

Air Traffic Bulletin

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A Communication from the
Vice President, System Operations Services

In this Issue:

Anticipating Separation

Contingency Plan

Emergency Locator Transmitter (ELT) Signals:
True or False? And what do YOU do?

NRP and NRR: What are they and where are we
going?

Say What?

Anticipating Separation

*/*T/* Federal Aviation Administration Order (FAAO) 7110.65, Paragraph 3-9-5, Anticipating Separation. What does it mean and how is it applied?

Perhaps no other paragraph in FAAO 7110.65 is more misunderstood and applied than 3-9-5. This paragraph states, 'Takeoff clearance needs not be withheld until prescribed separation exists if there is a reasonable assurance it will exist when the aircraft starts takeoff roll.' The intent of this paragraph, when used with the separation minima found in Paragraph 3-9-6, Same Runway Separation, is for the controller to keep aircraft moving on the runway surfaces in an efficient manner. Remember, takeoff roll does not begin until the aircraft is on the runway and starts forward movement. Timing is critical, anticipate wisely! Failure to do so may result in a loss of separation.

When applying paragraph 3-9-5 to the separation criteria found in Paragraph 3-9-8, Intersecting Runway Separation, reasonable assurance is paramount in a successful operation. This paragraph states, 'Separate departing aircraft from an aircraft using an intersecting runway, or nonintersecting runways when the flight paths

intersect, by ensuring that the departure does not begin takeoff roll until one of the following exists:

- a. The preceding aircraft has departed and passed the intersection, has crossed the departure runway, or is turning to avert any conflict.
- b. A preceding arriving aircraft is clear of the landing runway, completed the landing roll and will hold short of the intersection, passed the intersection, or has crossed over the departure runway.'

It is important to remember that separation is not ensured until one of the above requirements is met. Trouble often begins when controllers rely on a pilot acknowledging an instruction (do not confuse this with compliance) as reasonable assurance the above separation will exist. It is the controllers' responsibility to ensure separation standards are met. Do not bet on the pilot to ensure your separation requirements in paragraph 3-9-8 are met. Basing separation on assumed actions by pilots may lead to undesirable results. Providing positive control through specific instructions, and ensuring pilots understand and will comply with those instructions, is exercising anticipated separation. Exchanging traffic in this type of operation will go a long way in ensuring the operation will be a success. Anticipating separation is not just assuming separation will exist, it is making it happen with GOOD JUDGMENT! **(ATO-T)**

Contingency Plan

/*TERF/ When a facility declares 'ATC Zero' and activates its contingency plan, it is no longer able to provide air traffic control (ATC) services and consequently airspace is divested to support facilities. It is important to keep in mind the David J. Hurley Air Traffic Control System Command Center (ATCSCC) is an integral communications link in the event of a contingency event. Keeping the ATCSCC informed at all times will eliminate unnecessary phone calls between facilities, channel news media questions to the appropriate personnel, provide information and continuous updates to headquarters personnel, assist with keeping other facilities apprised of the situation, including the military. Most of all, communication among all affected entities will be orchestrated, thereby ensuring minimal impact to the National Airspace System (NAS).

The facility air traffic operational point of contact (POC) **must** contact the ATCSCC National Operations Manager (NOM) Watch Desk when activating the contingency plan.

The following facilities are required to contact the ATCSCC in the event a contingency plan is activated: All air route traffic control centers (ARTCC) and consolidated approach control facilities, New York Terminal Radar Approach Control (TRACON) (N90), Southern California TRACON (SCT), Northern California TRACON (NCT), TRACON located at Denver Airport (D01), Potomac Consolidated TRACON (PCT), and Boston Consolidated TRACON (A90). Airport traffic control towers, associated approach controls, and flight service stations will report directly to the ARTCC located in their geographical area of jurisdiction.

Additionally, to ensure proper notification of support facilities identified in each facility's contingency plan, it is of vital importance that telephone numbers are correct and continuously updated. If phone numbers change or new phone numbers are added, the revised/additional numbers must be entered in the Automated Contingency Tool (ACT) and forwarded to the ATCSCC for programming and testing.

For example:

Kansas City Center (ZKC), the parent facility, declares 'ATC Zero' and contacts the ATCSCC. The ATCSCC will conference all support facilities identified in the ZKC contingency plan and ensure proper notification is accomplished. The ATCSCC will also notify the Air Transport Association of America, Inc. (ATA), the National Business Aviation Association, Inc. (NBAA), and other affected parties. Once all notifications have taken place, and depending on the type of trigger declared by the ZKC facility POC, instructions identified in the ZKC contingency plan are implemented and acted upon by support facilities. (ATO-R)

Emergency Locator Transmitter (ELT) Signals: True or False? And what do YOU do?

/*TERF/ Designed as an aid to locate downed aircraft and rescue surviving occupants, the ELT was mandated on all general aviation aircraft in the early 1970s. Effective January 1, 2005, the mandate includes all U.S. civil-registered jet aircraft. The basic concept comes from the military during the Vietnam War. Used in locating downed airmen, ELTs emitted a continuous oscillating tone on 121.5 and 243 MHz following manual activation or an aircraft crash. This allowed searchers to home in on a downed aircraft's position.

In theory, the concept is simple: having the ELT work as intended, reading the signal in a reasonable time, and finding the downed aircraft based on the signal. However, this theory was more optimistic than reality. False alerts have become an alarming problem. Equipment malfunctions and inadvertent activation, account for 97% of the almost 100,000 ELT alerts since 1986 being false. A significant part of the false alarm problem results from inadequately designed, installed, and maintained ELTs. Unreliable signals may also result from G-sensors installed as crash sensors, from hard landings, handling on the ground, and turbulence.

When an ELT signal is heard or reported, notify the Rescue Coordination Center (RCC) or ARTCC as appropriate. Then, try to determine the location of the signal by soliciting assistance from Direction Finder (DF) facilities or other aircraft known to be operating in the signal area; forward any fixes or bearings on the signal to the appropriate facility.

When the ELT signal strength indicates the signal may be coming from somewhere on the airport or vicinity thereof, notify the on-site airway facilities personnel for their assistance. Their help can go a long way in identifying false alerts. (Be sure to remember that the first 5 minutes of each hour is authorized for the testing of ELTs for no more than three audio sweeps.) When the signal source is located or terminated, notify all alerted facilities.

Studies have shown that people who survive air crashes have an overall survival rate of 60% if they are rescued within 8 hours. The odds drop after 2 days, the survival rate is less than 10%. Search and rescue (SAR) is a serious and often expensive business, not to mention potentially hazardous to the searchers and rescuers. SAR teams often fly in the same conditions that contributed to an accident in the first place. For those reasons, it is vital that we help weed out phony alerts from real ones. Lives are usually at stake. Your actions can help eliminate time spent in responding to false alarms and allow a quicker response to real emergencies. Knowing the appropriate actions to take can make all the difference in responding to an ELT signal. A review of FAAO 7110.65, Paragraph 10-2-10, and FAAO 7110.10, Paragraph 5-2-8, Emergency Locator Transmitter (ELT) Signals, will ensure we provide the right response. **(ATO-T)**

NRP and NRR: What are they and where are we going?

*/*TERF/* The North American Route Program, or NRP as it is commonly referred to, is described in Advisory Circular (AC) 90-91H, dated 7/30/04, and FAA Notice 7110.365. Non-Restrictive Routing (NRR), a part of the High Altitude Redesign (HAR) program, is described in Advisory Circular 90-99, dated 9/22/03. Both of these initiatives are intended to provide a means for customers of the NAS to flight plan and fly routes which are more beneficial than the commonly used 'preferred' route system.

These two processes are different in their requirements and use, but also have significant similarities. These commonalities can lead us to the next step toward free flight in both flight planning and route flying. The goal of NRP is to allow aircraft operators to select operationally advantageous routings. The goal of NRR is to allow users more freedom in route selection to achieve

economic benefits. Since these goals are analogous, the originations of the two programs offer an insight into the main difference that permeates them.

NRP was basically an agency response to an industry identified need; NRR is an outgrowth of HAR and was developed by the FAA workforce in conjunction with industry direction. The HAR program is a concerted effort to offer more flexible and efficient en route operations in conjunction with ongoing improvements in aircraft navigation capabilities. NAS modernization is key to its potential to succeed. Additionally, the investment by the workforce ensures a dedication to its success.

NRP and NRR differ in various ways. NRP has basic requirements that involve initiating and concluding route selection outside of a 200 nautical mile (NM) range (unless a specific air traffic procedure is identified in FAA Notice 7110.365) from the origination and destination stations and also allows for operations at and above flight level (FL) 290. NRR requires that the routing be planned within the geographical bounds of the program (currently the northwestern seven ARTCCs listed in the AC), connect through the use of terminal specific 'pitch' and 'catch' points where delineated, and currently be planned only at and above FL 390. Other differences include: NRP has no navigation requirements but NRR requires aircraft to be equipped with E, F, G, or R navigation. NRP is available within the U.S. and Canadian airspace but NRR is only available within U.S. airspace. NRP requires one fix per ARTCC traversed and that fix must be within 200 NM of the preceding ARTCC boundary, but NRR only requires one fix per ARTCC traversed. Most significant though is the normal NRP requirement of 200 NM from the terminal, while NRR provides 'pitch' and 'catch' points that were not determined by a static distance but by a determination to connect directly with an arrival or departure procedure. Also, based on the level of traffic, many terminals do not have a pitch or catch point but only the requirement to connect with the local preferred/normal routing upon leaving the applicable airspace. The NRR route combines structure where needed by ATC, and provides our customers with free flight planning in other enroute airspace.

NRP and NRR require the customer to enter remarks in the flight plan. NRP is entered for NRP flights, and HAR or PTP is entered for NRR flights.

HAR indicates the flight is capable of accepting any waypoint, including NRS waypoints, and PTP indicates that the flight cannot accept all fixes. When these remarks are entered in the flight plan, they are provided priority handling and are not subject to route limiting restrictions such as published preferred IFR routes and letters of agreement. However, if traffic management issues a 'required' reroute, all aircraft must comply with the route, unless an exception is approved for that aircraft.

Historically, NRP has been successful and yet limited by the tactical requirements of the system. NRR was designed in the hope of eliminating some of the loss of predictability by delineating the areas of use to those that normally can accommodate en route traffic and deal with tactical changes without routine, significant impact to the traffic, while still combining the free flight aspect with the structured route requirements of the system. NRR is still in its infancy and will grow along with the scheduled expansion of the HAR program. The next expansion is planned for May 2005 when NRR is expanded to 14 centers and the altitude is lowered to FL 350. The following centers will not be part of the expansion: Atlanta, Washington, New York, Boston, Cleveland, and Indianapolis. NRR is set up to meld with the technological navigational advances of aircraft and produce economic benefits for the customers as well as with the FAA's future navigational system plan for the NAS, including the reduction of land-based navigational aids.

The HAR program office is coordinating with the ATCSCC to set up a working group to address the future of these two processes. They will plan a future strategy that can offer the customers the best options for reaching the most efficient and dependable en route operations as well as providing the ATC workforce with the capability to plan daily operations so that the system is as safe and efficient as possible. (ATO-R)

Say What?

/*TER/F 'Buckle your seatbelt.' You have only heard that a few thousand times, probably a thousand times more than necessary. As professionals, you get it; 'wear the seatbelt' or someday you'll 'wear the windshield.' Some other people don't get it and organizations (e.g., the

Department of Transportation) dedicate budgets to spread the word. Why am I telling you this? Because the same philosophy goes in aviation to use 'standard phraseology.' Most of us get it; use the right words, those prescribed in the [Pilot/Controller Glossary](#). Those are the same words written as an addendum to FAAO 7110.65, FAAO 7110.10, and the Aeronautical Information Manual.

Do you use correct phraseology all the time? Like wearing seatbelts, most of us do and we don't need the lecture. However, for those others, do you sometimes tolerate coworkers that prefer to use their own phrases? Do you feel it is impolite or not in the job description to assist aircrews in communicating correctly. Did the pilot mean 'WILCO' when he said 'Roger'? Did the pilot mean 'traffic in sight' when she said 'Roger'? Perhaps the pilot meant 'Roger' when making some sort of throaty, half a call-sign sound.

It is not fair (although convenient) to point the finger at aviators. Most pilots, like controllers, take pride in professional communications. Military pilots are especially prone to concise communications, and they are using two glossaries - the aforementioned, and 'Brevity' codes, the pilot/air weapons controller glossary. You have probably heard some of the terms such as 'Bingo fuel,' 'RTB (return to base)', but not the hundreds of other terms (e.g., 'Winchester,' meaning 'out of ammo').

Educate and re-educate we must. Similar to seatbelt public service announcements, aviation flight training and safety organizations routinely publish articles on proper radio communications and their 'Never Again' columns.

Why the lecture on the obvious? Several reasons. On occasion, we all let our radio discipline slip and some just don't bother to follow the rules.

Transcript reviews will always reflect this as less than professional. Worse, accident/incident investigators can point out easy phraseology disconnects, which may or may not have had an affect in leading to confusion. None of us wants to be a contributing factor, or worse, a cause. Besides, a board-recommended solution often has been to add more words to the Pilot/Controller Glossary.

Perhaps the most obvious rationale for using standard phraseology is the reflection on yourself from dozens of others listening out there on the frequencies. An ace student pilot summed it up

best. When controllers queried how a 20-hour student sounded so professional, she replied, 'I don't want to sound like a jerk.'

Take care and ensure you and your coworkers use proper phraseology; in other words, 'buckle up.'
(ATO-T)

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.)*

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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	05-2	MAY
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		
01-6	SEPTEMBER			03-6	DECEMBER	04-6	OCTOBER		
01-7	DECEMBER					04-7	** NOVEMBER		

** Special Edition