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# Cirrus SR20 G3

With an all-new wing with carbon fiber spar, WAAS navigators, a new interior and more, you might have to remind yourself that this is Cirrus' entry-level model.

By Robert Goyer September 5, 2008



It's official. With the introduction of the G3 version, the seminal Cirrus SR20 piston single is all grown up.

I hadn't fully realized that until recently, when I had the lucky chance to fly a pair of SR20s, one really old one (well, as old as they





Cirrus Design

### **Cirrus SR20 G3**

get) and one brand spanking new one, in close succession.

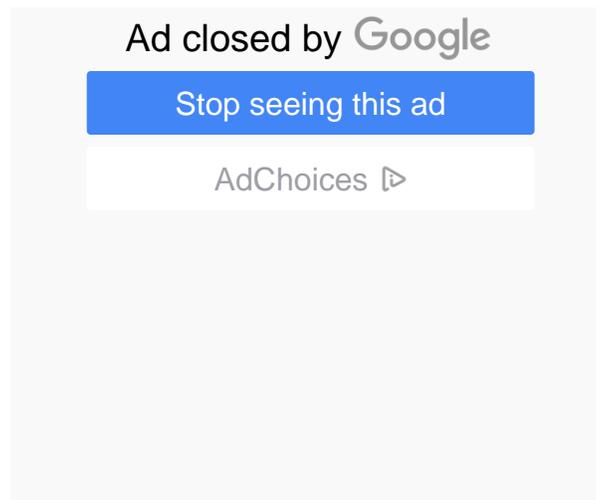
To be perfectly honest, I'd forgotten just how basic an airplane the first generation SR20 is.

Sure it has a chute

and it is all-composite, but despite that, the basic airplane feels pretty Spartan and, to be even more honest, a little rough around the edges.

I'll forgive myself the lapse of memory. After all, the airplane has been more or less constantly changing since its introduction almost 10 years ago, getting avionics upgrades on a few occasions, improved doors (thank heavens) a while back, upgraded interiors on a couple of occasions, not to mention the transformative addition of flat-panel avionics as standard equipment a few years back. Whether you want to call it polished, evolved or simply improved, you won't get an argument from me. Regardless of how you phrase it, the G3 is far and away the best SR20 that Cirrus has built yet.

I don't think Cirrus planned it that way in the beginning, but for years now the SR20 has played second fiddle to the company's faster and more powerful SR22. Consequently, people don't get very excited about it, and we've all but forgotten the commotion that accompanied the then-startup company's first delivery of the all-composite SR20 200 hp single back in 1999. The excitement was justified. The SR20 was the first high-profile new piston single-engine airplane to earn FAA Part 23 certification in years, and it came at a time when the industry was ready for a change and even more ready for some success.



In the years prior Cirrus co-founders and brothers Alan and Dale Klapmeier had all but abandoned the experimental market and their earlier kitplane, the sleek but problematical VK30 four-seat pusher. The brothers and their team retreated into the secrecy of Hangar X to plot their to-be-certified follow-on effort.

But much to the dismay of aviation rebels, the airplane that emerged was a very conventional looking four-seat fixed-gear single with the engine in the front and the tail in the back. Cirrus called it the SR20, which sounded pretty corporate, as well.

But if the iconoclasts were disappointed by the outward conformity of the new airplane, there was more to it than met the eye: a whole-airplane recovery parachute, side yokes, a big flat-panel MFD and more.

Their conservative industry counterparts, however, were skeptical about the prospects across the board. The airplane didn't go through the conventional flight test certification spin matrix, relying instead on the presence of the chute for credit on that testing. And the chute just rubbed traditionalists the wrong way (still does, for many).

But Alan and Dale Klapmeier were true idealists, hellbent on creating an airplane that did things differently. And they did just that.

## **A New Generation**

With the introduction of the SR22 G3 with its all-new carbon fiber wing last year, I figured that the introduction of the next-generation SR20 was only a matter of time.

It's simple economics, really. It just saves a lot of time and money to build more of the same thing than to build two different kinds of parts. Detroit has known that since the days of Henry Ford, and it's no different for 800 airplanes a year than it is for half a million cars.

Besides, the new wing was a clear improvement over the old one. How so? Let me count the ways.

For starters, it's both lighter and stronger, resulting in a 50-pound increase in max takeoff weight, which, in identically equipped airplanes, translates directly into additional useful load. Unlike the SR22, which got around 40 minutes of additional fuel (11 gallons, to be precise) with the G3 makeover, the SR20 doesn't get more fuel despite there being plenty of room -- it is, after all, the same wing. Apparently the rationale is, because the '20 is an airplane with limited horsepower, giving the pilot the option of seriously overloading the airplane with passengers and fuel was a bad idea. Granted, some pilots of small airplanes do have a hard time leaving fuel out of the tanks.

The new wing is longer, around three feet longer, in fact, and it features greater dihedral than its predecessor. It is simply a much better flying wing than the old one, so much so that Cirrus was able to eliminate the rudder-aileron interconnect that provided improved stability on previous models, so handling is far smoother.

Another G3 change the '20 inherited was a landing gear that's lankier by about two inches, which doesn't sound like much but somehow still winds up making the airplane look noticeably taller. You can even feel it when you climb up onto the wing.

There are numerous other little and not-so-little things, an improved fresh air inlet, better wing root fairings and the addition of LED recognition lights.

While it does nothing for the performance of the airplane, perhaps the biggest overall change is to the interior, which features newly designed backlit switches, one-piece bolsters and new choices of leather and fabrics, all features the SR22 got with the G3 edition, as well.

As you've no doubt read in *Flying* and elsewhere, the latest news from Cirrus is the introduction of the Garmin Perspective avionics suite. Perspective is not an option on the SR20, and there are no plans to make it one. There surely will be customers who will complain about the omission, at least until they think about the approximate \$50,000 price increase the Garmin panel brings with it, an increase that would make the SR20 a \$400,000 airplane, which is more than the SR22 topped out at not too long ago.

Besides, the Avidyne Entegra flat-panel system, which is standard in the SR20, is a marvelous package with an impressive list of standard and available safety functions, like TAWS, traffic awareness, IFR charts and XM Weather, not to mention a very nice rate-based autopilot, the S-Tec 55X, as standard equipment, as well.

On top of that, the Garmin GNS 430 navigators that come standard in the SR20 are WAAS equipped. WAAS, as you probably know by now, makes a lot of new vertical nav semi-precision approaches available to the instrument pilot, many of them at airports that never had vertical nav approaches.

### **Faster, Gentler, Smoother**

\*\*\*\*I recently traveled up to Dallas' Addison Airport to fly the newly released SR20 G3 GTS with Cirrus representative Reid Nelson, with whom I first flew the SR22 G3 model. With no turbocharging, TKS, oxygen or air conditioning, the SR20 is no SR22, nor is it meant to be.

That said, the SR20, often dismissed as a first airplane or an advanced trainer, is actually a surprisingly good cross-country airplane, especially with the new wing and especially when outfitted with the upscale GTS trim package.

Flying out of Addison it seemed that the longer wing was indeed doing exactly what longer wings are good at, climbing fast. Cirrus lists an initial rate of climb of better than 800 fpm, and we seemed to be doing a little better than that. (Though why is it that every demo pilot I fly with seems to leave the tanks half filled?)

Keeping the airplane down low to stay below Dallas' Class Bravo airspace, I had a chance to hand fly the airplane, and I liked what I saw. The improvement in handling is even more dramatic in the SR20 than it is in the '22, and that's saying a lot. The feel of the side yoke is much smoother and the interaction of the controls is much more harmonious than on the previous SR20 models, even in slow flight and down into the stall.

And that's a big help, as the side yokes, which are fundamentally different than side sticks, feel better than ever. Unlike the sticks in Cessna's Bend, Oregon, airplanes, the yokes in the Cirrus airplanes are like having little Cessna- or Piper-style yokes complete with a forward and backward travel component, just mounted along the side (and canted a little inward, at that). As is the case with the G3 upgrade to the SR22, the smoother handling of the SR20 G3 makes it seem as though the yokes are improved, when in fact they're just doing an easier job. Either way, it's a nice enhancement.

At cruise, the realm where fully decked-out airplanes like the one I was flying will spend most of their time, I saw a big improvement in speed, as well. While Cirrus only advertises 156 knots true, we saw readings as fast as 162 knots at 3,500 feet, and around 158 knots up at more typical altitude of 6,500. To put it in perspective, that's about 20 to 25 knots faster than a Piper Arrow, a retractable-gear airplane, on the same power and about the same fuel flow in a totally modern airplane with a much larger cabin and with lots of extra features. It's an interesting commentary that we've come to think of the SR20 as a midperformance airplane, and it's only because of the remarkable performance of its stable mate and a few remarkably fast models from its competitors.

After checking out the handling of the airplane, we stopped into a couple of Dallas-area airports to fly some approaches and shoot some touch and goes.

As I expected from its slow flight manners, the G3 model has significantly improved handling in the pattern and on landing. With the rudder interconnect gone, the feel of the airplane is much more natural than before. That's good for everyday flying, sure, but it's also a real bonus for flight schools, whose students are going to love the way the new airplane handles, and the flight schools are going to love the additional clearance, thanks to the

longer gear.

As we've written before many times, the addition of WAAS to the Garmin navigators gives pilots more precision and more instrument approach options, and the Avidyne EX5000 multifunction screen can show Cirrus' CMax Jeppesen approach charts, giving the pilot a nicely integrated set of tools, from navigators to displays to autopilot.

Heading back to Austin from Dallas, a typical midrange trip, an airplane like the SR20 really shines. With traffic on I-35 the trip at crunch time can take four hours, but with the SR20, we did it in just over one. (I made it up to Dallas that morning in less than an hour in my PlaneSmart SR22). Flying a '20, I could have easily flown up, conducted a day's worth of business, flown back down and been home in time for dinner. In fact, that's exactly what I did that day, in comfort and high style.

For more information about the SR20 and the many programs that Cirrus has developed for it, visit [cirrusdesign.com](http://cirrusdesign.com).

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