



# **FORMATION SENSATION**

## Team RV Takes Formation Flying to the Next Level

By Jim Froneberger

They call themselves "The World's Largest Air Show Team," and with twelve airplanes flying in formation, who can argue with them? They are larger than the Snowbirds, larger than the Red Arrows, larger than any other aerobatic team that we can think of.

Over the last nine years, under the leadership of Mike "Kahuna" Stewart, Team RV has evolved from a group of hobbyists flying formation for fun into one of the most unique precision formation aerobatic teams on the airshow circuit. Their exciting and dynamic routine keeps action in front of the crowd from start to finish. Their formations are precise, their timing is spot-on, and their rapid formation rejoins make you wonder how they get it done so quickly.

Team RV flies the aerobatic series of aircraft designed by Richard VanGrunsven, hence the name "RV." All are homebuilt, mostly by the pilots that fly them. The planes are capable of +6/-3gs and speeds in excess of 200 mph. The conventional-gear, tandem-seat RV-8 is

the most common aircraft flown by Team RV, but the team also flies side-by-side seat RV-7s and tricycle-gear RV-8As.

#### From Hobby to Professional Team

The seeds that eventually sprouted to become Team RV actually began in Texas in 1999 when an RV owner there created Formation Flying, Inc. (FFI) to provide RV owners with the training the FAA requires for flying in formation at airshows and other events. Warbird owners had the FAST organization to teach and certify their formation pilots, but General Aviation pilots had nothing prior to FFI.

As a result of this new structure, formation clinics began to spring up around the country to teach the art of formation flying. A number of RV formation teams began emerging regionally throughout the U.S.

Team RV itself had its genesis in one such formation flying clinic in Atlanta, Georgia that Mike Stewart had put together for RV owners in the Southeast. Several of the attendees at that clinic began







practicing and flying together, and one thing simply led to another.

Eventually Stewart and a couple of the other guys decided they should form a more structured team, so Team RV was born. "This is now our ninth season flying as a team," says Kahuna. "We started off with about five guys and it was much more informal back then. We were doing parade fly-bys and things of that nature." Eventually, the team began doing formation fly-bys at airshows and added more aircraft to the formation, but it was still more of a weekend hobby than a professional airshow organization.

A few years ago, however, Stewart and the team had come to feel they wanted to step it up yet another notch. They decided to turn Team RV into a true professional formation airshow team - complete with formation aerobatics. It wouldn't happen overnight, but the wheels were set into motion.

First came the requirement that all the pilots had to have commercial pilot licenses so they could be compensated by the venues. In addition, every plane would need to have a smoke system

installed. But the big step was the addition of formation aerobatics to the Team RV routine in 2009. "As we moved into the formation aerobatics, we had to fly at a whole new level and get people SAC card qualified," explains team lead Mike Stewart. "All the waivers and check rides brought a whole new level of discipline and requirements that we didn't have before."

The transition to a more structured, professional organization forced Team RV to replace the pilots who could not make that new level of commitment to the team. "We were open and honest about that and told them the transition was coming," says Stewart. "Many of them still come to our open practices and they come to our shows and watch, but we had to step that level up."

The addition of the formation aerobatics was a huge game changer for the team. Suddenly they were playing in the aerobatic arena and larger venues began to take notice. "In 2010, we did four jet team shows," says Stewart. "We hadn't done any jet team shows in like six years." (please turn page)

### Fast-Paced and Dynamic

The Team RV airshow routine today features large formations of up to twelve aircraft, a variety of formation splits and rejoins, formation aerobatics, and a requirement for very precise timing. Throughout the team's fast-paced and dynamic 18-minute routine, there is almost always something happening in front of the crowd. There is almost no dead time.

The twelve aircraft in a typical Team RV performance are divided in three "flights" of four aircraft each – Alpha Flight, Bravo Flight, and Charlie Flight. Alpha Flight, led by Stewart, flies the aerobatic portion of the Team RV performance. Bravo and Charlie are both non-aerobatic, but they make up the core of the formation fly-by maneuvers and also perform opposing maneuvers with each other. All three flights also join together several times during the performance for twelve-plane formation passes.

By splitting the team into multiple groups, Team RV minimizes the downtime created by the time it takes to turn a large formation around and return to show center. "There is almost always something happening right in front of the crowd," says Safety and Standards Officer and retired USAF and ANG fighter pilot, Charlie "Bones" Plunkett. "So that means for safety, we must time de-conflict. We have three separate 'flights' that can be flying as one, two, or three different groups during a program, so timing is critical since the formations can't change directions quickly."

Frequent practice is critical to the team producing a consistent and safe show. "We just try to practice, practice, practice so that everything is routine and there is nothing new that a guy has to experience before a program," says Plunkett. Practices are frequent and include two or three separate practice flights during each practice session. Each practice or performance is also followed by a detailed debrief where openness and direct feedback is encouraged. "We don't pull any punches in our debriefs," says Tad "Stripes" Sargent, Bravo Flight lead.

"We promote a culture of continuous improvement and openness to your fellow wingmen," adds Mike Stewart. "Some of our debriefs get serious. Guys will get really angry about something that happened because maybe it was a safety of flight issue and they're not going to stand for it. If they don't get a sense that the pilot they are talking too is rising to the seriousness, we get on them. We have a lot of fun but we also have times where we really have to get serious about what we're trying to accomplish."

#### A Large Team: Opportunities and Challenges

"The size of our team is always a double-edged sword for us," says Stewart, describing the unique nature of a twelve-person airshow team. "One of the good things is our ability to specialize. I have



Team RV. Back row, left to right: Len Leggett, Greg Reese, Tad Sargent, James Clark, Bob Goodman, Danny Kight, Robert Gibbons, and Tom Dubriouillet. Front row: Charlie Plunkett, Ron Schreck, Mike Stewart, and Jerry Morris. Not pictured: Crew Chief, Tony Spicer (photo by Chris Buff).



four guys whose day jobs are as salesmen, so that's my sales team. My Safety Committee is made up of former military guys and they know safety. Everyone has a place, so that is really important to us."

The bad news is Team RV's sheer size can sometimes be a bit overwhelming to a show organizer. "We need space for twelve airplanes, and we need twelve hotel rooms and three vans. They're just not used to that," continues Kahuna. "To help them cope, we have one person to act as the liaison with each show. That person is responsible for all the logistics – the hotels, the vans, and all the FAA waiver stuff. That helps and the organizers soon realize it's not really that bad. But it can be very intimidating for new venues that haven't worked with us before."

Another challenge for Team RV is what happens when one of

the pilots can't fly at a given show due to illness or other commitments. "We do not have fill in pilots and each pilot is expected to be at every show – but it doesn't always happen," explains Stewart. "If someone is not there, we fly one short. We have programs for each scenario. We have what we call the Bravo/Charlie Play Card. Whenever we are down an airplane or two, these guys know what formations we are going to fly. The overall program doesn't change, but the exact formations do because the numbers change."

With twelve team members, it can also be a challenge to get everyone together for the team's frequent practice sessions. Team RV's pilots are about equally scattered between Georgia, South Carolina, and North Carolina, so some may have to fly as much as an hour and forty-five minutes each way to get to the team's central practice site in Anderson, South Carolina.

In addition to frequent practices to maintain their own proficiency, Team RV also participates in FFI-endorsed formation flight clinics and their own "open practices." At formation clinics, they look for skilled formation pilots who might be a good fit for the team. These pilots are then invited to be part of the "farm team" and participate in several "open practices" held every year. Should an existing team member have to leave Team RV for any reason, they would go to this farm team to find a replacement. The new member must then be unanimously approved by the entire team.

One of Team RV's newest members is Greg "Greese" Reese. He came onto the team in early 2011 through the farm team system. "It's like drinking from a fire hose and you have to come up to speed as fast as you can and be ready to jump in with

both feet," he admits. "I knew it would be a big commitment, but it was really a step beyond that as far as time, effort, and overall planning of your personal life."

#### No Wingman Left Behind

The twelve pilots of Team RV come from a wide variety of backgrounds. Some are current or retired airline pilots and several have military experience. Almost all have full-time careers outside of the airshow business. That diversity is indeed one of Team RV's greatest strengths, and allows team members to help each other grow. The team calls this program "No Wingman Left Behind" and it has become the basis for the team's quest to always improve and get better.

"The idea of continuous improvement is ingrained in pretty much everything that we do from the show presentation to how we interact with each other," says Bravo Flight wingman James "CB" Clark. "We have a lot of people at different levels. I'm one of the civilian guys, but a lot of our guys are ex-military with ten, twenty, or thirty years of flying jets. But we all come together and everybody tries to help the next person. As an example, Robert "RB" Gibbons, a recently retired USAF A-10 pilot is helping me learn aerobatics."

"You think you're a really good pilot, but you can always get better,"





says Tad Sargent, who's an investment advisor when he's not flying with Team RV. "As long as you are always trying to raise the bar, there are always opportunities to grow and get better if we all help each other."

Team RV also works hard not to leave their other family members behind. They recognize flying for Team RV is a significant time commitment, and when combined with team members' full-time jobs, that may not leave much time left over for family. "We are always very specific about bringing spouses and girlfriends to the venues with us and ask them if they want to take on a job with the team," says Sargent. "For example, my wife handles where we're going to eat for dinner, and Kari Morris has been phenomenal as our PR manager. It's just great to see the families get involved."

So when you boil it all down, Team RV is truly a team in every sense of the word – how they interact with each other, how they practice, the way they perform, and how they include their families in the very fabric of the team. This singular focus has allowed them to evolve from an informal group of weekend pilots out for a little formation flying fun, into a professional airshow team with an outstanding routine that plays second fiddle to no one. In the words of team member James Clark, "We're an overnight sensation, that's nine years in the making!"