



S-TEC's IntelliFlight 2100, left, is an easy-to-operate digital autopilot designed to integrate with Avidyne's new Envision EFIS.

## AVIONICS FLIGHT TRIAL

# GLASS FOR THE AFTERMARKET: AVIDYNE AND S-TEC'S ALLIANT

BY PAUL BERTORELLI

If avionics manufacturers really listen to their customers—and we have no reason to believe they don't—they've been hearing a not-so-subtle thrumming sound of impatient fingers tapping glareshields, anxiously awaiting the arrival of real glass for aftermarket installations. Garmin primed the pump last summer with its announcement of the G600 display-only version of the G1000 EFIS suite, but it hasn't exactly been *introduced* yet.

That leaves Avidyne one down in the uncertain but inevitable hopscotch toward glass systems even the owner of a 30-year-old Bonanza can afford. In October, Avidyne inched closer to that reality, but for the time being, only King Air owners need apply. Teaming with autopilot giant S-TEC, Avidyne revealed its first aftermarket application for the well-regarded Entegra EFIS system. Suggestive of a joint venture, the new product is called Alliant and it represents the first aftermarket integrated flight deck system suitable for airplanes not necessarily built in Renton or Toulouse. (Or Savannah, for that matter.)

With its FlightLogic system, Chelton has been plying the somewhat limited market for glass in older airplanes for several years, but what's significant

about Alliant is that it marries the glass panel to a new, clean-sheet autopilot design. (Even Garmin is just beginning to do the same, but only for OEM aircraft, not older airframes.)

Avidyne calls its share of the system Envision—think of it as essentially a gen-and-a-half Entegra—while S-TEC's part is the IntelliFlight 2100, a box that can be considered among those rarest of birds: a new digital autopilot.

Outwardly, the Envision looks just like the Entegra in a Cirrus, but rather than a PFD and an MFD, it has two PFDs with independent, cross-referencing ADAHRS and an Avidyne EX500 centerstack for MFDs duties, including traffic, weather, lightning and the C-MAX Jeppesen-based flight library. Besides the dual ADAHRS, the Envision is more tightly integrated with the autopilot than the driver of a single-engine piston might be accustomed to. All of the AP's functions are annunciated on the PFDs and the two systems are designed to work together such that the airplane can be flown from wheels up to wheels down on autopilot?

So, can it? We flew a demo flight prior to the NBAA show in Orlando in October and with a bare five minutes of pre-flight briefing, we were able to operate the 2100 with ease. Its logic relates broadly to S-TEC products in general and we found it easier to use than the S-TEC/Entegra combination in Cirrus aircraft. It also has more tricks.

It will, for example, smoothly fly commanded rates—climb or descent—and can hold a specified indicated airspeed in climb, descent or cruise. It has no small authority over the rudder, too. Demo pilot Dwayne Clemens caged the King Air's right engine and after a brief yaw bobble, the autopilot cruised right through it, settling down with no altitude loss but 25 knots slower.

If you're thinking this capability would be sweet in your Baron or Seneca, we agree. For the time being, however, you can't have it unless you have in mind a King Air 200. Retail price of the Alliant package is \$170,000; figure another \$50,000 or so to install it. If that sounds like a high price tag, consider this: It represents about 25 percent or less of a typical King Air 200's value and upgrades of that magnitude are ho-hum at many an avionics shop.

What's significant for owners of lesser rides than the King Air is what the Alliant represents. It's Avidyne's first foray into the aftermarket and although this variant of the Envision might not be the one that slides into a Bonanza, Avidyne says the one that will be coming. They won't say when, but our guess is within 18 to 24 months.

*Alliant system, below, has two PFDs and a center-stack MFD for weather, traffic and charts. Navcomms are dual Garmin GNS430s.*



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