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CFIDarren Newsletter

ATC Conflict Alerts, F22 Problems, ATC Statistics

Issue #45

May 8, 2012

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Quote of the Month

"Flying alone! Nothing gives such a sense of mastery over time, over mechanism, mastery, indeed over space, time, and life itself, as this."

- Cecil Day Lewis

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Thank you for taking the time to read this safety message

This issue is devoted to ATC controllers. These essential members of our crew are a critical link to system safety and affect every flight we make. So how is ATC doing? This issue discusses one element of their workload. We continue with some recent news about F22 pilots. And finally, we have a stunning video from NASA - a time lapse video of the planet from the Int'l Space Station. Of special note is the lightning storms over the African continent at 0:54.

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Thanks for your continued support... Darren

How are things within ATC?

FAA controllers receive several types of alerts that warn of potentially hazardous situations, including Conflict Alerts (CAs), Mode-C Intruder (MCI) alerts, and Minimum Safe Altitude Warnings (MSAWs). The alerts are presented visually on the radar display and, in some environments, there is a corresponding audible alert.

A recent research study released on ATC performance reveals interesting statistics on how well things are with our ATC system and some things which need improvement.

Conflict Alerts are among the highest priority actions a controller can resolve. When controllers did respond to conflict situations, they made the response prior to the Conflict Alert 67% of the time. The results also show that 62% of the enroute CAs examined received no response from controllers. Similarly, 44% of the terminal area CAs examined received no response from controllers. While

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Quick tips for *SAFE* Winter Flying

this seems like a striking set of statistics, 31% of the enroute CAs and 36% terminal CAs lasted such a short time that controllers must have resolved the situation prior to the alert or the situation resolved itself without action. This means 81-87% of CAs are nuisance alerts or unnecessary; that is, the alerts are valid according to the algorithms but do not provide useful information to the controllers.

All ATC safety alerts incorporate time parameters that are intended to activate the alert before a loss of separation occurs and provide controllers with enough time to prevent an Operational Event from occurring.

The sequence of events looks like this:

1. Controllers react to the alert.
2. Controllers obtain necessary information.
3. Controllers decide what action to take.
4. Controllers communicate instructions to pilots.
5. Pilots hear and acknowledge the instructions.
6. Pilots implement the instructions (if necessary).
7. Aircraft execute the maneuver.

As you can see, there is significant time involved in translating an alert into an action we take as pilots.

In general, controllers issue traffic advisories to aircraft under their control when, in the controller's judgment, the aircraft "proximity may diminish to less than the applicable separation" or to other aircraft on the frequency when, in the controller's judgment, "their proximity warrants it" (FAA, 2006a, section 2-1-21). Traffic advisories are critical tools controllers may use to ensure that pilots are aware of the traffic situation around them. A traffic advisory without accompanying control instructions indicates that the controller has determined that the situation does not require immediate action in terms of a turn or altitude change.

A safety alert is a more formal and serious version of an advisory. A controller is required to issue a safety alert if the aircraft is in an imminent situation that places it in "unsafe proximity to terrain, obstructions, or other aircraft" (FAA, 2006a, section 2-1-6).

How Can We Help?

If we want to have the highest level of safety, we need to be on the side of ATC. One of the immediate ways we can impact system safety is to use proper phraseology. Proper phraseology helps us transmit accurately and unambiguously while minimizing transmission times. An uncluttered frequency helps all of us when it comes to ATC issuing traffic advisories and safety alerts.

I know its a very dry publication, but the FAA Pilot/Controller glossary is a useful document on proper radio phraseology.



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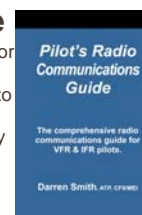
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Unusual Symptoms for F22 Pilots

ABC NEWS - Two F-22 Raptor pilots have said publicly that not only are they afraid to fly the most expensive fighter jets in American history, but the military has attempted to silence them and other F-22 pilots by threatening their careers.

"There have been squadrons that have stood down over concerns. And there's been threat of reprisals," F-22 pilot Josh Wilson told CBS News' "60 Minutes" Sunday. "There's been threat of flying evaluation boards clipping our wings and doing ground jobs. And... in my case, potentially getting booted out of the Air Force.

"So right now there's an example being set of, 'Hey, if you speak up about safety, you're going to be out of the organization,'" Wilson said.

Despite the Air Force's glowing descriptions of the next-generation jet as America's future of air dominance, as an ABC News "Nightline" investigation broadcast last week found, unknown problems with the plane's oxygen system have already contributed to the death of one pilot, the near-death of another and mid-air scares for dozens more.

Wilson and fellow F-22 pilot Jeremy Gordon, both veteran fighter pilots for the Virginia Air National Guard who came forward under whistleblower protection from Rep. Adam Kinzinger (R-Ill.), have asked not to fly the F-22 anymore, according to CBS News, citing their concerns with the oxygen problem.

Gordon said that two weeks after he requested not to fly the jet, he was called before a board of officers. Air Force spokesperson John Dorrian told ABC News he has no information about any pilots being explicitly told not to speak to the media about the Raptor and noted that several F-22 pilots have been made available to the press at Air Force events. Dorrian did say that if a member of the Air Force wishes to speak with the media as a representative of



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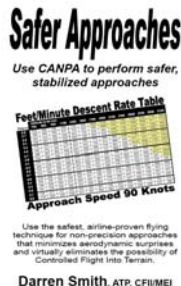
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the Air Force, that engagement is conducted through the Air Force public affairs office, but whistleblowers are still protected.

Top officials at the Air Force and Lockheed Martin refused to take part in one-on-one interviews with ABC News for its broadcast report, but the Air Force provided a statement last week in which it says the service is committed to "unparalleled dedication to flight safety."

"Flying America's premier fighter aircraft always entails risk but the Air Force has, and always will, take every measure to ensure the safety of our aircrews while delivering air superiority for the nation," the statement said. The Air Force has also stressed that reports of "hypoxia-like symptoms" are exceedingly rare -- more than two dozen compared to the thousands of flights flown without incident.

ATC by the Numbers

ATC Handles: 63,000,000 Tower Assisted Operations
 Carries: 544,000,000 Passengers
 Over: 537,000,000,000 Revenue Passenger Miles
 Using: 18,700 Air Carrier A/C
 170,000 General Aviation A/C
 Supported by: 639,000 Pilots & 651,000 Non-pilots
 Burning: 18,000,000,000 Gallons of Fuel
 Generating: \$87,000,000,000 Revenues
 Producing: \$5,300,000,000 Profit
 In Spite of: \$3,500,000,000 in Delays
 Source: FAA Air Traffic Organization (2006)

ATC Responsibilities

Air Traffic Control has four primary responsibilities:

1. Maintain legal separation among aircraft
2. Efficiently manage traffic flow
3. Provide flight information (weather, facility)
4. Initiate search and rescue operations

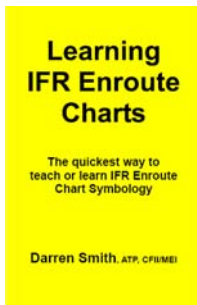
According to the New York Times, the Air Traffic Control system is already beyond its capacity. But FAA predicts that by 2010 the number of passengers will rise 59%, to 1 billion/year. Nothing on the drawing board will handle this increase. (NY Times, 09/05/00)

When Should the Xpndr Be On?

Air Traffic Control uses a ground taxi monitoring system to monitor surface movements. The system, ASDE-X, enables

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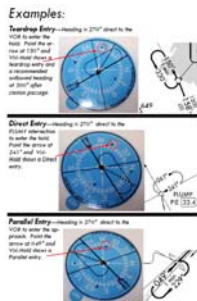
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air traffic controllers to detect potential runway conflicts by providing detailed coverage of movement on runways and taxiways. ASDE-X collects data from a variety of sources to track vehicles and aircraft on the airport movement area and obtain identification information from aircraft transponders.

As such, the AIM (4-1-20 a3) states, all aircraft should turn transponders "on" or normal altitude reporting position prior to moving on the airport surface. The section goes on to point out that transponders should be operated at all times while in controlled airspace and in uncontrolled airspace (Class G) unless requested by ATC.

The short answer: from movement after startup to parking prior to shutdown.

And Finally... Video of the Month

Around the World in three and a half minutes!



Walking On Air - NASA Time Lapse Video from The International Space Station

The clip, which plays to the haunting tune of 'Walking in the Air' by Howard Blake, begins over the southern United States at an altitude of 240 miles and finishes in Europe.

Stunning imagery from the Aurora Australis over the Indian Ocean to lightning storms in Africa, shows the planet in all its glory. Heavily populated urban areas can be seen beautifully lit up in the dark of night.

A yellow button with rounded corners and a slight shadow, containing the text "Buy Now" in a bold, black, sans-serif font.

Bargain Hunter

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