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PROMISES KEPT

Eclipse jets find a loyal following



BY IAN J. TWOMBLY
PHOTOGRAPHY BY DAVID TULIS

THE PROMISES WERE THRILLING. Thousands of small jets zig-zagging around the country, with their low acquisition and operating costs bringing charter flying to the masses and making private aviation accessible to millions more people. Then certification and production stumbles turned thousands into about 200-plus, and no charter revolution. No matter, say the owners. The promises are real.



Perhaps no jet in modern history is as enticing and controversial as the Eclipse. Big investments and a “swing for the fences” mentality brought talk of a small, twin-engine jet that could take four passengers a thousand miles, all for less than \$1 million. The Eclipse was the OG, the airplane that created and defined the very light jet category. Multiple bankruptcies, a production run that wasn’t even close to original projections, and a price that kept creeping up have combined to sully its reputation and mark it as a commercial failure. Don’t tell that to the owners, though—an incredibly dedicated, loyal, and proud group of pilots who praise the modern panel, easy flying characteristics, and low operating costs.

“For a million you can get in an aircraft that will knock the socks off anything with a prop,” said Peter Muller, a former Beechcraft Baron owner who stumbled into the Eclipse almost by accident. He had been looking to trade up from the Baron and was focused on a Daher TBM. But a fortuitous demo ride in an Eclipse at EAA AirVenture sold him almost immediately. “I didn’t think I was going to be

that impressed,” he said. The interior space, quiet cabin, and ability to climb 1,000 feet per minute on one engine had him hooked.

Victor Girgenti’s story is nearly identical. He had been looking for a TBM and kept losing out on deals, despite full-price offers. His wife knew he would trade up in three years anyway, so they decided to skip the TBM and go straight to the Eclipse, in part because it fits in a standard hangar. “A bigger plane with more seats means you’re just waiting for people. Or you’re flying with empty seats, and you feel guilty,” he said. He loves the airplane’s size, how easy it is to get in and out, the trailing link gear, and especially the performance. Palm Beach, Florida, to Farmingdale on New York’s Long Island is an easy nonstop flight. Girgenti said he can do it burning only 180 gallons of fuel, not that much more than you would in a piston twin.

One of the early selling points of the Eclipse was that it would be a technological marvel. A home-grown panel, new super-efficient engines, new construction techniques, and easy single-pilot operation were all going to be part of the package.

Although the Williams engines didn’t work out, and the avionics manufacturer changed, many of the original promises did come to fruition. Dubbed the Avio, the most recent panel is made by Innovative Solutions and Support (IS&S) and features dual primary flight displays with a large 15-inch center multifunction display. Updates are still coming regularly, including things like synthetic vision and autothrottles, which IS&S tested on the Eclipse before offering on the Pilatus PC-12 and Beechcraft King Air.

Eclipse owner Victor Girgenti is understandably proud of his airplane. Small enough to fit in a normal T-hangar, but fast enough and with a range big enough to get him from New York to Florida nonstop, it’s an ideal platform for his needs. The panel was ahead of its time, and has an interesting development history. Created in partnership with Avidyne, the companies parted ways in 2007, and now the panel is well supported by IS&S. Thoughtful features such as a sidestick control and seats on long tracks make the small jet comfortable and versatile.





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An early airframe is around \$1 million, and for that you get to 41,000 feet, with twin-engine redundancy, 350 knots, and as much as 1,000 nautical miles of range with four adults, all while burning roughly 60 gallons an hour.

Owner Mark Hansen said the design logic is apparent in the checklist. He describes it as a fraction of what you find for most turbine airplanes, with an easy and well-defined flow. And built-in safety systems, such as the stick pusher and anti-lock brakes, give single pilots some added help. A slow V_{REF} which usually clocks in between 88 and 95 knots, helps prevent incidents and improves runway performance. That and the antilock brakes are two reasons

you rarely hear about an Eclipse involved in runway overrun accidents that have plagued single-pilot light jet operators.

The bottom line on the Eclipse is also quite compelling. An early airframe is around \$1 million, and for that you get to 41,000 feet, with twin-engine redundancy, 350 knots, and as much as 1,000 nautical miles of range with four adults, all while burning roughly 60 gallons an hour. Not much else comes



Pilots rave about how easy it is to fly the jet. Many step up from pistons or turboprops that had more complex power management systems. They also love the trailing link gear, which, along with slow landing speeds, makes for nice arrivals. Total Eclipse is a factory refresh program that previous company head Mason Holland instituted. These are Eclipse 500s with the 2.0 software package.

close. The Cirrus SF50 burns similar fuel but flies lower, has one engine, is 40 knots slower, and costs twice as much. The Cessna Citation Mustang has similar performance, although Eclipse owners will tell you it's slower. It's also a bit more expensive.

One thing that has kept used values down on the Eclipse is the volatility of the factory. Multiple bankruptcies will put a damper on owner enthusiasm. If you spend that much on a jet you want to make sure parts will be available, which has been an issue in the past.

Muller's airplane has had a few issues, and parts have been hard to come by. He said a connector board went out on his starting battery, and while there were some available for the accessory battery, he couldn't find one for the starting battery. He ended up purchasing an entire second board and harvesting the relay, which obviously took additional time and money.



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Many owners take out the row of middle seats, leaving two up front and two in the back with leg room that would make a Emirates first-class passenger envious. The airplane fits in a standard T-hangar—just barely.

But that was during bankruptcy. All the owners praised the creative and effective aftermarket parts and STC solutions that have solved some long-term pain points, such as pitot tubes overheating.

Hansen has operated three Eclipses, and while the first was very reliable, the second had a few gremlins. His current airplane is owned in a four-way partnership, and it has also been quite reliable. The previous owner operated it during one of the company's two bankruptcies, so the partners were able to score \$150,000 worth of spare parts the owner had stocked as part of the acquisition, and in a few years, they have used about half of the stock. The second airplane had a habit of eating attitude and heading reference systems, and while it took some time to figure out why, Hansen spoke highly of the Eclipse support during that time.

There's been a resurgence in confidence, increase in used airplane prices, and exceptionally low inventory caused primarily by the company's new owner, AML Global, headed by Englishman Christopher Harborne. When AML bought the company in early 2021, it immediately injected a surge into the used market by snatching up dozens of airplanes, refurbishing them, and sending them to Europe for charter. With deep pockets, the company was also able to make immediate hires, pay vendors, and build up the parts inventory.

Owners have nothing but glowing things to say about the current ownership. Hansen said they offer free maintenance management software, will sell parts directly to local shops for more accessible service, and are responsive to owner needs. Because of tighter supply and general inflation in used aircraft prices, he estimates the jet is worth 30 percent more than what he and his partners bought it for in 2021.

Justin Beitler of Aerocor, which trades roughly 70 percent of the fleet, agrees that the market has tightened significantly. When the most recent



bankruptcy was looming, he estimates that 20 percent of the fleet was for sale. When we spoke earlier this year there were 14 airplanes listed, half of which weren't real listings. "We've gone back to the environment where nothing does what an Eclipse can do at that price point," he said.

The skies never darkened with swarms of VLJs like some had predicted in the early 2000s, but that doesn't mean the category has been a failure. Instead of point-to-point charter in the United States, the airplane has found a foothold as an ideal personal jet. Who wouldn't want to go nonstop from New York to Florida at FL410 burning less than some comparable turboprops? It's a dream that came true for many. ■

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No two the same Finding the right airframe takes work

With Eclipse Aerospace's troubled history, it can be hard to discern exactly what you're getting when you find an airplane for sale. Aerocor's Justin Beitler spends many hours on each transaction educating the customer on the various model options. "It's not like the Mustang, where you get synthetic vision or not," he said. "The Eclipse is a much more unique landscape." The core is the same, but avionics, engine condition, and various upgrade features are different on each airframe since they have been upgraded sporadically.

The company tracks 11 different versions with 29 different parameters across the few hundred airframes that have been built. That's not including interior and color choices. However, Aerocor says that there are generally three broad categories of airplanes broken down by software upgrade version. Versions 1.0 to 1.3 are considered legacy aircraft, versions 1.5 to 1.7 are the Garmin airplanes, and versions 2.0 and above are considered IFMS, or integrated flight management system airplanes. You'll see many references to "Total Eclipse" versions, which are older airplanes that have been factory upgraded and refurbished. And the company is starting to produce airplanes again. The first quarter results from the General Aviation Manufacturers Association indicated two airplanes came from the factory, the first since 2017. —JJT

T-16

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