

**Rapid and frequent deployments, 20-hour days,
200 days of TDY a year—it sounds like almost any other
squadron in the US Air Force.**



*The sparkling red, white, and blue
Thunderbirds, fresh from a desert
practice session, get immediate and
comprehensive attention from their
tireless crew chiefs and maintainers.*

Thunderbirds

Photos by Guy Aceto, Art Director, and Susan Kennedy



This year marks the 45th season of the US Air Force Air Demonstration Squadron, better known as the Thunderbirds. Masters of precision flying, the T-Birds have wowed millions of air show-goers in almost every country with their unsurpassed aerobatics and rock-steady formations. At right, T-Birds fly their trademark "diamond" in front of Sunrise Mountain at their home base, Nellis AFB, Nev. More than just six airplanes and pilots, the Thunderbirds are an organization of 142 aviators, maintainers, and other specialists who handle everything from transportation to air show posters.



Staff photo by Guy Aceto

Photo by Susan Kennedy



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The Thunderbirds take the basic skills taught to every USAF fighter pilot and hone them to perfection, flying far tighter formations than used in frontline service as well as aerial maneuvers like the "Calypso Pass," above.

Founded in 1953 as the 3600th Air Demonstration Unit at Luke AFB, Ariz., the first team comprised seven officers and 22 enlisted members and flew the F-84G Thunderjet. Since then, the T-Birds have flown the F-100, F-105B, F-4E, T-38, and now the F-16. Combat coded airplanes all, the Thunderbird F-16s retain their fighting capability and can be put into operational service with 72 hours' notice—and a coat of dull gray paint.



Staff photo by Guy Aceto



As one performance season winds down in November, the team is already gearing up for the next. Winter sees a tough regimen of training and integration of newcomers, comprising nearly half of the pilots and support crew. As in any combat squadron, the crew goes to work when the sortie is over; above, SSgt. Jeffrey York, crew chief on No. 6, and SSgt. Lee Cline, assistant crew chief, tweak "their" jet after practice. They travel with the airplane and keep it working flawlessly on its grueling nine-month air show and open house tour. TSgt. Rick Hines (right), an engine specialist, inspects hinges on the afterburner as part of his postflight ritual.



Thunderbirds employ "smoke" to make it easier for crowds to watch their intricate maneuvers. Actually, the "smoke" is a light oil, contained in a gun-bay drum and fed to a small tube along the afterburner. When released into the jet stream, it vaporizes into a contrail.

Training starts in November. The Thunderbirds start out practicing two aircraft at a time and gradually add more until the team is able to perform the definitive "Thunderbird Close," illustrated by the diamond formation at right. Most practicing is done north of Nellis at Indian Springs Air Force Auxiliary Field, where the actual polishing of the routine takes place. The toughest critics are the pilots themselves, though. Thunderbird No. 7 is flown by Operations Officer Maj. Randel A. Lane, who flies chase and "grades" each maneuver. In his adjunct role as safety observer, Lane travels with the team and grades each performance of the season, pointing out areas needing brushup between shows.



Staff photo by Guy Aceto

Photo by Susan Kennedy



Never has a Thunderbirds show been canceled as a result of mechanical problems, a record of which T-Bird maintainers are justifiably proud. At left, Nondestructive Inspection specialist SrA. April Seymour makes a landing gear bay check. Along with experts in fuel systems, egress, and structural maintenance, she ensures that the airplane is perfect from pitot tube to afterburner. The team has its own Aerospace Ground Equipment, all decked out in shiny red, white, and blue.

Photo by Susan Kennedy



Excruciating attention to detail is one of the hallmarks of T-Bird support personnel, as shown by the touch-up above. At right, SSgt. Gene Viele masks off the leading edge of No. 2's wing so he can buff it to a chrome-like finish. Contrary to popular belief, no special parts are used on the Thunderbirds' aircraft; the distinctive shine is the result of plain old hard work.



Staff photo by Guy Aceto



Planning and preparation are the keys to a stellar performance. Here, pilots "fly" the entire show in a miniature dress rehearsal, saying their "lines" and tracing their aerial movements just as they will in the airplane. Suggestions are made and the routine's safety—the No. 1 consideration—is verified.

Conditions at each field usually require the Thunderbirds to make slight variations in the routine. These are painstakingly briefed before each performance. In the picture at left (l-r), Maj. Mark R. Arlinghaus and Maj. Robert P. Givens make a point with the commander of the Thunderbirds, Lt. Col. Brian T. Bishop.



Following along with the brief are (l-r) Capt. Bradley D. Bartels, Maj. Paul E. Krause, and Maj. Dennis J. Malfer. Bartels, Bishop, and Malfer are in their first year with the team. However, after 100 winter training sorties per pilot, everyone—even newcomers—are in top form and ready for the season opener.



The T-Bird team has its own quality control, inspection, life support, and administrative personnel. Here, SrA. Rick Butz follows the checklist as TSgt. Michael Cortez inspects one of the ejection seats on No. 8. An assignment to the Thunderbirds requires not only high technical expertise but extensive study of squadron history and protocol. Once out on the flight line at a show, everyone is a Thunderbird and must be able to answer questions from the crowd.

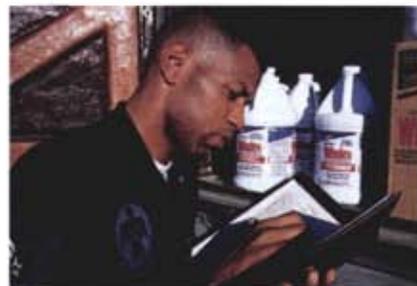
A Thunderbirds show generates a considerable requirement for literature and graphics, ranging from brochures and programs to posters and press releases. Having an in-house design and photography shop allows the T-Birds to maintain tight control over their image. Graphic Illustrator SSgt. Gina Vorce, right, checks out the color on a Thunderbirds brochure.

Everything must be double-checked before the team moves on to its next show. Maj. Loren J. Johnson, Thunderbird No. 8, is the advance man and narrator who flies ahead to the site of the next T-Bird performance, making sure all arrangements have been seen to. Below, SrA. Bill Kurek, assistant crew chief on No. 8, packs a travel pod in preparation for the next hop.



Photo by Susan Kennedy

Staff photo by Guy Aceto



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The Thunderbirds consume vast quantities of glass cleaner, used to polish everything from canopies to pitot tubes. Here, TSgt. Jeffrey Jones, assistant flight chief of the Combat Oriented Supply Organization, checks on stocks of consumables. The COSO makes sure team members have what they need—no matter how mundane—to do their jobs.

What it's all about: inspiring the next generation of USAF volunteers. The autograph being signed here by Arlinghaus and the dazzling flight display may be the sparks that launch the career of a future Air Force crew chief or pilot. Team leader Bishop notes that he wanted to be a Thunderbird "since the third grade," when he first saw them perform.



Photo by Susan Kennedy



The Thunderbirds treat their schedule as a series of deployments—shorter ones than average to be sure, but with 200 TDY days a year, no less stressful. Thunderbirds members are volunteers, extremely motivated and justly proud of the work they do. Many enlisted members ask to extend an extra year.

It's not easy becoming a Thunderbird. Bishop noted that the process is highly competitive, requiring recommendations and extensive interviews with team members and commanders.

Aspiring Thunderbird pilots must undergo rigorous aerial evaluations, including loops, rolls, and other aerobatics. "I feel very lucky" to have been selected, Bishop said. "This is a great opportunity for me to represent the Air Force and command at the same time."



Photo by Susan Kennedy

The Thunderbirds—whether officer or enlisted—are professional, dedicated, hard-working, and highly skilled. These "Ambassadors in Blue" give prospective blue-suiters something to aim for. ■

