

## Frequently Asked Questions | 2022

### 01 | What is the mission of the Blue Angels?

The mission of the United States Navy Flight Demonstration Squadron is to showcase the teamwork and professionalism of the United States Navy and Marine Corps by inspiring a culture of excellence and service to country through flight demonstrations and community outreach.

### 02 | What are the policies/requirements governing back seat flights in the number 7 jet?

The Blue Angels typically provide two backseat flights at each show site for selected personnel. Both riders fly with the Number 7 pilot in the two-seat jet. One of those riders are selected from the Key Influencer (KI) program and the other is a credentialed media representative. The KI program selects individuals who shape attitudes and opinions of youth in their communities. KIs may be experts in their field, public figures, leaders of youth organizations, teachers, guidance counselors or school administrators. They are not always the person at the top of an organization, but rather individuals that have an impact on recruiting youth and/or a specific target audience. Flying these candidates, in coordination with media presence, is intended to promote the Navy and Marine Corps as professional and exciting organizations in which to serve. To be selected as a Key Influencer, you must first be nominated by a commanding officer of a Navy or a Marine Corps recruiting district. For more information, contact your local recruiter or air show.

### 03 | Who authorized establishment of the Blue Angels?

The Chief of Naval Operations, Admiral Chester W. Nimitz, ordered the establishment of the team on April 24, 1946.

### 04 | Where did the name "Blue Angels" originate?

The name was picked by the original team when they were planning a show in New York in 1946. One of them came across the name of the city's famous Blue Angel nightclub in the New Yorker Magazine.

### 05 | Where was the Blue Angels' first air show?

Craig Field, Jacksonville, Florida, on June 15, 1946.

### 06 | Why don't the Blue Angels and the Air Force Thunderbirds fly together?

Current Department of Defense policy states the use of military aviation demonstration teams is for recruiting purposes; therefore, the teams usually do not fly within 150 miles of each other without special permission. Each demonstration team showcases U.S. military aviation capabilities to the public separately to maximize Navy or Air Force recruiting efforts. However, the Blue Angels or Thunderbirds often perform with the U. S. Army Parachute Team, the Golden Knights, or the U.S. Navy Parachute Team, the Leapfrogs.

### 07 | On average, how many people view the Blue Angels each year?

An estimated 11 million spectators view the squadron during air shows each year. Additionally, the Blue Angels visit more than 50,000 people a show season (March through November) during school and hospital visits.

## **08 | What are the basic requirements for becoming a Blue Angel demonstration pilot?**

Each applicant must be a career-oriented, carrier-qualified, active-duty Navy or Marine Corps pilot.

## **09 | How many Blue Angels demonstration pilots have there been?**

To date, there have been over 260 demonstration pilots and 37 Flight Leaders/Commanding Officers.

## **10 | Do the Blue Angels pilots go through the Navy Fighter Weapons School (TOPGUN)?**

Some current and former Blue Angels pilots have gone through TOPGUN; however, it is not a prerequisite.

## **11 | How do you determine where to hold an air show?**

Each July, the Department of Defense receives hundreds of requests to hold air shows featuring the Navy Blue Angels. After the Department of Defense screens requests for basic eligibility, requests are forwarded to the Blue Angels' Commanding Officer. The squadron reviews each air show request, considering input from the Chief of Naval Information and Navy Recruiting Command. In September, the Blue Angels' Events Coordinator, along with Navy and Department of Defense officials, meet at a scheduling conference for final considerations and approval.

## **12 | How does someone become a Blue Angel demonstration pilot?**

Navy and Marine Corps pilots meeting the basic requirements submit an application directly to the team via the Applications Officer. Applicants visit the squadron at scheduled show sites early in the show season to observe the team firsthand. Finalists are selected mid-season and interviewed at the Blue Angels' squadron in Pensacola, Florida. The new demonstration pilots and support officers are selected by unanimous vote. The Chief of Naval Air Training selects the Flight Leader/Commanding Officer.

## **13 | What happens if a Blue Angel demonstration pilot is ill or hurt?**

Safety is paramount for every demonstration. Each pilot is responsible for good health and safety; however, the Blue Angels Flight Surgeon will medically disqualify a pilot if one should become ill or injured. Should the Flight Leader/Commanding Officer be grounded for medical purposes, the demonstration will be canceled.

## **14 | Why don't the Blue Angels maintain a spare pilot?**

With the number of practice hours required to safely fly a demonstration, a spare pilot could not be utilized effectively. Each pilot must complete 120 training flights during winter training in order to perform a public demonstration safely. The teamwork required for the high-speed, low-altitude flying in the tight Blue Angel formation takes hundreds of hours to develop. A substitute pilot would not have enough time in the formation to do this safely.

## 15 | Why don't the pilots wear G-suits?

G-suits are designed with air bladders (pockets) that inflate and deflate to keep a pilot's blood from pooling in the pilots' legs while executing sharp, unpredicted combat maneuvers. Unlike combat flying, the Blue Angels demonstration pilots know the maneuvers they will fly prior to execution, so each pilot knows when one will be experiencing heavy gravitational forces. Anticipating the changes in gravitational forces allows the Blue Angels demonstration pilots to combat G-forces with muscle contractions. Additionally, G-suits would detrimentally impact flight safety. The Boeing F/A-18's control stick is mounted between the pilot's legs. The Blue Angels have a spring tensioned with 40 pounds of pressure installed on the control stick that gives the pilot a "false feel." This allows the pilot minimal room for un-commanded movement. The pilots rest their right arms on their thighs for support and stability while flying. Therefore, inflating and deflating air bladders in a G-suit would interrupt this support and stability, causing un-commanded aircraft movement.

## 16 | How many Blue Angels have made flag rank?

Nineteen former Blue Angels have made flag rank. The flag officers include:

- RADM E. L. Feightner (ret.), #5, 1952
- RADM W. Lewis Chatham (ret.), #5, 1952
- RADM W. A. Gureck (ret.), #2/4, 1955-56
- RADM Ernest Christensen (ret.), #3/4, 1969-70
- RADM Jim Maslowski (ret.), #3/4, 1970-71
- VADM Tony Less (ret.), #1, 1974-75
- RADM William E. Newman (ret.), #1, 1978-79
- RADM Dennis Wisely (ret.), #1, 1980-81
- BGEN Mark Bircher (ret.), #2, 1985-1987
- RADM David Anderson (ret.), #5/6/7, 1985-87
- VADM Pat Walsh (ret.), #3/4, 1985-87
- RADM Doug McClain (ret.), #3/4, 1988-90
- RADM P. D. Moneymaker (ret.), #1, 1989-90
- RDML John Kirby (ret.), Public Affairs Officer, 1993-97
- RDML R. Duke Heinz, Supply Officer, 1996-97
- RADM Doug Verissimo, #7,6,5, 1997-1999
- RDML Patrick Driscoll (ret.), #1, 1999-2000
- RADM Dan Martin, #7,6,5, 2001-2003
- RADM Max McCoy #3,4, 2001-2002, 2005

## 17 | Have any Blue Angels become astronauts?

CDR Chuck Brady, Flight Surgeon, 1989-90.

## **18 | How is the enlisted, support and maintenance team selected?**

Each applicant is selected from a pool of applicants that can fill upcoming job vacancies. The team accepts applications from all aviation and support ratings. All applicants are interviewed and spend five days with the team either in Pensacola or at a show site. Exceptions to the above are made for applicants who are on deployment or overseas. For more information, please see the application message under "How to Apply."

## **19 | Are the Blue Angels the "best of the best?"**

The Blue Angels are representatives of the excellence and professionalism found throughout the fleet. Each Blue Angel team member is an ambassador and representative of their fleet counterparts.

## **20 | How long is a Blue Angel tour of duty?**

Officers on the team generally serve two to three years, while the enlisted personnel serve three to four years. Each member, both officers and enlisted, return to the fleet after completing a tour with the Blue Angels.

## **21 | How many Marines serve in the squadron?**

The exact number of Marines serving within the squadron varies from year to year. Currently, there are Marines working within the Fat Albert Maintenance, Power Plants, Avionics, Quality Assurance, and Airframes departments.

## **22 | How many women are in the team?**

There are currently 25 women serving on the team. This number represents the U.S. Navy fleet average of 20% female manning.

## **23 | How do team members deal with the time away from home?**

Individuals are made aware that they will be away from home a lot before they volunteer for duty with the team, and are selected based on their ability to cope with not only family separation, but with a strenuous practice and show schedule. Additionally, the Navy, Blue Angels, and civilian communities at Pensacola, Fla., and El Centro, Calif., provide a family-type support network.

## **24 | Do any of the Blue Angels get extra pay?**

No. Each member of the squadron volunteers for duty with the Blue Angels. Due to extreme competition at all levels, each individual feels especially honored to be associated with the team.

## **25 | What is considered minimum visibility for a Blue Angel performance?**

To be able to perform, the Blue Angels must have at least three nautical miles of visibility horizontally from centerpoint, and a minimum cloud ceiling of 1,500 feet, which the FAA can waive to 1,000 feet. At these minimums, the Blue Angels can perform a limited number of maneuvers in what is called a "flat" show. When the ceiling is at least 4,500 feet and visibility at least three nautical miles, a "low" show can be performed, which includes some rolling maneuvers. With a minimum ceiling of 8,000 feet and visibility of three nautical miles, the Blue Angels can perform their "high" show, which includes all the maneuvers.

## 26 | What is the closest distance that the jets fly to each other?

The closest the diamond will fly to each other is 18 inches during the Diamond 360 maneuver.

## 27 | What are the lowest and highest maneuver heights performed during an air show?

This varies due to weather conditions. The highest is the vertical roll, performed by the Opposing Solo (up to 15,000 feet) and the lowest is the Sneak Pass (as low as 50 feet) performed by the Lead Solo.

## 28 | What is the most demanding maneuver performed?

All maneuvers are demanding, both mentally and physically, and reflect the daily challenges met by fleet Navy and Marine Corps aviators.

## 29 | What are the fastest and slowest speeds flown during an air show?

The fastest speed is about 700 mph (just under Mach 1; Sneak Pass) and the slowest speed is about 120 mph (indicated speed; Section High Alpha), both flown by the solo pilots during the show.

## 30 | How many and what types of aircraft have the Blue Angels flown?

Since 1946, there have been nine types of aircraft:

- Grumman F6F Hellcat, June-August 1946
- Grumman F8F Bearcat, August 1946-1949
- Grumman F9F-2 Panther (first jet), 1949-June 1950 and Grumman F9F-5 Panther 1951-Winter 1954/55
- Grumman F9F-8 Cougar, Winter 1954-55-mid-season 1957
- Grumman F11F-1 Tiger (first supersonic jet), mid-season 1957-1969
- McDonnell Douglas F-4J Phantom II, 1969-December 1974
- McDonnell Douglas A-4F Skyhawk II, December 1974-November 1986
- Boeing F/A-18 Hornet, November 1986-November 2020
- Boeing F/A-18 Super Hornet, November 2020-Present

\* Additionally, in 1970 the Blue Angels integrated a Marine Corps C-130 Hercules aircraft, affectionately known as "Fat Albert", as the opener of the flight demonstration. The C-130 is a tactical transport aircraft built by Lockheed Martin.

## 31 | How many jets are in the squadron?

The number of jets varies at any given time, but the average is 11.

## 32 | What are the major differences between the fleet model and the Blue Angel F/A-18?

The Blue Angel F/A-18s have the nose cannon removed, a smoke-oil tank installed and a spring installed on the stick which applies pressure for better formation and inverted flying. Otherwise, the aircraft that the squadron flies are the same as those in the fleet. Each Blue Angel aircraft is capable of being returned to combat duty aboard an aircraft carrier within 72 hours.

### **33 | Are Blue Angels' aircraft carrier capable?**

All of the Blue Angels' jets are carrier-capable and can be made combat ready in about 72 hours. The squadron's C-130 ("Fat Albert") is manned by an all-Marine Corps crew and was not designed for carrier operations.

### **34 | How do the jets get to each show site?**

The demonstration pilots fly the jets to each show site.

### **35 | How much does an F/A-18 cost?**

The basic acquisition price of a single F/A-18 Super Hornet is approximately \$67.4 million. The cost of additional weapons-related equipment varies according to the configuration, and the use of each aircraft can significantly increase the total price.

### **36 | What is the top speed and rate of climb of an F/A-18?**

The F/A-18 can reach speeds just under Mach 2, almost twice the speed of sound or about 1,400 mph. The maximum rate of climb of the F/A-18 is 30,000 feet per minute.

### **37 | What is the weight of an F/A-18?**

A F/A-18 Super Hornet weighs about 32,100 pounds, empty of all ordnance and aircrew.

### **38 | Why are the jets painted blue and gold?**

The jets showcase the official colors of the U.S. Navy.

### **39 | How far can the F/A-18 fly on a full load of fuel or with external fuel tanks?**

The F/A-18 can travel approximately 1,000 miles on a full load of fuel without external tanks. Adding the external tanks extends the range to approximately 1,200 miles.

### **40 | How do you produce the smoke, and why do you use it?**

The smoke is produced by pumping biodegradable, paraffin-based oil directly into the exhaust nozzles of the aircraft, where the oil is instantly vaporized into smoke. The smoke provides a traceable path for spectators to follow, so they can see the flight profile that has been flown. It also enhances safety of flight by providing a valuable means by which the solo pilots can see each other during opposing maneuvers and conditions of lowered visibility or haze. The smoke poses no hazard to the environment.

### **41 | Why can't the public listen to the pilots' conversation during the show?**

Since all maneuvers are preceded by radio communication, broadcasting these radio calls or making the frequencies of their radios publicly available could interfere with pilot communication, thereby jeopardizing the safety of flight.

## **42 | Why is the C-130 called "Fat Albert?"**

"Fat Albert" is a nickname given to the plane by Marine Corps Blue Angel pilots in the 1970s because of its size and shape. It is a reference to the popular children's cartoon of the same era.

## **43 | What does "JATO" stand for?**

"JATO" stands for Jet-Assisted Take-Off. JATO was used by the Lockheed-Martin C-130 to take off from short runways and gain high altitude in a short period of time, as required in combat situations. The first Blue Angels JATO performance took place at NAS Pensacola in November 1975. Eight solid fuel JATO rocket bottles, each producing 1,000 pounds of thrust, helped propel Fat Albert skyward and captivated millions of spectators each year.

## **44 | Why doesn't Fat Albert use JATO anymore?**

JATO bottles were produced in the Vietnam era. The last known stockpiles of JATO bottles were expended during the Blue Angels' 2009 show season. The last JATO performance for Fat Albert was at the NAS Pensacola Air Show in November 2009.

## **45 | How much fuel does Fat Albert hold?**

Fat Albert holds 43,450 pounds of fuel.

## **46 | What is the normal cruising speed and shaft horsepower per motor of Fat Albert?**

Fat Albert's cruising speed is 400 MPH (350TAS/average ground speed depends on the winds) and has 4,700 HP per engine.

## **47 | What is the maximum takeoff weight of Fat Albert?**

The maximum takeoff weight of Fat Albert is 155,000 pounds.

## **48 | What is the distance under Fat Albert's propellers to the ground?**

The distance under Fat Albert's propellers to the ground is approximately six feet.

## **49 | How many crewmembers are assigned to fly Fat Albert, and what are their positions?**

Generally, seven Marines are assigned to operate Fat Albert Airlines: three pilots, two loadmasters, and two flight engineers.

## **50 | How long has the team had the C-130?**

The team has been flying the C-130 since 1970.

## **51 | Have the Blue Angels ever performed overseas?**

Yes. Throughout the years, the Blue Angels have had limited opportunities to perform overseas. In 1992, the team completed a European tour performing in Sweden, Finland, Russia, Bulgaria, Italy, the United Kingdom, Romania, Spain, and Germany.

## **52 | Is it possible to schedule a tour of the Blues home base?**

Unfortunately, no. Due to hectic show and maintenance schedules, it is extremely difficult to schedule tours or photographic opportunities. People who desire to see the Blue Angels between shows are encouraged to view a practice demonstration at the National Museum of Naval Aviation at NAS Pensacola. Practices are usually held most Tuesday and Wednesday mornings; weather permitting, during the show season when the team is home. A tentative practice schedule may be viewed on the Blue Angels' website at [www.blueangels.navy.mil/show/](http://www.blueangels.navy.mil/show/).

## **53 | How can fans obtain a VIP pass for a show?**

Unfortunately, the Blue Angels do not have "VIP" seating available to the public at any show. Air shows usually have general seating available to the public and VIP seating available for purchase. Information may be found on individual air show websites. Some show sites reserve alternate seating areas for a nominal fee. Interested individuals should contact the local air show coordinator for additional information.

## **54 | What is the difference between a Blue Angel Hornet and the new F/A-18 E/F Super Hornet?**

The Super Hornet is 25% larger, can fly 40% further, remain on station 80% longer and carry more weapons than its predecessors. The Super Hornet F/A-18 E/F models have deployed with battle groups since 2001. While the Super Hornet has more recent technology, the Hornet has been a reliable asset for 30 years, and its many capabilities continue to meet the needs for the demonstration.

## **55 | Do you ever fly the jets under bridges?**

The Blue Angels do not fly under any structures during an air show. Some of the maneuvers have the appearance that the jets are flying under structures, but this is always an optical illusion from the perspective of the crowd. For safety reasons, the Blue Angels will never fly underneath bridges or any other structures.

## **56 | Are there ever sonic booms at air shows?**

Sonic booms occur when an aircraft surpasses the speed of sound. At a Blue Angels air show, there should never be a sonic boom, as we are not authorized to exceed the speed of sound at a show. On occasion, spectators may have mistaken the sound of engines at a high-power setting approaching the speed of sound for a sonic boom.

## **57 | I am in school right now. What should I be doing if I want to be a Blue Angel one day?**

The best way to begin the road to a successful career is to work hard in school, stay physically active, and refrain from illegal drug use. Additionally, it is helpful to serve in leadership roles and extracurricular activities. These principles apply in attaining a successful career both inside and outside the military. For more information about a career in the Navy and Marine Corps, see your local recruiter or visit [www.navy.com](http://www.navy.com) or [www.marines.com](http://www.marines.com).