



How Do Your Instruments Look?

By Lt. Harrison Schramm

Our mission was to fly passengers and cargo from an Arabian Gulf airfield to an aircraft carrier. My wingman—another Lt.—and I had flown to the carrier the previous day to be available for an early-morning launch. We had a nice afternoon getting lost on the ship but managed to eventually find the “autodog.”

The wing Ops O greeted us at dinner and told us the ship expected to remain underway. It would loiter 15 miles to the east of the airfield, making our transit due west. Before we hit the sack, we had a chance to watch our fixed-wing brethren bag a round of night traps.

We briefed at 0600 and talked with the boss over the phone. The ship was calling weather 1,000 and three with haze. The haze was the major factor, as part of the world has a permanent dust layer that limits visibility to less than one mile. We manned up and were turning a few minutes before our takeoff time of 0700. We had planned to fly as a section of two to de-conflict with the numerous other rotary-wing traffic we expected to see. I was Dash 1 on spot three in H/W 11, and my wingman was Dash 2 on spot four in H/W 00.

I called tower for breakdown, “Boss, 11 and 00 set for breakdown and launch, spots three and four.” We felt good about having both aircraft up and ready for takeoff.

“Roger, break you down,” he replied. I could

tell the boss also was happy our birds were up and ready.

I had my copilot "clean me up" for takeoff, and we lifted as a section of two and departed straight ahead. Once established at 200 feet, we put on the *alt hold* and turned direct to the airfield, bearing 260 at 12 miles. I gave my copilot the controls and relaxed a little bit. I let a last look at the map occupy the quick flight into the beach.

We were airborne for 10 minutes when I was overcome by a sense of mounting discomfort. I looked at the instruments, and things still made sense, mostly. The TACAN showed a good bearing to the field, but the DME was not decreasing. While my copilot kept flying, I did some quick troubleshooting. I flipped up the TACAN mixer switch, and we were getting a good, strong ident. I verified the TACAN channel, and it also was correct. From all appearances, the TACAN was working. Then, I decided to tune in the boat.

According to the TACAN, the ship now bore 260 at nine miles, which meant it was straight ahead. I took the controls for a moment and made a gradual right-hand turn. Sure enough, the TACAN needle continued to point "up and down," while the RMI card turned as normal. Somehow, my TACAN needle had gotten stuck. As this realization came over me, I keyed the MIC and said, "00, take lead."

00: "Uh..."

11: "00, I need you to take the lead."

00 passed me on the left, and I fell in behind him. We continued our discussion after I was established on the wing. It went something like this:

00: "Hey, is 260 still a good heading?"

11: "I don't know."

00: "My TACAN is pointing the opposite way. I think my instruments are screwed up."

11: "Let's follow yours. I'm sure mine are screwed up."

We followed 00's lead and made an uneventful landing at the field. On deck, we did more troubleshooting and found while our needle had failed, our CDI still worked. We used that to determine our bearing information for the next couple runs until we could get it fixed. Our ATs determined the syncro motor in the pilot's RMI had shorted out. Since the two motors are on the same circuit, the failure of the pilot's side also caused the copilot's side to fail. This situation is not addressed in NATOPS or by any failed-card training at the HTs or the FRS. But, it still happened.

Our biggest mistake was assuming the airfield remained in the direction it had been briefed over 14 hours earlier. We never questioned that until we were airborne, traveling in the wrong direction, for 15 minutes. That assumption fed on itself: I didn't ask for pigeons from the ship because I had a "good" TACAN lock. I didn't question my TACAN lock because it fit the pattern of my initial assumption. My wingman did not question my (bad) navigation because it fit the pattern of what we expected. Instead, he rejected his own (good) navigation.

Aircraft systems can fail in unexpected and unpredictable ways. The only indication we had that anything was wrong was the feeling that something didn't add up. Sometimes that's all the indication you get. Sometimes that's enough. Confirm your assumptions before you make decisions based on them. 

Lt. Schramm flies with HC-6.

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Photo by Senior Airman Myles Cullen
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