



Game Composites



# GB1 GameBird Versus Extra NG

## The buyer's perspective

BY JEFF GRANGER, IAC 19907

**YOU'VE CASHED THAT CHECK** from your Powerball winnings and paid off all your debts. Now it's time to get the aerobatic airplane you've always wanted. Maybe one of those new, all-composite monoplanes. But which one? The Extra NG or the GB1 GameBird? Maybe it would be good to talk to people who have recently been through the buying experience.

I first saw the NG at the rollout event at EAA AirVenture Oshkosh 2019. I was immediately impressed by the clean, angular lines, but even more so by the clean and functional cockpit layout. In a sharp contrast to my 1998 Extra 300L, the NG was built with a one-piece carbon fiber composite wing mounted to a steel tubing truss fuselage. Seated in my airplane (300L), I see tubes, wires, and rods going every which way. You don't dare drop anything, unless you want to spend half the day looking under the seat for it. Or worse, it could end up in the tail section where the elevator pushrod meets the horn.

The NG's instrument panel is clean and functional. The Garmin G3X Touch system eliminates most of the "round dials." Just a few of those remain for backup. Best of all, the front seat has a smaller duplicated flat-panel display. When doing a checkout for a new "Extra driver" seated in the rear of my 300L, one of my greatest sources of anxiety is that I have so little instrumentation when instructing from the front. There's no way to monitor the engine other than through constant verbal updates from the rear-seat pilot. There's no way to tune the radio. No way to monitor traffic unless I were to carry a separate iPad.

During the NG's 2019 rollout, I had a chance to talk engineer-to-engineer to Walter Extra about its design and development. For years he had contemplated going to an all-composite design to meet the challenges of the MX and GB1. Among the more



Jeff Granger with Walter Extra at EAA AirVenture Oshkosh 2019.

difficult challenges he faced were providing adequate stiffness and durability while preserving failure modes that protected the crew compartment in the event of a crash. Carbon fiber composites are very light, stiff, and strong. However, when they do fail, they fail catastrophically — they don't yield gradually like a metal structure. He felt confident that they had overcome all these issues and that the next generation of Extras would build upon the aircraft's long tradition of quality, performance, and reliability.

That same year the Game Composites GB1 was on display in front of the IAC Aerobatic Center. I spoke to Philipp Steinbach and had a chance to compare and contrast these designs from opposite sides of the Atlantic.

The GB1 has more curving lines in the planform but a more angular stance in the side view, with its straight gear legs. Like the NG, it has flat-panel displays front and back, with the added bonus of propeller rpm and mixture control in the front seat greatly simplifying the checkout of new pilots.

I got my first chance to fly the NG at the U.S. National Aerobatic Championships in Salina, Kansas, in September 2021. I was not disappointed. With the help of the aircraft's "glass panels," and my previous experience in the Extra 200 and 300L, it was "get in and go." There was a lot of power with the Lycoming AEIO-580-B1A engine and the low-density altitude. (I usually fly out of Provo, Utah, at a pressure altitude of 4,164 feet and a density altitude of 5,293 feet.)

The cabin is super quiet compared with those of the earlier-model Extras. Stick forces are light to moderate in the traffic pattern and climb-out. While doing aerobatics, the big reveal comes as the roll force "breaks out" and becomes very light once the stick moves a few inches laterally, resulting in high roll rates with almost no stick resistance. In general, pitch-and-roll forces are well balanced. Landing was easy — probably easier than in any Extra I have flown, as it lands a little flatter.



Marcus Extra enjoys the great balanced harmony of the NG.

*Last year at AirVenture, I had a chance to sit down with Marcus Extra and quiz him about the design, manufacture, and marketing of the NG three years after its debut.*

## MARCUS EXTRA

**What do you say to the potential new customer? Perhaps someone who has already had an entry-level aerobatic airplane and wants to move up to something significantly faster and more powerful. They now have the financial wherewithal to buy the latest aerobatic monoplane. Why should they buy the NG instead of the GB1?**

It's a really good-looking airplane. It was designed not just to be safe and a good performer. The build quality "fit and finish" is very high, not just for function but also for the aesthetics. The paint shop takes great pride in a seamless interface between different colors.

Extra has a long history of quality control in composite construction, which is so essential to the ultimate strength of the airframe. The bottom of the NG is the residual base frame. This provides an alternate pathway for load. The NG is even stronger and safer than the original steel tubing fuselage design.

The cockpit's ergonomics represent a big step up from the traditional Extra design. The seat is wide and contoured. The seat back and rudder pedals are adjustable. The clutter you find in the traditional Extra cockpit is gone. The autopilot is now certified. Fully fueled, its range is almost three and a half hours, so it's a great cross-country machine.

The front and back seats both have Garmin G3X touch-screen panels. The autopilot can be controlled from the Garmin. This is much simpler, lighter, and more reliable than the previous bulky and heavy panels with vacuum or electrically powered instruments.

It does not have an external baggage door like the GB1 or the Extra LT. This omission helps maintain the structural integrity of the fuselage. However, it's easy to reach the baggage area from within the rear cockpit.

As with all previous Extras, the aircraft is equipped with semicircular, single-piece fiberglass landing gear. It has a fair amount of fore and

aft rigidity and doesn't create the sensation of "walking" that one sometimes encounters with tapered-rod gear legs. Extras have generally been easy aircraft to land compared with other tailwheel airplanes, and the NG is probably the easiest of all Extras to land.

When it comes to product support, most local mechanics can't do the composite repair work needed to correct something like a bird strike on the leading edge of the wing. Extra can send factory product support personnel to do composite repairs in the field, and Extra USA in DeLand, Florida, now provides product support in North America.

The aircraft has great control harmony that's balanced between pitch-and-roll forces. The aileron design provides a fair amount of stick-centering, which reduces fatigue for nonaerobatic flying and also makes for nice, crisp roll-stopping when flying aerobatics. The elevator and rudder are large, providing plenty of control authority even at slower airspeeds. It's easy to tumble and snap, so it can compete at any level, from Primary to Unlimited.

On the other hand, it can also be a great touring airplane for the noncompetitor — comfortable and fast while easily doing recreational aerobatics with low stick forces.

*I recently spoke with Lee Drumheller, director for business development for Game Composites, and asked similar questions.*

## LEE DRUMHELLER

First and foremost, we have great customer service and parts availability with Game Composites LLC. Because of the factory support here in the United States, our customers receive excellent support and service in a timely manner.

We have a customer who took delivery of our GB1 No. 63. He has owned a couple Extras before. He came here, flew the GB1, and saw our factory. Then he went down to Florida, flew the NG, and came back and bought the GB1.

This customer plans on buying another GB1 based on his [assessment] that our airplane had a better fit and finish. It flew a little bit better with respect to its roll characteristics, but mostly he is able to get parts quickly.

Then there is the overall design — especially the feel and ergonomics of the cockpit. It seems to be a little bit bigger and more accommodating for a wider range of individuals than the NG.

The front seat has propeller and mixture control, and that's important, especially if you're going to do training such as competition or upset recovery. It's very helpful for the instructor in the front to have engine controls and instrumentation.

Not only is the GB1 capable of Unlimited category aerobatics, it's also a very comfortable cross-country airplane that travels at speed and has excellent baggage space. This airplane does a lot for the money. I get in and go 1,000 miles if I want; I can go 200 knots. I can throw stuff in the back. And it's really cool.

We had a customer come for GameFest, which is our social gathering here in Bentonville, Arkansas. He came from Santa Monica, California, nonstop in his GB1.

Lee Drumheller emphasizes the factory support and excellent customer service provided by Game Composites.

On the initial encounter, I usually have this conversation: “How much tailwheel time do you have?” And typically, given that we are 10 to 12 months from order to delivery, I will say, “During this next 10 months, I will get you set up with somebody who will give you your initial tailwheel instruction. You need to get time in the airplane. Learn how to dance with your feet on the rudders.” Depending on what they've been flying before, the conversation may not include much discussion of tailwheel instruction.

We are building out a service center network and plan to have one service center on the West Coast, one in Florida, and an additional location on the East Coast. The Bentonville factory will serve the central United States, but we may consider a location in Dallas as well.

Service needs to be easily accessible if an owner wants to have an annual inspection or any major modifications done. Center personnel will provide expert carbon fiber composite repair and a network of certificated flight instructors who are checked out to teach in the GB1. These instructors can provide initial training, recurrent training, and ferry service.

Our email address is [support@gamecomposites.com](mailto:support@gamecomposites.com). All our customers are welcome to submit customer service requests and questions, and the emails will go to me, Kent, the engineering department, and our COO. It's important to us that our customers receive an answer — if not the same day, then within 24 hours.



Fortunately, I have several friends in the aerobatic community who have been through this decision process recently and have either purchased or are purchasing one of these aircraft. I interviewed two who chose the NG and two who opted for the GB1.

I asked them a number of questions, including what went into their decision process, which aircraft they had been flying previously, and how many other types of airplanes they'd considered. I also asked how important price was, how important the companies' product support track records were, and if company-supported events were important to them.

## DAGMAR KRESS

*Dagmar Kress is a lecturer in the aviation and aerospace science department at Metropolitan State University of Denver, where she teaches theory of flight and aviation fundamentals. She also serves as the head coach for MSU Denver's aerobatic team, which she has led to three national IAC collegiate championships. Kress is an international world aerobatic competitor who has competed in world championships for both the United States and her native Germany. She flies a Pitts S-2B and an NG.*

I have previously owned an Extra 300L and an Extra 330 SC. I did not look at the GB1. I am a loyal Extra customer. I like the brand, which has a long history of quality and safety. They have an established record of knowing how to build airplanes. I did get a ride from a friend in the GB1. It is quite different from the Extra. Although they are certainly both very nice airplanes, I fly the Extra better because I have a lot of time in the type. The GB1 seems to be more



"I like the brand, which has a long history of quality and safety," said Dagmar Kress.

pitch-sensitive. I think I would have to fly it a good deal more in order to start flying it well. I would have to fly it from the rear seat as well, as my only experience is from the front seat.

I think the build quality of the NG is superior. I've never had an issue with structural integrity in one of mine. I don't have enough experience with the GB1 to comment on how it is built.

I think it comes down to personal preference. Based on my long experience with the Extras, I never really seriously considered the GB1.

The paint scheme on Dagmar Kress's Extra NG was designed by Mirco Pecorari and his daughter Federica Pecorari.



## DOUG TRACY

*Doug Tracy is an IT executive from Dallas. He graduated from the U.S. Naval Academy in 1982 and served in the U.S. Air Force from 1982 to 1996, flying the O-2A, RF-4C, and F-15E. He has owned and flown in competition an Extra 200, an Extra 300L, and a Super Decathlon. He currently competes in a GB1 in Sportsman.*

After serving in the military, I started flying in Cessnas and got bored with that. I got a ride in the Extra 200, then a tailwheel checkout in a Super Decathlon, and eventually bought the 200. I upgraded to an Extra 300L and was enjoying it until I moved to the Washington, D.C., area. It's really difficult to do a lot of VFR flying around there, so I stopped flying for some time and then took it up again as I moved between California and Texas. I decided in Texas that I would get a Super Decathlon, but I missed having the faster, more maneuverable airplane. I decided to look around.

The new all carbon fiber composite airplanes were coming out: the NG and the GB1. I flew both airplanes and found that they are similar, but there are some distinctions. The decision came down to a few factors.

I went down to Southeast Aero and flew the NG with Doug Vayda, who had sold me my 300L. I flew the NG



When Doug flew down to Bentonville to test out the GB1, the good experience, price, and craftsmanship won him over.



The GB1 GameBird comes with a 10.6-inch Garmin G3X Touch GDU 465 in the front cockpit.

The GB1 GameBird is designed by Philipp Steinbach, winner of the IAC's 2013 Curtis Pitts Memorial Trophy for his outstanding contribution to aerobatics through product design.





Richard Johnston has been flying his Extra NG in competition since 2022.

from the back seat and experienced everything the aircraft had to offer. It's a great airplane; I found that it was a natural fit for me.

A month later, I went to Bentonville and flew the GB1, which I initially found more difficult to fly. In comparison, the NG flew a lot like the Extra 300L and was similar in terms of handling and stick forces, etc. The GB1 was a bit different, and so it wasn't quite as easy for me to adapt to it. It took a little bit longer for me to get acclimated.

The handling characteristics were good. I think the GB1 had a longer range, but for me that wasn't really a big factor because, frankly, being in my 60s, I can't see myself sitting in the cockpit for five hours. The NG's range wasn't a factor. I did like the fact (and I don't understand why Extra didn't do this) that the GB1 has a baggage compartment door that was easy to access and similar to what was on the Extra 330LT.

In terms of flying and maneuverability, the NG was easier for me to pick up right away. It took a bit longer to get comfortable in the GB1, which was more pitch-sensitive. While getting acclimated to the GB1, there was a stiff learning curve in the landing phase, in making those last adjustments in the flare.

Regarding the fit and finish, both were nice. The build quality is very good in both.

Extra certainly has the longer track record as a manufacturer. Game Composites was still fairly new at the time, although the people involved with the GB1 had significant experience. Philipp Steinbach had designed his own airplane, the Sbach, in the United Kingdom. He

worked for Extra for a bit before designing the GB1.

While I was looking, the GB1 was FAA-certified and NG was in the process of getting its certification, which came a bit later. That was important to me.

When the aircraft were similarly configured, the price for the NG was about \$100,000 more than for the GB1. For some people that might not be a factor, but for me at the time it certainly was. So I could have a new GB1 for 80 percent of what I would pay for the new NG. Since then, both the NGs and the GameBirds have gone up in price to the point that they're now pretty close.

Another factor I considered was my proximity to factory support at Bentonville, Arkansas, because you didn't have the long supply chain coming from Germany. I can get to Game Composites in 80 minutes flying the airplane up there, which is nice. That

said, when it came to the Extras I owned, Southeast Aero always gave me great support.

In the end, although I liked their track record and the length of time that Extra had been in business, the price difference was too much for me to ignore. Also, the owner experience with Game Composites was better than what I experienced with Extra. Game Composites has set up an owners forum, where I recently saw there'd been an issue with crankshaft seals leaking. Based on information shared on the forum, I contacted the factory, and they fixed it at no cost.

In addition to the owners forum, the company now hosts an event called GameFest. At the last event, there was a lot of discussion about the airplane and where they're going as a company. Owners were able to meet each other, and there was also some fun flying and other activities.

I recently had to take the airplane back to the factory for some work on the smoke system. When I arrived around noon, I had a lousy landing. Philipp talked to the company's instructor pilot and said, "Why don't you take Doug up right now and get

some landing practice?" No charge to me. As a whole, Game Composites thinks a lot about the owner experience. How can we make it better? How can we try to make it safer for people?

Recently, one of the owners lost a GBI canopy, which may not have been fully latched. The company upgraded the customer's aircraft with a free warning light that shows if the canopy is not fully locked.

## RICHARD JOHNSTON

*Richard Johnston is a businessman from Pleasant Grove, Utah. He competes in Sportsman in the NG and flies a Cessna 340. He has previously owned an Extra 300L and a 330LT.*

It was mostly a gut feeling. I had already owned two Extras — the 300L and the 330LT. The 300L had great performance. The 330LT cornered better and drew straight lines much better because of the asymmetric wing, but it was missing performance characteristics like the roll rate. I didn't want to go back to the lower power of the 300L. If I was going to purchase a newer airplane, I figured it would be the NG. With respect to price, it was only a small jump to go to the NG versus the 330LX. I also liked the self-centering feature on the NG's ailerons. It sure stops!

I have never owned a Pitts or a Decathlon, although I trained initially on the Decathlon. It's a neat airplane, but my biggest concern was I'd break it. I want to stick with a carbon fiber wing.

The 330LT was super fast, really slippery, and handled higher altitudes a lot better. The NG makes up for it to some degree, but it's not quite as fast as that LT, which had less angle of attack in cruise, so it really slipped through the air.

The NG's luggage capacity is horrible compared to the others'. There's a small luggage compartment in the back, and I found out on the first flight that you can't have anything back there or it interferes with the magnetometer. The LT has a baggage door, and I had this big

Richard Johnston flies his Extra NG out of Utah to Southwest and South Central regional contests.





duffel bag that would slide in at an angle so you could put a ton of stuff in there.

I flew in the GB1 just once, as a passenger. I think it flies well from the front seat. One of the features that people like is that you have full prop and mixture controls in the front seat, along with the full engine monitoring, radio, and everything else. Of course, the NG and the GB1 are pretty similar in that respect, because they both use the G3X Touch system, but the main difference is the NG doesn't have prop or mixture in the front seat, which could be kind of a disappointment, especially when it comes to instruction.

In terms of handling, the NG is a lot more responsive than the GB1. It seemed to stop faster and center more easily.

Extra has a long track record for manufacturing quality aircraft and providing top product support. That's really why I went with them. Both airplanes are new enough that I knew there could be some hiccups.

The NG and the GB1 are relatively newer types, but Extra has the legacy behind it, relying on the same group of engineers who have designed Extras from the beginning.

I think designers relied a little bit on their older designs to create the newer design. If you look at the wing shape, the GB1 probably has the more efficient wing, and the GB1 is very attractive, especially with the taller gear on it. I think it's a really neat-looking airplane. It's got



Joe McMurray

that wing that has kind of a curved sweep to it, whereas the NG is blockier.

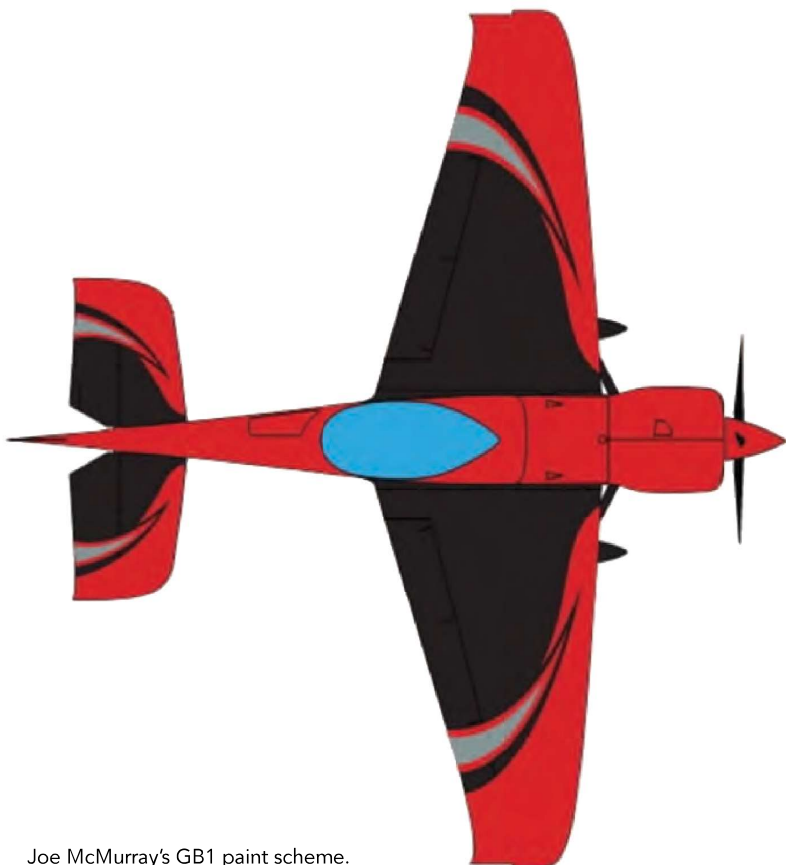
Regarding company-sponsored events for the owners, I don't know that it's super important. I'm in a chat group for NG owners. We share information back and forth and figure things out. I have my own aviation community here in Utah.

## JOE MCMURRAY

*Dr. Joe McMurray is a practicing board-certified oral and maxillofacial surgeon. He has owned a 1999 Beechcraft Bonanza A36, a 2012 Carbon Cub, and a 2020 Super Decathlon. With over 5,000 hours, he holds ATP, IFR, COM, SES, and CFI certificates and ratings. He's awaiting delivery of his 2023 GB1 serial No. 78 in September 2023.*

With any airplane I've owned, the question has been "What is my mission?" If my mission was to fly Advanced or Unlimited and make the U.S. National Aerobatic Team in those categories, I would be hard-pressed not to purchase either a 330SC or MX. Both ships have been proven on the national and international stage. That wasn't my mission or goal as I set out looking for an aerobatic airplane.

I started my research and compared and contrasted the two certified two-place aerobatic airplanes, the GB1 and NG, and it came down to:



Joe McMurray's GB1 paint scheme.

1. Emotional and visual appeal
2. Comfort
3. Performance and speed
4. Aerodynamic features
5. Fuel tank size
6. Cross-country capability

I wasn't dogmatic, nor do I have an unwavering loyalty to one particular manufacturer. The biggest decision process involved ramp appeal. Of course, beauty is subjective, but this design caught my eye. I love the way the GB1 looks; Philipp Steinbach's designs are works of art. The GB1 is more curvaceous than the NG, which in my opinion appears very angular and blocky.

How does it feel sitting in there? For my body type — I'm 6 feet, 4 inches tall, 245 pounds, and have a 37-inch inseam and 26-inch-wide shoulders — the NG was a snug fit compared to the GB1. The GB1 provides more legroom, more headroom, a bit more shoulder room, and better visibility, with a more elevated seating position and the lower cowling.

The throttle position in the GB1 is better suited for me as well.

Most aerobatic airplanes are spartanly dressed out with chromoly steel tube on the interior. The GB1 was one of the first 100 percent carbon fiber-built airplanes with an enclosed monocoque design.

The GB1 carries more fuel than my Bonanza A36 (81 gallons total, including 25 gallons in the acro tank) and has a range of more than 1,000 miles. It also has a separate, 35-pound enclosed baggage compartment with an external access door.

Many of the high-performance aerobatic airplanes are single-seat and are not built to fly long distances. However, I feel there is a demographic out there that demands long-distance possibilities, Unlimited capabilities, and comfort. Game Composites was the first to answer that call. It checks

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Joe McMurray goes vertical in the GB1, fits his 6-foot, 4-inch body with all the room he needs.



all the boxes when it comes to performing in competition at the highest level. But it also has many of the creature comforts that I appreciate and expect when flying for recreational purposes.

*In conducting these interviews, I deliberately maintained a neutral position. I wasn't looking to declare a "winner," because I don't think that's the point. The perspectives of the two product representatives and the four buyers are presented here to help you determine which aircraft aligns with your own desires and needs should you be in the market. Both aircraft are well made and excellent performers. Brand loyalty, a desire to buy a domestic product, flight handling, and cross-country travel amenities are all factors that hit buyers differently.*

*The greatest surprise for me while assembling this article was that the buyers each had their own biases from the outset. Few aerobatic aircraft buyers enter this process with a perfectly objective outlook. If you're fortunate enough to be able to afford one of these fine aircraft, it would be hard to go wrong with either purchase.*

*Apparently, I'm not the only one in a quandary when it comes to choosing between these two highly capable composite monoplanes. In episode 108 of their aerobatic podcast Fly Cool Shit, Mark Pollard and Jeff Petrocelli made some excellent points about the pros and cons of these aircraft and the potential market. Many of the potential buyers are relative newbies in the aerobatic community. They may not have gone*

*through the traditional, gradual steps of aircraft ownership, which often include purchasing a Super Decathlon or Pitts. The new buyer is successful and likes the aerobatic scene, but is not immersed in the history of aerobatic airplanes. In the past, this person might have bought a fast car to take to the racetrack. Now they want to fly. They enjoy high-performance sport flying and aerobatics.*

*This prospective NG/GB1 buyer wants to be able to do recreational aerobatics, including snap-rolls, and maybe participate in an occasional contest. These airplanes are fun and go fast. They can do that safely without getting overstressed. And they are more comfortable and easier to land than a Pitts.*

*These buyers are not world competitors or air show performers. In the near term, the Unlimited category will likely continue to be dominated by single-seat monoplanes like the MXS and particularly the Extra 330SC. In this sense, Extra has definitely cemented its place in aviation history. Experienced,*



In the GameBird "shop."

high-level aerobatic competitors are too rare to make up the primary market for these new monoplanes. That part of the market would be rapidly satiated by the aircraft's high production rate.

The market for high-performance monoplanes was previously dominated by Extra, and the buyers were very experienced with the sport and the market. The seller did not have to do much marketing. Now there is a new class of buyers.

The differences between the NG and the GB1 are small enough that customer support and factory-sponsored events may be deciding factors for some new customers. Proper maintenance and parts availability are especially important for new owners who don't have a local mechanic who has deep experience with aerobatic airplanes.

Game Composites is based in the United States and has strong financial support from the Walton family (of Walmart/Sam's Club fame). Factory tours are available that can greatly



Jeff Granger

influence a buyer's choice. Buyers may be very emotionally invested and like entering an ecosystem or collective where they can associate with people with mutual interests. Game Composites hosts GameFest events to build the ownership experience.

In coming years, these airplanes will be very attractive to the flight schools that do upset prevention and recovery training and spin training. This is a huge and growing market that specially caters to airlines and corporate flight departments. With luck, this will build a secondary market for affordable used airplanes.

Don't forget to buy that Powerball ticket! **IAC**

