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Air Traffic Bulletin

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A Communication from the
Vice President, System Operations Services

In this Issue:

Vector Without a Heading

/*TER/ Situations that require us to use vectors are numerous. These may include vectors for spacing, weather, traffic, noise abatement, or pilot requests. They are used daily. Federal Aviation Administration Order (FAAO) 7110.65, Air Traffic Control, Paragraph 5-6-2, Methods, addresses vectoring procedures.

One type of vector not frequently used is the no-gyro vector. The reasons for a no-gyro vector could be for pilot training, equipment failure, or any problem in navigating the aircraft.

Aircraft partial-panel emergencies, caused by failure of the vacuum pump, is an example that may result in a request for a no-gyro vector. During this type of emergency, the aircraft suffers the loss of heading and attitude indicators. No-gyro procedures may be initiated by either the pilot or controller.

The phraseology for advising the pilot is, "This will be a no-gyro vector." In addition, inform the pilot of the purpose of the vector. It may be to the final approach course, a navaid, an airway, or to the airport. The phraseology for this vector is, "turn left/right" and "stop turn." Pilots should make a standard 3-degree turn per second. "Timing the turn" is essential in a successful no-gyro vector.

An actual emergency of this type should be considered a serious event and the proper action is to get the aircraft on the ground. **(ATO-T)**

Radio and Interphone Communications

/*TER/ FAAO 7110.65 provides standard air traffic control (ATC) phraseology for providing ATC services. Phraseology is standardized in part to reduce the opportunities for confusion and misunderstanding between air traffic controllers and pilots. To minimize the chances for misunderstanding instructions, we encourage air traffic controllers to use standard ATC phraseology, and to speak at reasonable rates when communicating with all flightcrews. **(ATO-T)**
(This article originally appeared in Air Traffic Bulletin 2002-6 dated December 2002.)

Aeronautical Information Cutoff Schedule for the Year 2005

/*TEFR/ Strict adherence to specified cutoff dates will ensure that aeronautical information is published on the desired effective date. **(Aeronautical Information Services)**

EFFECTIVE DATE	TEXTUAL SID, INST APPROACH PROC		EN ROUTE MTR PREF RTS ARTCC BND	GRAPHIC SIDs/STARs	SIAP TRANSMITTAL LETTER	
	CUTOFF FOR SUBMISSION	.26 MSG (PROP IAP)			NUMBER	DATE
* 23 Dec 04	14 Oct 04	15 Nov 04	N/A	N/A	04-25	5 Nov 04
20 Jan 05	10 Nov 04	13 Dec 04	17 Nov 04	10 Nov 04	05-01	3 Dec 04
* 17 Feb 05	9 Dec 04	10 Jan 05	N/A	N/A	05-03	31 Dec 04
17 Mar 05	6 Jan 05	7 Feb 05	13 Jan 05	6 Jan 05	05-05	28 Jan 05
* 14 Apr 05	3 Feb 05	7 Mar 05	N/A	N/A	05-07	25 Feb 05
12 May 05	3 Mar 05	4 Apr 05	10 Mar 05	3 Mar 05	05-09	25 Mar 05
* 9 Jun 05	31 Mar 05	2 May 05	N/A	N/A	05-11	22 Apr 05
7 Jul 05	28 Apr 05	27 May 05	5 May 05	28 Apr 05	05-13	20 May 05
* 4 Aug 05	26 May 05	27 Jun 05	N/A	N/A	05-15	17 Jun 05
1 Sep 05	23 Jun 05	25 Jul 05	30 Jun 05	23 Jun 05	05-17	15 Jul 05
* 29 Sep 05	21 Jul 05	22 Aug 05	N/A	N/A	05-19	12 Aug 05
27 Oct 05	18 Aug 05	19 Sep 05	25 Aug 05	18 Aug 05	05-21	9 Sep 05
* 24 Nov 05	15 Sep 05	17 Oct 05	N/A	N/A	05-23	7 Oct 05
22 Dec 05	13 Oct 05	14 Nov 05	20 Oct 05	13 Oct 05	05-25	4 Nov 05

* Denotes Change Notice (CN). NOTE: There is no CN for Alaskan procedures.

INCIDENT'LY

Of What Value, a SIGMET or a PIREP?

What priority do you, personally, give to reports or forecasts of inflight turbulence? Is turbulence more a nuisance, or a comfort issue for pilots and their passengers? Is it a structural damage or control of the aircraft issue? Wouldn't you think that the flightcrews would already be aware of any turbulence, since they are airborne? Is this kind of information just an additional service that is being provided or is this information truly a higher priority?

We already know that FAAO 7110.65 requires the solicitation and dissemination of significant meteorological information (SIGMET), airmen's meteorological information (AIRMET), and pilot weather report (PIREP) information. But, may an air traffic control specialist be excused from this requirement when he/she is really busy? Have you ever been inclined to skip issuing a PIREP or SIGMET, or forego asking for such information to relay to aircraft on your, or your neighboring controller's, frequencies because you are too busy? If you answered with a "yes" or "sometimes," please consider what the consequences of such an omission might be.

Although rare, inflight turbulence has caused fatalities. In most cases, slight or no injuries occur to the occupants of the aircraft. However, severe injuries occur more often than you may think. Many times, we, in air traffic, are not aware that any injuries have occurred because the flightcrews may not mention it to us. We had the opportunity to speak with a flight attendant who had received injuries during an inflight turbulence experience, and what she had to tell us may surprise you. Her experience shows clearly that the value of turbulence weather reports is high. Her flight was in clear air; however, there was weather information regarding turbulence. Air traffic did not share the information with this flightcrew because none of the preceding arrival aircraft had reported any encounters. This turned out to be an unfortunate decision.

On December 20, 1996, an Air Wisconsin BAE-146 had begun its descent phase for landing at a large metropolitan airport. The flightcrew had just signaled to the flight attendants to prepare the cabin for landing. "Sally" and "Joan" stood up to perform the final walk-through, which is intended to assure that all passengers are buckled into their seats, the seat trays are stowed, and the seat backs are in their full upright position. Usually, one flight attendant does the walk-through while the other makes the pre-landing announcement to the passengers. "Sally" said to "Joan," "I'll walk and you talk." No sooner were the words out of her mouth then both she and "Joan" were violently plastered against the ceiling of the aircraft. Within seconds, they were both thrown violently down to the aircraft's floor, and a ***9 pound*** fire extinguisher was broken loose from its mounting bracket and thrown ***5 seat rows from its normal place***. Both pilots hit the ceiling of the cockpit even though they had their shoulder harness and belts on. "Sally" and "Joan" were knocked unconscious. To this day, "Joan" cannot remember the encounter at all.

When "Sally" regained consciousness, the aircraft seemed to be steeply banked to the right and she could see the lights of a city through the plane's window, but no horizon. The plane seemed, to her, to be on its side and she could see straight down. During this time, the indicated airspeed increased from 272 to 284 knots. Four seconds after the encounter began, the autopilot disconnected. Immediately thereafter, the aircraft pitched up 8 degrees and the vertical acceleration increased from - .75 g's to + 2.37 g's in ***one second***! These events were accompanied by a right roll of roughly 6 degrees accompanied by the aircraft yawing to the left at the same time. The pilots regained control of the aircraft and after landing, both flight attendants were taken to the hospital. "Sally" had four broken ribs, a crushed pelvis, and a broken collar bone. "Joan" had 14 broken teeth, a shattered ankle, and a concussion. "Sally" had to undergo six subsequent operations to repair her collar bone. "Joan" wanted very badly to return to work, but was unable to because her ankle was so badly damaged.

We all know that when our workload increases to a certain point, we begin to selectively shed certain functions to keep the workload at a comfortable level. This selective shedding of lesser-priority work varies by individual. For some it is phraseology that goes out the window, for others it is additional services. Another way to manage workload intensity is to split the duties by bringing in a hand-off person, splitting the sector off, etc. All of this is understood, however, if you are ever tempted to shed the activity of getting and

distributing PIREPs, or SIGMETs, please think again about priorities. Flight attendants are vulnerable to inflight injuries because their duties require them to be up and about rather than safely buckled into a seat as the passengers are. Personally, I would hate to think that my failing to issue such information could cause someone else great pain and suffering, and quite possibly cost them their job and livelihood.

A Sampling of Common Controller Mistakes

Each of the following mistakes resulted in an operational error.

1) The en route controller had 15 aircraft in the sector. When one of the aircraft made a turn at a fix, the controller was caught off guard and was surprised because he/she did not know that the aircraft's route of flight required a turn at that point. The separation deteriorated to 400 feet vertical and 3.25 nautical miles (NM) lateral.

The remedy for this is simple. Check the flight progress strips, User Request Evaluation Tool - Core Capabilities Limited Deployment (URET CCLD), or other sources of data that will tell you where an aircraft is going in the airspace for which you have separation responsibility. If you work aircraft only by observing the general direction they seem to be heading, and fail to educate yourself regarding what their intended paths are within your sector, then you are approaching the problem as though it were a video game and you a clueless player!

2) The flight data block (FDB) was designed to help a controller keep track of what the aircraft had been assigned as well as what it was doing. Data entered into the scratch pad area or, in this particular case, the altitude block must be accurate and current, otherwise it is entirely useless. For example, a loss of separation occurred simply because the FDB still showed the aircraft assigned flight level three one zero when in reality it had been issued a descent to 13,000 feet! The controller was working nine aircraft and this error resulted in a closest proximity of 100 feet vertical and 3.7 NM lateral separation.

3) In this error, the controller was working six aircraft. The controller handed off an aircraft level at 13,000 feet and then instructed the pilot to contact the next controller. The facilities had a letter of agreement (LOA) that permitted the receiving controller "control on contact." The receiving controller issued a descent clearance to the aircraft and the result was a proximity of 700 feet vertical and 4.3 NM lateral with another aircraft in the first controller's airspace. Know your LOAs. If you don't want the aircraft moved before it exits your airspace, resolve the conflict before you let go of it!

4) This next one has "gotten" quite a few folks, and it is so easy to avoid! The controller needed an aircraft to cross a particular fix at a certain altitude to maintain separation with other level traffic. The controller issued the restriction but failed to include the time check. The pilot's watch and the controller's clock were not in agreement. If the controller had issued the time check, the pilot could have corrected the aircraft's timepiece so that both were in the same time zone so to speak. Closest proximity was 600 feet vertical and 4.3 NM lateral.

5) Local control issued takeoff clearance to one of two aircraft waiting to depart. The ground controller requested approval to cross the runway with an airport vehicle. The local controller approved the request because it was *assumed* that the aircraft had already departed. Closest proximity 600 feet. There is no place for such assumptions! ALWAYS check. KNOW where your traffic is. NO EXCUSES!

6) The controller issued radar vectors to position a BE90 for an instrument landing system approach to a satellite airport. When this aircraft was 20 miles out, a C310 was issued a takeoff release from the same airport. The controller then became engaged in the primary airport's runway change and handling an aircraft that had missed an approach at the primary airport, temporarily forgetting about the other two aircraft on the frequency. Due to the hazy conditions, the BE90 and the C310 did not see each other until they were very close to each other, and managed to avoid each other by passing .5 NM apart at the same altitude.

Super Controller

Good controllers keep aircraft moving with little or no delay. Great controllers are able to keep the traffic moving with no delays. Aiming high for the "great controller" type of performance is admirable, but temper that goal with the knowledge that we boast to the world that ours is the safest air traffic system, bar none. Carefully evaluate your actions to assure that they are sound, safe, and efficient. It is rarely necessary to load up runways with aircraft

simultaneously. The separation standard is fixed, and not flexible. If you need 2 minutes between departures, then waiting the extra 30 seconds to put an aircraft on the runway after the previous departure will not cause any delay or loss of efficiency. They'll still be 2 minutes apart. Don't get so into "pushing tin" that you are introducing an unnecessary risk to the system. Be Great, Be SAFE!

In this publication, the option(s) for which a briefing is required are indicated by an asterisk (*) followed by one or more letter designators, i.e., ****T*** *= Tower, combined tower/approach control,* ****R*** *= TRACON,* ****E*** *= ARTCC (En route), or* ****F*** *= AFSS/FSS. (Reference 7210.3, para. 2-2-8.)*

This table lists bulletins published since 2001. They can also be found on the Internet at www.faa.gov/atpubs

2001	2002	2003	2004	2005
01-1 WINTER	02-1 FEBRUARY	03-1 MAY	04-1 ** MARCH	05-1 APRIL
01-2 ** FEBRUARY	02-2 JULY	03-2 ** JUNE	04-2 ** APRIL	
01-3 ** MARCH	02-3A ** SEPTEMBER	03-3 AUGUST	04-3 MAY	
01-4 SPRING	02-4 SEPTEMBER	03-4 OCTOBER	04-4 ** JULY	
01-5** JULY	02-5 ** OCTOBER	03-5 ** NOVEMBER	04-5 AUGUST	
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01-7 DECEMBER			04-7 ** NOVEMBER	

** Special Edition