FIRST TO FLY: BRAND-NEW GARMIN G1000 NXi GLASS COCKPIT

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G6!

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NEW CIRRUS SR22 G6
ALL NEW GLASS

2017 GA BUYER'S GUIDE

- »10 HOT LSA
- »20 BEST PISTON SINGLES
- »NEXT-GEN TWINS
- »TOP 7 HEADSET PICKS

8 GREAT USED PLANES FROM $20K TO A COOL MILLION

G6: Perspective+: Brand-new Garmin glass for 2017

By Robert Goyer

Photography By Scott Slocum

When visions of glass cockpits dance in our heads, we personal aviation pilots usually think of the Garmin G1000 avionics suite, which for more than 15 years has been the de facto standard avionics package in the vast majority of new production Part 23 light planes. With the introduction of its best-selling SR22 G6 high-performance piston single, Cirrus has raised the bar in the category once again. And the way the company did it is surprising, though at this point maybe it shouldn't be.

The new model, which Cirrus has dubbed the SR22 G6, isn't a new airframe. It builds on the impressive incremental progress the company has made over the 15-plus years of production. The airframe is nearly identical to the G5 model introduced two years ago, so it features more carbon fiber than ever, taller gear, better lights, and more interior and exterior options. It has better seats, including the 60/40 Flex Seating that allows for a fifth passenger or split fold-down for hauling larger items. It has flight into known icing capability with a powerful and redundant certified TKS system. It

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has air conditioning, built-in oxygen and USB ports everywhere you turn. And, yes, it also has the smooth, powerful Continental TSIO-550 factory turbocharged engine for 200-plus-knots true airspeed in cruise and 1,000-plus fpm rate of climb with the simplicity and user-friendliness of a fixed-gear single.

So, what *is* new? Essentially, there are just two new things, the new Perspective+ flat-panel avionics system, which is based on the brand-new Garmin G1000 NXi. That "one" new thing, of course, incorporates more than a dozen significant changes. The second thing is all-new exterior lighting, which takes an already slick exterior package and turns the wick up even brighter.

TOP SECRET: FLYING G6

I met Cirrus' single-engine product line manager Ivy McIver in San Marcos, Texas, to go flying in the new G6. With its distinctive paint scheme and otherworldly wingtip lighting, the plane attracts a lot of attention, so Ivy found the most out-of-the-way piece of ramp she could to park the plane. I met her on the ramp, and even before

2017 Cirrus SR22 G6 Turbo GTS Platinum Edition

The Cirrus SR22 G6 we flew for this report was a loaded 2017 model with the new Perspective+ by Garmin avionics suite with new keypad with QWERTY layout, autopilot controller, numerical array layout and more. Standard or optional equipment includes SiriusXM aviation weather and entertainment, Electronic Stability and Protection, terrain and traffic awareness utilities, flight into known icing TKS anti-ice system and more. Like all Cirrus aircraft, the SR22 G6 is equipped with a whole airplane parachute recovery system (Cirrus Airframe Parachute System, or CAPS).

- **PRICE AS FLOWN/BASE:** $889,800/$639,900
- **ENGINE:** CONTINENTAL TSIO-550-K
- **HORSEPOWER:** 315 HP
- **PROPELLER:** HARTZELL, THREE-BLADE COMPOSITE
- **LANDING GEAR:** FIXED
- **SEATS:** 4/5 WITH 60/40 FLEX SEATING
- **DOORS:** 2
- **EMPTY WEIGHT:** 2,270 LBS.
- **MAX. TAKEOFF WEIGHT:** 3,600 LBS.
- **USEFUL LOAD:** 1,330 LBS.
- **FUEL CAPACITY, GALS:** 92 GALS. USABLE/552 LBS.
- **WINGSPAN:** 38.3 FT.
- **LENGTH:** 26 FT.
- **HEIGHT:** 8.9 FT.
- **CABIN WIDTH:** 49 INCHES
- **TAKEOFF DISTANCE:** 1,517 FT. (GROUND ROLL)
- **MAX. CLIMB RATE (FPM):** 1,203 FPM
- **MAX. CRUISE SPEED (KTAS):** 213 KTAS
- **MAX. OPERATING ALTITUDE (FT.):** 25,000 FT.
- **MAX. RANGE:** 1,021 NM (45-MIN. RESERVE)
- **STALL SPEED, WITH FLAPS:** 60 KCAS
- **LANDING:** 1,178 FT. (GROUND ROLL)

The new Spectra wingtip lighting system is many things at once—a recognition system, bright nav lights, strobes and landing lights all in one. The bright and flexible all-LED system is anchored by a long light rope that can act as a strobe, a pulse light or path lighting.

she tied the G6 down, she pulled out some wingtip covers to hide them from prying eyes, as we were still nearly a month from the official launch date of the plane.

That hasn't stopped Cirrus from selling G6s. In fact, the company has sold nearly 100 of them in advance of the public launch, but all its contacts have been made under strict non-disclosure agreements.

After spending a couple of hours on Friday afternoon going over the new avionics package's ins and outs, Ivy and I took off from San Marcos on Saturday morning to meet up with our photographer in Page, Arizona, roughly a 1,000 nm trip. The trip started out fine, with moderate headwinds, that is, moderate for the desert Southwest in winter. With the brown and rugged Texas High Country below, we made our way westward, the terrain rising beneath us as we flew along, 12,000 feet and the frequency mostly quiet, save for a few airliners checking in high above us.

After a quick stop in Albuquerque at Double Eagle, we continued northwest over ever more surreal landscapes, canyons and crags crafted in stone and sand. Descending around a final big flat-topped mesa east of town, we arrived in time for a late lunch.

Our trip was typical for a turbo SR22. We were truing around 185 knots at 12,000, so our groundspeed was around 150 knots, which might sound slow, but it's a lot faster than the 95 knots many less slippery GA planes would have been making on that day. The new optional seats in the plane—actually, a feature introduced last year—are the most comfortable yet in a Cirrus, and Ivy tells me they're one of the most popular options, for reasons I well understood after our five-hour-plus trip west. With more and better high-tech foam placed in more strategic places, the seats cradle you and eliminate many of the areas where fatigue starts to set in with other designs.

Our photo shoot late in the day was nothing short of spectacular, as you can see in a couple of the accompanying shots.

PERSPECTIVE+ BY GARMIN

Here's the big thing. As you probably know, Cirrus incorporated G1000 years ago in its products with a specially designed package that Cirrus calls Perspective. It's not just branding, either. Perspective offers several big bonuses to standard G1000, including Cirrus' exclusive keypad, larger displays than on most G1000 installations and a number of features, including charts and vertical guidance, that were first launched by Cirrus on its Perspective cockpit before being picked up by other aircraft manufacturers on their planes.

And the "plusses" in the new Perspective+

ABOVE, LEFT: The all-new keypad in the Perspective+ cockpit has several brand-new features. Note the laterally arrayed number pad for entering frequencies and transponder codes. Near the bottom of the pad is the autopilot controller, and toward the top center is the brand-new home key for easy keypad nav.

ABOVE, RIGHT: The differences between old G1000 and new are numerous and important. The displays are the same size but the processors driving them are a lot faster. Zooming and panning now go at light speed. The keys and knobs and buttons are newly styled, there are dual ADAHRS instead of separate air data and AHRS, and there are new utilities, like on-screen weight and balance and data-driven maps. Perspective+ is a game changer.

glass cockpit are noteworthy indeed. Some are common to the new Garmin G1000 NXi suite that Garmin just launched—we flew it first at *Plane & Pilot*—and some are pure Cirrus.

For a pilot who has experience with G1000—this is around the 40th different airplane model I've flown with a factory-installed G1000 panel—the new Perspective+ panel is a revelation.

The displays are about as sharp, which is to say, plenty sharp, but they look brighter, though admittedly that might be because the way information is presented on the screens is different. Garmin admits that it borrowed from the way it shows text and graphics on its G2000, G3000 and G5000 touch-controlled avionics systems to give G1000 NXi (Garmin's name for the updated system) a cleaner, fresher and more user-friendly look. It worked. I loved the look and feel, and my eye fell to the right value without even consciously trying to find it.

I also loved the new QWERTY keypad with the autopilot controller integrated into it. The keypad has a row of numeric buttons arrayed across its face for entering frequencies and transponder codes. When the buttons are lit up in blue, they're active for entering data. It took a little practice for me to get the hang of the new process, but once I did, entering data was dirt-simple. Codes and frequencies are entered in a heartbeat, and there's zero hunting for the right digit. After all, when keys are arranged in a square, unless you're an accountant, you probably have to at least look for the right one. With this layout, we all know that 7 will be to the right of 6 and so on. It's super-intuitive. Same for frequencies. You do have to enter the digit 1 first, though I'm not sure why since all of our frequencies start with that number. Or why the numbers 8 and 9 light up when you're about to enter a transponder code. Does Garmin know something I don't?

> Similar systems to the G2000 grace the panels of airplanes from TTx to Phenom 300. So why didn't Cirrus select G2000 for the SR22, too?

PERSPECTIVE+ VS. G2000

For the last few years I had assumed that Cirrus would at some point launch a G2000-equipped SR22. I was wrong. Cessna with its TTx has the only G2000-outfitted piston single, to date. That system relies on a single touch controller to input data and enter flight plan information. Similar systems with more controllers and more features grace the panels of airplanes from the Cessna TTx to the Phenom 300 and Cessna Citation X+ in the form of the G3000 and G5000. So why not G2000 in the SR22? Why this new system?

The answer isn't that easy, and G2000 has some real advantages over this G1000 update. For one, Perspective+ (NXi) isn't as shallow a menu system as G2000, which means you need more button pushes to get where you're going, though Garmin/Cirrus mitigated that, to some degree, by adding a really cool "home" button with a cute little house symbol, so you can get back to square one with a single push. The home button also replaces many of the functions of the "clear" button, though it has been retained.

As much as it loves the new Perspective+,

and it's right to feel that way, Cirrus also has to be careful about not throwing shade on the G2000 system, which is essentially what it's putting in its recently certificated Cirrus SF50 Vision Jet. The company talking point now seems to be that a *single* touch controller isn't ideal. The Vision Jet has three controllers; the Cessna TTx, by coincidence (or lack thereof), has just one. So I take that argument with a grain of salt.

PERSPECTIVE+ PLUSSES

That said, I was prepared upon hearing about Perspective+ to be nonplussed. I was way off-base. I love it. Here are a couple of things it does that are new.

The profile view is totally updated. Now you can see the terrain ahead of you in context to the flight plan you've filed. Let me explain that. If you're going to waypoint #1 a hundred miles distant and then making a 90-degree right turn to waypoint #2, a hundred miles farther out, the profile view will now show you the terrain not straight out ahead of waypoint #1, but as it pertains to your route, which makes a hard right in the middle. This means you know what terrain is in front of your route instead of merely in front of you. Great improvement.

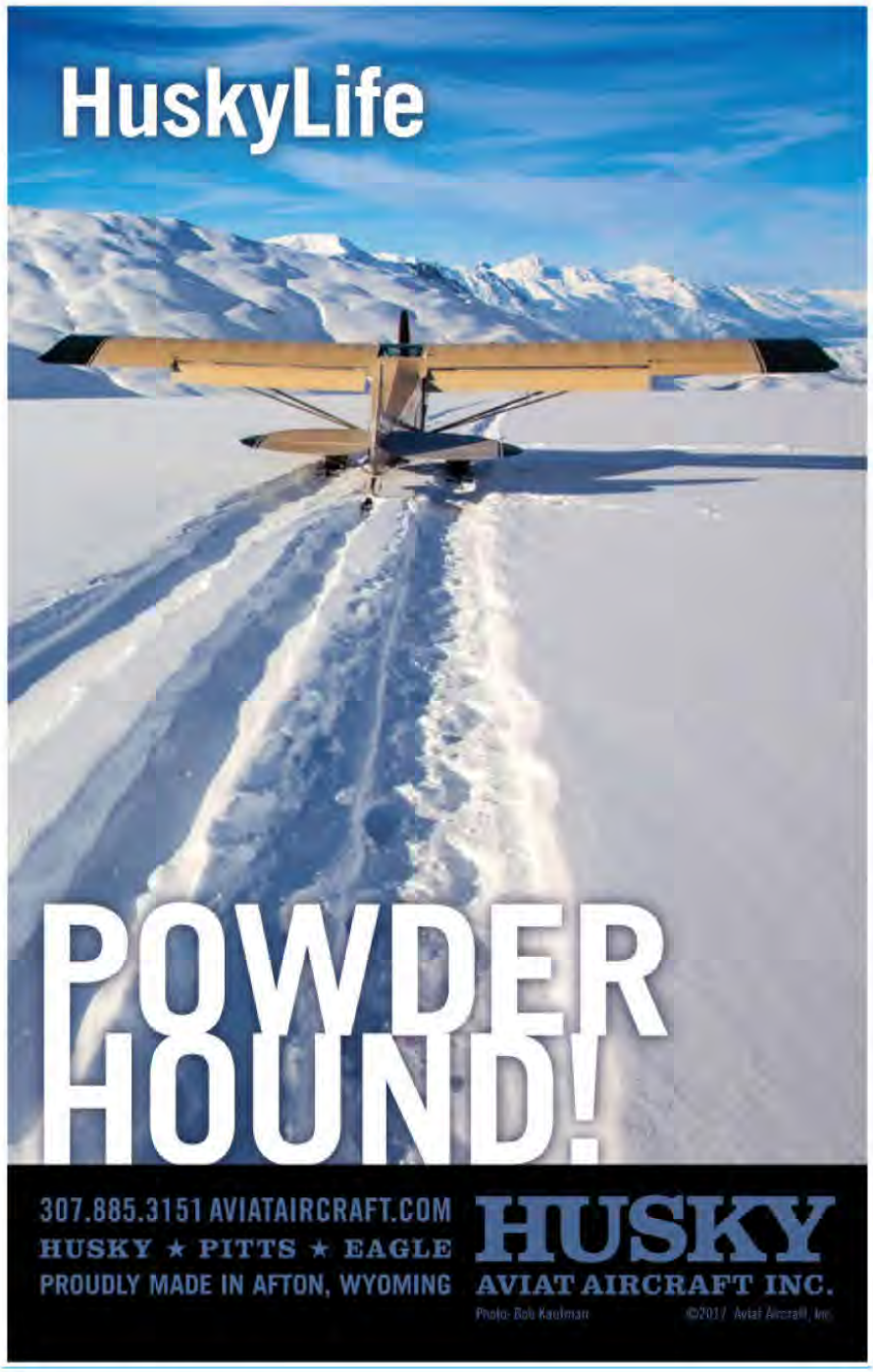
Perspective+ will also show you your approach path with altitudes and waypoints along the path. This is huge. Now you can see what your approach looks like ahead of time, not on a chart, but on the moving map page of the MFD. You see what altitudes you need to be at and you see where your little airplane symbol is in relation to the glideslope/glidepath and the lateral approach course. This will save lives. Kudos to Garmin, Cirrus and the FAA for this change.

As chance would have it, I got the opportunity to try this function out in anger coming back to Texas after my trip to Arizona.

We'd filed direct and nonstop, even though the weather in the Austin area was right at minimums. There was good marginal VFR and VFR weather within diversion distance, and the weather in three hours' time was sure to improve. It didn't. And because the ILS at San Marcos was out of service, we got to fly the LPV to Runway 17. Because the lighting on that runway is limited, the decision altitude for that approach is 360 feet agl. The ceiling was reported as 400 feet overcast, so it would be close. (As I said, we had options, including four good ILSes a few miles north at the International airport (KAUS).

The profile view of the approach was spectacular. In the right seat, Ivy, by now a pro in Perspective+, pointed out the new features as we approached the terminal area. Once on vectors for the approach, we activated it and the profile view popped up with our waypoints and altitudes plotted clearly.

On intercept, we got a heading to join and had to cheat it a little due to strong crosswinds. The headwind component, we reported when asked by the tower controller, was 50 knots. We had plenty of time to fly the approach with a ground speed of around 50 knots at



one point. Even with the winds and 15 knots plus or minus of wind shear, the approach went smoothly, and I was happy to be home after a sub-four-hour nonstop leg from Arizona to central Texas. The tailwinds, at one point 60 knots on the tail, were much appreciated.

Another big addition that we enjoyed along our route were the data-driven charts on the MFD for both high and low IFR enroute and sectional charts. The data-driven charts self-declutter as you zoom out, and as you zoom in, more detail emerges. In our case, we were able to keep an eye on the Grand Canyon special rules flight area as we approached Page. As we zoomed in on the area around Grand Canyon, the special flight rules chart appeared like magic, along with the pertinent rules and regs associated with it.

LOOKS AND LIGHTING

Cirrus has been making a push in recent years to offer amenities in keeping with those offered to buyers of high-end cars by companies like Porsche, Audi and Mercedes, and Cirrus' branding efforts reflect this. The GTS package is an all-up options collection, and the three trim levels, Carbon, Platinum and Rhodium, offer styling options intended to please everyone of its customers by offering a range of colors, fabrics, upholstery and aesthetic choices to suit a wide variety of customer preferences. The Carbon package, for example, is an in-your-face supercar approach to a fast next-gen single-engine plane, while the Platinum and Rhodium packages are increasingly more understated and luxurious. The SR22 I flew for this report was the Platinum package, and its middle-ground aesthetic sensibility seemed just right to me.

As part of this drive to go the auto way, Cirrus introduced a remote entry system a while back, and on the G6 they've improved it and given it new functionality. As with your high-end car, the G6 has a key fob from which you can control the door locks. When you unlock your plane, lights illuminate the wingtips, so others are less likely to walk or taxi into them, the steps, so it's easy to see them when you're climbing in, and the interior.

Also new is the fantastic, sci-fi-looking wingtip lighting, a light rope that wraps around the tip in a line. It's super-bright, and serves multiple purposes, with nav and strobe lighting (all LED), as well as pulse recognition lighting all incorporated in the new design, which Cirrus calls Spectra. Check out the pic. It's very cool.

With the new G6, Cirrus has once again upped the ante in the high-performance single-engine piston market. The plane is beautiful and capable, it incorporates numerous safety features—don't forget that it has a chute—and it adds the latest in avionics to make a product that impressively updates what was already the best-selling airplane in the world. For many more details, go to **planeandpilotmag.com**. PP