

The Lima Lima Flight Team

From Flying Club to Airshow Stars



Trailing plumes of white airshow smoke, the four bright yellow T-34 Mentors pulled up and over, performing a graceful loop in the clear blue skies above the Sun 'n Fun airshow this past April. For the next seventeen minutes, the Lima Lima Flight Team thrilled the Central Florida airshow audience, kicking off their 29th airshow season in style.

As one of the longest-running civilian precision formation aerobatic teams in North America, Lima Lima has thrilled over 100 million spectators from coast-to-coast since 1988. While the pilots flying the planes have changed over the team's long history, one thing hasn't changed – the team's dedication to flying the best performance they can possibly fly.

IT STARTED WITH A FLYING CLUB

The Lima Lima Flight Team can trace its roots back to 1975 and the Mentor

Flyers flying club located at Naper Aero, a residential airpark outside of Naperville, Illinois (a Chicago suburb). The Mentor Flyers began with up to 15 members sharing a single T-34. Eventually, some club members bought their own Mentors and they began flying formation. Soon, there were enough airplanes and formation-qualified pilots to form a six-ship formation airshow team.

The team's name – Lima Lima – was derived from the FAA airport designator code for Naper Aero – LL10. The vertical tail of each team aircraft is adorned with a black band carrying the "LL" insignia. All aircraft are painted in a standard yellow military paint scheme.

The team eventually grew to as many as nine airplanes and eleven qualified pilots, although the typical show consisted of only six aircraft. The extra aircraft and pilots gave the team flexibility to work around team members' busy schedules, with spare

***Above:** Roger Fritzler's view from the slot position in the Lima Lima diamond formation (photo by Chris Dilley).*

***Opposite page:** The Lima Lima diamond flies over the countryside near Lake City, Florida (photo by Ken Biggs).*

pilots and planes ready to fill-in as needed.

In recent years, a number the long-time Lima Lima pilots have chosen to retire for age, medical, or other personal reasons. Many still fly, but they became less comfortable with the demanding flying required for airshows. As a result, the team flew as a five-ship for the 2014 season and as a four-ship formation in 2015 and 2016.

The team members own their own airplanes, either outright or through some form of partnership. Three of the current aircraft flying on the team are T-34A models and one is a T-34B model (Navy version). Three of the aircraft carry Navy markings, while the lead aircraft is painted in USAF markings. Two types of engines are used – the Continental IO-520

and Continental IO-550 – producing 285 horsepower and 300 horsepower respectively. Both engines are upgrades from the original 225 horsepower T-34 powerplant, and are required to generate the higher energy the team needs to flow smoothly from one maneuver right into another.

The current team consists of:

Skip “Scooter” Aldous. Team Lead Skip Aldous spent 28 years in the USAF flying a variety of jet aircraft ranging from the T-33 to the F-16. He retired in 1994 as the squadron commander of the 159th Fighter Squadron of the Florida Air National Guard in Jacksonville.

Skip has been flying with Lima Lima since 1999. Over the years, he has flown most of the positions on the team, but when the team flew as a six-ship, most of his time was spent as either the opposing or lead solo. He assumed the Team Lead position for the 2013 season after the retirement of previous leader, Bill Cherwin. Skip resides in Lake City, Florida.

Steve “Hoss” Smith. Flying the right wing position is Steve Smith, a former USAF C-130 pilot. He left active duty in 1991, but continued flying in the Air National Guard for a few years after that.

Steve started flying the T-34 in 2003 and began flying right wing for Lima Lima in 2013. He has earned his ATP with both land and sea qualifications and is a CFII. An experienced business operations executive, he splits his time between homes in Maryland and South Carolina.

Mark “Enigma” Miller. Flying left wing is Mark Miller, the only team member without a military background. A third-generation pilot, Mark was introduced to flying in his grandfather’s Cessna 170B. His father gave up flying when Mark was still young, so he was never able to seriously pursue flying until he was established in his successful engineering career in the late 1980s.

Mark’s interest in the T-34 was kindled when he moved to the

Naperville area and watched the Lima Lima team guys fly over his house almost every weekend. He bought a share of his first T-34 in 2003 and qualified for the team in 2007.

Roger “Fritz” Fritzler. The newest member of the team is slot pilot Roger Fritzler of San Diego, California. Fritz spent 10 years of active duty in the US. Navy flying the F-14 Tomcat, followed by 20 years in the Navy Reserves. After leaving active duty in 1984, he took a job with American Airlines and currently flies the Boeing 777. He retired from the Navy Reserves in 2004.

Fritz has owned a T-34 for over 30 years, and while he was involved with the original cadre of Chicago area Lima Lima pilots from the very beginnings of the team, he never had the time to become a member of the airshow team until recently. The 2015 season was his first flying with Lima Lima.

John “Ripper” Rippinger. John Rippinger started flying T-34s in 1989 and has been a part of Lima Lima Flight Team since 1992. John serves as the President of the team, but has retired from an active airshow flying role. Today John handles the team’s finances, sponsorships, and other management and administrative tasks. He lives in Scottsdale, Arizona.

A DYNAMIC FOUR-SHIP ROUTINE

The team’s current four-ship airshow routine is about seventeen minutes long and consists of a mixture of four-ship, two-ship, opposing, and solo maneuvers. The team does not have their own narrator, but they have a suggested narration script and their own music soundtrack.

After an overhead entry from behind the crowd and a turn into the airshow box, the Lima Lima aerobatic routine begins with a four-ship diamond loop. At the top of the loop, the slot kicks out of the loop and exits in the opposite direction as the three-ship completes their loop. On the second pass, the three-ship returns to show center as the slot returns from the opposite direction. As





The pilots of Lima Lima. From left to right, Steve "Hoss" Smith, Mark "Enigma" Miller, Skip "Scooter" Aldous, and Roger "Fritz" Fritzler (photo by Jim Froneberger).

they cross at show center, the left wingman pulls up and out of the formation into a half Cuban Eight before rejoining with the slot to form two, two-ship elements.

The two, two-ship elements then take turns performing in the aerobatic box, keeping aircraft in front of the crowd for most of the show. In one sequence, Scooter and Hoss fly down the show line at only 70-75 knots with gear and flaps extended. Fritz and Enigma overtake them at 180 knots, passing them at show center, and completing a full loop before the slower element exits the airshow box. Later in the show, Scooter and Hoss pull up into a loop, split across the top, and come back down in a crossing maneuver as their smoke trails create a large heart in the sky.

The four-ship eventually rejoins near the end of the show to perform a missing man formation paying homage to our veterans. They then rejoin in diamond formation for the final maneuvers before their pitch ups to landing.

In addition to their standard four-ship aerobatic routine, Lima Lima also offers a four-ship flat show for use when ceilings do not permit the full show, and a four-ship aerobatic teaser routine. They are also among the increasing number of airshow acts that offer night and twilight shows. The team also practices three-ship versions of each show, just in case one of the aircraft has a mechanical problem and can't fly.

"I'm responsible for safety, choreography, and the training," explains Team Lead Skip Aldous. "I have the most experience on Lima Lima, and my job is to make sure we always have enough energy for the next maneuver. I tell the other guys, 'You're not flying on your own. I'm flying your airplane. Just do what I tell you.'"

"Mark and I both break away and we swap leads during the performance," adds slot pilot Roger Fritzler. "But as the slot guy, my job is to dress up the formation and call them in closer."

"Each flight we're trying to fly a little better than the last flight," says right wingman Steve Smith. "We never have a perfect flight, and we're not exceptionally gifted and talented people. We just work very hard at what we're doing."

COMMITMENT AND DEDICATION

With its origins in the Chicago area, the Lima Lima Flight Team has long been a fixture at Midwest airshows, but at one time or another, they have performed in most parts of the United States, including Alaska. They have also performed internationally in places as diverse as Canada, Mexico, and the Dominican Republic.

"At one time we would take a week or ten days and go to Alaska, Mexico, or the Caribbean," says Skip Aldous. "But now, three of our guys have full-time jobs, and with no alternate pilots, we tend not to do the long range trips anymore."

"When we had eleven pilots and nine airplanes, we could also do 20-25 shows a year," adds Skip. "But now, seven shows are comfortable, plus three to four weekends of practice. That's still at least ten four-day weekends a year."

In addition to airshows, the team also does formation fly-bys at a host of other events like parades and veterans celebrations. Almost every year they do a fly-over at a special Thanksgiving event in Illinois.

In the team's early days, virtually all of the pilots and planes were based near Chicago, making practice and airshow logistics a bit easier. But now they are spread out from coast-to-coast, so even scheduling practice sessions require planning and commitment.

Several years ago the team started doing their off-season maintenance at Skip's home base at Cannon Creek Airpark in Lake City, Florida. Even in January, Lake City weather is typically good for flying, so their off-season practices are also held there.

"We'll schedule a practice in January, and the guys will bring their airplanes in," explains Skip. "We'll put in three or four days of hard practice, flying three or four times a day, and then they'll leave the airplanes in Lake City to get all of the maintenance and inspections done. We may even schedule another practice a month or so later. Our mechanic may have two inspections done by then, and we'll tell him to hold off on the next two and do a practice that week. We'll then get the other two airplanes done, and we'll show up a few days before the first airshow and polish off the show."

The team briefs and debriefs every practice and every performance. During practice season, they may do three rehearsals in one flight. In a typical weekend practice, they'll do about 10 reps. By the time they fly their first public performance,

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The Lima Lima four-ship kicks off the 2016 season at Sun 'n Fun in Lakeland, Florida (photo by Jim Froneberger).

they may have as many as 40 reps under their belt.

"What is amazing is, with all of these type-A egos, we don't get mad at each other," admits Skip. "We say, 'Yes, you're absolutely right. I remember I did that, and I can fix that. If I can't fix it the next time, I will keep trying to fix it until I do fix it.'"

"We are our own worst critics," he continues. "We have landed and people have told us what a great job we did, but then we go into the back room and just slap each other silly! We know what we want, and we know we are all trying to move in that direction."

Another direction the team says it would like to move is to return to their legendary six-ship Lima Lima formation. Getting back to six airplanes would give the team more maneuver options and make it easier to keep the action in front of the crowd at all times.

"We would love to find a couple of folks to join us, and we're always looking for new talent," says Skip. "But team formation aerobatics takes a lot of commitment, and a lot of time."

"The challenge of flying formation the way we do it is the attraction, and that's part of the fun," adds left wingman Mark



Miller. "But it's a lot of work and you have to be really dedicated to doing it."

"So if there are any pilots out there who are willing to commit the time and energy it takes to do what we do, we're always recruiting," concludes Skip. "We're an

equal opportunity employer...as long as you have a yellow T-34!"

Editor's note: To read about a fantastic flight with the Lima Lima Flight Team, see Stick Time, elsewhere in this issue. 🌐

The view from Mark Miller's left wing position during a Whifferdill turn (photo by Jim Froneberger).





JIM FRONEBERGER: STICK TIME WITH...

The view from Mark "Enigma" Miller's T-34 as we go over the top in a barrel roll during a tail chase over the Central Florida countryside (photo by Jim Froneberger).

LIMA LIMA



As you can read in our feature story elsewhere in this issue, the Lima Lima Flight Team has been flying airshows all across North America for the past 29 seasons. I've been going to airshows for longer than that, but for some strange reason, I had never managed to cross paths with Lima Lima until the 2016 Sun 'n Fun International Fly-In and Expo, held this past April in Lakeland, Florida.

Thanks to the generosity of team president John Rippinger and flight leader Skip Aldous, I was offered the opportunity to ride along on a morning media and sponsor flight during the middle part of Sun 'n Fun week. I would be flying in the left wing position in the back seat of Mark "Enigma" Miller's T-34.

One thing I've found as I've gotten a bit older and put on a few pounds (well, maybe more than a few), is that the toughest part of flying in warbirds like the T-34 is getting into and out of the cockpit without hurting myself. Thanks to Mark's guidance, I was able to make my way onto the wing and safely get my old bones into the cockpit.

Mark helped me buckle into the parachute that was waiting for me in my seat, followed by a second set of harnesses and buckles that would keep me snugly secured into the airplane. He then pointed out the buckles I needed to release if we needed to exit the airplane in flight, as well as the buckles I needed to make sure NOT to release if I wanted the parachute to stay securely attached to my body. After I learned how to open and close my rear canopy, it was time to start engines and taxi for takeoff.

Like many formation teams, Lima Lima taxis as precisely as they fly. Even during their pre-takeoff checks, the team parked their four T-34s at identical angles while performing their run-ups. Checks complete, we formed up on the runway in two, two-ship elements.

With team lead Skip Aldous and right wingman Steve Smith making up the first two-ship, Mark led the second element with Roger Fritzler just off our wing, behind and to the right. The lead element started rolling first, and when the proper interval was achieved, Mark simply moved his head backwards toward the

headrest, then aggressively nodded his head forward to signal brake release. We were rolling.

After takeoff, we headed south of Lakeland Linder Regional Airport and quickly formed up into diamond formation. Mark moved deftly into position on Skip's left wing (Steve was already in position on the right), and when Fritz called "Four is in," the diamond formation was complete.

What you don't realize when watching precision formation flying from the ground is there is constant motion as the pilots jockey their flight controls and throttles to maintain the right position relative to the leader. Each aircraft is constantly moving up and down, back and forward, making minor position adjustments before the required moves become larger and harder to make. Each wingman keeps their eyes glued on the leader's aircraft, following his every move.

The power adjustments required to keep precise position can't be smooth and subtle. They must be immediate and definitive. The larger required power changes occasionally resulted in the landing gear warning horn blaring loudly in the cockpit whenever the throttle was abruptly retarded in order to maintain position. (For those of you not familiar with retractable gear aircraft, the gear warning horn is designed prevent gear-up landings by alerting the pilot that the landing gear is up, but the throttle has been reduced to a lower power setting like those used to slow down and land.)

After a few minutes in diamond formation, and a couple of steep Whifferdill formation turns, Lima Lima broke formation. We then began the exhilarating grand finale of the flight – a four-plane tail chase, complete with barrel rolls through the smoke of the lead airplanes.

We rejoined for the flight back to Lakeland, and then came overhead runway 9 for individual pitch-ups for landing.

Precision formation flying is something I'll probably never get to do as a pilot, but it's a real treat to get to ride along with true professionals like Lima Lima. Thanks for a great flight guys!