

# CALLBACK



From NASA's Aviation Safety Reporting System

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## Readback/Hearback:

# Much to Be Heard on Both Sides

There has been much discussion lately about pilots' and controllers' respective responsibilities for accurate verbal communications. Several recent ASRS reports present suggestions aimed at improving communication on both sides. We begin with a Captain's account of a clearance misinterpretation that led to a rejected takeoff.

■ *Tower gave us, Company X15, position and hold [on] Runway 12R "for spacing." As we set the brake we thought we heard, "Company X15 right turn, right turn you are cleared for takeoff." I responded, "Company X15 right turn, right turn cleared for takeoff Runway 12R." We next heard, "Tower, Company Y15, verify that clearance was for us." We aborted immediately (from taxi speed) and called "Company X15 aborting." Tower instructed us to clear to [the] right and taxi back to the end, which we did. Company Y15 took off, and then we did.*

*It appears that we took their similar call sign. We made a mistake. Factors:*

- ✈ *Taxiing out, we were told to anticipate a left turn. The "right turn, right turn" helped to suck us in.*
- ✈ *We were not told "traffic departing crossing runway" when we were put in position.*
- ✈ *The Tower did not state the runway, to my knowledge.*

*After a similar incident years ago (I was the cleared one), I started always using call sign and runway on Tower frequency. If we all used call sign and runway on Tower frequency, would it not be a step in the right direction to avoid such incidents?*

Including the runway in the takeoff clearance as well as crossing clearances would help prevent such incidents, too.

## The Pause That Confuses

A popular punctuation joke presents a "Dear John" letter in two versions, each version consisting of the same words, but quite different meanings. Excerpts follow:

Version 1

*"...I have no feelings whatsoever when we're apart. I can be forever happy-will you let me be yours?"*

Version 2

*"...I have no feelings whatsoever. When we're apart, I can be forever happy. Will you let me be?"*

The analogy in pilot-controller verbal communications is the pause – where it falls in the transmission, and how long it lasts. A recent Captain's report to ASRS illustrates the confusion that can result when the timing of the pause is off.

■ *Upon receiving takeoff clearance, Tower modified the SID to fly runway heading (010°). Upon climbing through 1,000 feet MSL, Tower instructed us to do the following:*

*"[Aircraft call sign] Start your turn to heading 030° (same as SID) – pause / breath – at 4,000 feet contact [Departure] on 120.9."*

*What the Tower meant to say was:*

*"Start your turn to heading 030° at 4,000 feet. Contact [Departure] on 120.9."*

*Depending on where the pause / breath was taken, the instructions from Tower have different implications. After contacting [Departure], they asked our heading and advised us of traffic...ahead. We acknowledged the traffic in sight and asked if they wanted us back on a 010° heading. Several seconds went by. Then [Departure] assigned us a heading of 350°, direct [fix] when able. ▲*

## ImPROPer Engine Starts

Many small airplanes have impulse magnetos installed which use sensitive spring-loaded coupling to produce a series of sudden rotations – and hot sparks – during starting. If the magnetos are ON, even the slightest manual turn of a prop may be enough to snap the magneto and start the engine, as this unlucky pilot discovered:

■ *The airplane had been having difficulty starting... The battery had just been replaced. I tried to start the engine without success and got out to adjust the prop. I*

*neglected to turn off the magnetos and when I moved the propeller, the engine started. The prop hit me on the head and right elbow. I was hospitalized for 5 days. The incident could have been prevented if I had been certain I turned off the magnetos.*

Any pilot hand-turning a prop should make sure the magnetos are in the OFF position. In addition, hand-propping is never a one-person job. A second person is always needed in the cockpit to apply brakes. ▲

### ASRS Recently Issued Alerts On...

A reported charting error involving a Prohibited Area
CL65 stabilizer and mach trim failure during a takeoff
Non-compliance with Required Inspection Items (RIIs)
MD-80 in-flight loss of control following trim maintenance
Problems with a ATC Rapid Data Voice Switching system

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### March 2000 Report Intake

Air Carrier / Air Taxi Pilots	2287
General Aviation Pilots	655
Controllers	53
Cabin/Mechanics/Military/Other	204
<b>TOTAL</b>	<b>3199</b>

# Legally Armed – And Dangerous



ASRS hears occasionally about passengers who are legally authorized to carry weapons on board aircraft, but who may not be up to the serious responsibilities involved. A recent report from an air carrier Captain explains:

■ *During preflight preparations, a properly identified employee of [government agency] presented herself to me in the cockpit to identify herself as an armed passenger. She expressed some apprehension about the flight because of (innocuous) comments made by the gate agent about the extra fuel we were taking on board for the longer than normal flight, due to unusually strong headwinds. I assured her that there was nothing to be concerned about.*

*After she left the cockpit, my First Officer, who had had a better view of her...than I had, expressed concern to me. The armed passenger ... was physically shaking, obviously because of her fear of flying.*

*I had her brought back to the cockpit, where I told her I had serious reservations about carrying an armed passenger who wasn't in complete control of herself. She said that her travelling companion had arrived, that [the companion] had a calming effect, and that she would be OK. Since she did appear to have calmed down at least some, we departed with her aboard.*

*During the flight, the Lead Flight Attendant commented more than once, that our armed passenger, while calmer than at the beginning, was still obviously nervous.*

*If confronted with similar circumstances in the future, I will not carry an armed passenger who is not in full control of him / herself...*

As this crew discovered, armed passengers gripped by the fear of flying may not exercise the best judgment. Other flight crews who find themselves in this situation have the option of requiring the armed passenger to unload and check the gun as cargo, or if the nervous flyer refuses, to deplane both passenger and weapon.

## “A Gaping Hole in Security Procedures”

In March 1998, CALLBACK reported an incident involving a legally armed passenger – another white-knuckle flyer – who left his gun and holster in the aircraft lavatory during flight, where it was later discovered by a flight attendant. In a similar incident reported to ASRS, the forgetful passenger was not nervous – just inexcusably careless:

■ *We got the paperwork at the gate for an armed individual traveling alone... His agency was listed as a government agency... He explained he was a special agent with the government agency and was transporting evidence. After leaving the aircraft at [destination], I was approached by several flight attendants who explained*

*they had found a gun in a seatback pocket. It was the government agency guy's piece [gun] – still in its little black waist pouch. The [gate] agent was busy paging this guy to come back to the gate. I do not know if he ever came back for it.*

*We have a gaping hole in our security procedures. We have lots of controls in place to [prevent] getting a weapon onto the airplane, but nothing to ensure that it gets off the airplane! Thank goodness it was found by a crew member.*

*Perhaps we should have a procedure in place to have the individual show the piece [gun] or confirm to the crew on their way out that they have it. It is not very hard to imagine a passenger with that gun on the next flight of the airplane. Also, an authorized weapons carrier could intentionally leave it hidden on a place for a co-conspirator to use on a later flight, and we would never know, since we have no way of checking that the [gun] made it off the airplane with the person. ▲*

## More on “Mechanics of the Human Mind”

An article in the February issue of CALLBACK (#248) described a GA pilot's disorientation during a gyro failure in instrument weather conditions. Distracted during the emergency by a spinning heading indicator and see-saw attitude indicator, he later reflected, “All my initial and recurrent partial panel training has been accomplished using suction cup style covers over the attitude and heading indicators. In this actual event, I found it difficult to ignore the erroneous information presented by these instruments.”

A number of readers empathized with this pilot's predicament, and a few took us gently to task for not mentioning the obvious:

✍ *Had I the opportunity, I would point out to the reporter that there is nothing to prevent him / her from sticking a couple of these suction cup covers in close proximity to those critical instruments and in the event of a failure, [to] cover those malfunctioning instruments with the suction covers. There wouldn't be time to use them in every case, but in many cases there would.*

An elegantly simple solution that other pilots flying “actual” will want to consider. ▲