COMMUNICATIONS

A Key Component of a Safe Flight

1st Edition

www.faa.gov/runwaysafety

Introduction

Effective communications are a key component of every safe aircraft operation - both in the air and on the ground. Communication not only involves speaking, it also involves active listening. This booklet highlights communication procedures for safe surface operations at towered and non-towered airports. However, many of the items emphasized are also applicable to aircraft in flight.

A few basics, such as message protocol and the meaning of some often misunderstood or overlooked terminology, are included in this booklet. Principles that every pilot should adhere to as part of their standard communication procedures are also identified. Common communication errors that have been made by pilots or air traffic controllers are illustrated with a scenario showing how the error occurred. Some of these errors resulted in an inconvenience, others resulted in close calls, and unfortunately, some ended with fatalities.

Even if you only fly occasionally, it is important to learn and use proper communication procedures and phraseology.

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Message Content

Use proper communications procedures when contacting air traffic control (ATC). Your initial transmission should contain these elements:

- Who you are calling
- Your call sign
- Where you are located on the airfield
- The alphabetical code for the ATIS, if available
- What you want to do, if it is short

State your position whenever making initial contact with any tower or ground controller, regardless of whether you have previously stated your position to a different controller. Be sure to use your full call sign. After the initial contact, the controller may abbreviate your call sign using "November" or aircraft type and the last three alphanumerics of your call sign; once the controller has done this, it is permissible for you to use the abbreviated call sign.

Standard Aviation Phraseology

In communicating with air traffic controllers or other pilots, use standard aviation phraseology at all times in order to facilitate clear and concise communications. The meaning of some common terms used in surface movement-along with the phonetic alphabet-is shown in the Glossary of Phraseology, starting on page 19.

Further information on standard aviation phraseology can be found in the Pilot/Controller Glossary section of the Aeronautical Information Manual located at http://faa.gov/atpubs.

Some Basics to Know

Based upon reported incidents, there is some common terminology used by air traffic controllers that is often misunderstood or overlooked by many pilots. Let's review some of the common ones:

- **Taxi To:**

  a. When a controller says, "Taxi to Runway 5," that instruction permits the pilot to cross all intervening runways and taxiways along the taxi route but does not authorize the pilot to taxi on or cross Runway 5.

  - When instructed to "Taxi to Runway 5," you must stop at the hold short line for Runway 5. Some runway configurations may require you to cross or back taxi to reach the approach end of the runway. In those instances, an explicit clearance is required.

  b. When a controller says "Taxi to ABC ramp," this instruction permits you to cross all runways and taxiways that cross your taxi route.

- **Position and Hold:** This instruction is used by air traffic control to inform a pilot to taxi onto the departure runway in takeoff position and hold. **It is not an authorization for takeoff and therefore does not permit the pilot to begin his/her takeoff roll.** The instruction is used when takeoff clearance cannot immediately be given because of traffic or other reasons such as wake turbulence. *(Note: The equivalent International Civil Aviation Organization (ICAO) instruction is "Line up and Wait.")*

- **Full-length:** If multiple aircraft call the tower ready for departure, one or more at the approach end of the runway and one or more at an intersection, the controller will state "full length" as the location of the aircraft at the full length of the runway when authorizing that aircraft to taxi into position and hold or clearing that same aircraft for takeoff.

- **Intersection:** When a controller gives a takeoff clearance or "position and hold" instruction

to a pilot located at an intersection, the controller is required to ***always state the name of the intersection in the transmission***. If you are at an intersection and the controller gives you a takeoff clearance with "full length" in it or omits the intersection designation, call the controller for clarification:

- It is possible that the controller knows you are at the intersection and inadvertently omitted the intersection designation in the transmission. It is also possible that the controller confused your call sign with the call sign of another aircraft that is located at the approach end of the runway.
- Pilots should state that they are at an intersection when requesting a takeoff clearance. When acknowledging the clearance, the pilot should reiterate that he/she is at an intersection.

➢ **Follow:** When told to "follow" another aircraft, make sure that you understand that any instruction to follow another aircraft does NOT imply a clearance to cross, or take, an active runway.

Sterile Cockpit

Focus on what ATC is instructing. Do not perform any non-essential tasks while communicating with ATC. Invoke the sterile cockpit rule while taxiing. Limit conversation with crewmembers and passengers to only what is essential for flight.

Good Radio Techniques:

Prepare first: Your transmission should be well thought out. Before keying your transmitter, know what you want to say and check to make sure you are on the proper frequency.

Communication with ATC should be concise and to the point. For unusual situations or lengthy communications, initial contact should be established first.

Acknowledge all clearances/instructions with your aircraft call sign. It is permissible to begin or end your acknowledgment with your call sign.

Non-Towered Airports

The preceding procedures also apply to operations at non-towered airports. However, some additional measures should also be taken at these airports.

➢ **Common Traffic Advisory Frequency (CTAF)**

- When flying to and from a non-towered airport, always monitor the local Common Traffic Advisory Frequency, also known as CTAF. Frequencies are listed on sectional charts and in airport directories.
- Proper use of CTAF builds situational awareness and increases the margin of safety for all pilots.
- Always transmit before taxiing, taking off, entering the traffic pattern, and landing.
- Routinely monitor and use CTAF within 10 miles of your destination airport.

➢ Remember some aircraft may not have a radio so always continuously scan the runways and approaches for other traffic.

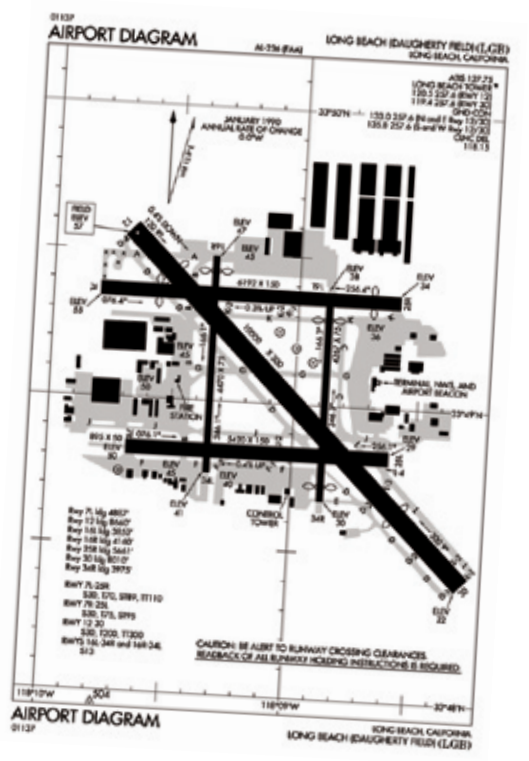
➢ CTAF frequencies may be shared by several airfields in the same geographic area. For this reason, the message protocol is modified to begin and end the transmission with the airport name.

- Identify the airport you are calling
- State your call sign
- State your position and your intentions
- Repeat the airport name at the end of your transmission

Communications Planning

All successful flights begin with thorough pre-flight planning including developing a communications plan. Just as you compute takeoff and landing data, plan your route and fuel consumption, you also need to plan communications. Your communications plan should contain the following:

- **Frequencies:** Identify and write down all the frequencies you think you might need, from taxiing out for takeoff to taxiing in after landing. Obtain the necessary frequencies from up-to-date charts, airport diagrams, and/or airport directories.
- **Automatic Terminal Information Service (ATIS):** Use the ATIS and airfield diagrams to help you plan your taxi route for departure and arrival. Identify points along your taxi route where you will be crossing runways and/or taxiing through complex intersections.



Communications Principles

Adhering to the following principles in your radio communications will help you eliminate many of the common errors that occur in the aviation system. Make these principles part of your standard operating procedures:

1. Listen to the appropriate frequency and establish a "mental" picture of airport activity before transmitting.
2. Know and use standard aviation phraseology.
3. Be brief. Keep transmissions precise and concise.
4. Listen. Be ready to write down instructions.
5. Remember, ATC may direct you to do something that was not in your plan. Don't make the mistake of hearing what you expect or want to hear, rather than your actual ATC instruction.
6. Ask ATC for a clarification when in doubt about a clearance or an instruction.
7. Ask ATC to "Say Again" if you are not sure about what you heard.
8. Readback (including the runway identifier) all instructions and clearances to:
   - i. hold short
   - ii. position and hold
   - iii. takeoff
   - iv. land
9. Stop prior to the hold line and ask air traffic control if you aren't sure whether you have clearance to enter or cross a runway.
10. Look left and right before entering a runway even after you have received clearance from the air traffic controller. Your scan is a crucial link in the safety chain.
11. Ask for progressive taxi instructions if you are unfamiliar with taxi routes at a towered airport.
12. Be especially vigilant for potential conflicts involving the runway you are planning to use; Monitor the tower frequency or the Common Traffic Advisory Frequency (CTAF).

Some Common Communications Errors

In this section we identify common communications errors that have been made by pilots and controllers, and provide some specific examples of these errors. Many of the incidents that are used as examples represent a combination of errors rather than a single mistake. This is your opportunity to learn from the mistakes others have made.[1]

Similar sounding call signs

Two aircraft with similar sounding call signs on the same frequency can dramatically complicate communications. Similar sounding call signs can happen at any airport, but the probability increases at airports where an airline has a hub or where a flight school has several aircraft whose call signs only differ by a digit or two. Listen carefully to the frequency chatter and be alert for any other aircraft that has a call sign that is similar to yours.

NXX67H taxied out to a hold short position for Runway 13 via Taxiway A. While NXX67H was holding short, Tower Control (TC) was working several other aircraft including NYY67H. Using only "67H" as the call sign, TC cleared NYY67H for departure and subsequently for a turn on course and frequency change. A transmission (possibly from NYY67H) was partially blocked but the final portion was heard as "...67H, right turn westbound." Following this transmission, NXX67H assuming the instruction was intended for them, entered Runway 13 and departed without contacting TC. NXX67H's departure conflicted with Cessna C152 on 1/8 mile final. The Cessna 152 saw NXX67H, initiated a go-around, and then side-stepped to avoid over flying NXX67H.

Do not make the "Assumption Mistake."

Hearing what we expect to hear is a human tendency. Experience and skill cannot compensate for this natural perceptual limitation. As one pilot said, "After 27 years of flying, I now find it becoming easier to 'hear' things in a clearance that are not really there. More diligence is required." (ASRS Accession Number 199764).

[1] Examples that are taken from the Aviation Safety Reporting System (ASRS) contain a reference to their ASRS Accession Number.

You can help avoid this mistake with active listening. The "Assumption Mistake" has several variations. We have highlighted three of the most common mistakes:

- If any portion of the transmission is "garbled" or "stepped on," do not assume the unheard portion is irrelevant. Request that the transmission be repeated.
- If your call sign is not included in the transmission, don't assume the transmission is for you.
- Listen, don't assume the transmission is what you requested.

Aircraft #1, maintenance taxi, was told to hold short of Runway 13 on Taxiway C. Aircraft #1 read back instructions. Ground control issued crossing instructions to Aircraft #2 holding at Taxiway N. Aircraft #1 took those crossing instructions as his and crossed the hold short bars for Runway 13 before tower stopped him. Aircraft #3 on 3/4 mile final to Runway 13 was sent around to avoid loss of separation.

Instructions that just "don't seem right."

If you're given an instruction that doesn't seem right to you, ask for clarification. In the following example, an aircraft that was placed in "position and hold" hears a landing clearance for another aircraft and proceeds to takeoff.

Aircraft #1, a Piper PA28, was cleared to taxi into position and hold on Runway 26 with Aircraft #2, another Piper PA28, cleared for stop and go on intersecting Runway 35L. Tower Control (TC) intended to clear Aircraft #3, a third Piper PA28, following Aircraft #2, for stop and go Runway 35L but used the wrong call sign: "Aircraft #1, Runway 35L, cleared for stop and go, make left traffic." Aircraft #1 took this as clearance for departure and responded that he was departing to the southwest. TC stated: "Disregard, that's for Aircraft #3, Runway 35L, clear-ed stop and go." TC then observed Aircraft #1 airborne approximately 2,500 feet down Runway 26. As Aircraft #1 reached the intersection, Aircraft #2 was estimated to be 800 feet short of the intersection of Runway 26 & 35L and 200 feet higher (air to air) than Aircraft #1.

Readback errors

A "readback" is a pilot's acknowledgment of an air traffic controller's transmission that repeats the information that the controller conveyed. A pilot readback presents the first and most efficient opportunity to catch miscommunications. It provides a "reality check" in two ways: First, it tells the controller "this is what the pilot heard," and secondly, it provides the controller the opportunity to reaffirm that is what he/she meant to say.

An effective readback can mitigate the effects of expectation, because it gives the controller an opportunity to correct the error. In the next example, a readback of what the pilot *expected*, rather than what was *said,* saved the pilot from an unauthorized landing, or worse. The controller, recognizing from the readback that the pilot had lined up on the wrong runway is able to amend the clearance to reflect the runway that the aircraft is approaching.

"The initial approach controller told us to expect an approach to Runway 18R. This 'expect' call, plus recent flights into [airport X] with construction on Runway 18L had us all thinking Runway 18R. The final controller apparently cleared us for 18L. We had the ILS set up for Runway 18R, and the captain read back, 'Cleared for 18R'. I headed for Runway 18R. The tower then cleared us to land on 18R. On landing roll, the tower advised us to contact the approach controller about a little problem with our approach. We were all wearing headsets, but we heard what we expected instead of what was really coming over the headset." (ASRS Accession Number 162629)

Pilot readbacks of controller instructions provide a critical part of the safety net. With no readback, there is a hole in the safety net.

A first officer who did "not believe in readbacks of clearances, as that tends to clutter the frequency," responded "Roger" to a clearance to "position and hold" that was intended for another aircraft. This runway incursion necessitated a go-around for an incoming aircraft. (ASRS Accession Number 217581)

Pilots should NEVER guess or readback what they thought they might have heard, and expect the controller to catch and correct any discrepancies. When in doubt, ASK.

As one pilot lamented, "I broke my 'cardinal rule' of taking questions over clearances out of the cockpit to the source." (ASRS Accession Number 300858)

Hearback Errors

As we've seen, it is a natural human tendency to hear what you expect to hear, and this makes catching readback errors a very difficult task for controllers. When a controller misses an incorrect readback, we call this a "hearback" error.

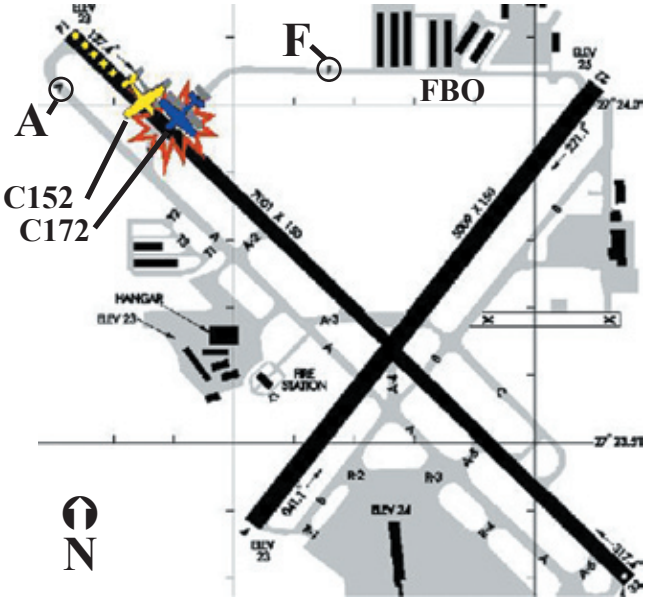
Tower Control (TC) cleared Aircraft #1 for take-off Runway 10. Aircraft #2, reported ready for departure Runway 28 (opposite direction). TC advised Aircraft #2 to hold short. Aircraft #2 responded with his call sign and "Position and Hold." TC did not catch the error. TC then observed Aircraft #2 enter Runway 10 departure end. TC aborted Aircraft #1's take-off clearance. Closest horizontal separation was reported as 2,500 feet.

Sometimes communication errors are discovered and corrected in the readback or hearback phase. At other times, the communication errors are missed and the ensuing operation compromises safety standards. However, through pilot/controller intervention, and sometimes by pure coincidence, some incidents do not result in an accident. Unfortunately, as illustrated by the following two examples, there are instances when communication errors and omissions have led to fatal results.

Sarasota, Florida - March 9, 2000

Runway 14 at Sarasota-Bradenton International Airport (SRQ) was being used for both full-length and intersection departures. Aircraft originating from the fixed base operator (FBO) on the south side of the runway were being taxied to the approach end of the runway for takeoff via Taxiway Alpha. Aircraft originating from the FBO on the north side of the runway were normally assigned intersection departures from Taxiway Foxtrot. (Taxiway Foxtrot was located approximately 1300 feet from the approach end of Runway 14.)

A Cessna 152 with an instructor and student on board called ground control (GC) requesting a visual flight rules departure. He was instructed by GC to "Taxi to Runway 14." The aircraft taxied via Taxiway Alpha to the approach end of Runway 14.



Less than three minutes later, the pilot of a Cessna 172 called GC and indicated he was at the FBO on the north side and "Ready to taxi." (The Cessna 172 had two occupants–the pilot-in-command who was in the right seat and a Canadian registered pilot who was in the left seat.) The GC instructed him to "Taxi to Runway 14." Although the aircraft's location would have suggested an intersection departure, the GC annotated the flight progress strip as if the aircraft would be making a full-length takeoff. (The GC later told investigators that he did not recall the C172 pilot indicating he was on the north side of the runway and since he did not mention the Foxtrot intersection in his taxi instructions must have thought the aircraft was on the south side of the runway.) The Cessna 172 pilot held short of Runway 14 at Foxtrot behind a Piper Seneca. The pilot then contacted the Tower Controller (TC) and stated "We're number two and ready for takeoff."

The TC proceeded to clear the Piper Seneca at Taxiway Foxtrot for takeoff on Runway 14 and placed the Cessna 152 in "position and hold" at the beginning of Runway 14.

At this time there was another Cessna 172 on Alpha that was holding for takeoff clearance behind the Cessna 152. Once the Piper Seneca took off, the TC issued a takeoff clearance to the Cessna 152.

(Note: The full-length terminology discussed earlier in this booklet was instituted after this accident.)

Within 6 1/2 seconds of receiving acknowledgment of Cessna 152's takeoff clearance, the TC, thinking that the Cessna 172 at Foxtrot was the aircraft located at Alpha, issued position and hold instructions to the pilot. The pilot proceeded to taxi onto the runway at Foxtrot into the path of the departing Cessna 152. All four people in the two aircraft were killed in the collision.

Lessons Learned from Sarasota:
The GC erred in failing to hear that the Cessna 172 was on the north side of the field and in failing to mark the flight strip accordingly. However, there was at least one clue that should have made the Cessna 172 pilot suspicious about the "position and hold" instruction that he received from the TC - the controller did not mention the intersection. There are three other actions that the Cessna 172 pilot could have taken that may have prevented the collision:

- *specifically stating he was at an intersection as part of his initial contact with Tower control would have informed the TC that he was not at the approach end of the runway,*
- *specifically stating he was at an intersection in acknowledging the "position and hold" instruction could have alerted the controller that he had given the instruction to the wrong aircraft and allowed him to take corrective action, and*
- *scanning the runway prior to entry probably would have revealed the Cessna 152 on takeoff roll.*

(Note: We have extracted the pertinent facts from this accident for the purpose of illustrating the communications aspect. The full accident report can be obtained from the NTSB's website: http://NTSB.gov)

Quincy, Illinois - November 19, 1996

Late in the afternoon of November 19, 1996, United Express 5925 was approaching Quincy Municipal Airport (UIN), a non-towered airport near Quincy, Illinois. Visibility was reported as 12 miles with a 13,000 feet broken ceiling and 20,000 feet overcast. According to the cockpit voice recorder (CVR), the captain announced on the UIN common traffic advisory frequency (CTAF) that the flight was 30 miles north of the airport and was planning to land on Runway 13. The captain also asked "any traffic in the area to please advise." No replies were received to this request.

A little more than 3 minutes after this request, a person on board a King Air announced on the CTAF that they were taxiing out for takeoff on Runway 4. (Runway 4 and Runway 13 intersect.) Shortly after that transmission, the pilot of a Cherokee announced that he was also taxiing for takeoff on Runway 4. Both planes were taxiing to the approach end of Runway 4 for a full-length takeoff.

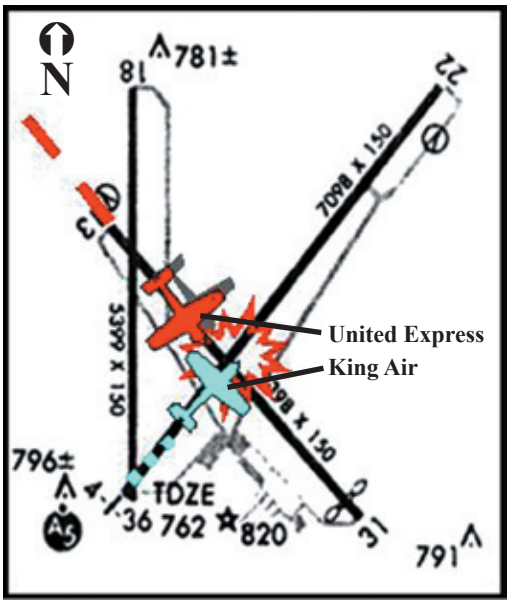
United Express 5925 heard both of these transmissions. Approximately a minute later, the captain announced they were 10 miles north of the airfield and would enter a left downwind for Runway 13, and asked any other traffic to please respond. No replies were received to this request.

About two minutes later, the same person on the King Air announced that they were holding short of Runway 4, but would be taking the runway for departure and heading southeast. According to the Cherokee pilot whose aircraft was located behind the King Air, the King Air then taxied into position on Runway 4.

Approximately 30 seconds later, the captain announced that United Express was about to turn a five mile final for Runway 13. Approximately 45 seconds later the captain announced that United Express was on a short final for Runway 13 and asked if "the aircraft gonna hold in position on Runway 4 or you guys gonna takeoff?"

The King Air did not respond to this request. However, about 15 seconds later the Cherokee pilot responded "Seven Six Four Six Juliet...holding...for departure on Runway 4." The CVR then recorded an interruption in the Cherokee transmission by a mechanical "200 feet" alert from the ground proximity warning system. The CVR then recorded the last part of the transmission from the Cherokee pilot: "[unintelligible word] on the uh, King Air."

The captain then replied, "okay, we'll get through your intersection in just a second sir [unintelligible word] we appreciate that."



The NTSB calculated that the King Air began its takeoff roll on Runway 4 about 13 seconds before the United Express touched down on Runway 13. The two planes collided at the intersection of the two runways. According to the Cherokee pilot, the King Air was in position on the runway for about a minute and he did not hear the King Air make any takeoff announcement over the CTAF, and none was recorded on the CVR of the United Express plane.

The two crew members and the ten passengers on the United Express flight were killed in the accident along with the two people on board the King Air.

Remains of the United Express 5925 after the collision and ensuing fire.

The NTSB determined that the probable cause of the accident was the failure of the pilots of the King Air "to effectively monitor the common traffic advisory frequency or to properly scan for traffic, resulting in their commencing takeoff roll" when the United Express was landing on the intersecting runway. (*Note: The pilot in command of the King Air was a retired airline and military pilot with over 25,000 flight hours. The other pilot on the King Air had a commercial pilot certificate and over 1,400 hours of flight time.*)

Contributing to the cause of the accident was the Cherokee pilot's interrupted radio transmission that led to the United Express crew's misunderstanding that the King Air would not takeoff until United Express had cleared the intersection. (*Note: The pilot of the Cherokee had received his private pilot certificate 9 months before the accident and had 80 hours of flight time in the Cherokee.*)

Lessons Learned from Quincy:

Always monitor and transmit your intentions on the CTAF when operating at a non-towered airport.

If a radio transmission is interrupted, e.g., stepped on, ***do not assume*** *you can fill in the missing parts. Ask the sender to "Say Again."*

(Note: We have extracted the pertinent facts from this accident for the purpose of illustrating the communications aspect. The full accident report can be obtained from the NTSB's website: http://NTSB.gov)

Standard Aviation Phraseology and Phonetic Alphabet

This section contains a glossary of phraseology commonly used in surface operations. For a complete listing of all aviation phraseology, consult the Pilot/Controller Glossary section of the Aeronautical Information Manual (AIM).

- ACKNOWLEDGE – Let me know that you have received my message.
- ADVISE INTENTIONS – Tell me what you plan to do.
- AFFIRMATIVE – Yes.
- EXPEDITE – Used by ATC when prompt compliance is required to avoid the development of an imminent situation. Expedite climb/descent normally indicates to a pilot that approximate best rate of climb/descent should be used without requiring an exceptional change in aircraft handling characteristics.
- FINAL – Commonly used to mean that an aircraft is on the final approach course or is aligned with a landing area.
- HOLD FOR (takeoff clearance, release, landing/taxiing aircraft, etc.) – Stay in place; where you are currently located.
- HOW DO YOU HEAR ME? – A question relating to the quality of the transmission or to determine how well the transmission is being received.
- IMMEDIATELY – Used by ATC or pilots when such action compliance is required to avoid an imminent situation.
- NEGATIVE – "No," or "permission not granted," or "that is not correct."
- POSITION AND HOLD – Used by ATC to inform a pilot to taxi onto the departure runway in takeoff position and hold. It is not authorization for takeoff. It is used when takeoff clearance cannot immediately be issued because of traffic or other reasons.
- READ BACK – Repeat my message back to me.

- ROGER – I have received all of your last transmission. It should not be used to answer a question requiring a yes or no answer. (See Affirmative, Negative).
- STAND BY – Means the controller or pilot must pause for a few seconds, usually to attend to other duties of a higher priority. Also means to wait, as in "stand by for clearance." The caller should reestablish contact if a delay is lengthy. "Stand by" is not an approval or denial.
- UNABLE – Indicates inability to comply with a specific instruction, request, or clearance.
- VERIFY – Request confirmation of information (for example, "verify assigned altitude").
- WITHOUT DELAY – With a sense of urgency, proceed with approved instructions in a rapid manner.
- WILCO – I have received your message, understand it, and will comply with it.

International Civil Aviation Organization (ICAO) Phonetics

ICAO has adopted the following words to reduce confusion that may result from similar sounding letters and numbers.

A – Alfa	S – Sierra
B – Bravo	T – Tango
C – Charlie	U – Uniform
D – Delta	V – Victor
E – Echo	W – Whiskey
F – Foxtrot	X – X-ray
G – Golf	Y – Yankee
H – Hotel	Z – Zulu
I – India	0 – Zee-ro
J – Juliet	1 – Wun
K – Kilo	2 – Too
L – Lima	3 – Tree
M – Mike	4 – Fow-er
N – November	5 – Fife
O – Oscar	6 – Six
P – Papa	7 – Sev-en
Q – Quebec	8 – Ait
R – Romeo	9 – Niner

➢ Taxi Instructions

• Initial Call for Taxi:

Initial contact should include: Who you are calling, Call sign, Position, Request, and ATIS code (if available)

Example:

Pilot: *O'Hare Ground, Cessna Six Seven Six Kilo, ACME Aviation, Ready to Taxi with information Foxtrot.*

Controller: *Cessna Six Seven Six Kilo, O'Hare Ground, Taxi to Runway Two-Two Left.*

• Initial Call-up With Specific Requests:

Example:

Pilot: *O'Hare Ground, Mooney Three One One Echo, ACME Aviation, with information Foxtrot, Request Taxi to Runway Two-Two Right.*

Controller: *Mooney Three One One Echo, O'Hare Ground, Taxi to Runway Two-Two Right.*

• Initial Contact after Landing:

Example:

Pilot: *Concord Ground, Cherokee Three Eight One Six Juliet, Clearing Runway Three Two Right at Echo, Taxi to ACME Aviation.*

Controller: *Cherokee Three Eight One Six Juliet, Concord Ground, Taxi to the Ramp.*

➢ Hold Short Instructions:

A controller is required to obtain a readback for all hold short instructions issued. To minimize the need for additional radio transmissions, it is important that a pilot or vehicle operator always readback the hold short instruction.

• Taxi and Hold Short Instructions:

Example:

Controller: *Bonanza Three One Zero Six Foxtrot, Runway Four, Hold Short of Runway Two Five at Taxiway Delta.*

Pilot: *Bonanza Three One Zero Six Foxtrot, Runway Four, Hold Short of Runway Two Five at Taxiway Delta.*

• Land and Hold Short Instructions:

Land and hold short instructions require a pilot readback.

Example:

Controller: *Baron Five Six Three Hotel, Cleared to Land Runway Three Six Right, Hold Short Runway Five for Departing Traffic.*

Pilot: *Baron Five Six Three Hotel Cleared to Land Runway Three Six Right, Hold Short Runway Five.*

➢ Crossing Active Runways:

Pilots should pay particular attention to instructions that include a runway crossing or hold short instruction. If in doubt of the ATC instruction, verify it. If a pilot receives a clearance to cross an active runway, they should scan the area and proceed without delay.

Example:

Controller: *November Three Eight Six Bravo, Taxi to Runway Two Seven, Cross Runway Three Right.*

Pilot: *Ground, November Three Eight Six Bravo, Verify Clearance to Cross Runway Three Right.*

Controller: *November Three Eight Six Bravo, Affirmative, Cross Runway Three Right.*

➢ Immediate, Expedite, Without Delay:

If given an instruction that includes: "taxi without delay," "immediate," or "expedite," the pilot is expected to comply promptly. If unable, advise ATC immediately.

Example:

Controller: *Mitsubishi Four Five Two Kilo, Runway Two Seven, Cleared for Immediate Takeoff.*

Pilot: *Tower, Mitsubishi Four Five Two Kilo, Unable Immediate Takeoff.*

Controller: *Mitsubishi Four Five Two Kilo, Cancel Takeoff Clearance, Hold Short, Runway Two Seven.*

Pilot: *Mitsubishi Four Five Two Kilo, Holding Short of Runway Two Seven.*

➢ Position and Hold:

It is a recommended Standard Operating Procedure (SOP) to read back "position and hold" instructions (see AC 91-73A).

Example: Full-Length With No Intersection Departures.

Controller: *Cherokee One Two Four Papa Hotel, Runway Two Seven Position and Hold, Traffic a Learjet Six Mile Final.*

Pilot: *Cherokee One Two Four Papa Hotel, Runway Two Seven, Position and Hold.*

Example: Runway being used for both Full-Length and Intersection Departures.

Controller: *Cessna Five Three Two Seven Bravo, Runway One Niner Full-Length, Position and Hold.*

Pilot: *Cessna Five Three Two Seven Bravo, Runway One Niner Full-Length, Position and Hold.*

➢ Intersection Departure:

Example:

Controller: *Aztec Two Four Four Delta, Runway Three Six At Golf Five, Position and Hold.*

Pilot: *Position and Hold, Runway Three Six at Golf Five, Aztec Two Four Four Delta.*

➢ Landing Clearance/Takeoff Clearance:

It is particularly important that pilots acknowledge all landing and takeoff clearances with a call sign. This is especially important at airports with multiple runways in use.

Arrival Example:

Controller: *Baron Six One Three Romeo, Boston Tower, Runway Niner Right, Cleared to Land.*

Pilot: *Baron Six One Three Romeo, Cleared to Land Runway Niner Right.*

Departure Example:

Controller: *Cherokee Two Seven Two Six Two, Charlotte Tower, Runway Two Three, Cleared For Takeoff.*

Pilot: *Cherokee Two Seven Two Six Two, Cleared for Takeoff, Runway Two Three.*

➢ Runway Exiting:

Pilots are expected to exit the runway at the first available taxiway or as instructed by ATC. Pilots should remain on tower frequency until advised to contact ground control.

Example:

Controller: *Duke Four One Two Six, Turn Right on Taxiway Golf and Contact Ground Control on Point Niner.*

Pilot: *Duke Four One Two Six, Roger.*

➢ Braking Action Reports:

When a braking action report is requested from a pilot, the condition should only be described in the following terms:

1) Good
2) Fair
3) Poor
4) Nil

Braking actions that affect only a portion of a runway or taxiway should be reported as such.

Example:

Controller: *Mitsubishi Two Two Six Three Three, Say Braking Action.*

Pilot: *Mitsubishi Two Two Six Three Three, Braking Action on Runway One Two is Good First Half of the Runway, Fair on the Second Half.*

Controller: *Mitsubishi Two Two Six Three Three, Roger, Thank You.*

➢ **Non-Towered Airports:**

Arrival Example:

Frederick traffic, Apache Two Two Five Zulu, (position), (altitude), (descending) or entering downwind/base/final (as appropriate) Runway One Two full stop, Frederick.

Frederick traffic, Apache Two Two Five Zulu, clear of Runway One Two, Frederick.

Departure Example:

Frederick traffic, Queen Air Seven One Five Five Bravo, (location on airport), taxiing to Runway Two Three, Frederick.

Frederick traffic, Queen Air Seven One Five Five Bravo, departing Runway Two Three. Departing the pattern to the (direction), climbing to (altitude), Frederick.

This booklet contains many guidelines about communications, as well as information contained in the AIM. We recognize that to the new pilot or the pilot who only flies into an airport with a control tower occasionally, the task of communicating with ATC or other pilots may seem overwhelming, and may result in some pilots trying to avoid situations where they should be communicating on the radio. For this reason, it's imperative that pilots understand their role in safe surface operations.

"The single most important thought in pilot-controller communications is understanding...Brevity is important, and contacts should be kept as brief as possible, but controllers must know what you want to do before they can properly carry out their control duties. And you, the pilot, must know exactly what the controller wants you to do. Since concise phraseology may not always be adequate, use whatever words are necessary to get your message across."

-- AIM

Looking forward to hearing you on the frequency!

produced by:

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