

# Crew Resource Management

Situational Awareness

Assertiveness

Decision Making

Leadership

Communication

Adaptability/Flexibility

Mission Analysis

# Radio

By LtCol. Peyton DeHart, USMCR

It was a dark and stormy night [*Only a frequent contributor like LtCol. DeHart gets away with an opening line like this.—Ed.*] as we were being cleared for an approach into Texarcana. We descended through a thick layer of clouds. We occasionally peered into the inky blackness, left and right, to check the rime ice on the wings' leading edge.

Houston Center broke the routine by asking if we were a military flight. Practicing my response over the ICS, I said to the copilot, "It wasn't us, we weren't there, you can't prove it!" But despite the rehearsal, my answer to the control agency came out as a rather tentative, "Yes, a C-12 King Air, why?"

"I wonder if you could help me out here," he said. "I've got an aircraft, actual IFR, with a complete loss of electrical power. His radio is too weak for me to pick up now, and I wonder if you could radio relay for me."

"Certainly," I replied.

Center gave us a vector to an area 40 miles away; then they broadcast in the blind to the distressed pilot that help was on the way. I heard no reply. I tried the call sign myself. No response. I tried again with the radio squelch off. Squeezing between the drone of the props, the faintest of replies came through. He was either using a low-power hand-held radio, or his remaining aircraft-battery reserve was about gone. We relayed a vector that would get him to VFR and a descent to 3,000 feet—the minimum safe altitude in that area.

The pilot of the other plane sounded collected, much more so than I would have been at night, actual IFR, with only a turn needle, ball and wet compass, illuminated by flashlight. Center fed a constant stream of information on what airports were reporting VFR conditions within a 100-mile radius. We dutifully passed them on. It occurred to me this was done as much for information's sake as to keep a voice on the radio



## CRM Contacts:

Cdr. Scott Stroble, OPNAV N789F3  
CRM Program Mgr.  
stroble.scott@hq.navy.mil, DSN 664-7721

CRM Model Mgr., Pensacola, Fla.  
www.act.navy.mil, DSN 922-2088

LCdr. Mike Reddix, Naval Safety Center  
mreddix@safetycenter.navy.mil  
(757) 444-3520, Ext. 7277 (DSN 564)

# Relay



Photo-composite by Patricia Eaton

to reassure the troubled pilot he wasn't alone in the air. The minutes rolled by. I was aware of the passing time because the UC-12B does not have a squelch-off switch or function on the radio. There is a small button on the face of the instrument panel to disable squelch, mostly used as a volume-tester for our headsets. After 10 minutes of keeping that button mashed in, my forefinger was numb; after half an hour, the other fingers had their turn.

Center asked if we could see the other aircraft since we had arrived in its vicinity. I replied it wasn't likely because it was pitch dark, he didn't have lights, and I, too, still was actual IFR.

The other pilot then reported he had broken out under a low ceiling. He was over a vast, dark swamp. We passed a vector to the nearest airport, and he headed that way until we heard the rather ominous transmission, "I can't go in that direction any longer. If I do, I'll punch into the clouds again, and I'm not doing that."

Center gave me a new steer to pass. I did so, and it seemed a bit more promising. Clouds at my level started to break up, and we saw the ground for increasing stretches of time. Center asked us to escort the airplane, once we saw it, to an airport. I told Center it still was unlikely I would see a plane without lights, but I'd try to make sure he could see me.

Turning to my copilot, I said, "Let's turn on the landing lights."

"The gear needs to be down for the landing lights to come on."

"Oh, yeah. Well, lower the gear."

"Too fast. We're doing 220."

"Well, slow down."

The power levers were pulled back to the stops. The other pilot said he was doing 90 knots, so we needed to slow down considerably. Eventually, we dropped the gear, turned on the landing lights, and flew into a clear sucker big enough to orbit inside of, making our plane easier to see.

Good plan. It worked!

“I’ve got the aircraft circling with lights on in sight,” the other pilot said.

We peered into the dark, trying to catch a glimpse of the other airplane. If we did, we could depart our altitude, descend into clearer air, and guide the other airplane into a safe airport.

Speaking of “departure,” that’s what was about to happen in two seconds if we didn’t honor the stall-warning horn that now blared

at us. We shoved the power levers forward from their idle position and stabilized in a nice slow turn.

Center gave us a vector to the closest airport, and we turned toward it, leading the distressed aircraft like a beacon in the sky. As we relayed the runway length of 3,000 feet and width of 50 feet, the other pilot replied that since he didn’t

have a landing light, he wanted a runway wider than 50 feet. Center gave us another vector to a more distant airport with a 150-foot-wide strip. Ten minutes later, we were overhead that field and circling in order to relieve the other pilot from having to worry about doing the navigation. He progressively called us when he was 10 miles out, on right base and then safely on deck. We never saw him.

Center made some closing remarks on the order of, “Thanks for spending the time to help out.”

I replied, “Hey, it was government gas. We’re just glad to be of service.”

The pilot on the ground chimed in, “Thanks, you were a big help to me.”

My response: “You made a very professional set of decisions...from not reentering IFR, to refusing a runway that was narrower than you wanted, even though it may have gotten you on the ground earlier. Good flying, guy.”

With that, we turned off the extra lights, sucked up the gear, and headed back to Texarcana to begin the approach we had intended to shoot an hour earlier. 

LtCol. DeHart is with the 4th Marine Aircraft Wing, FMF.

## Analyst Comments

**T**he fact that the cavalry didn’t charge to the rescue made for a mishap-free ending to this story. Inventive communication and coordination, sound decision-making, and adaptability were demonstrated here. This C-12 aircrew initially developed good situational awareness (SA) and then adapted to an unbriefed SAR mission.

How did the SA picture develop in CRM terms? First, all available resources were used. More than a functional set of “Mark I, Mod 0” aviator eyeballs were required to develop good SA on this mostly cloudy night. ATC formed the backbone of a three-way communication link between an aircraft with crippled electronics and the C-12 SAR bird. Center provided intercept vectors, relative position, and alternate-runway information. Fortunately, they found a patch of clear sky at just the right time. Maintaining a safe altitude, the C-12 crew communicated its position using landing lights. A great idea as long as you lower the gear below the critical “gear becomes FOD” speed of 90 knots (good-on-ya coordination backup, by the copilot). With each player’s SA picture matching reality, the rest of the mission proceeded without a hitch. We have to give the civilian pilot a CRM Bravo Zulu. He made a good decision to reject the first runway offered (Do you see assertiveness here as well?). He took the alternate, a safer runway relative to his predicament (thanks center for supplying this info earlier!), and landed safely. P.S.—We would like a copy of the new C-12 SAR patch when it comes out. 

LCdr. Mike Reddix is the CRM program representative at the Naval Safety Center.

**“I wonder if you could help me out here,” he said. “I’ve got an aircraft, actual IFR, with a complete loss of electrical power.”**