

**BY ORDER OF THE
SECRETARIES OF THE AIR FORCE,
ARMY, AND NAVY**



**AIR FORCE JOINT INSTRUCTION 16-401
ARMY REGULATION 70-50,
NAVAIRINST 8800.3B**

14 MARCH 2005

Operations Support

**DESIGNATING AND NAMING DEFENSE
MILITARY AEROSPACE VEHICLES**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This joint service publication implements DoD Directive 4120.15, *Designating and Naming Military Aerospace Vehicles*, May 2, 1985. It provides guidance and procedures for designating and naming defense military aerospace vehicles. The Air Force will use this instruction with AFPD 16-4, *Accounting for Units, Installations, and Aerospace Vehicles*. A glossary of references and supporting information is in [Attachment 1](#).

SUMMARY OF REVISIONS

This revision incorporates new Table of Contents; adds SECAF and CSAF to be informed of all Mission Design Series (MDS) designators and popular names (paragraph [1.1.1](#)); corrects wording, joint service directive to this joint service instruction (paragraph 1.1.3.); transfers responsibility of Air Force or DoD control point for MDS designators and aerospace vehicle popular names from HQ AFMC Cataloging and Standardization Center (CASC) to HQ AFMC/LGSI (paragraph 1.1.4.); clarifies SAF/PA responsibilities in naming of aerospace vehicle popular names (paragraph 1.1.7); updates wording, Department of the Navy to Department of the Navy, Marine Corps and Coast Guard (paragraph [1.3](#)); clarifies wording, NOTE: Air Force Agencies to NOTE: Air Force SPOs (paragraph 3.1.); adds new SECAF and CSAF MDS coordination responsibilities (paragraph 3.2.2.); updates HQ AFMC/PA mailing address (paragraph 5.1.1.); adds SECAF and CSAF to final popular name coordination responsibilities (paragraph 5.1.3.); corrects wording, Assistant Secretary of Defense (Public Affairs) (ASD/PA) to Office of the Assistant Secretary of Defense, Public Affairs (OASD/PA) (paragraph 5.1.5); corrects abbreviation SAF/PA from Assistant Secretary of the Air Force/Public Affairs to Secretary of the Air Force/Public Affairs ([Attachment 1](#)); deletes CASC abbreviation and adds LGSI ([Attachment 1](#)); adds new non-standard vehicle and UCAV definition ([Attachment 1](#)); establishes a Vehicle Type symbol of "D" for Unmanned Aerial Vehicle (UAV) Control Segments ([Attachment 3](#)); updates Modified Mission symbol "H" description to include MEDEVAC missions ([Attachment 3](#)); changes Figures A3.1 and A4.1 to

Examples **A3.1.** and **A4.1.** (**Attachment 3** & **Attachment 4**); updates Q-Unmanned Aerial Vehicle Type symbol definition (**Table A3.4.**); corrects Mission column with Basic Mission column (**Attachment 4**); corrects Example **A4.1.** wording from Sample Aircraft MDS to Sample Missile MDS (**Attachment 4**); updates mailing addresses for all Military Department Points of Contacts (**Attachment 5**); incorporates new Sample MDS Action Request letter (**Attachment 6**); incorporates new Sample Popular Name Action Request letter (**Attachment 7**). A | indicates revisions from the previous edition.

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Section A— Responsibilities

1. Department of the Air Force.

1.1. SECAF and CSAF

1.1.1. Coordinates on assignment of all Mission Design Series (MDS) designators.

1.1.2. Coordinates on assignment of all aerospace vehicle popular names.

1.2. HQ USAF/XP (Plans and Programs).

1.2.1. Serves as DoD Executive Agent.

1.2.2. Approves MDS designators.

1.3. HQ USAF/XPPE (Program Integration Division).

1.3.1. Administers the MDS Designator Program.

1.3.2. Publishes this joint service instruction and DoD 4120.15-L, *Model Designation of Military Aerospace Vehicles List*.

1.3.3. Coordinates on popular name requests.

1.4. HQ AFMC/LGSI (Asset Identification Branch).

1.4.1. Serves as Air Force and DoD control point for MDS designators and aerospace vehicle popular names.

1.4.2. Receives and reviews requests for and assigns DoD aerospace vehicle designations.

1.4.3. Receives and reviews DoD proposed aerospace vehicle popular name requests.

1.4.4. Maintains historical DoD aerospace vehicle lists.

1.4.5. Reports nonstandard or unauthorized use of MDS.

1.5. HQ AFMC/PA (Public Affairs).

1.5.1. Reviews requests for aerospace vehicle popular names from HQ AFMC/LGSI.

1.6. HQ USAF/JA (Judge Advocate).

1.6.1. The Air Force Legal Services Agency (Judge Advocate General Patent Division) conducts a trademark search of proposed aerospace vehicle popular names.

1.7. SAF/PA (Public Affairs).

1.7.1. Serves as central point of contact for processing and tracking requests for proposed aerospace vehicle popular names from Air Force Materiel Command (AFMC).

1.7.2. Obtains final coordination for popular names from the Office of the Assistant Secretary of Defense (Public Affairs) (OASD/PA).

1.7.3. Approves DoD aerospace vehicle popular names.

2. Department of the Army. Headquarters, Army Materiel Command (HQ AMC), Office of Command Contracting, AMCCP-P, is the Army single point of contact and is the official requesting agency for the

Department of the Army. AMC Public Affairs will review all popular name requests processed through AMC.

3. Department of the Navy, Marine Corps, and Coast Guard. Naval Air Warfare Center, Aircraft Division (Code 414100B120-3), is the single point of contact and is the official requesting agency for the Navy, Marine Corps and Coast Guard.

Section B— Aerospace Vehicle Designation System

4. HQ AFMC/LGSI assigns and HQ USAF/XP approves designators for DoD aerospace vehicles according to their MDS. DoD established the current designator reporting system in 1961 to standardize identification of military aerospace vehicles. This system uses letters and numbers to symbolize identifying characteristics of aerospace vehicles of direct interest to the DoD.

Section C— Procedures for Requesting an MDS Designator

5. Military Departments must submit a written request for assignment of a distinctive MDS designator as early as possible in the aerospace vehicle development cycle. Requests must be coordinated with their respective Military Department point of contact and HQ AFMC/LGSI, as soon as possible, to have an MDS designator assigned. HQ AFMC/LGSI will assign and reserve the next available consecutive design number within each basic mission for new vehicles. Do **not** use MDS designators before approval. **NOTE:** Air Force agencies must coordinate MDS requests through their applicable System Program Office (SPO) and the SPO must coordinate MDS requests through their applicable lead and using command.

6. Military departments must request new designators, changes, or deletions through their single point of contact (**Attachment 5**). The department contact will send the request to HQ AFMC/LGSI. **NOTE:** Air Force SPOs and lead or using commands will send requests to HQ AFMC/LGSI.

6.1. HQ AFMC/LGSI will assign the MDS designator and send the request to HQ USAF/XPPE, 1070 Air Force Pentagon, Washington DC 20330-1070, for processing and approval.

6.2. SECAF and CSAF will be informed of all requests for MDS assignments after HQ USAF/XP approval.

6.3. Use the reverse order to notify requesters of approval or disapproval.

7. Each request for new designations, modifications, or revisions to existing data must include (see **Attachment 6** for example):

7.1. Complete MDS desired.

7.2. Manufacturer, approved popular name (if known), engine data (number, type, and designation), and using department(s).

7.3. Short, unclassified, distinctive description of the vehicle suitable for publication in *DoD 4120.15-L, Model Designation of Military Aerospace Vehicle, May 12, 2004*.

7.4. Name, office symbol, email address, and telephone number of requesting official and agency.

8. Aerospace vehicles undergoing significant modification or design modernization require a new MDS designator in order to change the *status prefix*, *modified mission*, *launch environment*, or *series* symbols. Requests for these changes must comply with paragraph 3.3. Justification for a new MDS designator must include information on changes in operational capability, structure or system design, and logistics support requirements. The vehicle description should differentiate the new vehicle from other models with the same *basic mission* and *design number*.
9. Military Departments must include declassification instructions for classified designation requests. DoD Regulation 5200.1, *DoD Information Security Program*, January 14, 1997 and departmental directives provide guidance. The vehicle description must be unclassified for publication in DoD 4120.15-L.
10. Military Departments must coordinate with the Under Secretary of Defense (Acquisition, Technology, and Logistics) through the channels stated in paragraph 3.2. prior to:
 - 10.1. Changing a *basic mission* or *vehicle type* symbol of an approved MDS designation (extraordinary circumstances must exist before taking this action).
 - 10.2. Referencing aerospace vehicles (not officially approved) in public announcements or other documentation.

Section D— Aerospace Vehicle Popular Name Guidelines

11. Military Departments will submit requests only for those aerospace vehicles that have reached production or have immediate prospects of entering the inventory. Requests must follow the guidelines below (See [Attachment 7](#) for example).
12. Names must be brief. Use no more than two short words. Choose a name that characterizes the mission and operational capabilities of the vehicle (see DoD 4120.15-L for examples).
13. Submit at least three popular names, in order of preference, to increase the likelihood that one will clear the review process.
14. Requests must be submitted to the respective military department point of contact, which in turn, will forward the request, as soon as possible, to HQ AFMC/LGSI to get a popular name assigned. Do **not** use a popular name before approval. **NOTE:** Air Force agencies must coordinate popular name requests through their applicable SPO and the SPO must coordinate popular name requests through their applicable lead and using command.
15. Each MDS with the same *basic mission* and *design number* will normally keep the same popular name assigned to the original MDS, regardless of variations in manufacturer, operational use, or change in series. Use procedures listed in [Section E](#) to request exceptions.
16. Manufacturer or military services may reserve a set of names for future models for their exclusive use.

Section E— Procedures For Requesting a Popular Name

17. Military Departments must submit a written request for assignment of a popular name through the Department's single point of contact (**Attachment 5**). The department contact will send the request to HQ AFMC/LGSI. **NOTE:** Air Force agencies send their requests to HQ AFMC/LGSI.

17.1. HQ AFMC/LGSI will check requested names for duplication against the master list of popular names and send the request to:

HQ AFMC/PA

4375 Chidlaw Road, Bldg. 262, Room N-152

Wright-Patterson AFB, OH 45433-5006

Phone: Comm: (937) 257-7828; DSN: 787-7828

Email: afmc.pax@wpafb.af.mil

17.2. HQ AFMC/PA will review the request and forward to:

SAF/PA

1690 Air Force Pentagon

Washington DC 20330-1690

Email: saf.pa@pentagon.af.mil

17.3. SAF/PA will staff the package among the services as appropriate. SECAF and CSAF will coordinate on all requests for a popular name.

17.4. HQ USAF/JA will conduct a trademark search of proposed aerospace vehicle popular names and will inform SAF/PA of the findings.

17.5. SAF/PA will forward the final package to OASD/PA for coordination. SAF/PA will receive OASD/PA concurrence or non-concurrence and will provide final approval or disapproval.

18. Use the reverse order to notify requesters of approval or disapproval. HQ USAF/XPPE will add the approved popular name to DoD 4120.15-L upon notification from HQ AFMC/LGSI.

Section F— Relationship between MDS Designator and Popular Name

19. MDS is the official designation for DoD aerospace vehicles. The MDS represents a specific category of vehicles for operations, support, and documentation purposes. Popular names characterize aerospace vehicle missions and aid communications and media references. You may use either reference as a management tool; however, refer to the MDS in official publications and technical manuals.

Section G— Retirement of Aerospace Vehicle Designator or Popular Name

20. When all aerospace vehicles within a specific MDS or popular name have retired from service inventories, the military department(s) will notify the service point of contact, who will notify HQ AFMC/LGSI. HQ AFMC/LGSI will place these MDS designators and popular names on the retired list and notify HQ USAF/XPPE to remove them from DoD 4120.15-L.

NOTE: Air Force agencies will notify HQ AFMC/LGSI through their applicable SPO.

21. Aerospace vehicles and/or popular names that have been retired will not be used again to identify another aerospace vehicle. EXCEPTION - aerospace vehicles returned or modified to that MDS and popular name, if applicable, can reactivate the retired MDS and/or popular name with the approval of the SPO (with coordination of the respective lead and using command) that retired the MDS and/or popular name.”

Section H— Publication of Approved MDS Designators and Approved Popular Names

22. DoD 4120.15-L lists approved MDS designators for all military aerospace vehicles in the DoD inventory. The list displays MDS designator, manufacturer(s), approved popular name (if any), engine data, using department(s), and a brief description.

23. All DoD Components must use DoD 4120.15-L. DoD Components can get copies through their own publication channels.

24. Other Federal Agencies and the public may get copies from the U. S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. Phone: (703) 605-6000. E-mail Address: info@ntis.gov

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Naval Air Systems Command

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFPD 16-4, *Accounting for Units, Installations, and Aerospace Vehicles*, September 7, 1993
DoD Directive 4120.15, *Designating and Naming Military Aerospace Vehicles*, May 2, 1985
DoD 4120.15-L, *Model Designation of Military Aerospace Vehicles*, May 12, 2004
DoD Regulation 5200.1, *Information Security Program*, January 14, 1997 1997

Abbreviations and Acronyms

AFI—Air Force Instruction
AFMC—Air Force Materiel Command
AFPD—Air Force Policy Directive
AR—Army Regulation
C4—Command, Control, Communications, and Computers
DOD—Department of Defense
HQ USAF—Headquarters United States Air Force
MDS—Mission Design Series
NAVAIRINST—Naval Air Systems Command Instruction
OASD/PA—Office of the Assistant Secretary of Defense, Public Affairs
SAF/PA—Secretary of the Air Force, Public Affairs
SPO—System Program Office
UAV—Unmanned Aerial Vehicle
UCAV—Unmanned Combat Aerial Vehicle

Terms

Aerospace Vehicle—Collective term for military aircraft, rockets, guided missiles, boosters, satellites, probes, airborne lasers, unmanned aerial vehicles (UAVs), and UAV control segments used to launch, control, and recover UAVs.

Aircraft—Vehicle designed primarily for flight in the atmosphere. It can carry a crew and payload (passengers; cargo; command, control, and communications systems; weapons, etc.).

Booster—An initial or auxiliary propulsion system, which travels with a missile or aircraft and which, may or may not separate from the parent craft when its impulse has been delivered. A booster system may contain, or consist of, one or more units.

Guided Missile—An unmanned vehicle moving above the surface of the earth, whose trajectory or flight path is capable of being altered by an external or internal mechanism.

Mission Design Series (MDS)—The official designation for aerospace vehicles used to represent a specific category of aerospace vehicles for operations, support, and documentation purposes.

Nonstandard Vehicle—An aerospace vehicle with a vehicle type designator that must be accompanied by a basic mission or modified mission symbol.

Popular Names—Characterize aerospace vehicle missions and aid communications and media references.

Probe—A non-orbital, instrumented vehicle designed to penetrate the aerospace environment, commonly used for collecting meteorological data.

Rocket—A thrust-producing system that derives its thrust from ejection of hot gases generated from material carried in the system, not requiring intake of air or water (rockets may be either of liquid or solid propellant types).

Satellite—A vehicle placed in various orbits to collect and transmit various types of data for multiple purposes.

Unmanned Aerial Vehicle (UAV)—A powered aerial vehicle that does not carry a human operator, uses aerodynamic forces to provide vehicle lift, can fly autonomously or is piloted remotely, can be expendable or recoverable, and carries a non-lethal payload. Ballistic or semi ballistic vehicles, cruise missiles, and artillery projectiles are not considered UAVs.

Unmanned Combat Aerial Vehicle—(UCAV) - Same definition as UAV except that it carries a lethal payload.

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Attachment 2

DESCRIPTION AND POSITION OF STANDARDIZED MDS DESIGNATION SYMBOLS

A2.1. Status Prefix (Optional). Indicates a nonstandard use of an aerospace vehicle, such as test, experimental, prototype, etc. Appears to the immediate left of the *modified mission* symbol or *basic mission* symbol for aircraft. Appears to the immediate left of the *launch environment* symbol or *basic mission* symbol for rockets and missiles. **EXAMPLE:** YF-16A. *Status prefix* "Y" denotes an F-16A prototype.

A2.2. Modified Mission (Aircraft Only - Optional). Identifies modifications to the basic mission of an aircraft. Appears to the immediate left of the *basic mission* symbol. **EXAMPLE:** AT-38B, *Modified Mission* "A" identifies a T-38B modified for "attack".

A2.3. Launch Environment (Rockets and Missiles Only - Required). Identifies the launch environment or platform parameter. Appears to the immediate left of the *basic mission* symbol. **EXAMPLE:** LGM-118A, Peacekeeper. *Launch Environment* "L" indicates silo-launched missile.

A2.4. Basic Mission (Required). Identifies the primary function and capability of an aerospace vehicle and is the initial symbol assigned to that series. For standard vehicles (e.g., bombers, fighters), it appears to the immediate left of the *design number* separated by a dash. **EXAMPLE:** F-16A. *Basic Mission* "F" denotes fighter. For nonstandard vehicles it appears to the immediate left of the *vehicle type* symbol. **EXAMPLE:** LGM-118A. *Vehicle Type* "M" indicates guided missile; *Basic Mission* "G" indicates surface attack.

A2.5. Vehicle Type (Nonstandard Vehicles Only - Required). Required for nonstandard vehicles, such as helicopter, vertical takeoff and landing (VTOL), UAV control segment, space, etc. A *basic mission* or *modified mission* symbol must accompany the *vehicle type* symbol. *Vehicle type* appears to the immediate left of the *design number*, separated by a dash. **EXAMPLE:** CH-53A. *Vehicle Type* "H" indicates a helicopter with a *Basic Mission* of transport "C".

A2.6. Design Number (Required). Identifies major design changes within the same *basic mission*. Design numbers run consecutively from "1" to "999" and appears to the immediate right of the *basic mission* or *vehicle type* symbols, separated by a dash. **EXAMPLE:** F-16A. *Design Number* "16" is the sixteenth MDS requested for an aircraft with a fighter mission under the current MDS reporting system, (implemented, Sep 1962)."

A2.7. Series (Required). Identifies the production model of a particular *design number* and later models representing major modifications that significantly alter the aerospace vehicle systems components or change the logistics support of the vehicle. Consecutive *series* symbols, starting with "A", appear to the immediate right of the *design number*. To avoid confusion, do not use the letters "I" and "O" for this symbol. **EXAMPLE:** F-16C. *Series* "C" indicates the third production model of the F-16. At the end of the *series* indicator "Z", the next sequence will be to advance the *design number* to the next consecutive unused number and begin with symbol *series* "A".

NOTE: The following descriptions for *configuration*, *block*, and *serial* numbers further identify configuration or specific vehicles, but are not part of an MDS designator. DoD 4120.15-L does not contain these

numbers. Assignments of *configuration*, *block*, and *serial* numbers do not require coordination with HQ AFMC/LGSI or approval by HQ USAF/XP.

A2.8. Configuration or Component Number. Denotes configuration changes that affect performance, tactics, or integral components of a weapon system that require the same operations or logistics reporting as the aerospace vehicle. Appears to the immediate right of the *series symbol*, separated by a dash. Each Military Department determines its own method for assigning *configuration numbers*.

A2.9. Block Number. Denotes a production group of identically configured aircraft within a particular *design series*. The Military Departments may reserve intermediate block numbers for field modifications.

A2.10. Serial Number. Identifies a specific aerospace vehicle. Military Departments determine the method for assigning *serial numbers*.

Attachment 3

STANDARDIZED MDS DESIGNATOR SYMBOLS AND DESCRIPTIONS FOR AIRCRAFT

A3.1. The following list outlines the symbols used in aircraft MDS designators. Example **A3.1.** shows a sample aircraft MDS designator.

<u>Status Prefix</u>	<u>Modified Mission</u>	<u>Basic Mission</u>	<u>Vehicle Type</u>
G - Permanently Grounded	A - Attack	A - Attack	D - UAV Control Segment
J - Special Test (Temporary)	C - Transport	B - Bomber	G - Glider
N - Special Test (Permanent)	D - Director	C - Transport	H - Helicopter
X - Experimental	E - Special Electronic Installation	E - Special Electronic Installation	Q - Unmanned Aerial Vehicle (UAV)
Y - Prototype	F - Fighter	F - Fighter	S - Spaceplane
Z - Planning	H - Search/Rescue/MEDEVAC	L - Laser	V - VTOL/STOL
	K - Tanker	O - Observation	Z - Lighter-Than-Air Vehicle
	L - Cold Weather	P - Patrol	G - Glider
	M - Multi-mission	R - Reconnaissance	H - Helicopter
	O - Observation	S - Antisubmarine	
	P - Patrol	T - Trainer	
	Q - Drone	U - Utility	
	R - Reconnaissance	X - Research	
	S - Antisubmarine		
	T - Trainer		
	U - Utility		
	V - Staff		
	W - Weather		

Example A3.1. Sample Aircraft MDS - YEH-60B

- *Status Prefix (Prototype)* ----- “Y”
- *Basic Mission (Electronics)* ----- “E”
- *Vehicle Type (Helicopter)* ----- “H”
- *Design Number (60th helicopter design)* “60”
- *Series (2nd version of this design)* ----- “B”

Table A3.1. Description of Aircraft Status Prefix Symbols.**G** - Permanently Grounded

Aircraft permanently grounded (may be used for ground training).

J - Special Test (Temporary)

Aircraft in special test programs by authorized organizations, on bailment contract with a special test configuration, or with installed property temporarily removed to accommodate a test.

N - Special Test (Permanent)

Aircraft in special test program by authorized activities or on bailment contract where the configuration changes so drastically that returning to the original operational configuration is impractical or uneconomical.

X - Experimental

Aircraft in a development or experimental stage.

Y - Prototype

A model suitable for evaluation of design, performance, and production potential.

Z - Planning

Aircraft in the planning or predevelopment stage.

Table A3.2. Description of Aircraft Modified Mission Symbols.**A - Attack**

Aircraft modified to find, attack, and destroy enemy targets using conventional or special weapons. This symbol also describes aircraft used for interdiction and close air support missions.

C - Transport

Aircraft modified to carry personnel, cargo, or both.

D - Director

Aircraft modified for controlling drone aircraft or missiles.

E - Special Electronic Installation

Aircraft modified with electronic devices for one or more of the following missions:

- (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.

F - Fighter

Aircraft modified to intercept and destroy other aircraft or missiles.

H - Search and Rescue/MEDEVAC

Aircraft modified for search and rescue and/or MEDEVAC missions.

K - Tanker

Aircraft modified to refuel other aircraft in flight.

L - Cold Weather

Aircraft modified for operation in Arctic and Antarctic regions. Includes skis, special insulation, and other equipment for extreme cold weather operations.

M - Multi-mission

Aircraft modified to perform several different missions.

O - Observation

Aircraft modified to observe (through visual or other means) and report tactical information concerning composition and disposition of forces.

P - Patrol

Long range, all weather, multiengine aircraft that operate from land or water bases modified for independent antisubmarine warfare, maritime reconnaissance, and mining.

Q - Drone

An aerospace vehicle modified for remote or automatic control.

R - Reconnaissance

Aircraft modified for photographic or electronic reconnaissance missions.

S - Antisubmarine

Aircraft modified to find, identify, attack, and destroy enemy submarines.

T - Trainer

Aircraft modified for training purposes.

U - Utility

Aircraft modified to perform multiple missions such as battlefield support, localized transport, and special light missions.

V - Staff

Aircraft modified to provide support for the President or Vice President of the United States.

W - Weather

Aircraft modified and equipped for meteorological missions.

Table A3.3. Description of Aircraft Basic Mission Symbols.**A - Attack**

Aircraft designed to find, 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 enemy targets.

C - Transport

Aircraft designed primarily to carry personnel, cargo, or both.

E - Special Electronic Installation

Aircraft designed for one or more of the following missions:

- (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.

F - Fighter

Aircraft designed to intercept and destroy other aircraft or missiles. Includes multipurpose aircraft also designed for ground support missions such as interdiction and close air support.

L - Laser

Vehicle designed for employing a high-energy laser weapon.

O - Observation

Aircraft designed to observe (through visual or other means) and report tactical information concerning composition and disposition of forces.

P - Patrol

Long range, all weather, multiengine aircraft operating from land or water bases designed for independent antisubmarine warfare, maritime reconnaissance, and mining.

R - Reconnaissance

Aircraft designed for photographic or electronic reconnaissance missions.

S - Antisubmarine

Aircraft designed to find, detect, identify, attack, and destroy enemy submarines.

T - Trainer

Aircraft designed for training purposes.

U - Utility

Aircraft designed to perform multiple missions such as battlefield support, localized transport, and special light missions. Included are aircraft designed for small payloads.

X - Research

Aircraft designed for testing highly experimental configurations. These aircraft are not generally intended for use as operational aircraft.

Table A3.4. Description of Aircraft Vehicle Type Symbols.**D - Unmanned Aerial Vehicle Control Segments**

Ground Control Segments for unmanned aerial vehicles (UAVs).

G - Glider

Fixed wing aircraft flown by using air currents to keep it aloft.

H - Helicopter

Rotary wing aircraft (deriving lift from a rotating lifting surface).

Q - Unmanned Aerial Vehicle (UAV)

An unmanned aircraft that uses aerodynamic forces for lift, autonomously or remotely piloted, expendable or recoverable, and carries a non-lethal payload. A version of a UAV that carries a lethal payload is called an Unmanned Combat Aerial Vehicle (UCAV).

S - Spaceplane

Aircraft designed to travel above the earth's atmosphere and return to earth in support of space operations.

V - VTOL and STOL

Aircraft designed to take off and land vertically or in a very short distance.

Z - Lighter-Than-Air Vehicle

Non-rigid or semi-rigid aircraft that achieves its primary lift through use of hot gases or lighter-than-air gases (includes blimps and balloons).

Attachment 4

STANDARDIZED MDS DESIGNATOR SYMBOLS AND DESCRIPTIONS FOR GUIDED MISSILES, ROCKETS, PROBES, BOOSTERS, AND SATELLITES

A4.1. The following list outlines the symbols used in guided missile, rocket, probe, booster and satellite MDS designations. Example [A4.1](#) shows a sample missile MDS designator.

<u>Status Prefix</u>	<u>Launch Environment</u>	<u>Basic Mission</u>	<u>Vehicle Type</u>
C - Captive	A - Air	C - Transport	B - Booster
D - Dummy	B - Multiple	D - Decoy	M - Guided Missile
J - Special Test (Temporary)	C - Coffin	E - Electronic/ Communications	N - Probe
N - Special Test (Permanent)	F - Individual	G - Surface Attack	R - Rocket
X - Experimental	G - Surface	I - Aerial/Space Intercept	S - Satellite
Y - Prototype	H - Silo Stored	L - Launch Detection/ Surveillance	
Z - Planning	L - Silo Launched	M - Scientific/Calibration	
	M - Mobile	N - Navigation	
	P - Soft Pad	Q - Drone	
	R - Ship	S - Space Support	
	S - Space	T - Training	
	U - Underwater	U - Underwater Attack	
		W - Weather	

Example [A4.1](#). Sample Missile MDS - *BGM-109G*

- Launch Environment (Multiple) ----- “B”
- Basic Mission (Surface Attack) ----- “G”
- Vehicle Type (Guided Missile) ----- “M”
- Design Number (109th Missile design) - “109”
- Series (7th version of this design) ----- “G”

Table A4.1. Description of Status Prefix Symbols.**C - Captive**

Vehicle designed for carry on a launch platform, but incapable of being fired.

D - Dummy

Non flyable vehicle used for training.

J - Special Test (Temporary)

Vehicle in special test programs by authorized organizations, on bailment contract with a special test configuration, or with installed property temporarily removed to accommodate tests.

N - Special Test (Permanent)

Vehicle in special test programs by authorized activities or on bailment contract whose configuration changes so drastically that returning to its original operational configuration is beyond practical or economical limits.

X - Experimental

Vehicle in a development or experimental stage.

Y - Prototype

A model suitable for evaluation of design, performance, and production potential.

Z - Planning

Vehicle in the planning or predevelopment stage.

Table A4.2. Description of Launch Environment Symbols.**A - Air**

Vehicle launched in the air by another vehicle.

B - Multiple

Vehicle capable of being launched from more than one environment.

C - Coffin

Vehicle stored horizontally or at less than a 45-degree angle in a protective enclosure (regardless of structural strength) and launched from ground level.

F - Individual

Vehicle hand carried and launched by combat personnel.

G - Surface

Vehicle launched from a runway or the ground.

H - Silo Stored

Vehicle vertically stored but not launched from below ground level.

L - Silo Launched

Vehicle vertically stored and launched from below ground level.

M - Mobile

Vehicle launched from a ground vehicle or movable platform.

P - Soft Pad

Vehicle partially protected or unprotected in storage and launched from ground level.

R - Ship

Vehicle launched from a surface vessel (ship or barge).

S - Space

Vehicle launched from an aerospace vehicle that operates outside the earth's atmosphere.

U - Underwater

Vehicle launched from a submarine or other underwater device.

Table A4.3. Description of Basic Mission Symbols.**C - Transport**

Vehicle designed to carry personnel, cargo, command, control, and communications equipment or weapons systems.

D - Decoy

Vehicle designed or modified to confuse, deceive, or divert enemy defenses by simulating an attack vehicle.

E - Electronic/Communications

Vehicle designed or modified with electronic equipment for communications, countermeasures, electronic radiation sounding, or other electronic recording or relay missions.

G - Surface Attack

Vehicle designed to destroy enemy land or sea targets.

I - Aerial/Space Intercept

Vehicle designed to intercept aerial/space targets in defensive or offensive roles.

L - Launch Detection/Surveillance

Vehicle designed for the systematic observation of aerospace for the purpose of detecting, tracking, and characterizing objects, events, and phenomena associated with satellites, in flight missiles, including intrusion detection.

M - Scientific/Calibration

Vehicle designed for the collection, evaluation, analysis, and interpretation of scientific and technical information.

N - Navigation

Vehicle designed to provide data for navigation purposes.

Q - Drone

Aerospace vehicle remotely or automatically controlled.

S - Space Support

Vehicle designed to ensure maintainability of space control and support of terrestrial forces. Includes activities such as launching and deploying space vehicles, maintaining and sustaining space vehicles while in orbit and recovering space vehicles if required.

T - Training

Vehicle designed or permanently modified for training purposes.

U - Underwater Attack

Vehicle designed to detonate underwater and to destroy submarines or other underwater targets.

W - Weather

Vehicle designed to observe, record, or relay meteorological data.

Table A4.4. Description of Vehicle Type Symbols.**B - Booster**

A primary or auxiliary propulsion system used as a source of thrust for a satellite, missile, or aerospace vehicle. A booster system may consist of one or more units.

M - Guided Missile

An unmanned vehicle that flies in and above the atmosphere and an external or internal guidance system controls its trajectory or flight path.

N - Probe

Non orbital, instrumented vehicle designed to penetrate the aerospace environment. Commonly used for collection of meteorological data.

R - Rocket

A vehicle propelled by an engine that derives its thrust from ejection of hot gases generated by liquid or solid propellants carried in the vehicle. A rocket has no guidance (internal or external) after launch.

S - Satellite

A vehicle placed in various orbits to collect, transmit various types of data for multiple purposes.

Attachment 5

MILITARY DEPARTMENT POINTS OF CONTACT MAILING ADDRESSES

A5.1. Air Force and DoD:

- HQ AFMC/LGSI
4375 Chidlaw Road, Bldg 262, Rm B108
WPAFB OH 45433-5006
Phone: DSN: 787-0610; Comm: 937-257-0610
FAX DSN: 787-8904
Email: afmc.lgsi.dodcontrolpoint@wpafb.af.mil

A5.2. Army:

- HQ AMC
Office of Command Contracting
Attn: AMCCP-P
9301 Chapek Road
Fort Belvoir, VA 22060-5527

A5.3. Navy, Marine Corps and Coast Guard:

- Commander
Naval Air Warfare Center Aircraft Division
Code 4141B120-3
Highway 547
Lakehurst, NJ 08733-5100

Attachment 6

SAMPLE MDS ACTION REQUEST LETTER

(Use Official Letterhead)

DD MMM YY

MEMORANDUM FOR HQ AFMC/LGSI

FROM: *Place your information here*

SUBJECT: Mission Design Series (MDS) for (aircraft/missile/ecetera).

1. Request approval to assign MDS to aerospace vehicle (aircraft/missile/etcetera).

2. Reference SPO and/or Lead and Using Command/Service Department, request/concurrence attached to this request. This attachment should be fairly detailed in describing the requirements of the SPO/Using Command and the description - in greater detail than in paragraph 3.g. below - of the items(s) being requested for MDS approval. The attached letter should not only request the MDS officially or give concurrence to, but should expound on the items in detail listed in paragraph 3, below. Normally, it is not longer than one page. It should also be on the Official Letterhead, list a point-of-contact, and be signed as well. Both of these letters define the position of the service or other department concerning the MDS, in case there is any litigation.

3. The following information is offered for inclusion in the DoD 4120.15-L:

a. MDS:	(see Attachment 3 & Attachment 4)
b. Manufacturer:	self-explanatory
c. Popular Name:	List "None" if it does not have a popular name.
d. Using Service:	self-explanatory
e. Engine/Motor Type:	self-explanatory
f. Number of Engines:	self-explanatory
g. Description:	Keep it short/simple; this is what will go in to the DoD 4120.15-L.

4. Any questions can be directed to point of contact name, phone number (DSN and or commercial), and email address.

Signature
NAME
Title (area of responsibility)

ATCH:
SPO and/or Lead and Using Command Request/Concurrence

Attachment 7

SAMPLE POPULAR NAME ACTION REQUEST LETTER

(Use Official Letterhead)

DD MMM YY

MEMORANDUM FOR HQ AFMC/LGSI

FROM: *Place your information here*

SUBJECT: Popular Name Request for (aircraft/missile/etcetera)

1. Request consideration of and approval to assign a Popular Name to aerospace vehicle (aircraft/missile/etcetera).

2. Reference SPO and/or Lead and Using Command/Service Department, request/concurrence attached to this request. This attachment should be fairly detailed in describing the requirements for the Popular Names(s) being requested for approval. The attached letter should not only request the Popular Name(s) officially or give concurrence to, but should place them in an order of priority. Normally, it is not longer than one page. It should also be on Letterhead, list a point-of-contact, and be signed as well. Both of these letters define the position of the Air Force or other department concerning the Popular Name(s), in case there is any litigation. List any further pertinent information related to this subject that will help in the process of obtaining the Popular Name.

3. The following names are being submitted for consideration as Popular Name(s) in their order of priority.

- a.
- b.
- c.
- d.
- e.

4. Any questions can be directed to point of contact name, phone number (DSN and/or commercial), and email address.

Signature

NAME

Title (area of responsibility)

ATCH:

SPO and/or Lead and Using Command Request/Concurrence