

# The HUD You Hardly Notice is There

by ROGER WHITTIER

**A**t AirVenture 2018 in Oshkosh I stopped by the MYGOFLIGHT (MGF) booth. They make great cockpit and iPad® gear, stuff many of us use. The owner, Charles Schneider, is a Cirrus pilot and COPA® member – great guy and is passionate about flying. We talked, and I took a look at his new engine installation; we had a great time.

I am always interested in connecting with COPA members, but this was more than that. I had heard from a few friends that MGF had been developing a Heads Up Display (HUD). The military has been using this technology for quite a while, but it has been too expensive and too big to be practical for general aviation.

In simple terms, the MYGOFLIGHT HUD takes flight information from the existing navigational systems and projects it onto something called the combiner, a piece of clear glass put at eye level that you look through. It displays critical flight information in that transparent glass and “combines” it with the view of the outside world. There’s no need to look down at the instrument panel except to conduct your normal scan. I tried the display he set up for the HUD tied to a simulator. I was intrigued. Note to self: I need to look at this closer.



*The MYGOFLIGHT HUD combiner, placed at eye level to look through.*

Fast forward six weeks to September and I was teaching at the Denver CPPP, which was located at KAPA – MGF’s home base. I met with Dominic Martinez, their president. After an hour or so of discussion, we went to the airport. There sat N162AM, a Cirrus Avidyne Turbo with big “EXPERIMENTAL” lettering on the side.

I flew with a well-known local instructor as PIC, Bob Stedman, president of Independence Aviation. One of the engineers, Scott Wilson, rode in the back. I can be pretty curious and ask technical questions, so I was really glad he was there for color commentary.

Once seated in the left seat we adjusted the glass to be right smack at eye level. There is a well-engineered mount

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that holds it in place from the top of the cabin just behind the windscreen. We started up, taxied, checked off all the items and proceeded to the departure end of the runway; then advanced the throttle and executed a normal takeoff.

Then it sort of hits you. All that data you always look down to get is right in front of you. I made myself not look down through sheer force of will. Look forward and there is your airspeed, your altitude, your attitude indicator, etc. – everything you need that is normally on the PFD.

I spent the next hour hand flying while looking straight ahead. I never even considered turning on the autopilot. We flew straight and level, performed some turns of various bank angles and executed normal maneuvers. We turned on the flight director, then shot an ILS, and went missed. It felt like cheating, and in a sense, it was a little. The instructor did all the programming work, all I had to do was fly the path put up there. Easy cheesy.

One of the serious innovations is the way they have added a flight path marker and depict the flight director, which is called the flight director cue. It is not the normal wedges or command bars we tuck together. The flight path marker (which is the aircraft) is depicted as a green circle with wings. The flight director cue (which is where the plane is to go) is depicted as a smaller magenta circle with wings. What is really unique is that the flight director cue sits in three-dimensional space. As a result, while the command bars point you in a direction, the flight director cue shows you exactly where you need to be. All you have to do is put



*The flight information provided on the combiner is everything you need to fly the airplane right in front of you. All you do is put the “green plane on top of the little magenta circle.”*

the big green circle on top of the little magenta circle, or the “thing in the thing.” Once you capture it, so to speak, all you have to do is keep it there. It’s much easier than a pointing system that gets you to sometimes overshoot and over correct. I think big iron is moving to this model, but it is the first I’ve seen it in a GA plane.

Some of our graphic-oriented pilots who want a picture with synthetic everything may not be impressed with the look. They may call it too simple. That’s the point, it is very simple, just put the green plane on top of the little magenta circle.

For an hour I never was more than a dot off my course, and I was not fatigued.

It is easy. It is intuitive. It is the future of GA flight.

For more information, check out their ad on page 11. ⊕

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