperture Radar (SAR)
- Wide area/small area surveillance with rapid revisit
- Robust ECCM, joint mission crew, 17 multi-purpose workstations, allows rapid deployment, self-contained operation
- Secure Surveillance and Control Data Link (SCDL) to Army Common Ground Stations (CGSs); Link 16 to Joint C3I nodes

EC-130E/J Commando Solo

Acquisition Status

• **Program Status:** Sustainment for current EC-130E aircraft; Modernization through Congressional adds to cross-deck/convert Commando Solo special mission equipment to new C-130Js, producing EC-130Js

• **Current Inventory:** 3 x operational EC-130Es and 3 x EC-130Js in conversion

• **Unit Assignment:** 193rd Special Operations Wing (ANG), Harrisburg, PA

• **Contractor:** Lockheed Palmdale

• **Future Upgrades:** Cross-decking of special mission equipment from EC-130Es to EC-130Js, AAR-47 Infrared Warning Receiver, ARC-222 SINCGARS radio

Capabilities/Profile

• **Service Ceiling:** 20,000 Feet

• **Combat Range:** Unlimited (air refuelable)

• **Prime Mission:** Psychological operations

• **Crew Complement:** 11 - Two pilots, navigator, flight engineer, loadmaster, mission control chief/EWO, and five electronic communications specialists

• **Dimensions:**

  • 132 Feet (Wing Span)

  • 100 Feet (Length)

  • 38 Feet (Height)

• **Weight:** 155,000 Pounds (Gross Weight)

Functions/Performance Parameters

• **Mission Statement:** Conducts psychological operations and civil affairs broadcast in the AM, FM, HG, TV, and military communications bands. Typical mission consists of a single-ship orbit which is offset from the desired target audience. The targets may be either military or civilian personnel.

• **Secondary Mission:** Command, control, and communications countermeasures (C3CM) and limited intelligence gathering

• **Performance Parameters:**

  • Power Plant: Four Allison T-56-A-15 Turboprops

  • Thrust: 4,910 (equivalent shaft hp each)

  • Speed: 240-260 knots

EC-130H Compass Call

Acquisition Status

• **Program Status:** Sustainment
  • 1 Block 20 Squadron
  • 1 Block 30 Squadron

Block 35 upgrade underway. Originally intended as a full-fleet common configuration with increased capabilities, but cuts forced reprogramming.

• **Unit Assignment:** 41st and 43rd Electronic Combat Squadrons, Davis-Monthan AFB, AZ

• **Production:** Block 35 begun late FY02.

• **Current Inventory:** 6 Block 20 and 8 Block 30

• **Projected Inventory:** 2 Block 20 and 12 Block 35 (FY11)

• **Contractors:**

  • Prime Integrator - L3 Communications Integrated Systems (Waco, TX)

  • Prime Systems Integrators - BAE, NH;

  • Associate Contractors: Lockheed-Martin Aeronautics (Palmdale, CA); Raytheon Systems Division (Fort Wayne, IN); General Dynamics (Mountain View, CA); S & K Technologies (Ronan, MT)

• **Future Upgrades:** Improved Offensive Counter Information (OCI) capabilities Block 40

Capabilities/Profile

• **Service Ceiling:** 25,000 Feet

• **Combat Range:** Unlimited (air refuelable)

• **Prime Mission Avionics:** System locates and jams hostile communications and other electronic systems. Mission crew includes 5 linguists, 2 special signals operators, and an Electronic Warfare Officer. System is able to surgically deny hostile communications while leaving friendly systems unaffected.

• **Dimensions:**

  • 132 Feet (Wing Span)

  • 99 Feet (Length)

  • 38 Feet (Height)

• **Weight:** 155,000 Pounds (Gross Weight)

Functions/Performance Parameters

• **Mission Statement:** Provides jamming capabilities to the Joint Forces Air Component Commander (JFACC) throughout the spectrum of war. Targets include communications, radar, and other electronic systems.

• **Performance Parameters:** Classified

F-15 Eagle

Acquisition Status

- **Program Status:**
  - Production of F-15E attrition reserve aircraft
  - Modification/sustainment of fielded F-15s
- **Unit Assignment:** Worldwide
- **Production:** Last F-15 (F-15E) delivery Sep 04
- **Current Inventory:** 737 F-15A/B/C/D/E (10 a/c on-contract, in-production)
- **Projected Inventory:** 745
- **Contractors:**
  - Boeing (Airframe)
  - Pratt & Whitney (Propulsion)
  - Raytheon (Radar)
- **Future Upgrades:** Radar & Engine Upgrades, GPS/Smart Weapons Integration, Helmet Cueing, Data Link Capability, Full Band EW protection, Digital Video Recorder, radar warning receiver upgrade
- **Purchase Requirements:** Congress directed procurement of 10 additional F-15E in FY00/01

Capabilities/Profile

- **Service Ceiling:** 65,000 Feet
- **Combat Range:** 220-1300 NM (varies with loadout & mission)
- **Armament:**
  - F-15A/B/C/D: Missiles (Air-to-Air) AIM-7/-9/-120, 20mm Cannon
  - F-15E: Adds Missiles/ Bombs (Air-to-Ground) Gen Purpose, GBUs, CBUs, Maverick
- **Dimensions:**
  - 42.8 Feet (Wing Span)
  - 63.8 Feet (Length)
  - 18.5 Feet (Height)
- **Weight (Max Gross):**
  - F-15C: 68,000 lbs
  - F-15E: 81,000 lbs

Functions/Performance Parameters

- **Mission Statement:** F-15A-D is a dual engine, all weather, extremely maneuverable fighter designed to gain and maintain air superiority. F-15E retains the F-15A-D's basic air-to-air capability and is equipped to conduct all weather/night, deep penetration air-to-surface attack.
- **Performance Parameters:**
  - Speed: 1,875 mph (Mach 2.5+)
  - Range: 3,000 nautical miles ferry with conformal fuel tanks (F-15E only) and 3 external tanks
  - Thrust: F-15C: 25,000 lbs each engine,max with afterburner F-15E: 29,000 lbs each engine, max with afterburner

F-16 Fighting Falcon

Acquisition Status

- **Program Status:**
  - Production of force structure/attrition reserve aircraft
  - Modification/sustainment of fielded F-16s
- **Unit Assignment:** Worldwide
- **Production:** Last USAF a/c delivery FY04
- **Current USAF Inventory:** 1381
- **Projected Inventory:** 1384
- **Contractors:**
  - Lockheed Martin (Airframe)
  - General Electric/Pratt & Whitney (engines)
  - Northrop Grumman (Radar)
- **Future Upgrades:** GPS/ Smart Weapons Integration, Link-16 Capability, Joint Helmet Mounted Cueing System, Advanced Air-to-Air Weapons, Modular Mission Computer, Night Vision Imaging System, Air-to-Air Interrogator (Blk 50), and Advanced Targeting Pod (Blk 50)

Capabilities/Profile

- **Service Ceiling:** 50,000 Feet
- **Combat Range:** 500 NM
- **Armament:**
  - Missiles (Air-to-Air): AIM-9/-120:
  - Missiles/Bombs (Air-to-Ground): GBUs,CBUs, Maverick, HARM, 20mm Cannon, JDAM, JSOW, WCMD
- **Dimensions:**
  - 32.8 Feet (Wing Span)
  - 49.3 Feet (Length)
  - 16.7 Feet (Height)
- **Weight:** 42,000 Pounds (Gross Weight)

Functions/Performance Parameters

- **Mission Statement:** A single engine multi-role tactical fighter with full air-to-air and air-to-ground combat capabilities. Block 40 aircraft have the systems required to conduct night/under-the-weather precision attacks and Block 50 aircraft employ the HARM Targeting System in the Suppression of Enemy Air Defenses (SEAD) role. Block 50 Destruction of Enemy Defenses (DEAD) will occur with the delivery of the Advanced Targeting Pod in FY04.
- **Performance Parameters:**
  - Speed: 1,500 mph (Mach 2 at altitude)
  - Range: > 2,000 miles ferry range
  - Thrust: 27,000 lbs

F/A-22 Raptor

Acquisition Status

• **Program Status:** Engineering & Manufacturing Development is approximately 95% complete; Currently in Low Rate Initial Production

• **Unit Assignment:** Edwards AFB

• **Production:** Last delivery in 2012

• **Current Inventory:** 8 EMD aircraft (a/c); 1 Production Representative Test Vehicle (PRTV)

• **Projected Inventory:** 339 (plus EMD a/c)

• **Contractors:**
  • LM-Aero, Marietta (Center Fuselage and overall System Integration)
  • LM-Aero, Ft Worth (Mid-Fuselage)
  • Boeing (Aft Fuselage & Wings)
  • Pratt & Whitney (Propulsion)

• **Future Upgrades:** Integration of Small Diameter Bomb (SDB), Enhanced Air-to-Ground Radar

• **Purchase Requirements:** 31 a/c on contract thru Lot 2; 308 a/c remain to be procured

Capabilities/Profile

• **Service Ceiling:** >50,000 Feet

• **Combat Range:** 415 nm (Mission 1 profile)

• **Armament:**
  • AIM-120C (Air-to-Air)
  • AIM-9M/X (Air-to-Air)
  • 1,000lb JDAM (Air-to-Ground)
  • M61 (20MM) Cannon

• **Dimensions:**
  • 44 Feet, 6 Inches (Wing Span)
  • 62 Feet, 1 Inches (Length)
  • 16 Feet, 6 Inches (Height)

• **Weight:** 50,000 Pounds (Gross Weight)

Functions/Performance Parameters

• **Mission Statement:** The F/A-22 Program is developing the next-generation air dominance multi-mission fighter with inherent air-to-ground capability to counter emerging worldwide threats. The F/A-22 is designed to penetrate enemy airspace and achieve a first look, first shot, first kill capability against multiple targets. The F/A-22 is a critical component of the Global Strike Task Force (GSTF) that is designed to project air dominance, rapidly and at great distances, to counter and defeat threats that will attempt to deny access to the battlespace.

• **Performance Parameters:**
  • The F/A-22 is characterized by a low observable, highly maneuverable airframe, advanced integrated avionics, and aerodynamic performance allowing supersonic cruise without afterburner (supercruise).
  • This combination of characteristics will make the F/A-22 the world's premier air dominance fighter and will also make it a formidable air-to-ground weapon system.
  • Internal carriage of both air-to-air and air-to-ground weapons preserves F/A-22 stealth characteristics.
  • For its air-to-air mission, the F/A-22 will carry six AIM-120C and two AIM-9M/X.
  • For its air-to-ground mission,the F/A-22 can internally carry two 1,000 pound-class Joint Direct Attack Munitions (JDAM), with two AIM-120C and two AIM-9M/X.

F-117 Nighthawk

Acquisition Status

• **Program Status:** Sustainment

• **Unit Assignment:** 49th FW, Holloman AFB, NM

• **Production:** Production Line closed in 1990

• **Current Inventory:** 55 (52 F-117A, 3 YF-117)

• **Projected Inventory:** 55

• **Contractors:**
  • Lockheed Martin Aeronautics Company (Airframe)
  • General Electric (Propulsion)
  • Raytheon (Major Subsystem)

• **Current Upgrades:** Single Configuration Fleet, Stores Management Processor, Smart Weapons Integration (EGBU-27, JDAM, WCMD), Mid-Life Improvement Programs.

• **Future Upgrades:** Brooklyn Bridge Wing Structure, Combat Capability Sustainment Program (Expanded Data Transfer System (EDTS) replacement, cockpit display replacement, targeting system refurbishment), data-link, common data digital data recording capability.

Capabilities/Profile

• **Service Ceiling:** 35,000 Feet

• **Combat Range:** Unlimited with air refueling

• **Armament:**
  • 2-2000 Pound Laser Guided Bombs (GBU-27/GBU-10)
  • 2-2000 Pound Enhanced GBU-27 (LGB with GPS backup mode)
  • Internal Carriage

• **Dimensions:**
  • 43.3 Feet (Wing Span)
  • 63.9 Feet (Length)
  • 12.9 Feet (Height)

• **Weight:** 52,500 Pounds (max weight)

Functions/Performance Parameters

• **Mission Statement:** Penetrate dense threat environments and deliver precision weapons against high value, highly defended targets with pinpoint accuracy. Utilize low observable technology (RADAR, IR, visual and acoustic) to achieve vehicle signatures that significantly degrades enemy defenses. Provide rapid response to the National Command Authority.

• **Performance Parameters**
  • Top Speed: 562 KCAS/0.9 Mach
  • Thrust: 9,040 pounds per engine

HC-130P/N King

Acquisition Status

• **Program Status:** Conversion program to deliver 6 additional aircraft converted from EC-130/ WC-130H configuration.

• **Unit Assignment:** Moody AFB, GA; Kirtland AFB, NM; Davis-Monthan AFB; Patrick AFB, FL (AFRC); Portland, OR (AFRC); Moffett FAF, CA (ANG); F.S. Gabreski Airport, NY (ANG); Kulis ANGB, AK (ANG)

• **Current Inventory:** 36 (includes 4 CSAR dedicated MC-130Ps flown by the ANG)

• **Projected Inventory:** 42 (by FY07)

• **Contractors:** Pending (tanker conversion)

• **Current Upgrades:** Integrated SATCOM, NVG compatible lighting (ARC), digital low-power color radar, FLIR (ANG), E-TCAS (partial), personnel locator system (partial)

• **Future Upgrades:** Partial mods expanded fleet-wide, cockpit mods under C-130 Avionics Modernization Program (AMP), in-flight refueling (receiver) capability, tactical data receivers

Capabilities/Profile

• **Service Ceiling:** 30,000 Feet

• **Combat Range:** 3,500 NM

• **Mission Crew Complement:** Three officers (pilot, co-pilot, navigator) and seven enlisted (flight engineer, communications specialist, two loadmasters, and three Pararescue specialists)

• **COMM**: UHF/VHF/ SATCOM/Secure/Anti-jam

• **NAV:** Integrated INS/GPS/ Doppler, radar

• **Self-Protection:** Radar and missile warning receivers, chaff & flare dispensers, cockpit armor

• **Dimensions:**

  • 132 Feet (Wing Span)

  • 99 Feet (Length)

  • 38 Feet (Height)

• **Weight:** 155,000 Pounds (Gross Weight)

Functions/Performance Parameters

• **Mission Statement:** CSAR configured extended-range C-130. Increases the range of rescue helicopters by in-flight refueling and performs tactical delivery of Pararescue specialists (trained in emergency trauma medicine, harsh environment survival, and assisted evasion) or equipment to isolated personnel in permissive or hostile environments.

• Additional mission capabilities include extended visual/electronic searches and delivery of survival equipment over land or water, unimproved airfield operations for survivor transload/MEDEVAC.

• **Performance Parameters:**

  • Power Plant: Four Allison T56-A-15 turboprop engines

  • Thrust: 4,910 shaft horsepower each engine

  • Speed: 289 miles per hour (464 kilometers per hour) at sea level

HH-60G Pave Hawk

Acquisition Status

• **Program Status:** Sustainment

• **Unit Assignment:** Moody AFB, GA; Nellis AFB, NV; Kirtland AFB, NM; Kadena AB, Japan; NAS Keflavik, Iceland; Patrick AFB, FL (AFRC); Davis-Monthan AFB, AZ (AFRC, AD); Portland, OR (AFRC); Moffet FAF, CA (ANG); F.S. Gabreski Arpt, NY (ANG); Kulis ANGB, AK (ANG)

• **Production:** Future production TBD: AoA is complete; ORD is in coordination.

• **Current Inventory:** 105

• **Projected Inventory:** 105

• **Contractors:** Sikorsky (Prime Contractor)

• **Future Major Upgrades:**

Upgraded Comm/Nav/ Electronic Warfare Suite, External Gun mount, Tactical Datalink

• **Purchase Requirements:** TBD

Capabilities/Profile

• **Service Ceiling:** 14,200 Feet

• **Combat Range:** 500 NM

• **Armament:** GAU-2, 7.62mm mini-gun

• **COMM:** UHF/VHF/ SATCOM/PLS/Secure/HQ-II

• **NAV:** Integrated INS/GPS/ Doppler

• **Self-Protection:** Integrated Chaff/Flare/RWR, IR Jammer, Kevlar armor, Self-sealing fuel tanks

• **MSN Equip:** FLIR, OTH Tactical Receiver, Digital Moving Map/Threat Display, WX Radar, Hoist

• **Dimensions:**

  • 53 Feet (Main Rotor)

  • 64 Feet (Length)

  • 16 Feet (Height)

• **Maximum Gross Weight:** 22,000 Pounds

Functions/Performance Parameters

• **Mission Statement:** Primary operational mission is Combat Search and Rescue (CSAR). The most rapidly deployable, long range, combat capable rescue helicopter in the Air Force inventory. Conduct day/ night/marginal weather alert response missions to recover downed aircrew or other isolated personnel in hostile or permissive environments. Also performs disaster relief, NEO, counter-drug, civil SAR, and Space Shuttle support.

• **Performance Parameters:** Mission flown at airspeeds between 120 and 150 kts. Can fly for 4 1/2 hours unrefueled. With air refueling, range is limited only by human factors. Max gross weight for takeoff is 22,000 lbs. The HH-60G employs a sophisticated avionics system to enhance crew situational awareness and to avoid threats.

Joint Strike Fighter

Acquisition Status

- **Program Status:** System Development and Demonstration (SDD)
- **Unit Assignment:** TBD
- **Production:** 2005 - 2028
- **Projected Inventory:**
  - 1763 USAF
  - 680 USN/USMC
  - 150 UK
- **Contractors:**
  - Lockheed Martin (Airframe)
  - Pratt & Whitney and General Electric (Propulsion)

Capabilities/Profile

- Speed:
  - Level Flight: 1.5 Mach > 30,000 ft
  - Design Max: 750 KCAS/ 1.6 Mach
- "G": +9.0/-3.0
- Payload (Internal):
  - 2x AIM -120 (AMRAAM)
  - 2 x 2,000 lb Class
- Range:
  - Threshold: 590 Nautical Miles
  - Objective: 690 Nautical Miles

Functions

- **Mission Statement:** The JSF program will develop and deploy an affordable, next-generation, multi-role strike fighter aircraft which can meet the requirements of three Services, the United Kingdom (UK), and other allies.
- **Service Needs:**
  - **USAF:** Multi-role aircraft (primary air-to-ground) to replace the F-16 and A-10 and complement the F/A-22.
  - **USN:** Multi-role, stealthy strikefighter to complement the F/A-18E/F.
  - **USMC:** Multi-role, STOVL strike fighter to replace the AV-8B and F/A-18.
  - **UK:** STOVL (supersonic) aircraft to replace the Sea Harrier and GR-7.

KC-10 Extender

Acquisition Status

- **Program Status:** Sustainment
- **Unit Assignment:** McGuire AFB, NJ; Travis AFB, CA
- **Production:** Completed in 1987
- **Current Inventory:** 59
- **Projected Inventory:** 59
- **Contractors:**
  - Douglas Aircraft Corp - now Boeing (Airframe)
  - General Electric (Propulsion)
- **Future Major Upgrades:** Global Air Traffic Management (GATM)

Capabilities/Profile

- **Service Ceiling:** 42,000 Feet
- **Range:** 10,000 NM (unrefueled ferry range) (unlimited with in-flight refueling)
- **Armament:** None
- **Dimensions:**
  - 165 Feet (Wing Span)
  - 181 Feet (Length)
  - 58 Feet (Height)
- **Maximum Gross Weight:** 590,000 Pounds

Functions/Performance Parameters

- **Mission Statement:** Air refueling and airlift support for deployment, employment, redeployment and joint/ combined special operations.
- **Performance Parameters:**
  - **Speed:** 619 mph
  - **Airlift role** - can accommodate loads ranging from 27 pallets to a mix of 17 pallets and 75 passengers; can transport up to 75 people and 170,000 pounds of cargo 4,400 miles.
  - **Air Refueling role** - equipped with both advanced aerial refueling boom and hose/drogue refueling systems; maximum fuel transfer rates to receiver aircraft of 1,100 gallons per minute for the boom system and 470 gallons per minute for the drogue system; can transfer 200,000 pounds of fuel to a radius of 2,200 miles.

KC-135 Stratotanker

Acquisition Status

- **Program Status:** Sustainment
- **Unit Assignment:** 9 Active Duty, 6 Reserve and 19 Guard bases (Portland OR transition from CSAR mission)
- **Production:** Completed in 1965
- **Current Inventory (all tanker types):** 544
- **Contractors:**
  - Boeing (Airframe)
  - General Electric (Engines)
  - Pratt & Whitney (Engines)
- **Future Major Upgrades:** Global Air Traffic Management (GATM)

Capabilities/Profile

- **Service Ceiling:** 50,000 Feet
- **Range:** 11,015 (ferry range)
- **Armament:** None
- **Dimensions:**
  - 131 Feet (Wing Span)
  - 136 Feet (Length)
  - 42 Feet (Height)
- **Maximum Gross Weight:** 322,500 Pounds

Functions/Performance Parameters

- **Mission Statement:** Principal mission is air refueling. The KC-135 greatly enhances the Air Force's capability to accomplish its missions of Global Reach and Global Power. Also provides aerial refueling support to Navy, Marine Corps and allied aircraft.
- **Performance Parameters:**
  - Speed: 530 mph at 30,000 feet
  - Nearly all internal fuel can be pumped through the tanker's flying boom, the KC-135's primary fuel transfer method. A special shuttlecock-shaped drogue, attached to and trailed behind the flying boom, may be used to refuel aircraft fitted with probes. Can transfer 150,000 pounds of fuel to a radius of 1,500 mi.

MC-130E Combat Talon

Acquisition Status

• **Program Status:** Sustainment

• **Current Inventory:** 14 x MC-130E

• **Unit Assignment:** Duke Field, FL

• **Contractors:** Boeing for Integrated Weapon Systems Support (IWSS)

• **Future Upgrades:** Direct Infrared Counter Measure (DIRCM), C-130 Avionic Modernization Program (AMP), Common Avionics Architecture for Penetration (CAAP); ARC-222 SINCGARS Radios, ALE-47 Chaff & Flare system; High Power Fiber Optic Towed Decoy (HPFOTD)

Capabilities/Profile

• **Service Ceiling:** 30,000 Feet

• **Combat Range:** Unlimited (air refuelable)

• **Crew Complement:** 9 - 5 officers (two pilots, two navigators and one electronic warfare officer) and four enlisted (one flight engineer, one radio operator and two loadmasters).

• **Dimensions:**

  • 132 Feet (Wing Span)

  • 99 Feet (Length)

  • 38 Feet (Height)

• **Weight:** 155,000 Pounds (Gross Weight)

Functions/Performance Parameters

• **Mission Statement:** The mission of the MC-130E Combat Talon is to provide global, day, night and adverse weather capability to airdrop and airland personnel and equipment in support of U.S. and allied special operations forces. The MC-130E also has a deep penetrating helicopter refueling role during special operations missions.

• **Performance Parameters:**

  • Power Plant: Four Allison T56-A-15 turbroprop engines

  • Thrust: 4,910 shaft horsepower each engine

  • Speed: 289 miles per hour (464 kilometers per hour) at sea level

MC-130H Combat Talon II

Acquisition Status

• **Program Status:** Sustainment, 10 additional MC-130H buys planned

• **Current Inventory:** 22

• **Unit Assignment:** Hurlburt Field, FL; Kirtland AFB, NM; RAF Mildenhall, UK; Kadena AB, JP

• **Contractors:** Boeing for Integrated Weapon Systems Support (IWSS)

• **Future Upgrades:** Directional Infrared Counter Measure (DIRCM), C-130 Avionics Modernization Program (AMP), Common Avionics Architecture for Penetration (CAAP) and Helo Aerial Refueling capability (MCAR), ALE-47 Chaff & Flare system; High Power Fiber Optic Towed Decoy (HPFOTD); and RF Low Band Jammer

Capabilities/Profile

• **Service Ceiling:** 30,000 Feet

• **Combat Range:** Unlimited (air refuelable)

• **Primary Mission:** Infiltration, exfiltration, and resupply of special operations forces

• **Crew Complement:** 7 - Two pilots, one navigator, one electronic warfare officer, one flight engineer, and two loadmasters

• Dimensions:

  • 132 Feet (Wing Span)

  • 100 Feet (Length)

  • 38 Feet (Height)

• **Max Takeoff Weight:** 155,000 Pounds

Functions/Performance Parameters

• **Mission Statement:** The mission of the MC-130H Combat Talon II is to provide global, day, night and adverse weather capability to airdrop and airland personnel and equipment in support of U.S. and allied special operations forces.

• **Performance Parameters:**

  • Power Plant: Four Allison T56-A-15 turboprop engines

  • Thrust: 4,910 shaft horsepower each engine

  • Speed: 300 miles per hour (480 kilometers per hour) at sea level

MC-130P Combat Shadow

Acquisition Status

- **Program Status:** Sustainment
- **Current Inventory:** 27
- **Unit Assignment:** Duke Field, FL; Eglin AFB, FL; Mildenhall AB, UK; Kadena AB, JP; Moffet Field, CA
- **Contractors:** Boeing
- **Future Upgrades:** Future cockpit mods under C-130 Avionics Modernization Program (AMP), ALE-47 Chaff & Flare system, Environmental Control System (ECS)

Capabilities/Profile

- **Service Ceiling:** 30,000 Feet
- **Combat Range:** 3,500 NM
- **Crew Complement:** 8 - Four officers (pilot, co-pilot, primary navigator, secondary navigator), and four enlisted (flight engineer, communications systems operator and two loadmasters)
- **Dimensions:**
  - 132 Feet (Wing Span)
  - 99 Feet (Length)
  - 38 Feet (Height)
- **Weight:**
  - 155,000 Pounds (Gross Weight)

Functions/Performance Parameters

- **Mission Statement:** The MC-130P Combat Shadow flies clandestine or low visibility, low-level missions into politically sensitive or hostile territory to provide air refueling for special operations helicopters. The MC-130P primarily flies its single- or multi-ship missions at night to reduce detection and intercept by airborne threats. Secondary mission capabilities include airdrop of small special operations teams, small bundles, and zodiac and combat rubber raiding craft; as well as night-vision goggle takeoffs and landings.
- **Performance Parameters:**
  - Power Plant: Four Allison T56-A-15 turbroprop engines
  - Thrust: 4,910 shaft horsepower each engine
  - Speed: 289 miles per hour (464 km per hour) at sea level

MH-53J/M Pave Low III/IV

Acquisition Status

- **Program Status:** Sustainment
- **Unit Assignment:** Hurlburt Field, FL; Kirtland AFB, FL; RAF Mildenhall, UK
- **Current Inventory:** 35
- **Contractors:**
  - Sikorsky (Airframe)
  - General Electric (Propulsion)
  - Texas Instruments (Terrain Following/Terrain Avoidance [TF/TA] radar and Forward-Looking Infrared [FLIR])
- **Future Upgrades:** Directional Infrared Countermeasures (DIRCM), APX-118 IFF, ALE-47 Chaff & Flare System

Capabilities/Profile

- **Service Ceiling:** 16,000 Feet
- **Range:** 600 nautical miles; unlimited with air refueling
- **Crew Complement:** 6 - Two officers (pilot, co-pilot), and four enlisted (two flight engineers and two aerial gunners)
- **Armament:** Any combination of three 7.62mm miniguns and .50 caliber machine guns
- Dimensions:
  - 72 Feet (Rotor Diameter)
  - 88 Feet (Length)
  - 25 Feet (Height)
- **Max Takeoff Weight:** 46,000 lbs

Functions/Performance Parameters

- **Mission Statement:** Low-level, long-range, undetected penetration into denied areas, day or night, in adverse weather, for infiltration, exfiltration, and resupply of special operations forces. Missions are almost always conducted under the cover of darkness, and are frequently conducted under adverse weather conditions requiring extended flight operations as low as 50' using Night Vision Goggles or Instrument Meteorological Conditions as low as 100' Above Ground Level. Missions involve deep penetrations of hostile areas, at extreme ranges, without escort. The MH-53M employs a sophisticated avionics system to enhance crew situational awareness and to avoid threats.
- **Performance Parameters:** Normal cruise is 110 kts (125 mph) at sea level

Multi-sensor Command & Control Aircraft (MC2A)

Acquisition Status

• **Program Status:** Pre-System Development and Demonstration

• **Unit Assignment:** TBD

• **Production:** TBD

• **Current Inventory:** None

• **Projected Inventory:** Spiral 1 fields 5 aircraft (1 test and 4 operational) equipped with an MP-RTIP sensor

• **Contractor:**

- Northrop Grumman (prime)
- Raytheon
- Boeing

• **Future Proposed Upgrades:** Spiral 2 is envisioned to integrate an Air Moving Target Indicator (AMTI) capability for air surveillance onto the same or a separate 767 MC2A airframe. Spiral 2 will also incorporate multi-sensor fusion, an Air Operations Center (AOC) Execution Cell and enhanced battle management capabilities.

Capabilities/Profile

• **Aircraft Type:** Modified 767-400 Extended Range

• **Predicted Aircraft Performance:**

- Service Ceiling: 34,000 - 38,000 Feet
- Range/Duration: Mission Profile—400 nm transit range with 11.5 hrs Time-On-Station; unlimited w/inflight refuel
- Cruise Airspeed: 0.76 Mach

• **Dimensions:**

- 170 Feet, 4 Inches (Wing Span)
- 201 Feet, 4 Inches (Length)
- 55 Feet, 4 Inches (Height)

• **Weight:** 450,000 Pounds (Maximum Takeoff Weight)

Functions/Performance Parameters

• **Mission Statement:** The Multi-sensor Command & Control Aircraft (MC2A) is the next generation wide area surveillance platform designed to provide a near real-time, horizontally integrated view of the air and surface battlespace through the use of advanced sensors, network centric warfare and high-speed, wideband communications systems. The MC2A is a key enabler of the Global Strike Task Force and the Cruise Missile Defense (CMD) architecture.

• **Performance Parameters:** Spiral 1 fields MP-RTIP, the next generation Ground Moving Target Indicator (GMTI) sensor; a focused AMTI capability supporting CMD; and an open system architecture to facilitate dynamic battle management and command and control functions.

- Open system communication and sensor network; Multi-Platform Common Data Link (MP-CDL) to Distributed Common Ground Stations (DCGS); Link 16 to Joint C3I nodes
- Growth capacity for UAV control and space-based radar interface capabilities

MQ-1B Predator

Acquisition Status

• **Program Status:** Production/ Operational

• **Unit Assignment:** 11/15/ 17RS, 57WG located at Indian Springs AFAF, NV

• **Production:** Continues through FYDP

• **Current Inventory:** 40 Air Vehicles

• **Projected Inventory:**71 air vehicles plus attrition reserve

• **Contractors:**
  • General Atomics ASI (Prime)
  • Northrop Grumman (SAR)
  • Raytheon (video sensors, laser designator)
  • L3C OMM (Communications)

• **Future Upgrades:** Multispectral Targeting System (MTS) laser sensor balls; Weaponized wing kits; enabling improvements to include power upgrades, paint scheme, secure comms

• **Purchase Requirements:** 24 air vehicles per year in FY02-03, thereafter, approximately 7 attrition aircraft across the FYDP

Capabilities/Profile

• **Service Ceiling:** 25,000 Feet

• **Combat Range:** 24 hours endurance (400 nautical miles with 16 hours on station)

• **Armament:** Hellfire successfully tested

• **Dimensions:**
  • 49 Feet (Wing Span)
  • 27 Feet (Length)
  • 7 Feet (Height)

• **Weight:** 2,250 Pounds (Max T/O Gross Weight)

Functions/Performance Parameters

• **Mission Statement:** Endurance Unmanned Aerial Vehicle providing airborne reconnaissance. Sensors include Electro-Optic/Infrared (EO/IR) and Synthetic Aperture Radar (SAR). Provides real-time full motion video through either line-of-sight or satellite.

• **Performance Parameters:**
  • Max Speed: 120 knots
  • Typical operating altitude: 15,000 Feet
  • Maximum operating altitude: 25,000 Feet
  • Endurance: Nominally 24 hours

OC-135B

Acquisition Status

- **Program Status:** Sustainment
- **Unit Assignment:** 55WG, Offutt AFB, NE
- **Production:** Complete
- **Current Inventory:** 2
- **Projected Inventory:** 2
- **Contractors:**
  - Boeing (Airframe)
  - Pratt & Whitney (Propulsion)
  - Northrop Grumman, Logicon (Major Subsystems)
- **Future Upgrades:** Avionics, on-going modernization

Capabilities/Profile

- **Service Ceiling:** 35,000 Feet
- **Range:** 8 hours unrefueled
- **Armament:** None
- **Dimensions:**
  - 132 Feet (Wing Span)
  - 136 Feet (Length)
  - 42 Feet (Height)
- **Weight:** 297,000 Pounds (Max)

Functions/Performance Parameters

- **Mission Statement:** The Open Skies (OC-135B) observation aircraft supports the Open Skies Treaty. The aircraft flies unarmed observation flights over participating parties of the Treaty, and collects images using its various imaging equipment.
- **Performance Parameters:**
  - Speed: 500 mph

RC-135S Cobra Ball

Acquisition Status

• **Program Status:** Sustainment

• **Unit Assignment:** 55WG, Offutt AFB, NE

• **Current Inventory:** 3 + 1 Trainer

• **Projected Inventory:** 3 + 1 Trainer

• **Contractors:**
  • Boeing (Airframe)
  • Pratt & Whitney (Propulsion)
  • L^3 COM, Textron (Major Subsystems)

• **Future Upgrades:** Re-Engine Fleet, Avionics, Primary Mission Equipment, on-going modernization

Capabilities/Profile

• **Service Ceiling:** 35,000 Feet

• **Combat Range:** 8-10 hours unrefueled

• **Armament:** None

• **Dimensions:**
  • 131 Feet (Wing Span)
  • 140 Feet (Length)
  • 42 Feet (Height)

• **Weight:** 299,000 Pounds (Max)

Functions/Performance Parameters

• **Mission Statement:** COBRA BALL (RC-135S) is a self-contained MASINT collection platform, providing Scientific and Technical (S&T) assessments of foreign ballistic missiles and assisting in treaty verification.

• **Performance Parameters:**
  • Speed: 500 mph

RC-135U Combat Sent

Acquisition Status

- **Program Status:** Sustainment
- **Unit Assignment:** 55WG, Offutt AFB, NE
- **Current Inventory:** 2
- **Projected Inventory:** 2
- **Contractors:**
  - Boeing (Airframe)
  - Pratt & Whitney (Propulsion)
  - L^3 COM, Harris Information Systems (Major Subsystems)
- **Future Upgrades:** Re-Engine Fleet, Avionics, Primary Mission Equipment (PME), on-going modernization

Capabilities/Profile

- **Service Ceiling:** 35,000 Feet
- **Combat Range:** 8-10 hours unrefueled
- **Armament:** None
- **Dimensions:**
  - 135 Feet (Wing Span)
  - 136 Feet (Length)
  - 42 Feet (Height)
- **Weight:** 299,000 Pounds (Max)

Functions/Performance Parameters

- **Mission Statement:** COMBAT SENT (RC-135U) is a Scientific & Technical SIGINT collector for information used in the development of advanced weapon systems and dynamic reprogramming of radar warning gear.
- **Performance Parameters:**
  - Speed: 500 mph

RC-135V/W Rivet Joint

Acquisition Status

- **Program Status:** Sustainment
- **Unit Assignment:** 55WG,Offutt AFB, NE
- **Current Inventory:** 16 + 2 Trainers
- **Projected Inventory:** 17 + 2 Trainers
- **Contractors:**
  - Boeing (Airframe)
  - Pratt & Whitney (Propulsion)
  - L^{3}COM (Major Subsystems)
- **Future Upgrades:** Re-Engine Fleet, Joint SIGINT Avionics Family (JSAF), Avionics, Primary Mission Equipment, on-going modernization

Capabilities/Profile

- **Service Ceiling:** 35,000 Feet
- **Combat Range:** 8-10 hours unrefueled
- **Armament:** None
- **Dimensions:**
  - 131 Feet (Wing Span)
  - 136 Feet (Length)
  - 38 Feet (Height)
- **Weight:** 299,000 Pounds (Max)

Functions/Performance Parameters

- **Mission Statement:** RIVET JOINT (RC-135V/W) is a self-contained collection, processing, analysis and dissemination system. Provides direct tactical SIGINT support to theater/component commanders.
- **Performance Parameters:**
  - Speed: 500 mph

RQ-4A Global Hawk

Acquisition Status

• **Program Status:** Currently in Engineering, Manufacturing, and Development (EMD) phase. Advanced Concept Technology Demonstration (ACTD) complete.

• **Unit Assignment:** In flight test at Edwards Air Force Base, CA

• **Production:** Low Rate Initial Production

• **Current Inventory:** 3 Air vehicles

• **Projected Inventory:** 51

• **Contractors:** Northrop-Grumman Ryan Aeronautical Center (Prime)

• **Future Upgrades:** SIGINT, Improved EO/IR and SAR, MP-RTIP Surveillance Radar, payload increase to 3,000 lbs

• **Purchase Requirements:** Total of 51 aircraft to include attrition through 2030

Capabilities/Profile

• **Service Ceiling:** 65,000 Feet

• **Combat Range:** 13,500 Nautical Miles

• **Payload:** 1,960 lb. (SAR & EO/IR Sensors)

• **Armament:** None

• **Dimensions:**
  • 116 Feet (Wing Span)
  • 44 Feet (Length)
  • 15 Feet, 2 inches (Height)

• **Weight:** 25,600 Pounds (Gross Weight)

Functions/Performance Parameters

• **Mission Statement:** Global Hawk will provide continuous, all-weather, day/night, wide area surveillance to support the tactical warfighter. It is designed for long endurance, high altitude, standoff, image collection capabilities. Global Hawk will operate in low-to-moderate air defense threat environments with the ability to fly above, standoff, and look into high threat areas. Sensors include Electro-Optic/Infrared (EO/IR) and Synthetic Aperature Radar (SAR) with Ground Moving Target Indicator (GMTI) mode.

• **Performance Parameters:**
  • Speed: 350 knots
  • Typical operating altitude: 60-65,000 Ft
  • Endurance: Up to 35 hours

T-1A Jayhawk

Acquisition Status

- **Program Status:** Sustainment
- **Unit Assignment:** Randolph, Vance, Laughlin, and Columbus AFBs
- **Production:** 1989–1995
- **Current Inventory:** 180
- **Projected Inventory:** 180
- **Contractors:**
  - Raytheon (Airframe)
  - Pratt & Whitney (Engines)
  - Collins (Avionics)
  - Quintron (Simulators)
  - McDonnell Douglas (Integration)

Capabilities/Profile

- **Service Ceiling:** 41,000 Feet
- **Range:** Over 2,100 NM
- **Armament:** None
- **Dimensions:**
  - 43 Feet, 6 Inches (Wing Span)
  - 48 Feet, 5 Inches (Length)
  - 13 Feet, 11 Inches (Height)
- **Max Takeoff Weight:** 16,100 Pounds (Gross Weight)

Functions/Performance Parameters

- **Mission Statement:** Used by Air Education and Training Command as an advanced aircraft to train student pilots who will fly airlift, bomber, or tanker aircraft and student navigators who will fly on airlift or tanker aircraft.
- **Performance Parameters:**
  - Medium range, twin-engine jet
  - Top Speed: 539 mph (Mach 0.78)
  - Thrust: 2,900 pounds each engine

T-6A Texan II

Acquisition Status

• **Program Status:** Full Rate Production

• **Unit Assignment:** **USAF:**Randolph AFB, TX; Moody AFB, GA; Laughlin AFB, TX; Vance AFB, OK; Columbus AFB, MS; Sheppard AFB, TX; **USN:** NAS Whiting, FL; NAS Corpus Christi, TX; NAS Pensacola, FL

• **Production:** Through FY08 (USAF) and FY14 (USN)

• **Current Inventory:** 89 (87 USAF and 2 USN)

• **Projected Inventory:** 454 USAF; 328 USN

• **Contractors:**
- Raytheon (Prime/Airframe)
- Pratt & Whitney (Propulsion)
- Martin Baker (Ejection)
- Allied Signal (Avionics)
- Flight Safety (GBTS)

• **Future Upgrades:** Minor enhancements (e.g., to environmental control system, UHF radio)

• **Purchase Requirements:** For FY03, acquire 35 USAF aircraft; continue Ground Based Training System (GBTS) acquisition

Capabilities/Profile

• **Maximum Operating Altitude:** 31,000 Feet

• **Range:** 800+ NM

• **Armament:** N/A

• **Dimensions:**
- 33.4 Feet (Wing Span)
- 33.3 Feet (Length)
- 10.6 Feet (Height)

• **Weight:** 6,500 Pounds (Gross Weight)

Functions/Performance Parameters

• **Mission Statement:** Provides entry-level flight and ground based training for future USAF and USN pilots. Replaces USAF T-37B and USN T-34C primary trainer aircraft and associated Ground Based Training Systems (GBTS).

• **Performance Parameters:**
- Power Plant: 1,100 horsepower Pratt& Whitney Canada PT6A-68 turbo-prop engine
- Speed: 320 mph

T-37B Tweet

Acquisition Status

- **Program Status:** Sustainment
- **Unit Assignment:** Randolph, Sheppard, Vance, Columbus and Laughlin AFBs
- **Production:** 1956–1968
- **Current Inventory:** 419
- **Projected Inventory:** Being phased out by the T-6A, beginning FY00
- **Contractors:**
  - Cessna (Airframe)
  - Continental (Engines)
  - Sabreliner Corp (Structural Life Extension Program)
- **Future Upgrades:** None

Capabilities/Profile

- **Service Ceiling:** 35,000 Feet
- **Range:** 400 NM (460 Miles)
- **Armament:** None
- **Dimensions:**
  - 33 Feet, 8 Inches (Wing Span)
  - 29 Feet, 3 Inches (Length)
  - 9 Feet, 2 Inches (Height)
- **Max Takeoff Weight:** 6,625 Pounds (Gross Weight)

Functions/Performance Parameters

- **Mission Statement:** Primary trainer in undergraduate pilot training, undergraduate navigator and tactical navigator training.
- **Performance Parameters:**
  - Twin-engine jet
  - Top Speed: 315 mph (Mach 0.4 at sea level)
  - Thrust: 1,025 pounds each engine

T-38A/AT-38B/T-38C Talon

Acquisition Status

- **Program Status:** Sustainment
- **Unit Assignment:** Randolph, Sheppard, Vance, Columbus, and Laughlin AFBs
- **Production:** 1961–1972
- **Current Inventory:** 509
- **Projected Inventory:** 509
- **Contractors:**
  - Northrop Grumman (Airframe)
  - General Electric (Engines)
- **Future Upgrades:**
  - Pacer Classic, the structural life extension program, is integrating 10 modifications, including major structural renewal, into one process
  - Avionics Upgrade Program
  - Propulsion Modernization Program (PMP)

Capabilities/Profile

- **Service Ceiling:** Above 55,000 Feet
- **Range:** 870 Nautical Miles (1,000 Miles)
- **Armament:** AT-38B has provisions for external armament
- **Dimensions:**
  - 25 Feet, 3 Inches (Wing Span)
  - 46 Feet, 4.5 Inches (Length)
  - 12 Feet, 10.5 Inches (Height)
- **Max Takeoff Weight:** 12,500 Pounds (Gross Weight)

Functions/Performance Parameters

- **Mission Statement:** Used primarily by Air Education and Training Command as an advanced aircraft for undergraduate pilot training and pilot instructor training. Air Combat Command, Air Mobility Command, and the National Aeronautics and Space Administration also use the T-38 in various roles.
- **Performance Parameters:**
  - Twin-engine, high-altitude, supersonic jet
  - Top Speed: 812 mph (Mach 1.08 at sea level)
  - Thrust: 2,900 pounds with afterburners

T-43A

Acquisition Status

- **Program Status:** Sustainment
- **Unit Assignment:** Randolph AFB, TX
- **Production:** 1971–1973
- **Current Inventory:** 10
- **Projected Inventory:** 10
- **Contractors:**
  - Boeing (Airframe)
  - Pratt & Whitney (Engines)
- **Future Upgrades:** Traffic Collision Avoidance System (TCAS), Terrain Avoidance Warning Systems (TAWS)

Capabilities/Profile

- **Service Ceiling:** 37,000 Feet
- **Range:** 2,604 NM
- **Armament:** None
- **Dimensions:**
  - 93 Feet (Wing Span)
  - 100 Feet (Length)
  - 37 Feet (Height)
- **Max Takeoff Weight:** 115,000 Pounds

Functions/Performance Parameters

- **Mission Statement:** Used by Air Education and Training Command to train navigators for strategic and tactical aircraft.
- **Performance Parameters:**
- Medium range, jet aircraft
  - Military training version of the Boeing 737-200
  - Speed: 535 mph (Mach .72)
  - Thrust: 14,500 lbs per engine

U-2S Dragon Lady

Acquisition Status

- **Program Status:** Sustainment
- **Unit Assignment:** Beale AFB, CA
- **Current Inventory:** 35 (5-two seat trainers, 30 single seat)
- **Projected Inventory:** 35
- **Contractors:**
  - Lockheed Martin (Airframe)
  - GE (Propulsion)
  - Raytheon, Northrup-Grumman, L-3Com, Sanders, BF Goodrich Aero, BAE (Major Subsystems)
- **Future Upgrades:** Cockpit Modernization, Advanced Defensive System, Dual Data Link, Link 16, Advanced Signals Intelligence Payload (ASIP)

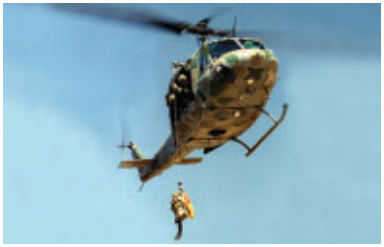
Capabilities/Profile

- **Service Ceiling:** >70,000 Feet
- **Combat Range:** >7,000 NM
- **Armament:** None
- **Dimensions:**
  - 104 Feet (Wing Span)
  - 63 Feet (Length)
  - 16 Feet (Height)
- **Weight:** 40,000 Pounds (Gross Weight)

Functions/Performance Parameters

- **Mission Statement:** Conducts high-altitude, deep-look, multi-INT reconnaissance and surveillance utilizing state of the art IMINT and SIGINT sensors. Provides Near Real Time (NRT) worldwide battlespace awareness and time critical targeting.
- **Performance Parameters:**
  - Speed: 475 mph
  - Sortie Duration: >10 Hours
  - Airframe Service life: >CY2050 based on current utilization rates
  - Payload: Advanced Synthetic Aperture Radar System (ASARS-2), ASARS-2A, Senior Year Electo-optical Reconnaissance System (SYERS), SYERS-2, Optical Bar Camera (OBC) wet film, and SIGINT suite. SIGINT can be carried simultaneously with any one of the imaging sensors. Total payload capacity is 5,000 pounds.

UH–1N Helicoptor



Acquisition Status

• **Program Status:** Sustainment

• AOA completed to examine replacement options. Vertical Lift Roadmap provides alternatives for the next generation of AF Helicopters, including the replacement of the UH-1 fleet that are over 30 years old.

• **Unit Assignment:** AFSPC - 26, AMC - 19, AETC - 10, PACAF - 4, AFMC - 2, AFSOC – 2

• **Production:** Completed; AF delivery 1970

• **Current Inventory:** 63

• **Projected Inventory:** 63

• **Contractors:** Bell Helicopter

• **Commercial Variant of:** Bell 212

• **Current Major Upgrades:** None

Capabilities/Profile

• **Range:** 300 Nautical Miles

• **Dimensions:**

- 57.25 Feet (Length)
- 9.5 Feet (Width)
- 12.8 Feet (Height)

• **Power Plant:** Two Pratt and Whitney T400-CP-400 engines (1800 shaft hp)

• **Max Gross Weight:** 10,500 Pounds

Functions/Performance Parameters

• **Mission Statement:** Provides Special Air Mission support for the National Capital Region, VIP airlift, airlift of emergency security and disaster response forces, nuclear weapons security and surveillance, search and rescue, and missile launch security.

• **Performance Parameters**

- **Top Speed:** 149 mph
- **Cruise Speed:** 103-115 mph

• **Load:** 8 passengers and 2 crew

VC-25A

Acquisition Status

- **Program Status:** Sustainment
- **Unit Assignment:** Andrews AFB, MD
- **Production:** Completed
- **Current Inventory:** 2
- **Projected Inventory:** 2
- **Contractors:**
  - Boeing Airplane Co. (Airframe)
  - General Electric (Propulsion)
- L3 Comm
- **Commercial Variant of:** Boeing 747-200
- **Current Major Upgrades:** Presidential Data System (PDS)

Capabilities/Profile

- **Service Ceiling:** 45,100 Feet
- **Range:** 8,348 Nautical Miles
- **Armament:** None
- **Dimensions:**
  - 196 Feet (Wing Span)
  - 232 Feet (Length)
  - 63 Feet (Height)
- **Maximum Takeoff Weight:** 833,000 lbs

Functions/Performance Parameters

- **Mission Statement:** Provides transportation for the President of the United States.
- **Performance Parameters:**
  - **Top Speed:** 701 mph (Mach 0.95)
- **Load:** 76 passengers and 26 crew

WC-135 Constant Phoenix

Acquisition Status

- **Program Status:** Sustainment
- **Unit Assignment:** 55WG Offutt AFB, NE
- **Current Inventory:** 1
- **Projected Inventory:** 1
- **Contractors:**
  - Boeing (Airframe)
  - Pratt-Whitney (Propulsion)
  - Raytheon, Harris Information Systems (Major Subsystems)
- **Future Upgrades:** Migrating to Advanced Atmospheric Research Equipment (AARE) — this will be flown on RC-135 trainer aircraft

Capabilities/Profile

- **Service Ceiling:** 35,000 Feet
- **Combat Range:** 8-10 hours unrefueled
- **Armament:** None
- **Dimensions:**
  - 135 Feet (Wing Span)
  - 136 Feet (Length)
  - 42 Feet (Height)
- **Weight:** 299,000 Pounds (Max)

Functions/Performance Parameters

- **Mission Statement:** Constant Phoenix conducts world-wide nuclear air sampling.
- **Performance Parameters:**
  - Speed: 500-mph

X-45B Unmanned Combat Air Vehicle (UCAV)

Acquisition Status

- **Program Status:** In second of a three phase DARPA/USAF System Development Program (SDP)
- **Unit Assignment:** In test at Edwards AFB
- **Production:** TBD
- **Current Inventory:** 2 X-45A demonstrators, 3 X-45B demonstrators in FY04-05
- **Projected Inventory:** TBD
- **Contractors:** Boeing Phantom Works
- **Future Upgrades:** TBD
- **Purchase Requirements:** 14 Block 10 systems (Preemptive SEAD and Strike) by late FY08

Capabilities/Profile

- **Service Ceiling:** 40,000 Feet
- **Range:** 1,300 Nautical Miles
- **Armament:**
  - 12 Small Diameter Bombs
  - 2-1000lb JDAM
  - 2-500lb JDAM
- **Dimensions:**
  - 44.2 Feet (Wing Span)
  - 32.9 Feet (Length)
  - 7.0 Feet (Height)
- **Weight:** 19,222 Pounds (Gross Weight)

Functions/Performance Parameters

- **Mission Statement:** The Unmanned Combat Air Vehicle (UCAV) program will demonstrate and develop an unmanned, highly survivable and interoperable weapons system capable of effectively and affordably performing lethal and non-lethal Suppression of Enemy Air Defenses (SEAD)/Strike missions. Potential future missions for UCAV include Electronic Attack, Directed Energy, and Tactical Reconnaissance.
- **Performance Parameters:**
  - Speed: >0.8M at 40K ft
  - Propeller-driven
  - Combat Radius: 650 nmi with 30 min loiter


KEY AIR FORCE
PROGRAMS
MUNITIONS

AGM-65 Maverick

Acquisition Status

- **Program Status:** Sustainment
- **Current Inventory:**
  - 6,172 AGM–65A/Bs
  - 6,860 AGM-65Ds
  - 4,485 AGM-65G/G2s
- **Contractor:** Raytheon
- **Ongoing Seeker Upgrades:**
  - 1,500-2,000 AGM-65Gs (IR seeker) and AGM-65Bs (EO seeker) will be converted to AGM-65Ks/Hs respectively (Varies with available AF funding and Raytheon Foreign Military Sales (exchange credits toward seeker upgrades)
  - Goal is a 70/30 mix of IR (D/G/G2) and EO (H/K)

Capabilities/Profile

- **Range:** <10 NM
- **Warheads:**
  - 300lb Blast/Frag - AGM–65G/G2/K
  - 125lb Shaped - AGM–65A/B/D/H
- **Dimensions:**
  - 97 Inches (Length)
  - 12 Inches (Diameter)
- **Weight:**
  - 500lb (AGM-65A/B/D/H)
  - 650lb (AGM-65G/K)

Functions/Performance Parameters

- Air to surface launch and leave missile
- Electro-optical (EO) or infrared (IR) guidance
- Platforms: A–10, F–16, F–15E
- Primary targets: Armor, vehicles, bunkers, air defense

AGM-86B Air Launched Cruise Missile

Acquisition Status

- Service Life Extension Program (SLEP) Extends ALCM service life to 2030
- Form, Fit, Function Replacement - No enhanced capabilities
- CALCM/ALCM Test Instrumentation Kit
  - RDT&E - July 00
  - Procurement - FY04
- Inertial Navigation Element
  - RDT&E - FY01
  - Procurement - FY05
- Thermal Battery and Pyrotechnic Device Replacement Procurement - FY01-FY08
  - Program Status: Sustainment
  - Production: 1980-1986
  - Current Inventory: 975

Capabilities/Profile

- **Range:** 1,500+ Miles
- **Armament:** W80-1 warhead – under current W80 LEP warhead integration
- **Dimensions:**
  - 20.75 Feet (Length)
  - 12 Feet (Wingspan)
  - 2 Feet (Diameter)
- **Weight:** 3,150 Pounds

Functions/Performance Parameters

- **Mission Statement:** Subsonic, highly accurate, long range, air-to-surface strategic nuclear missile. The ALCM is designed to evade air and ground-based defenses in order to strike targets at any location within any enemy's territory.
- **Performance Parameters:**
  - Speed: 550 MPH

AGM-86C Conventional Air Launched Cruise Missile (CALCM)

Acquisition Status

- **Program Status:** Sustainment/Upgrade
- **Production:** N/A
- **Current Inventory:** 336
- **Projected Inventory:** 336
- **Contractors:**
  - Boeing (Prime)
  - Interstate Electronics Corp (GRIU/P)
  - Harris Corp (Anti-Jam System)
- **Future Upgrades:**
  - Global Positioning System (GPS) Receiver Interface Unit-Precision (GRIU-P)/ Anti-Jam Upgrade. Allows for Precision Level accuracy insured by state-of-the-art GPS Anti-Jam protection system. Stockpile upgrade currently ongoing for Block 0/I missiles and should be completed by 2nd QTR FY03.

Capabilities/Profile

- **Range:** Nominal 500 NM
- **Warheads:** Blast/Frag
  - Block 0 - 2,000 lb. Class
  - Block I - 3,000 lb. Class
  - Block IA - 3,000 lb. Class
- **Dimensions:**
  - 21 Feet (Length)
  - 2 Feet (Width)
  - 4 Feet (Height)
- **Wing Span:** (Deployed) 12 Feet
- **Weight:** (At Launch)
  - Block 0 - 3,117 Pounds
  - Block I/IA - 3,277 Pounds

Functions/Performance Parameters

- **Mission Statement:** CALCM provides the warfighter with an adverse weather, day/night, air-to-surface, accurate, long-range stand-off (outside theater defenses) strike capability. CALCM is equally effective for stand-alone, clandestine/punitive strikes, and fully integrated theater warfare.
- **Performance Parameters:**
  - Near Precision Accuracy - Block IA
  - Multi-Axis of Attack Capability
  - Adverse Weather Capability
  - USAF B-52H Bomber Compatibility
  - Limited In-Flight Captive Carriage Retargeting Capability

AGM-86D CALCM Penetrator Missile

Acquisition Status

- **Program Status:** Sustainment
- **Production:** Completed
- **Current Inventory:** 48
- **Projected Inventory:** 48
- **Contractors:**
  - Boeing (Prime)
- **Future Upgrades:** None planned

Capabilities/Profile

- **Range:** Nominal 500 NM
- **Warheads:** Penetrating 1,000 lb. Class
- **Dimensions:**
  - 21 Feet (Length)
  - 2 Feet (Width)
  - 4 Feet (Height)
- **Wing Span:** (Deployed) 12 Feet
- **Weight:** (At Launch) - 3,250 Pounds

Functions/Performance Parameters

- **Mission Statement:** CALCM Penetrator is a long-range, air-delivered, stand-off missile mating the battle proven CALCM airframe with a penetrator warhead. CALCM Penetrator provides the warfighter with a cost-effective, stand-off Outside Theater Defenses capability against a wide range of hardened, deeply buried targets.
- **Performance Parameters:**
  - Near Precision Accuracy
  - Autonomous navigation/ terminal guidance
  - Capable of twice BLU–109 penetration capability
  - Multi-Axis of Attack Capability
  - Adverse Weather Capability
  - USAF B-52H Bomber Compatibility
  - Limited In-Flight Captive Carriage Retargeting Capability

AGM-88 High Speed Anti-Radiation Missile (HARM)

Acquisition Status

- **Program Status:** Sustainment
- **Production:** Complete
- **Current Inventory:** 7,156
- **Contractor:** Raytheon
- **Future Upgrades:** None planned for USAF. USN proceeding on Block VI GPS/INS precision navigation upgrade. USAF integrating BK VI capability on F-16 OFP M4+ (IOC FY04).

Capabilities/Profile

- **Range:** <60 NM
- **Warhead:**
  - 145 lb Fragmentation Warhead
  - Block III - 25,000 steel cubes
  - Block IV/V/VI - 14,000 tungsten cubes
- **Dimensions:**
  - 164 Inches (Length)
  - 10 Inches (Diameter)
- **Weight:** 795 Pounds

Functions/Performance Parameters

- **Mission Statement:** Tactical Anti-Radiation Missile used to destroy or suppress radar threats at standoff range. Block V missile adds limited geo-specificity and provides a significant step in countering rapidly improving threats. Block VI missile (USN only procurement, USAF interoperability) will have GPS quality accuracy, increasing probability of kill and allowing precise geo-specificity.
- **Performance Parameters:**
  - Accurate (18 meter CEP)
  - Adverse Weather Capability
  - USAF platform - F–16CJ
  - Navy platform F/A–18 and EA-6B

AGM-129A Advanced Cruise Missile

Acquisition Status

- **Program Status:** Sustainment
- Production: 1987-1993
- **Manufacturer:** General Dynamics, Hughes, and Raytheon
- Currently in a Service Life Extension Program (SLEP) extending ACM service life to 2030
  - Form, Fit, Function Replacement – No enhanced capabilities
  - Joint Test Instrumentation Kit (JTIK) Test Door Modification Procurement – Jul 02
  - Thermal Battery And Pyrotechnic Device Replacement Procurement – FY01-FY08
  - PE2 Card Repair – FY01-FY08
  - Current Inventory: 402
  - Production: 1987-1994

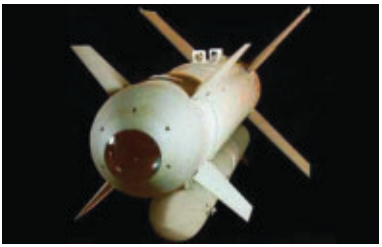
Capabilities/Profile

- **Range:** 2000+ NM
- **Armament:** W80-1 warhead – under current W80 LEP warhead integration
- **Dimensions:**
  - 20.8 Feet (Length)
  - 2.4 Feet (Diameter)
  - 10 Feet (Wingspan)
- **Weight:** 3,700 Pounds

Functions/Performance Parameters

- **Mission Statement:** Subsonic, low-observable air-to-surface strategic nuclear missile with significant range, accuracy, and survivability improvements over the ALCM. The ACM is designed to evade air and ground-based defenses in order to strike heavily defended, hardened targets at any location within an enemy's territory.
- **Performance Parameters:**
  - Speed: Mach .45 - .81

AGM-130 Standoff Attack Weapon



Acquisition Status

- **Program Status:** Sustainment
- **Current Inventory:** 426
- **Contractor:** Boeing
- **Future Upgrades:** None

Capabilities/Profile

- **Range:** >30 NM
- **Warhead:**
  - Blast/Frag: Mk–84
  - Penetrator: BLU–109
- **Dimensions:**
  - 156 Inches (Length)
  - 18 Inches (Diameter)
- **Weight:** 3,000 Pounds

Functions/Performance Parameters

- **Mission Statement:** Solid rocket powered GBU–15. Autonomous INS/GPS Mid-Course Guidance provides adverse weather capability and backup for man-in-the-loop features. Weapon uses TV or IR Terminal Seeker. Provides only fielded Air Force Standoff Outside Point Defense weapon with a 2,000 pound warhead. Integrated on the F–15E Strike Eagle.
- **Performance Parameters:**
  - Precise (<3 meter circular error probable (CEP))
  - Adverse Weather Capability
  - USAF platform - F–15E

AGM-142 Weapon System

Acquisition Status

- **Program Status:** Sustainment
- **Current Inventory:**
  - 45 Blast/Frag units
  - 111 I-800 units
- **Projected Inventory:**
  - 46 Blast/Frag units
  - 111 I-800 units
- **Contractors:** RAFAEL Industries and Lockheed Martin (Precision Guided Systems U.S. [PGSUS])

Capabilities/Profile

- **Range:** >50 NM
- **Warheads:**
  - Blast/Frag: 750 lb.
  - Penetrator: 800 lb. (I-800)
- **Dimensions:** 16 Feet Long x 21 Inches Diameter
- **Weight:** 3,000 Pounds
- **Propulsion:** Solid fuel rocket motor
- **Seeker:** TV/IIR and Upgraded Z-Seeker
- **Weapon Control:** Video and Command Data Link
- **A/C Capability:** B–52H, 3 Missiles per aircraft and One Data Link Pod

Functions/Performance Parameters

- **Mission Statement:** The AGM-142 is a 3,000 lb. air-to-surface, man-in-the-loop, precision guided, standoff missile, powered by solid propellant rocket motor, and launched from a B-52H. Specifically, procured to provide B-52s as an interim precision stand-off weapon capability, AGM-142 inventory is programmed to 'phase out' as USAF's advanced stand-off precision weapons (JSOW, JASSM) enter the Bomber inventory.
- **Performance Parameters:**
  - Precision (<3 meter circular error probable (CEP))
  - Adverse Weather Capability
  - USAF B-52H Bomber Compatible
  - Autonomous midcourse inertial navigation feature is insensitive to GPS jamming

AIM-7M Sparrow

Acquisition Status

- **Program Status:** Sustainment
- **OPR:** NAVAIRSYCOM PMA-259
- **AF Mgmt/Eng OPR:** WR-ALC/LKG
- **Current Inventory:** 4,029
- **Contractors:**
  - Raytheon
  - General Dynamics

Capabilities/Profile

- **Guidance:** Semi-Active Radar
- **Diameter:** 8 Inches
- **Length:** 12 Feet
- **Weight:** 500 Pounds
- **Warheads:**
  - Blast/Frag: WAU–17
  - Continuous Rod: WAU–10
- **Fuze:** Proximity RF
- **Propulsion:** MK-58 Rocket Motor (4.5 sec Boost; 11 sec Sustain)
- **Launcher:** LAU-106A
- **Speed:** More than 2,660 mph
- **Range:** More than 30 NM

Functions/Performance Parameters

- **Mission Statement:** The AIM–7M Sparrow is a supersonic, medium range, semi-active radar-guided air-to-air missile with a high explosive warhead.
- **Performance Parameters:**
  - Joint Project between Navy and Air Force
  - All Altitude Capability
  - All Weather Capability
  - All Aspect Capability
  - Carriage Options: F–14, F–15, F–16ADF, F–18
  - Radar Guidance Required Throughout Time Of Flight (TOF)
  - AIM–7M H-Build: Home-On-Jam Capable

AIM-9M Sidewinder

Acquisition Status

• **Program Status:** Sustainment. Joint project between Navy and Air Force.

  • **OPR:** NAVAIRSYCOM PMA-259

  • **AF Mgmt/Eng OPR:** WR-ALC/LKG

• **Current Inventory:** 8,013

• **Contractors:**
  •Raytheon
  •General Dynamics

• **Introduction Date:** 1956

Capabilities/Profile

• **Guidance:** Passive Infrared Homing

• **Diameter:** 5 Inches

• **Length:** 113 Inches

• **Weight:** 191 Pounds

• **Warheads:** Annular Blast/ Frag

• **Fuze:** Contact and Active Optical

• **Propulsion:** MK-36 Rocket Motor

• **Speed:** Supersonic

• **Range:** 8.7+ NM

Functions/Performance Parameters

• **Mission Statement:** The AIM-9M Sidewinder is a supersonic, short range, passive infrared-guided air-to-air missile with a high explosive warhead.

• **Performance Parameters:**

  • Joint Project between Navy and Air Force

  • All Altitude Capability
  • All Aspect Capability
  • Launch and Leave Capability

  • Carriage Options: A–10, F–14, F–15, F–16, F–16 ADF, F–18

AIM-9X

Acquisition Status

• **Program Status:** Joint Navy/AF Program (Navy lead) in Operational Evaluation (OPEVAL)

- Completed 16 Separation Firings and 19 Guided Firings resulting in 18 successful launches
- Completed DT and Operational Assessment (OA) testing
- OTRR successfully accomplished Jan 02 – OPEVAL began Aug 02

• **Production:** Manufacturing Processes in Place - approved for LRIP in Sep 00

- LRIP 1 contract awarded Nov 00
- LRIP 2 contract awarded Nov 01
- LRIP 3 contract awarded Nov 02

• **Contractor:** Raytheon Systems Company

• **Future Upgrades:** P3I Starting in FY04

Capabilities/Profile

• **Length:** 119 Inches

• **Diameter:** 5 Inches

• **Weight:** 188 Pounds

• **Warhead:** Annular Blast/Frag

• **Fuze:** Contact/Active Optical (AOTD)

• **Propulsion:** MK-36 Rocket Motor

• **Speed:** Supersonic

• **Range:** Classified

Functions/Performance Parameters

Mission Statement: The AIM-9X (Sidewinder) short-range air-to-air missile program provides a launch and leave air combat munition that uses passive infrared (IR) energy for acquisition and tracking of enemy aircraft.

Key Performance Parameters:

- Improved IR Countermeasure Performance
- Improved Probability of Kill (Pk)
- Highly Maneuverable Airframe
- High Off-boresight Acquisition and Track
- Day/Night Capability
- Lead Test Platforms: F-15C and F/A-18C/D
- Follow-on Platforms: F-16, F/A-22, F/A-18E/F, F-35, and FMS
- Integration with Joint Helmet Mounted Cueing System (JHMCS)

AIM-120 AMRAAM

Acquisition Status

• **Program Status:** Production with Pre-Planned Product Improvement (P3I) Program

• **Production:** July 2009

• **Current bought to date:** 5,058

• **Contractor:** Raytheon Systems Company

• **Future Upgrades:** P3I and Processor Modernization Program

Capabilities/Profile

• **Guidance:** Inertial/Command, Inertial & Active Radar

• **Diameter:** 7.15 inches

• **Length:** 144 inches

• **Weight:** 348 pounds (C model)

• **Warhead:** Blast/ Fragmentation

• **Fuze:** Target Detection Device

• **Propulsion:** Boost/Sustain, Reduced Smoke

• **Launcher:** LAU-127/128/ 129/142 Launchers

• **Speed:** Supersonic

• **Range:** 20+ nautical miles

Functions/Performance Parameters

• **Mission Statement:** The AIM-120 Advanced Medium-Range Air-to-Air Missile (AMRAAM) is a supersonic, medium range, active radar guided air-to-air missile with a high explosive warhead.

• **Performance Parameters:**

  • Joint project between Air Force and Navy
  • All Altitude Capability
  • All Weather Capability
  • All Aspect Capability
  • Carriage Options: F-15, F-16, F-18, F/A-22
  • P3I Program
    • Enhanced Electronic Protection (EP) capabilities
    • Improved warhead, fuzing, and guidance
    • Increased kinematics via new 5-in stretched rocket motor

CBU-87 Combined Effects Munition (CEM)

Acquisition Status

- **Program Status:** Sustainment/Upgrade
- **Current Inventory:**
  - CBU-87 - 107,704 units
  - CBU-103 - 4,442 units
- **Contractors:**
  - Aero General
  - Honeywell, Inc
  - Alliant Tech
- **Ongoing Upgrades:** Upgrade to the CBU-103 Configuration with Wind Corrected Munitions Dispenser (WCMD) Tail Kits

Capabilities/Profile

- **Range:** Direct Attack Munition
- **Warhead:** 202 BLU-97 Shaped Charge Anti-Personnel/ Anti-Material Frag/Incendiary Bomblets
- **Dimensions:**
  - 92 in x 15.6 in diameter
- **Weight:** 949 Pounds

Functions/Performance Parameters

- **Mission Statement:** The weapon dispenses the bomblets over the target in a rectangular pattern.
- **Performance Parameters:**
  - Adverse Weather Capability
  - USAF and Navy Fighter and Bomber Compatibility
  - Aircraft Carrier Operability
  - Upgrade to INS incorporated WCMD tail kits provides increased accuracy for high altitude deliveries

CBU-89 GATOR

Acquisition Status

- **Program Status:** Sustainment/Upgrade
- **Current Inventory:**
  - CBU–89 -10,447 units
  - CBU–104 -22 units
- **Contractors:**
  - Honeywell
  - Aerojet
  - Olan
  - Alliant
- **Future Upgrades:** Upgrade to the CBU–104 Configuration with Wind Corrected Munitions Dispenser (WCMD) Tail Kits
- **Purchase Requirements:** Tail Kit purchases based on available funding

Capabilities/Profile

- **Range:** Direct Attack Munition
- **Warhead:**
  - 72 BLU–91 Anti-Tank Mines
  - 22 BLU–92 Anti-Personnel Mines
- **Dimensions:**
  - 92 in x 15.6 in diameter
- **Weight:** 705 Pounds

Functions/Performance Parameters

- **Mission Statement:** CBU–89 (mixed system) disperses 94 mines. 72 mines are anti-tank and 22 are anti-personnel. The weapon dispenses the mines over the target in a rectangular pattern. The mines have three selectable self destruct times.
- **Performance Parameters:**
  - Adverse Weather Capability
  - USAF and Navy Fighter and Bomber Compatibility
  - Aircraft Carrier Operability
  - Upgrade to INS incorporated WCMD tail kits provided increased accuracy for high altitude deliveries

CBU-97 Sensor Fused Weapon (SFW)

SFW Skeet

BLU-108/B
Submunition

SFW - CBU-97/B
SUU-66/B Dispenser

SFW P3I Skeet

Acquisition Status

• **Program Status:** Full rate production

• **Production:** Procurement ends FY04

• **Current Inventory:**
  • CBU-97 - 635
  • CBU-105 - 2,157

• **Projected Inventory:**
  • CBU-97 - 0
  • CBU-105 - 3,800

• **Contractors:** Textron Systems Corporation

• **Future Upgrades:** None at this time. Currently being fitted with INS guided WCMD tail kit (CBU-105)

• **Purchase Requirements:** After FY02 buy, 502 weapons left to procure until complete

Capabilities/Profile

• **Range:** N/A - Direct Attack Munition

• **Dimensions:**
  • 7.7 Feet (Length)
  • 1.3 Feet (Width)
  • 1.3 Feet (Height)

• **Weight:** 920 Pounds

Functions/Performance Parameters

• **Mission Statement:** Provides operational forces with the capability to achieve multiple kills per pass against moving and stationary land combat vehicles. Tanks, APCs, and propelled targets are primary targets. It provides direct attack capability and interdiction against command and control centers.

• **Performance Parameters:**

	Threshold/ Baseline	Actual	Variance
Kills	Multiple/ Pass	Exceeding	+70%
Targets	Armor/Support Vehicles	✔	0
Del Altitude	200–3000* ft	✔	0
Aircraft	F–16, F–15E, A–10, B–1, B–2, B–52	✔	0
Schedule (RAA) (Required Asset Availability)	MET	MET	0

**Requirement calls for 200-3000 ft. With WCMD can be employed at altitudes up to 40,000 ft*

F–16 HARM Targeting System (HTS-R6) and F-16 Smart Targeting and Identification via Network Geolocation (STING-R7)

Acquisition Status

• **Program Status:** Operational at 5 locations; currently deploying Revision 6 hardware and software upgrade

• **Current Inventory:** 145

• **Projected Inventory:** 234

• **Contractor**: Raytheon Missile Systems

• **Future Upgrades:**

  • Revision 7 - Precision Geolocation

  • Targeting - Fielding in FY06/07

  • Alternate/Dual Carriage HTS/

  • Advanced Targeting Pods in FY04

Capabilities/Profile

• **Range:** N/A - F-16 Subsystem Mounted on engine inlet

• **Dimensions:**

  • 56 Inches (Length)

  • 25 Inches (Circumference)

• **Weight**: 90 Pounds

Functions/Performance Parameters

• **Mission Statement:** Provides the F-16CJ Block 50/52 aircraft with the capability for real-time targeting of enemy air defense system threats and enables employment of the AGM-88 High-Speed Anti-Radiation Missile (HARM) in the “range known” mode - the missile’s most lethal mode. HTS equipped F-16s are primary aircraft that conduct SEAD mission - - used in front line activity during engagements in Iraq and Kosovo.

• **Performance Parameters:** Detects and provides targeting information on enemy air defense radar outside the lethal range of their associated Surface-to-Air Missile (SAM). HTS targeting information increases HARM lethal range by 25% and increases probability of hitting the target radar.

• Upgrades will provide F-16 Destruction of Enemy Air Defenses (DEAD) capability and real-time JSOW precision targeting capability.

GBU-10/12/24/27/28 Laser Guided Bombs

GBU-24

GBU-28

Acquisition Status

- **Program Status:** Sustainment
- **Production:** GBU-10/12, EGBU-27, EGBU-28, EGBU-28 P3I
- **Current Inventory:**

GBU-10	5,691
GBU-12	10,729
GBU-24	1,031
GBU-27	2,914
GBU-28	488

- **Contractor**: Raytheon, Lockheed-Martin (GBU-10/12)
- **Upgrades:** EGBU-27 and EGBU-28 adds GPS/INS capability to the current guidance and control unit to provide adverse weather capability. The EGBU-28 P3I will be a Hard Deeply Buried Target upgrade to the EGBU-28 which will improve penetration and lethality.

Capabilities/Profile

- **Range:** <15 NM
- **Warheads**
  - GBU-10: Mk-84 2000 lb Blast/Frag or BLU-109 Penetrator
  - GBU-12: Mk-82 500 lb Blast/Frag
  - GBU-24: Mk-84 or BLU-109 2000 lb Penetrator
  - GBU-27: BLU-109 2000 lb Penetrator
  - GBU-28: BLU-113 5000 lb Penetrator
- **Guidance**
  - GBU-10/12: Paveway II with bang-bang control and semi-active laser seeker
  - GBU-24/27/28: Paveway III with proportional navigation and semi-active laser seeker
  - EGBU-27/28: Paveway III with proportional nav, GPS/INS guidance and semi-active laser seeker

Functions/Performance Parameters

- **Mission Statement:** Air-to-ground glide bombs used for precision bombing against both soft and hardened targets, capable of release from low, medium, or high altitudes.
- **Performance Parameters:**
- Accuracy: Paveway II, GPS/INS — Near-Precision (<13 meter CEP)

  Paveway III — Precision (<3 meter CEP)
- USAF platforms:

  F-16, (GBU-10, 12, 24), Blk 40/50 (GBU-27)

  F-117 (GBU-27/EGBU-27, GBU-10 MK-84, GBU-12 MK-82)

  F-15E (GBU-28/EGBU-28, GBU-10,12,24)

  A-10 (GBU-10 MK-84, GBU-12 MK-82)

  B-52 (GBU-10,12,28)

  B-2 (EGBU-28)

GBU-15 Guided Standoff Weapon

Acquisition Status

- **Program Status:** Sustainment
- **Production:** Complete
- **Current Inventory:**
  - GBU-15 - 956
  - EGBU-15 - 1,128
- **Contractor:** Boeing/Raytheon
- **Latest Upgrades:** EGBU-15 adds a GPS/INS capability to the current seeker to provide adverse weather capability.

Capabilities/Profile

- **Range:** <20 NM
- **Warhead:**
  - Blast/Frag: Mk–84
  - Penetrator: BLU–109
- **Dimensions:**
  - 154 Inches (Length)
  - 18 Inches (Diameter)
- **Weight:** 2400 Pounds

Functions/Performance Parameters

- **Mission Statement:** Weapon uses TV or IR Terminal Seeker. After launch, weapon performs a programmed climb and operator acquires the target. Data link allows one aircraft to launch weapon and another to perform target acquisition. GPS/INS adds adverse-weather capability. Integrated on the F–15E Strike Eagle.
- **Performance Parameters:**
  - Precise (<3 meter CEP)
  - USAF platform: F–15E

GBU-31/32 Joint Direct Attack Munition (JDAM)

Acquisition Status

• **Program Status:** Production, MK-83/MK-84/BLU-109; EMD MK-82

• **Production:** Last Delivery FY11

• **Current Inventory:** Over 17,000 tail kits
  • B–1B, B–2, B–52H, F-14B/D, F-16C/D, F/A-18C/D and F/A-18E/F

• **Projected Inventory:** 215,741 Total (143,495 AF; 72,246 USN)

• **Contractors:**
  • Boeing (JDAM)
  • Textron (Tail Assembly System)
  • Honeywell (Inertial Measurement Unit)

• **Future Upgrades:** JDAM GPS Selective Availability Anti-Spoofing Module (SAASM) development and integration efforts, along with development of a JDAM anti-jam antenna capability, will begin in Nov 03.

Capabilities/Profile

• **Range:** <15 Nautical Miles

• **Warheads:**
  • Blast/Frag: Mk-83/Mk-84/BLU-110/BLU-111
  • Penetrator: BLU-109

• **Dimensions:**
  • Mk-83: 10 Feet (length)
  • Mk-84: 12.7 Feet (length)
  • BLU-109: 12.4 Feet (length)

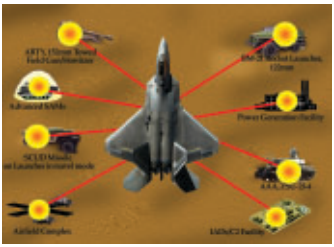
• **Weight (USAF/USN):**
  • Mk-83: 1014/1029 Pounds
  • Mk-84: 2039/2059 Pounds
  • BLU-109: 2118/2138 Pounds

Functions/Performance Parameters

• **Mission Statement:** JDAM will upgrade the existing inventory of general purpose bombs by integrating them with a GPS/INS guidance kit to provide the warfighter with accurate weapon delivery in adverse weather from medium/high altitudes.

• **Performance Parameters:**
  • Accurate (13 meter Circular Error Probable (CEP) with GPS-aided INS)
  • Adverse Weather Capability
  • Warhead Compatibility (MK-84, BLU-109, MK-83, MK-82, BLU-110, BLU-111)
  • USAF and Navy Fighter and Bomber Compatibility
  • In-Flight Captive Carriage Retargeting
  • Aircraft Carrier Operability
  • Interoperability

GBU-XX Small Diameter Bomb (SDB)



Acquisition Status

• **Program Status:** Concept Advanced Development (CAD)

• **Production:** LRIP FY05; Last Delivery FY20

• **Current Inventory:** 0

  •F-15E Required Assets Available (RAA); 4QFY06 (158 SDBs; 27 carriages)

• **Projected Inventory:** 24,000

• **Contractor:**

  •McDonnell Douglas (Boeing), St. Louis

  •Lockheed Martin, Orlando

• **Future Upgrades:** Spiral development of program

Capabilities/Profile

• **Range:**

  •>= 40 Nautical Miles downrange at 40K Mean Sea Level (MSL)

  • >= 35 Nautical Miles crossrange at 40K Mean Sea Level (MSL)

• **Warheads:**

  •Penetration/Blast Frag

• **Dimensions:**

  •Competition sensitive

• **Weight:** 250 lb Class

Functions/Performance Parameters

• **Mission Statement:** SDB will provide fighter and bomber aircraft with a tactically significant standoff attack capability from outside of point defenses against fixed targets, while increasing loadout and minimizing collateral damage.

• **Performance Parameters:**

  • Increase Weapon Loadout

  • Interoperability (interoperable with established/projected C4ISR architectures)

  • Increased Weapons Accuracy

  • Compatibility with current and future Air Force platforms

Joint Air-to-Surface Standoff Missile (JASSM)

Acquisition Status

- **Program Status:**
  - MS I/Began PDRR: June 96
  - MS II/Began EMD: Nov 98
  - LRIP: Dec 01
  - B-52 RAA: Sep 03
  - MS III: Oct 03
- **Production:** Last delivery in FY17
- **Current Inventory:** 0
- **Projected Inventory:** 3,700
- **Contractors:**
  - Lockheed Martin (Prime)
  - Teledyne Ryan, , Honeywell, Fiber Innovations, Lockheed Martin Owega , Klune (Sub-Contractors)
- **Future Upgrades:** JASSM Extended Range (JASSM-ER) - congressional plus-up of $10M for development to begin in FY03
- **Purchase Requirements:** 3,700

Capabilities/Profile

- **Range:** Greater than or equal to 200NM
- **Dimensions:**
  - 14 Feet (Length)
  - 78 Inches (Circumference)
- **Weight:** 2,250 Pounds

Functions/Performance Parameters

- **Mission Statement:** Affordable, autonomous, long range, conventional, survivable, air-to-ground, precision-guided, standoff cruise missile; compatible with Air Force and Navy fighter and bomber aircraft; able to strike a variety of high value, heavily defended, fixed or relocatable targets.
- **Performance Parameters:**

	Threshold/ Baseline	Actual
Range		
Low	Classified	Classified
High	Classified	Classified
Missile Mission Effectiveness	≤ 55 missiles	Classified
Carrier Operable	yes	yes
Affordability ($FY95) (Ave Unit Proc Price)	$700K	$380K
Autonomous	yes	yes
Adverse weather capability	yes	yes
Warhead	Unitary	yes (1000 lb class)

Joint Helmet Mounted Cueing System (JHMCS)

Acquisition Status

• **Program Status:** Joint Air Force/Navy Program in EMD Flight Test

  • 700+ Flight Test Hours on F-15/F/A-18

  • Air Force/Navy Operational Assessments (OAs) complete

• **Production:** LRIP 1 Approved in May 00 with contract awarded in Jul 00; Milestone III decision 4Q/FY00

• **Procurement Objective:** 1,795 units

• **Contractor:** Boeing/VSI (Kaiser/Elbit primary sub-contractors)

• **Future Upgrades:** P3I options are currently being evaluated

Capabilities/Profile

• Accurately cue and display sensors and weapons during flight from negative 3.0 to positive 9.0 Gs

• Display symbol showing directional cue when item is beyond system field of view

• Off-Boresight Cueing of 90 degrees in all directions

• Helmet Weight less than or equal to 4.3 pounds

• Helmet Center of Gravity less than or equal to 2.5 inches off center

Functions/Performance Parameters

• **Mission Statement:** The program is tasked to design and develop a helmet mounted display system which will provide the aircrew member the capability to cue and verify cueing of high off-boresight sensors and weapons. Allows the US to regain the combat advantage of first look/first shoot in the air-to-air within visual range arena.

• **Capabilities:**

  • Compatible with current ejection systems

  • Outstanding cueing/ verification performance with the AIM-9X

  • Carriage Options: F-15C, F-16, F/A-22 and the Navy F/A-18C/D/E/F

  • Cueing Options: AIM-9M, Radar, FLIR, and various A/G weapons

Joint Standoff Weapon (JSOW)

AGM-154A

145BLU-97 Combined Effects Bomblets

Acquisition Status

- **Program Status:**
  - AGM-154A MSIII - Oct 98
- **Production:** Ends FY13 FY2013 (date factory line due to close)
- **Current Inventory:** 148
- **Projected Inventory:** 3,000
- **Contractor:** Raytheon Systems Company
- **Future Upgrades:** None planned at this time
- **Purchase Requirements:** After FY02 buy, 2,852 weapons left to procure until complete.

Capabilities/Profile

- **Range:** 15-40 NM
- **Dimensions:**
  - 13.3 Feet (Length)
  - 1.1 Feet (Width)
  - 1.4 Feet (Height)
- **Weight:** 1,065 Pounds

Functions/Performance Parameters

- **Mission Statement:** Long range, INS/GPS guided, standoff, air-to-ground weapon designed to attack a variety of soft and armored area targets (fixed, relocatable, and mobile) during day/night/adverse weather conditions. JSOW enhances aircraft survivablity as compared to current interdiction weapon systems by providing the capability for launch aircraft to standoff outside the range of enemy point defenses.

- **Performance Parameters:**

	Threshold/ Baseline	Actual	Variance
Launch Speed	0.6-0.95M	0.6-0.TBD	TBD
Off-Axis Launch	±30°	±178°	+493%
Range High Alt	X	1.5X	+50%
Survivability	X	X	0%
CEP	X	.83X	+17%
BLU–108 kills/wpn	X	3.5X+250%	

*F-16 launch envelope presently undefined

LGM-30G Minuteman III

Acquisition Status

• **Program Status:** Fielded; two ACAT I & three ACAT III modernization programs

• **Guidance Replacement Program (GRP)**

  • **Production:** Continues through FY08

  • **Projected Inventory:** 652 units

  • **Contractors:** Northrop Grumman, Boeing

• **Propulsion Replacement Program (PRP)**

  • **Production:** Continues through FY08

  • **Projected Inventory:** 606 units

  • **Contractors:** Northrop Grumman, ATK/ Thiokol, CSD

• **Propulsion System Rocket Engine (PSRE)**

  • **Development:** Continues through FY04

• **Safety Enhanced Reentry Vehicle (SERV)**

  • **Development:** Continues through FY06

• **Rapid Exec & Combat Targeting (REACT)**

  • **Development:** Continues through FY05

Capabilities/Profile

• **Range:** 6,000+ Miles

• **Armament:** 1 - 3 MK12/12A reentry vehicles (RVs)

• **Propulsion:** Three stage solid fuel, and a liquid fuel post boost vehicle (PBV); hot launch

• **Dimensions:**

  • 59.9 Feet (Length)

  • 5.5 Feet (Diameter)

• **Weight:** 79,432 Pounds

• **Treaty Implications:**

  • START I sublimit - One Minuteman missile wing downloaded to single reentry vehicle (SRV)

• **Deployed:** Malmstrom AFB, Minot AFB, FE Warren AFB

Functions/Performance Parameters

• **Mission Statement:** The MM III is an inertially guided, ballistic missile of intercontinental range. The missile is capable of delivering up to 3 independently targetable reentry vehicles. Minuteman III provides a highly survivable, quick-reacting component to the nuclear Triad.

• **Performance Parameters:**

  • Speed: Approx 15,000 MPH at burnout

LGM–118 Peacekeeper

Acquisition Status

• **Program Status:** Fielded; weapon system deactivation began Oct 02. All missiles are scheduled to be removed by the end of FY05.

Capabilities/Profile

• **Range:** 6,000+ Miles

• **Armament:** Up to 10 Mk21 reentry vehicles (RVs)

• **Dimensions:**

  • 71.0 Feet (Length)

  • 7.7 Feet (Diameter)

• **Propulsion:** Four stages; first three are solid propellant; fourth post boost vehicle (PBV) contains liquid fuel; cold launch

• **Weight:** 195,000 Pounds

• **Treaty Implications:** Peacekeeper weapon system is undergoing deactivation

• **Deployed:** FE Warren AFB

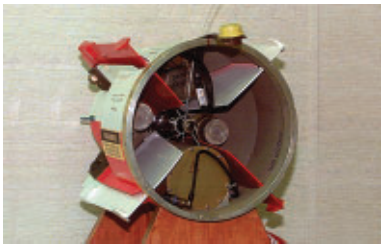
Functions/Performance Parameters

• **Mission Statement:** Strategic weapon system using a ballistic missile of intercontinental range, capable of delivering up to 10 independently targetable re-entry vehicles with very hard target kill capability

• **Performance Parameters:**

  • Speed: Approx 15,000 MPH at burnout

Wind Corrected Munition Dispenser (WCMD)



Acquisition Status

• **Program Status:** Full rate production

• **Production:** Ends FY 2005

• **Current Inventory:** 8,236 tail kits delivered

• **Projected Inventory:** 31,165

• **Contractor:** Lockheed Martin

• **Future Upgrades:** None planned at this time

• **Purchase Requirements:** After FY02 buy, 22,929 tail kits left to be delivered until complete

Capabilities/Profile

• **Range:** N/A - Tail kit for Direct Attack Munitions

• **Dimensions:**
  • 1.42 Feet (Length)
  • 1.75 Feet (Width)
  • 1.75 Feet (Height)

• **Weight:** 100 Pounds

Functions/Performance Parameters

• **Mission Statement:** Provides accurate dispenser weapon capability when delivered from medium to high altitudes. WCMD develops a kit for use on inventory cluster weapons (CEM, Gator, SFW). Combined Effects Munition (CEM) is an anti-armor/anti-personnel weapon. Gator delivers anti-tank and anti-personnel mines. Sensor Fuzed Weapon (SFW) is an anti-armor weapon.

• **Performance Parameters:**

- Adverse weather performance
  - Autonomy (release and leave)
  - Retargeting capability (prior to release)
  - No degradation of Tactical Munitions Dispensor envelope
  - Core/Alternate aircraft interface
  - Compatible with CBU-87, CBU-89, & CBU-97

	Threshold	Actual (est)	Variance
Accuracy	100 ft	37 ft	+63 ft