

USAF AIR DEMONSTRATION SQUADRON



MISSION

The Thunderbirds Squadron is composed of eight pilots, four support officers, three civilians and more than 130 enlisted personnel performing in 25 career fields. A Thunderbirds air demonstration is a mix of formation flying and solo routines. The four-aircraft diamond formation demonstrates the training and precision of Air Force pilots, while the solo aircraft highlight the maximum capabilities of the F-16. The pilots perform approximately 30 maneuvers in a demonstration. The entire show, including ground and air, runs about an hour and fifteen minutes. The season lasts from March to November, with the winter months used to train new members. Officers serve a two-year assignment with the squadron, while enlisted personnel serve three to four. Replacements must be trained for about half of the team each year, providing a constant mix of experience.

The squadron performs no more than 88 air demonstrations each year and has never canceled a demonstration due to maintenance difficulty. More than 280 million people in all 50 states and 57 foreign countries have seen the red, white and blue jets in more than 3,500 aerial demonstrations. In addition to their responsibilities as the official U.S. Air Force aerial demonstration team, the Thunderbirds are part of our combat force. If required, the team's personnel and aircraft can be rapidly integrated into a fighter unit at Nellis Air Force Base, Nev. Since the aircraft are only slightly modified, they can be made combat-ready in less than 72 hours.

LINEAGE

30 Aero Squadron organized, 13 Jun 1917

Demobilized, 14 Apr 1919

Reconstituted and redesignated 30 Bombardment Squadron, 24 Mar 1923

Activated, 24 Jun 1932

Redesignated 30 Bombardment Squadron (Heavy), 6 Dec 1939
Redesignated 30 Bombardment Squadron, Very Heavy, 28 Mar 1944
Inactivated, 1 Apr 1944
Activated, 1 Apr 1944
Redesignated 30 Bombardment Squadron, Medium, 10 Aug 1948
Redesignated 30 Bombardment Squadron, Heavy, 1 Jul 1961
Discontinued and inactivated, 1 Feb 1963

USAF Air Demonstration Squadron and activated, 13 Feb 1967
Organized, 25 Feb 1967

30 Bombardment Squadron, Heavy and USAF Air Demonstration Squadron consolidated, 19 Sep 1985. Consolidated unit retains USAF Air Demonstration Squadron designation.

STATIONS

Camp Kelly (later, Kelly Field), TX, 13 Jun 1917
Fort Totten, NY, 16-22 Aug 1917
Southampton, England, 15 Sep 1917
Etampes, France, 19 Sep 1917
Issoudun, France, 23 Sep 1917
Bordeaux, France, 6 Jan-18 Mar 1919
Mitchel Field, NY, 5-14 Apr 1919
Rockwell Field, CA, 24 Jun 1932
March Field, CA, 25 Oct 1935
Albuquerque, NM, 1 Jun-27 Sep 1941
Clark Field, Philippines, 23 Oct 1941
Batchelor, Australia, 20 Dec 1941 (ground echelon in Luzon and Mindanao, Philippines, 20 Dec 1941-May 1942)
Singosari, Java, 31 Dec 1941
Melbourne, Australia, 5 Mar 1942
Cloncurry, Australia, 27 Mar 1942
Longreach, Australia, 13 May 1942
Mareeba, Australia, 24 Jul-10 Nov 1942
Pocatello, ID, 9 Dec 1942
Pyote AAB, TX, 24 Jan 1943-1 Apr 1944
Great Bend AAFld, KS, 1 Apr 1944
Dalhart AAFld, TX, 26 May 1944
Great Bend AAFld, KS, 23 Aug- 7 Dec 1944
Fort Lawton, WA, 11-19 Dec 1944
North Field (later, Andersen AFB), Guam, 16 Jan 1945
Kadena AB, Okinawa, 1 Jul 1950-16 May 1954
Pincastle AFB, FL, 30 May 1954
Homestead AFB, FL, 1 Jun 1956
Grand Forks AFB, ND, 1 Jan 1962-1 Feb 1963

Nellis AFB, NV, 25 Feb 1967

ASSIGNMENTS

Unkn, 13 Jun-Sep 1917

Third Aviation Instruction Center, Sep 1917-Jan 1919

Unkn, Jan-14 Apr 1919

19th Bombardment Group, 24 Jun 1932-1 Apr 1944 (ground echelon attached to 5th Interceptor Command, 20 Dec 1941- May 1942)

19th Bombardment Group, 1 Apr 1944

19th Bombardment Wing, 1 Jun 1953

4133d Strategic Wing, 1 Jan 1962-1 Feb 1963

Tactical Air Command, 13 Feb 1967

USAF Tactical Fighter Weapons Center, 25 Feb 1967

57th Fighter Weapons (later, 57th Tactical Training; 57th Fighter Weapons; 57th Fighter; 57th Wing, 15 Feb 1974)

WEAPON SYSTEMS

O-27

OA-4

YOA-5

B-3

B-12

B-10

B-18

B-17

B-24

LB-30, 1941-1942

B-17, 1942-1944

B-29, 1944- 1954

B-47, 1954-1961

B-52, 1962-1963

F-100, 1967-1968

F-4, 1969- 1973

T-38, 1974-1986

F-16, 1982

COMMANDER

Unkn, 13 Jun 1917-14 Apr 1919

Capt Willis H. Hale 30 Jun 1926

Inactive 28 Feb 1927

1st Lt Charles B. Overacker, Jr. 15 Jan 1930

Capt James L. Grisham 24 Jun 1932

1st Lt Walter W. Gross 13 Apr 1934

1st Lt Franklin C. Wolfe 23 May 1934

1st Lt Wentworth Goss 9 Jul 1934
Capt Carl W. Pyle 12 Sep 1934
Maj James L. Grisham 5 May 1935
Maj Albert F. Hegenberger 1 Oct 1935
Maj John K. Cannon 9 Jul 1937
Capt Carlyle I. Ferris 16 Aug 1937
Maj Harry A. Halverson 11 Sep 1937
Capt Cecil E. Archer 17 Jul 1939
Maj Thomas Blackburn 10 Oct 1940
Maj David R. Gibbs May 1941
Maj Raymond V. Schwanbeck, 14 Mar 1942
Maj Dean C. Hoevet, Jul 1942
Maj John A. Rouse, Sep 1942
Maj Paul E. Cool, 14 Feb 1943
Capt Edson P. Sponable, May 1943
Unkn, 1 Apr-10 May 1944
Maj Arthur D. Sullivan, 11 May 1944
Maj Leon L. Lowry, 28 May 1944
Maj Robert B. Irwin, 1 Sep 1944
Unkn, 1945-1947
Maj Charles J. Boise, 1948
Capt Richard H. Partrick, 7 Feb 1949
Maj James S. Howard, 19 May 1949
Maj Edward M. Osander, by Dec 1949
Lt Col Warren C. Stirling, c. 1952
Lt Col Ralph W. Jones, by Jan 1953
Lt Col Harold E. Brown, 23 Apr 1954
Maj Louis W. Park, Jul 1954 (acting)
Maj William J. Gregory, Sep 1954 (acting)
Maj Ermine L. Hales, 3 Oct 1954 (acting)
Lt Col Curtis N. Youngblood, 19 Oct 1954 (acting)
Lt Col Harold E. Brown, 5 Nov 1954
Lt Col Fred R. Peck Jr., by Jan 1956
Lt Col Charles W. Ryckman, 24 Jun 1957
Maj Haldene A. Cope, by May 1959-unkn
Lt Col Robert J. Horrigan, 1 Jan 1962-1 Feb 1963
Unkn, 13-24 Feb 1967
Lt Col Ralph J. Maglione Jr., 25 Feb 1967
Maj Neil L. Eddins, 4 Jun 1967
Lt Col Joseph D. Moore, 1969
Lt Col Thomas S. Swalm, 28 Jul 1970
Maj Roger K. Parrish, 31 Jan 1973
Maj Chris Patterakis, by Dec 1975
Lt Col Edward D. Cherry, 12 Jan 1977

Lt Col David L. Smith, 16 Apr 1979
Maj Norman L. Lowry III, 8 Sep 1981
Lt Col Shumpert C. Jones, 18 Jan 1982
Maj James D. Latham, 7 Jun 1982
Lt Col Lawrence E. Stellmon, 3 Feb 1984
Lt Col Roger D. Riggs, 7 Feb 1986
Lt Col Stephen E. Trent, 5 Feb 1988
Lt Col Charles N. Simpson, Jan 1990
Lt Col Daniel J. Darnell, 1 Jan 1992
Lt Col Stephen J. Anderson, 11 Feb 1994
Lt Col Ronald A. Mumm, 19 Jan 1996
Lt Col Brian J. Bishop, 23 Jan 1998
Lt Col John R. Venable, 21 Jan 2000
Lt Col Richard G. McSpadden, 25 Jan 2002
Lt Col Michael Chandler, Jan 2004
Lt Col Kevin J. Robbins, 15 Feb 2006
Lt Col Greg Thomas, 18 Jan 2008

HONORS

Service Streamers

World War I Theater of Operations

Campaign Streamers

World War II

Philippine Islands

East Indies

Papua

Guadalcanal

Western Pacific

Air Offensive, Japan

Air Combat, Asiatic-Pacific Theater

Korea

UN Defensive

UN Offensive

CCF Intervention

First UN Counteroffensive

CCF Spring Offensive

UN Summer-Fall Offensive

Second Korean Winter

Korean Summer-Fall, 1952

Third Korean Winter

Korea, Summer 1953

Armed Forces Expeditionary Streamers

Decorations

Distinguished Unit Citations

Philippine Islands, 7 Dec 1941-10 May 1942

Philippine Islands, 8-22 Dec 1941

Philippines and Netherlands Indies, 1 Jan- 1 Mar 1942

Philippine Islands, 6 Jan-8 Mar 1942

Papua, 23 Jul-[10 Nov] 1942

New Britain, 7-12 Aug 1942

Japan, 9-19 Mar 1945

Kobe, Japan, 5 Jun 1945

Korea, 28 Jun-15 Sep 1950

Air Force Outstanding Unit Awards

[25 Feb 1967]-31 Dec 1968

1 Jan-31 Dec 1973

1 Jan-31 Dec 1974

1 Jan 1979-31 Dec 1980

1 Jun 1995-31 May 1997

1 Jun 2001-31 May 2003

1 Jun 2004-31 May 2006

Air Force Organizational Excellence Awards

1 Jan 1984-31 Dec 1985

1 Jan 1986-31 Dec 1987

30 Sep 1989-30 Sep 1991

1 Jun 1997-31 May 1998

Air Force Organizational Excellence Awards

1 Jan 1984- 31 Dec 1985

1 Jan 1986-31 Dec 1987

30 Sep 1989-30 Sep 1991

Philippine Presidential Unit Citation (WWII)

Republic of Korea Presidential Unit Citation

7 Jul 1950-27 Jul 1953

EMBLEM



30 Bombardment Squadron



30 Bombardment Squadron emblem: On a blue disc bordered yellow between four cardinal compass points indicated by three yellow triangles and a green fleur-de-lis outlined white for the north point, a white skull in profile with black shadows and with a yellow wing protruding diagonally upward from its back and extending over the disc and from the eye a white lightning flash streaked red extending diagonally downward over the disc. (Approved, 8 Sep 1953)

Air Demonstration Squadron emblem: On a White disc with an attached White scroll below the disc, all edged Black, a Blue Thunderbird with Yellow beak and eye, surmounted by a Red disc charged with a White five-pointed star, all above an arced inscription, THUNDERBIRDS, in Black script. (Approved, 14 Jun 1977; replaced emblems approved, 8 Sep 1953 and 9 Jan 1933. Newest rendition approved, 1 Feb 2008)

MOTTO

OPERATIONS

Repaired and overhauled aircraft engines in France, Sep 1917-Nov 1918.

Organized on 30 June 1926 with Organized Reserve personnel as a RAI unit in the Third Corps Area. Withdrawn from the Third Corps Area on 28 February 1927 and allotted to the Ninth Corps Area. Withdrawn from the Ninth Corps Area on 1 September 1928 and allotted to the Eighth Corps Area. Organized on 15 January 1930 with Organized Reserve personnel as a RAI unit with headquarters at Kelly Field, TX. Activated on 24 June 1932, less Reserve personnel, at Rockwell Field, CA. Concurrently, relieved from assignment to the 7th Bombardment Group and assigned to the 19th Bombardment Group. Transferred on 25 October 1935 to March Field, CA.

16 December 1932 During a routine practice flight, Capt. J. L. Grisham flying Fokker Y10-27, 31-599, '2', of the 30 Bombardment Squadron, is unable to get the port main undercarriage leg to extend more than one-quarter down, makes emergency landing in San Diego Bay off of NAS San Diego, California. He and Sgt. Clarence J. King survive, aircraft salvaged, repaired and returned to service.

10 October 1933 Fokker Y10-27, 31-602, '3', of 30 Bombardment Squadron, Rockwell Field, California, en route from Burbank, California to Crissy Field, California, lands at Crissy with landing gear retracted. Both light and buzzer in cockpit that are supposed to activate when the throttles are retarded fail to function. Only serious damage is to the propellers but airframe is surveyed and dropped from inventory with 115 hours, 15 minutes flying time. Pilot 2nd Lt. Theodore B. Anderson uninjured.

3 November 1933 First fatal accident involving a Fokker YO-27 occurs when pilot Lt. Lloyd E. Hunting with Sgt. John J. Cunningham aboard, departs Olmsted Field, Middletown Air Depot, Pennsylvania, in 31-589 of the 30 Bombardment Squadron at 1800 hrs. after darkness had fallen. Pilot had apparently not observed a mountain ridge, 400 to 800 feet (120 to 240 m) high, one mile from the airfield, when he landed during the afternoon, and upon departure did not see it in the dark, crashing head-on into the ridge, aircraft burned, both crew KWF.

Combat in Southwest Pacific, 7 Dec 1941-16 Nov 1942; ground echelon fought with infantry units, in the Philippines Islands, 20 Dec 1941-May 1942. Replacement training in the US, 1943-1944. Combat in Western Pacific 12 Feb-15 Aug 1945. Combat in Korea, 28 Jun 1950-25 Jul 1953. Precision aerobatic demonstrations (popularly known as the "Thunderbirds" squadron), 1967.

30 Bombardment Squadron. B-52H Aircraft Loaded With Combat Munitions For The First Time On 19 Sep 62.

19 April 1947 A Boeing B-29A-85-BW Superfortress, 44-87638, of the 30 Bomb Squadron, 19th Bomb Group, 20th Air Force, crashes and explodes one mile off shore at Kwajalein Island after take-off. Sixteen KWF, no bodies are recovered.

The 1969 season saw the first of Thunderbirds with the F-4E. The F-4E was a powerful aircraft and a crowd pleaser. The F-4E was dropped due to the energy crisis in the early 70's. In its place, the T-38A was chosen which was smaller and not as noisy, but did use far less fuel and required less maintenance. The infamous "Diamond Crash" happened with the T-38 during a practice flight on January 18th, 1982 in which the entire team flew into the range. The four aircraft involved were 68-8156, 68-8175, 68-8176 and 68-8184. As a result of this tragic loss, no shows were flown by the Thunderbirds during the 1982 season. Instead the unit took the time to convert to a new aircraft type.

The year 1972 saw the last of the T-38s delivered to the USAF. Two years later the Talon was chosen as the new aircraft for the 3600th Air Demonstration Squadron the "U.S. Air Force Thunderbirds." Using the T-38 trainer for the Thunderbirds was a radical departure from previous practice of use of a front line fighter as the team aircraft. The previous Thunderbird aircraft had started with the F-84 in 1953, and included the F-100 and F-105 in the early 1960s, and finally the F-4 Phantom II in 1968. After six years with the F-4, the fuel economy conscious attitudes of the 1970s made use of a more fuel efficient aircraft good for public opinion, and would also be less expensive to operate. Many European flight demonstration teams had also transitioned to trainers so the USAF was not alone in this change to a more economical aircraft. Even with the economic factors considered, it was not an easy decision to leave the tradition of first line fighters and use a trainer as the Thunderbirds' aircraft. It had long been stated that the USAF T-birds pilots were line pilots flying the same type of aircraft as the operational squadrons in Tactical Air Command. Now the aircraft was going to be a trainer, but at least it was a supersonic high performance aircraft.

For the Thunderbirds role, the Talon received an entirely new paint scheme. The Talons streamlined airframe was not suited to the Thunderbird motif applied to the underside contours of previous aircraft types. Instead, the Talon had gracefully curved stripes applied to the fuselage and vertical tail. Under the wings a double arrowhead sweeping forward from the wingtips to nose was applied. This achieved a good contrast between the upper and lower surfaces when seen in plain view or during the fast rolls for which the T-38 was well known.



Thunderbirds at Dobbins AFB, Georgia.



Thunderbirds at Dobbins AFB, Georgia.

The Thunderbirds operated the T-38 from 1974 until 1982. During this time the T-Birds had three fatal accidents. The first occurred on 9 May 1981. The opposing solo pilot was killed when his T-38 crashed inverted at Hill AFB, Utah. The aircraft crashed outside the air base apparently with both engines stopped. On September 8, 1981 a second Thunderbirds Talon crashed at Cleveland Airport, Ohio. Departing after completing the show, team leader Lt. Col. David Smith had a multiple birdstrike when he ran into a flock of seagulls. Smith and his groundcrew passenger ejected at low altitude but Smith's parachute failed to open in time. His ground

crewman survived having suffered only minor injuries.

The final fatal accident occurred during practice at Indian Springs air field, north west of Nellis on the morning of 10 January 1982. The four aircraft formation (Numbers 1 through 4) struck the ground at the bottom of a line abreast loop. All four pilots were killed. Examination of the crash site indicated that the Thunderbird leader, Major Lowry impacted first, followed by Number 4, with Numbers 2 and 3 hitting last. As the flight of four neared the bottom of the loop, the stabilizer of the lead aircraft (No.1) apparently jammed, preventing the aircraft from recovering at the bottom of the loop. The other three pilots flying standard formation procedures were only watching the lead aircraft and did not see their closeness to the ground until it was too late. The 1982 show season was canceled before it had even begun. The T-38 was replaced by the F-16 for the 1983 show season.

As a replacement for the T-38A the Thunderbirds were given the F-16A/B block 15. The F-16 had been considered as a replacement long before the diamond crash. The first Thunderbird painted F-16 arrived at Nellis AFB, Nevada on June 22nd, 1982. After 18 months with no show due to the "Diamond Crash" the first show returning to the air and with a new aircraft was on April 2nd, 1983.

After the 1991 season and a European tour, the Thunderbirds converted from the F-16A/B to the F-16C/D block 32.

As part of the opening ceremonies for the 1996 Olympic Games held in Atlanta, the Thunderbirds performed a flyby at the end of the American national anthem. The team performed the 1000th demonstration in the F-16 at Pope AFB, North Carolina on November 10th, 1996. The following year in 1997 to celebrate the USAF's 50th anniversary. The US Postal Service used the Thunderbirds to represent the USAF for a commemorative stamp.

Although not assigned, the USAF Thunderbirds do obtain for their own use cargo aircraft from other squadrons. Their first support aircraft was the C-123B followed by the C-119F in 1958. In preparation for Desert Storm the USAF Thunderbirds season was shortened and gave up their C-141B for C-130s. After the war the C-141B returned for a short while as half way through the 1993 season all C-141s were grounded and the Demonstration team used two C-130s. After the retirement of the C-141 it has been difficult as operating two C-130s has been expensive and C-17 numbers were too small. Since around 2006 the C-17 has been primarily used and just like in the past none are dedicated to the team. Whichever one is available as a spare and is given the call sign of Thunderbird fourteen.

The USAF Thunderbirds during a display routine converting an F-16 into a Thunderbird aircraft is rather simple task. The radar is removed as well as the gun. In place of the gun is equipment and holding tanks for the smoke generators. A pipe is run from the gun bay to the afterburner where oil is burned in the engine to make smoke. Finally the F-16 is painted in the trademark paint scheme. The ADS team claims to be able convert an F-16 back to operational status within a 72 hour period. This was tried in 1988 with F-16 #81-0679 and done in only 27 hours except

for painting the aircraft.



Thunderbirds at Dobbins AFB, Georgia.



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DEPARTMENT OF THE AIR FORCE ORGANIZATIONAL HISTORIES

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Sources

Air Force Historical Research Agency, U.S. Air Force, Maxwell AFB, Alabama.

The Institute of Heraldry. U.S. Army. Fort Belvoir, Virginia.

Air Force News. Air Force Public Affairs Agency.