No Gyro, No Horizon, No Problem

By Lt. Dave Burmeister

I was a nugget on my first deployment. We had been in the Arabian Gulf for the past three months, doing the same missions day in and day out, in support of Operation Southern Watch. The sky was clear but very hazy. The summer had ended, so the weather wasn't too hot. We flew Case I procedures during the day, but there was not a well-defined horizon.

I felt good about myself: I had 40 traps under my belt, and I had flown every day for the past four months. Even though I had been with the squadron just six months, I was becoming "one" with the mighty E-2C.

Our mission for this day was similar to most of the missions we had been flying: Take off before everyone else, check the fighter package through the local control agency, and go to our station. It was so standard it seemed as if we barely had to brief. One thing we do in the E-2C community is brief crew coordination for every flight. This brief would be a lifesaver on this hop.

We manned the aircraft, started engines, and began our taxi to the catapult with no problems. The weapons systems were up and running, and the cockpit looked good. We went into tension, got the two-finger turn up, and began our trip down cat 3. We were airborne with no problems.

As I started my clearing turn to the left, I noticed my gyro did not respond. I didn't think too much of this problem, because it's common in the Hawkeye. We have two systems that provide pitch and roll to our gyros: the carrier-inertial-navigation system (CAINS), and the heading-and attitude-reference system (HARS).

I had the CAINS selected for this cat shot. Normally, the pilot will have CAINS or HARS selected, and the copilot will select the other. The CAINS has a tendency to dump on the cat shot, so I switched my control to the HARS system and went on my way, outbound at 500 feet over the water.

As we continued outbound, I told my copilot the gyro had failed. My copilot was the carrier-airborne-early-warning plane commander (CAPC) for this hop. He asked if I had switched to HARS since his system was working perfectly, and I told him I had.

We thought everything was fine. At seven miles, I told the crew I would turn out to the right. Everyone was ready. I turned sharply and looked down at my gyro; it showed me wings level. Although it caught me by complete surprise, I had enough sense to look outside—I saw nothing but haze.

I still was in a 60-degree, angle-of-bank turn, and I had no idea how much time had gone by, or what the aircraft attitude or altitude was. I began to fixate on my broken gyro, when my copilot started screaming, "Climb! Climb!"

After we had traveled through 200 feet, while descending more than 1,200 feet per minute, he grabbed the controls, pulled up, and we started to climb. When I had calmed down and realized we were fine, he gave the controls back to me, and we finished the mission. I flew back to the carrier, did a straight-in approach, and caught the 2-wire.

Fortunately, the CAPC had the presence of mind to understand the severity of the situation

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I had gotten us into. I had vertigo, and my brain had shut down. Instead of pulling up while turning, I had decided to make a hard-level break and then climb. Now, every time I turn out during a Case I launch, I make sure I have some altitude between the water and myself—right away.

In the E-2C community, we have the luxury of two pilots in the cockpit. One of those pilots usually has at least 600 to 700 hours in model and at least one cruise under his belt.

I quickly realized that at 500 feet outbound on a Case I departure, you don't try something new or fancy, with only 100 hours in the plane. Because our brief included crew coordination, vertigo, and changing controls when the other pilot is flying out of parameters, we were able to save ourselves and a multi-million-dollar aircraft. Whether you are in a single seat or multi-place aircraft, vertigo and confusion can hit at any time. Most likely, it will happen when everything seems normal.

Lt. Burmeister flies with VAW-113.