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makes old airplanes new



THE NEW 2010

# CIRRUS SR20

MORE SPEED  
MORE SOPHISTICATION  
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High tech simulators  
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have arrived p.19

What it  
takes to fly  
Boeing's  
huge 777  
p.88



# SR20 IN THE LIMELIGHT



With enhanced features galore, Cirrus' original airplane is faster, more sophisticated and even more luxurious than ever.

STORY AND PHOTOS  
BY ROBERT GOYER

**B**ACK IN 1998 *FLYING* sent ace photographer Paul Bowen to Chicago to photograph a revolutionary new airplane, the Cirrus SR20. Editor-in-chief Mac McClellan flew the airplane and weighed in on such eye-opening new features as the BRS whole-airplane recovery parachute system, the down-and-welded landing gear (unusual at the time for such a fast single) and the signature Cirrus side-yoke. It's a little hard, 12 years after the fact, to remember the kind of controversy these features — the chute, in particular — generated, but they did. And it might be a little hard for those of us who have flown the two Cirrus airplanes to remember just how unrefined those first-generation airplanes were, but this, too, is true. The fact is that we were all just getting to know the airplane, the company and, indeed, the whole concept of the fast, composite, fixed-gear four-seater. The SR20 was that true pioneer.

That said, with Cirrus' introduction shortly after of the substantially more powerful and better performing SR22, the SR20 suddenly seemed like a footnote. It wasn't that there was anything wrong with the SR20; on the contrary, it was pretty much everything the company said it would be. But the lure of the 180-knot SR22 made the 150-knot-on-a-good-day SR20 look a lot less tempting. And that's not a casual observation. The SR22 outsold the 20 by a margin that some years approached 10 to 1.

It wasn't that Cirrus wasn't trying to sell 20s. From the start, it has felt that this 200-horsepower cruiser was a solid performer that was a great fit for a certain kind of customer. There just didn't seem to be that many of those customers.

The SR20 was simply overshadowed by its star teammate. I saw it firsthand. A few years ago I had reserved an SR22 with my shared-ownership provider PlaneSmart to fly from Texas to Sun 'n Fun in Lakeland, Florida, with a friend. When a minor mechanical issue grounded my airplane just before the trip, the folks at PlaneSmart sheepishly offered me an SR20 instead. A bit surprised by their apologetic attitude, I responded that I would be very happy

indeed to fly the 20 to Florida. I did fly it out, and it was a great trip. It took noticeably longer than it would have in the SR22, but that was for a maximum-range trip. And it was about 10 knots faster than the comparably powerful Piper Arrow on around the same amount of fuel and without the cost, risk and complications of the retractable gear. Not to mention the far nicer interior of the Cirrus. I was happy.

It should also be noted that over the years the SR20 has become a much better airplane. Part of that is a reflection of Cirrus getting better and more efficient at building airplanes. The first sub-\$200,000 SR20s, it's widely believed, were sold at a loss, and Cirrus didn't start improving its profitability

until it started being able to produce airplanes with many fewer labor-hours invested in each one. A few years back Cirrus introduced its SR22-G3, which featured, among other improvements, an all-new wing that included a redesigned interior structure and a carbon fiber spar. It was stronger, lighter (around 40 pounds lighter in the wing alone) and much easier to produce. Before too long the SR20 got that same G3 treatment, including the new, longer wing, along with a higher profile gear designed to get the prop farther off the ground. The result was a faster and more durable airplane that, in my opinion, handles better than the original does, with increased dihedral in the wing eliminating the need for





larger displays and synthetic vision. At first Perspective was available only in the SR22, though Cirrus soon made it available in the SR20, and it has become a popular choice for private individuals who buy an SR20 — most flight schools stick with the Avidyne Entegra system in their more-pared-down SR20s.

### Flying the SR20

My numerous long cross-countries in the SR20 have been excellent experiences. They are comparable to flying the same trips in the normally aspirated SR22, though the airspeed, it goes without saying, is slower, about 155 knots in the 20 compared with around 180 knots true in the 22. So a 500-mile leg in the SR20, figuring climb, which is slower in the less-powerful airplane, takes about 45 minutes longer. Tack together two of those legs, as is typically done for many of my trips, including Austin, Texas, to Phoenix or Austin to Orlando, Florida, and you've got a substantially longer day in the SR20 — longer, though still very doable.

The range of the SR20 is, likewise, less than that of the SR22, because the fuel capacity of the new SR20 is just 56 gallons, compared with 92 for the SR22. Still, with the miserly fuel consumption of the six-cylinder Continental IO-360-ES engine — 11.6 gph at 8,000 feet and 75 percent power — the SR20 manages a cruise

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the rudder/aileron interconnect on previous Cirrus airplanes.

The G3s also benefited from the many quality-of-life improvements Cirrus made to its airplanes, including a better looking and more durable interior, much better functioning and easier-to-use entry doors, improved soundproofing and better fit and finish, which included recessed switches, a whole new, easier-to-reach circuit-breaker panel and available premium interior options.

There were, of course, improvements

in the avionics. While Cirrus originally thought the SR20 might remain a steam-gauge airplane while the 22 went glass in 2003, that notion was quickly dispelled when almost no one ordered either with anything but the Avidyne Entegra flat-panel avionics system that pioneered flat panels in small airplanes.

Then, two years ago, the same thing happened when Cirrus launched its Perspective by Garmin cockpit, an enhanced version of the G1000 integrated system with a remote data-entry keypad,

range of 627 nautical miles, a figure that will put you in the air for just over four hours (with a 45-minute reserve), which is about as long as most folks want to be flying between stretches of the legs. This is about 200 nm less than the range of the SR22.

I recently flew a new SR20 with Cirrus' Matt Bergwall, who was kind enough to bring the airplane down to Austin from Duluth, Minnesota, for the evaluation. For the flight, I chose to go from my home airport of Austin

Bergstrom International (KAUS) to Scholes International Airport (KGLS) in Galveston, because the trip from Central Texas to a Gulf Coast Texas city represents an excellent demonstration of the capabilities of the SR20. At 160 nautical miles, AUS-GLS is the kind of trip that takes far too long in a car. And if you want to take the airlines, well, you'd better plan for that journey to take longer than it would if you drove. Flying a small airplane is by far the best way to get from this particular Point A to that particular Point B. It's also a distance that underscores the utility of the SR20, which made the trip, including short vectors on departure, a climb to 5,500 feet and a jog around the southern end of Houston's Class Bravo airspace, in just over an hour. A flight in an SR22 would have beat that figure by maybe 10 minutes, about the amount of extra time you'd spend on the ramp with the SR22 if you, for instance, had to add a quart of oil before departure.

Even though it was the value-package SR20 S, the airplane we were flying that day was equipped with a lot of optional equipment, including the Perspective cockpit. Because it was headed for a European delivery, it also had DME and ADF.

In the SR20, the Perspective cockpit is almost identical to that in the SR22, but it has displays that are smaller, 10.4 inches diagonally compared with 12.4 for the SR22. I know that Cirrus has made a point of lauding the larger displays in the Perspective SR22, but I'm very happy with the 10.4-inch Entegra LCDs in the PlaneSmart G3 Turbo Cirrus I regularly fly.

I'm a big fan of the Perspective cockpit, and in the SR20 the Garmin system is an excellent, scalable fit. Apart from the smaller displays, there are few differences between the systems in the SR20 and the SR22, and most of those have to do with installed equipment. We've written at length about Garmin's Synthetic Vision Technology (SVT), and in the SR20 it's a great fit. On our way back from Galveston, we were scouting photo locations and, heading from one potential location to the next, we

flew much lower — around 2,500 feet agl — than I'd normally fly while en route, and the Perspective was invaluable in several respects. While terrain is not a factor in the area, SVT helped me keep track of the many obstacles,

namely towers and traffic, both of which show up on the primary flight display in a way that's hard to miss. You do still have to keep your eyes peeled, though, because there can be airplanes with no transponder in the



The airplane we were flying was trimmed out with black leather and premium detailing. Despite its plain Jane reputation, this is one SR20 that has a lot of sex appeal.



kind of uncontrolled airspace we were flying through, as well as big birds, two of which we narrowly avoided hitting on our trip back home.

In addition to SVT, there were safety features galore on the airplane I flew for this report, including traffic and terrain alerting, Garmin charts, Garmin SafeTaxi and WAAS. The one thing missing was XM Weather, because, as I mentioned, the airplane is bound for Europe, where XM is unavailable. There's also the standard BRS whole-airplane recovery parachute system, a feature that Cirrus pilots overwhelmingly like having on board.

Along the way I was reminded of just how roomy the SR20 cockpit is. With a cabin width of 49 inches, and excellent headroom and legroom, the space you have available in the 20 is truly luxurious. It's hard to overstate this fact. I hadn't yet flown an SR20 with the X-Edition interior, but it was impressive in its fit and finish. The airplane we were flying was trimmed out with black leather and premium detailing. Despite its plain Jane reputation, this is one SR20 that has a lot of sex appeal.

The SR20 is often used as a transition airplane for new or inexperienced pilots who are looking to move up to an SR22, and it's an excellent platform for that purpose. It's a lighter airplane than the SR22, and it feels that way. It lands better than does the 22, which in my humble opinion is not the best-landing airplane in the world. The slightly slower approach speeds of the 20 and its natural stability, not to mention the excellent avionics, would make it a great instrument-training platform too.

For pilots looking for a good cross-country-capable airplane with sophisticated available equipment, great comfort and excellent economy, the SR20 is worth a long look, and not just as a transition airplane but also as one you could fly and love for many years to come. ✈

## 2010 Cirrus SR20 S

**The airplane flown for this report** was a 2010 model SR20 S with the Perspective by Garmin integrated glass-panel avionics system with dual, reversionary 10.4-inch-diagonal LCDs with dual ADAHRS and digital air-data computers, a remote data-entry keypad, Garmin terrain and traffic utilities, Mode S transponder and Synthetic Vision Technology. The BRS Cirrus airframe parachute system is standard, and the airplane was outfitted with a premium leather interior.

<b>Price as flown</b>	approx \$360,000
<b>Engine</b>	Continental IO-360-ES
<b>Horsepower</b>	200
<b>Propeller</b>	Hartzell 3-blade, const-spnd
<b>Length</b>	26.6 ft
<b>Height</b>	8.9 ft
<b>Wingspan</b>	38.3 ft
<b>Wing area</b>	145 sq ft
<b>Wing loading</b>	21 lbs/sq ft
<b>Power loading</b>	15.3 lbs/hp
<b>Cabin width</b>	49 in
<b>Cabin height</b>	50 in
<b>Max takeoff weight</b>	3,050 lbs
<b>Standard empty weight</b>	2,080 lbs
<b>Typical useful load</b>	970 lbs
<b>Max usable fuel</b>	56 gal/336 lbs
<b>Full-fuel payload</b>	634 lbs
<b>Takeoff distance</b>	1,478 ft
<b>Takeoff over 50-ft obstacle</b>	2,221 ft
<b>Climb rate</b>	828 ft/min
<b>Stall speed, flaps up</b>	56 kcas
<b>Cruise speed (75% power)</b>	155 ktas
<b>No-wind cruise range w/ reserve</b>	627 nm
<b>Max range w/ reserve (55% power)</b>	785 nm
<b>Landing ground roll</b>	853 ft
<b>Landing over 50-ft obstacle</b>	2,636 ft

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