

Unmanned Air Vehicles (UAVs)

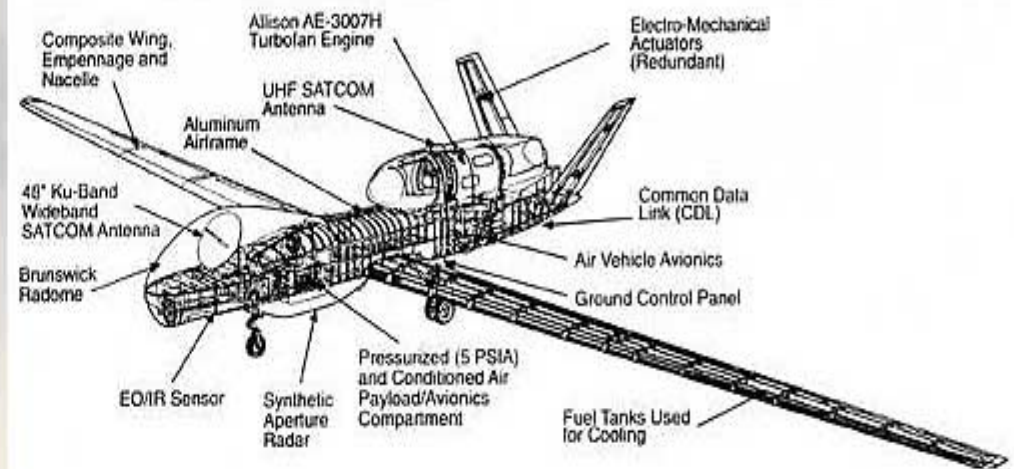
Characteristics



- Operate in the Atmosphere
- Jet or Propeller-Driven
- Variety in Size and Performance
- Military and Civil Applications
 - Cruise Missiles, Target Drones, Communication Links
- Long Operational History

Unmanned Air Vehicles (UAVs)

Global Hawk (U.S.)



Unmanned Air Vehicles (UAVs)

Predator (U.S.)



Unmanned Air Vehicles (UAVs)

Shadow (U.S.)



Source: AAI

Unmanned Air Vehicles (UAVs) Searcher (Israel)



Unmanned Air Vehicles (UAVs)

Seamos (Germany)



Source: Dornier GmbH

Unmanned Air Vehicles (UAVs)

Sprite (U.K.)



Unmanned Air Vehicles (UAVs)

Helios (U.S.)



Unmanned Air Vehicles (UAVs)

Terrorist Use of Related Systems

- Battlefield Rockets
 - Rocket-Propelled Grenades
 - Light Anti-Tank Weapons
- Man-Portable Air Defense Systems (MANPADS)
- Anti-Tank Guided Missiles?
- Ballistic Missiles?

Unmanned Air Vehicles (UAVs)

Terrorist Threat Dimension

- Difficult to Defend Against
- Greater Range and Payload than Commonly Used Rocket Systems
- More Accurate than Rocket Systems
- More Effective as WMD delivery System
 - Aerosol Dissemination of CW and BW
- Options for Terrorist Survival, Escape, Anonymity

Unmanned Air Vehicles (UAVs)

Options for the Terrorist



- Model Aircraft
- Commercially Available UAVs
- Aircraft Conversion
- Auto-Manufacture

Unmanned Air Vehicles (UAVs) Role of Export Controls



- Export Controls Have Inherent Limitations
 - Advanced Country Operating Environments
 - Small-Scale Acquisition
 - Control List Avoidance

Unmanned Air Vehicles (UAVs) – Export Control Options



- Listed Items
- Non-Listed Items
- Intangible Technology
- Brokering
- Scope of Application
- Information Sharing

Unmanned Air Vehicles (UAVs)

U.S. Controls



- Currently controlled on the USML Category VIII generally as “drones”
- Proposed revision as follows:
 - ALL UAVs specifically designed for a military application
 - ALL UAVs, regardless of application, capable of performing at the Category I parameters of the MTCR (300km range/500kg payload)
- Category II civil UAVs controlled on the Commerce Control List (licenses referred to State and Defense)

Unmanned Air Vehicles (UAVs)

Conclusion



- UAVs have Terrorist Potential
 - Infliction of massive casualties with CW/BW payloads
 - Husbanding of resources
- Elements of Effective Response
 - Counter-terrorism Initiatives
 - Export Control Initiatives