

# CALLBACK

From NASA's Aviation Safety Reporting System



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Extensive and accurate communications are imperative in aviation operations. Whether conducting an airline operation or a general aviation equivalent, communications occur in various ways through many channels. Communications must be efficient and explicit between Pilots, Air Traffic Controllers, Dispatchers, Maintenance Technicians, Relay Services, Ramp Services, Flight Attendants, Passengers, Customer Services, and Command and Control Authorities.

An old aviator's maxim wisely bids one to "aviate, navigate, and communicate." Effective communications may preclude a multitude of aviation problems or even restore success from imminent failure, while poor or no communications can quickly steer a desirable outcome toward potential disaster. As Mark Twain once said, "The difference between the right word and the almost right word is the difference between lightning and the lightning bug." We might all benefit if we strive to better our communications with the same commitment as the effort expended to resolve personal weight and balance issues that emerge each January.

In this issue, *CALLBACK* examines reports that reveal communication deficiencies during aviation operations. In these reported incidents, the resulting circumstances yield important lessons where ambiguity is unacceptable and may have serious consequences.

## An Air Carrier's Premature Pushback

"The single biggest problem in communication is the illusion that it has taken place." - George Bernard Shaw.

■ *At the same time we were cleared to push, we received a [third] message for inaccurate weights. I told the push crew that we needed to get new weights before we pushed. We got new weights and loaded them into the FMC. When cleared to push, I released the brakes and said, "Brakes released, cleared to push, disconnect abeam gate XX." We started moving, but no verbal response was heard from the push crew. After trying to contact [the push crew] on the headset, the aircraft stopped. I still thought we had a communication problem. One of the wing walkers got on the headset and told us there was no one in the tug.*

## From Defect to Conflict and Complexity

"The two words 'information' and 'communication' are often used interchangeably, but they signify quite different

things. Information is giving out; communication is getting through." - Sydney J. Harris.

■ *[The airport] was running an east operation, and we were on approach for Runway XX. We were given vectors to turn north for the base leg and 3,000 feet. I had spotted the preceding aircraft, as well as the aircraft on approach for Runway YY. Approach called us and issued a right turn to a heading of 070. I sensed everything went quiet because usually there is a bit more with that clearance, so I looked at [the] radio and realized that Communication Radio 1 was transmitting. We had a stuck microphone, yet as I scanned all the switches, none were in the [Radio Transmit (R/T)] position. The First Officer (FO) and I both [realized the condition] at the same time, and [we] began checking our switches more thoroughly. The FO was the Pilot Flying (PF), and as we were converging with traffic from the adjacent runway, coupled with a small delay caused by our becoming aware of the malfunction, he elected to disengage the autopilot to expedite the turn back toward our localizer. Additionally, because we had strayed and it appeared that the adjacent aircraft had started a descent based on our TCAS, [the FO] started a shallow descent as well.*

*Once we established a heading back toward our approach course and were no longer in unsafe proximity of the Runway YY approach course, we leveled off. To make matters worse during this situation, we didn't realize for a few moments that he and I couldn't hear one another over the crew intercom, and the FO is hearing impaired. We were both talking, thinking the other person could hear, and at one point, he asked me to take the controls so he could investigate his headphone jacks, but I didn't hear him. Nothing came of that because he was only a moment in doing so, but under a different set of circumstances there could have been very different results. I didn't think there was a procedure in the QRH for our situation and felt that what little time I had to correct this problem without it escalating into an even bigger problem was best spent trying to [troubleshoot] a couple of things I knew of from basic system knowledge. I isolated the [communication radios] by selecting EMERG on both [audio control panels], and it solved the problem. Although the FO could not hear ATC or me, I was able to reestablish communication with the Approach Controller and obtain proper clearances. As we crossed the outer marker, ATC issued a low altitude alert as a result of the descent*

maneuver we performed earlier. We had leveled off at 2,200 feet, and ATC advised us that the minimum altitude at the outer marker was 2,700 feet. We established the aircraft on the glideslope and continued to a normal landing. The FO's [communication radios] came back somewhere along the approach but went back out during taxi in. We reported to ground control that we were having problems with the radios, and we were extra vigilant during taxi in.

The biggest threat was losing communication with ATC at a very critical phase of the approach, in very congested and busy airspace.... The nature of this malfunction didn't allow a determination of the full scope of debilitation immediately; it became a huge distraction when coupled with the tight constraints of the operating environment. The idea of flying in such busy, complex airspace without [communication, and thereby] imperiling one's own aircraft as well as others, caused extreme pressure to correct the issue.

## Impaired Crew Communications

“Communication usually fails – except by chance. If communication can fail – it will. If communication cannot fail, it nevertheless, usually does fail.” – Osmo A. Wiio.

■ The first attempt to land...was unsuccessful due to fog, and the flight returned to [the departure airport]. The flight then changed Captains and was re-dispatched.... The [second] Captain was on his second day of being [assigned involuntary flying] and [had been] pulled off his deadhead aircraft home to [fly this] turn.... He was understandably upset and was having problems hearing the First Officer (FO) through the [communications system], since there was no HOT MIC function on this [aircraft]. Unfortunately this was not identified until the return trip. The Captain missed several CRM calls from the FO on climbout, and the FO assumed it was due to his emotional state, but it was also due to the [communications system issue]. Upon approach to [the airport], Approach Control vectored the flight to a position north of [the airport] and asked if they had the field in sight. [The destination] recently had a snow and frost event, and the Crew was having problems identifying the field. Everything looked white. The Captain responded that they had it; the FO concurred and began to maneuver for landing. At approximately 1,300 feet AGL, both pilots noted that the runway did not line up with the nav aids and verbalized, “This doesn't look right.” At that time, [the] Tower informed the Crew that they were lined up on the wrong airfield. A go-around was conducted, the flight maneuvered for the proper airfield, and [we] landed uneventfully.

The HOT MIC function should be installed on all aircraft.

## A Numerical Near Miss

“Precision of communication is important, more important than ever, in our era of hair trigger balances, when a false or misunderstood word may create as much disaster as a sudden thoughtless act.” - James Thurber.

■ Upon my landing flare on Runway 17 at CVO, I noticed a single engine, low wing plane off to the left side of the runway, heading toward me. The plane had moved off to the left of the runway and was flying above the taxiway at about 100 feet AGL.

It was my third landing at CVO on Runway 17 that day, and I had communicated with other planes on 123.075, all of which were using Runway 17. During my [last] left downwind, I did see a plane to the west of the airport above traffic pattern altitude, but I didn't hear any calls on CTAF and thought [the plane] was transitioning through the airspace. So I was a little shocked to see it buzz past me as I landed. I was able to complete the landing without incident. I do know that the sectional shows CTAF at CVO as 123.0, but the frequency is 123.075, so maybe they were reporting on this frequency, but I don't know.

## Dispatch Isolation

“The more elaborate our means of communication, the less we communicate.” - Joseph Priestley

■ As I was building the release for this flight, I was getting an error that [indicated] the drift-down alternates could not be calculated because of an error. [A fellow Dispatcher] told me to file it and make sure that the drift-down information was on the release. I filed it and checked the release, but the [drift-down] information was missing. After I corrected this issue, I called [the associated ARTCC] to pull the flight strip, sent the corrected [flight plan], sent an ACARS message to the crew, and then called Ops to pass the information to the crew to print the new [flight plan]. While the flight was enroute, I got a message from the crew that the route given to them by ATC was not matching what was on the release. I sent [the crew] the corrected flight summary, the drift-down information, and the weather for [their] escape airport. I then did a pen and ink for the new flight plan. The Captain said he was not notified by the gate agent and did not receive [my] ACARS [message].

There was a breakdown of communication. The gate agent did not notify the crew to print the new [flight plan], and the crew did not receive the ACARS message. The next time I [will] directly call the Captain and follow up to ensure that they have the correct [flight plan].

ASRS Alerts Issued in November 2016	
Subject of Alert	No. of Alerts
ATC Equipment or Procedure	2
Hazard to Flight	1
<b>TOTAL</b>	<b>3</b>

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November 2016 Report Intake	
Air Carrier/Air Taxi Pilots	4,154
General Aviation Pilots	1,191
Controllers	504
Flight Attendants	435
Military/Other	250
Dispatchers	236
Mechanics	138
<b>TOTAL</b>	<b>6,908</b>