



AIRCRAFT MISSION SYMBOLS

Teacher Resource Guide



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An Introduction

All Department of Defense aircraft have assigned designations to conform to joint Army-Navy-Air Force regulations. Each aircraft or missile system designation has one letter to denote its primary function or capability; e.g. “B” for bomber, “F” for fighter, etc. To this, one or more prefixes are added to denote modified mission and status for aircraft, or mission and launch environment for missiles.

For example, in the designation VC-137, the basic mission or type is “C,” cargo/transport. The “V” prefix denotes the modified mission of transporting staff personnel. If the designation were YVC-137, the additional “Y” prefix would denote prototype status.

Suffixes are also used to denote different models of the basic aircraft. The C-137B would be a newer version of the C-137A.

The following prefixes have been used for many years although not all apply to USAF aircraft.

In a missile system example, one model of the Minuteman ICBM is the LGM-30G. In this case, the vehicle type is “M” for guided missile. The prefix “G” denotes the mission, surface attack, and the additional prefix “L” gives the launch environment, silo-launched. If this LGM designation was prefixed with an “X,” it would mean the missile systems status was experimental.

AIRCRAFT

Basic Mission & Type Symbols

Letter	Title	Description
A	Attack	Aircraft designed to search out, attack and destroy enemy land or sea targets, using conventional or special weapons. This symbol also applies to aircraft used for interdiction and close air support missions.
B	Bomber	Aircraft designed for bombing targets.
C	Cargo/Transport	Aircraft designed for carrying cargo, passengers or medical patients.
E	Special Electronic Installation	Aircraft modified with electronic devices for employment in one or more of the following missions: <ol style="list-style-type: none">1. Electronic countermeasures2. Airborne early warning radar3. Airborne command and control, including communications relay4. Tactical data communications link for all non-autonomous modes of flight.
F	Fighter	Aircraft designed to intercept and destroy other aircraft and/or missiles (includes multi-purpose aircraft also designed for ground support mission); for example, interdiction and close air support.

H	Helicopter	Rotary-wing aircraft designed with the capability of flight in any plane; for example, horizontal vertical, or diagonal. (type symbol)
K	Tanker	Aircraft designed for in-flight refueling of other aircraft.
O	Observation	Aircraft designed to observe (through visual or other means) and report tactical information concerning composition and disposition of enemy forces, troops and supplies in an active combat area.
P	Patrol	Long-range, all-weather, multi-engine aircraft operating from land and/or water bases, designed for independent accomplishment of: antisubmarine warfare, maritime reconnaissance and mining function. <i>(Note: The U.S. Army Air Service used the term "P" for pursuit aircraft, adapted from the French Avion de Chasse for pursuit or hunt airplane. After World War II, the term fighter was formally adopted by the USAF with the designator "F.")</i>
R	Reconnaissance	Aircraft designed to perform reconnaissance missions.
S	Antisubmarine	Aircraft designed to search out, detect, identify, attack and destroy enemy submarines.
T	Trainer	Aircraft designed for training personnel in the operation of aircraft and or related equipment, and having provisions for instructor personnel.
U	Utility	Aircraft designed for miscellaneous missions, such as carrying cargo and/or passengers, towing targets, etc. These aircraft will include those having a small payload.
V	VTOL & STOL	Aircraft designed for vertical takeoff or landing with no takeoff or landing roll, or aircraft capable of takeoff and landing in a minimum prescribed distance. (type symbol)
X	Research	Aircraft designed for testing configurations of a radical nature. These aircraft are not normally intended for use as tactical aircraft.



Boeing VC-137C



North American RF-86F

Modified Mission Symbols

Letter	Title	Description
A	Attack	Aircraft modified to search out, attack and destroy enemy land or sea targets, using conventional or special weapons. This symbol also describes aircraft used for interdiction and close air support missions.
C	Cargo/Transport	Aircraft modified for carrying cargo, passengers or medical patients.
D	Director	Aircraft modified for controlling drone aircraft or a missile.
E	Special Electronic Installation	Aircraft modified with electronic devices for employment in one or more of the following missions: <ol style="list-style-type: none"> 1. Electronic countermeasures 2. Airborne early warning radar 3. Airborne command and control, including communications relay 4. Tactical data communications link for all non-autonomous modes of flight.
H	Search Rescue	Aircraft modified and equipped for performance of search and rescue missions.
K	Tanker	Aircraft modified and equipped to provide in-flight refueling of other aircraft.
L	Cold Weather	Aircraft modified for operation in the Arctic and Antarctic regions; includes skis, special insulation and other ancillary equipment required for extreme cold weather operations.
M	Mine Countermeasures	Aircraft modified for aerial mine countermeasures and minesweeping missions.
O	Observation	Aircraft modified to observe (through visual or other means) and report tactical information concerning composition and disposition of enemy forces, troops and supplies in an active combat area.
P	Patrol	Long-range, all-weather, multi-engine aircraft operating from land and/or water bases, modified for independent accomplishment of: antisubmarine warfare; maritime reconnaissance; and mining function.
Q	Drone	Aircraft modified to be controlled from a point outside the aircraft.

R	Reconnaissance	Aircraft modified and permanently equipped for photographic and/or electronic reconnaissance missions.
S	Antisubmarine	Aircraft modified so that it can function to search, identify, attack and destroy enemy submarines.
T	Trainer	Aircraft modified and equipped for training purposes.
U	Utility	Aircraft, having small payload, modified to perform miscellaneous missions, such as carrying cargo or passengers, towing targets, etc.
V	Staff	Aircraft modified to provide accommodations, such as chairs, tables, lounge, berths, etc. for the transportation of staff personnel.
W	Weather	Aircraft modified and equipped for meteorological missions.

ROCKETS & GUIDED MISSILES

Launch Environment Symbols

Letter	Title	Description
A	Air	Vehicles air launched.
B	Multiple	Vehicles capable of being launched from more than one environment.
C	Coffin	Vehicles stored horizontally or at less than a 45-degree angle in a protective enclosure (regardless of structural strength) and launched from the ground.
F	Individual	Vehicles carried and launched by one individual.
G	Runway	Vehicles launched from a runway.
H	Silo-Stored	Vehicles vertically stored below ground level and launched from the ground.
L	Silo-Launched	Vehicle vertically stored and launched from below ground level.
M	Mobile	Vehicles launched from a ground vehicle or movable platform
P	Soft Pad	Vehicles partially or nonprotected in storage and launched from the ground.
R	Ship	Vehicles launched from a surface vessel, such as ship, barge, etc.
U	Underwater	Vehicles launched from a submarine or other underwater device.

Mission Symbols

Letter	Title	Description
D	Decoy	Vehicles designed or modified to confuse, deceive or divert enemy defenses by simulating an attack vehicle.
E	Special Electronic	Vehicles designed or modified with electronic equipment for communications, countermeasures, electronic radiation sounding or other electronic recording or relay missions.
G	Surface Attack	Vehicles designed to destroy enemy land or sea targets.
I	Intercept-Aerial	Vehicles designed to intercept aerial targets in defensive or offensive roles.
Q	Drone	Vehicles designed for target, reconnaissance or surveillance purposes.
T	Training	Vehicles designed or permanently modified for training purposes.
U	Underwater Attack	Vehicles designed to destroy enemy submarines or other underwater targets or to detonate underwater.
W	Weather	Vehicles designed to observe, record or relay data pertaining to meteorological phenomena.



(above) AGM-12B Bullpup A; (right) Missile & Space Gallery



North American AGM-28B Hound Dog

ROCKETS & GUIDED MISSILES

Type Symbols

Letter	Title	Description
M	Guided Missile	Unmanned, self-propelled vehicles designed to move in a trajectory or flight path all or partially above the earth's surface, and whose trajectory or course, while the vehicle is in motion, is capable of being controlled remotely or by homing systems, or by inertial and/or programmed guidance from within. This term does not include space vehicles, space launch vehicles (space boosters), or naval torpedoes, but it does include target and reconnaissance drones.
N	Probe	Nonorbital instrumented vehicles (not involved in space missions) that are used to penetrate the aerospace environment and transmit or report back information.
R	Rocket	Self-propelled vehicles, without installed or remote control guidance mechanisms, whose trajectory or flight path cannot be altered after launch. Normally, rocket systems designed for line-of-sight ground fire against ground targets are not included.

Status Prefix Symbols

Letter	Title	Description
G	Permanently Grounded	Aircraft permanently grounded and utilized for ground instruction and training. (applies only to aircraft)
J	Special Test, Temporary	Aerospace vehicles on special test programs by authorized organizations, or on bailment contract, having a special test configuration, or whose installed property has been temporarily removed to accommodate the test.
N	Special Test, Permanent	Aerospace vehicles on special test programs authorized activities, or on bailment contract, whose configuration is so drastically changed that return to its original configuration is so drastically changed that return to its original configuration or conversion to standards operational configuration is beyond practicable or economic limits.
X	Experimental	Aerospace vehicles in a development, experimental stage where the basic mission symbol and design number have been designated, but not established as a standard vehicle for service use.
Y	Prototype	Aerospace vehicles procured in limited quantities, usually prior to production decision, to serve as models or patterns.
Z	Planning	Aerospace vehicles in the planning or pre-development stage.



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