

Pilot–Controller Communications Review (AIM)

Purpose: a quick, plain-language review of how to talk to ATC, what the key words really mean, and how (and when) to comply with clearances.

1. Why We Talk: Understanding Comes First

- The AIM's core idea: the **single most important thought in pilot–controller communications is understanding**.
- Brevity matters, but **clarity beats brevity**. If you're unsure, ask — plain English is always acceptable.
- Good phraseology exists so both sides hear the same thing the same way, every time.

2. Before You Key the Mic

- **Listen first.** Make sure the frequency is clear and you're not stepping on someone or on a controller waiting for a reply.
- **Think before you talk** — know what you'll say so the transmission is short and complete.
- After a frequency change, pause and listen briefly before checking in.

3. The Initial Call-Up

Use this order — **Who you're calling** → **Who you are** → **Where you are** → **What you want**:

Step	Content	Example
1	Facility name	"Springfield Ground..."
2	Full aircraft ID (as filed)	"...Cessna One Two Three Four Alpha..."
3	Position (when on the airport surface)	"...at the FBO ramp..."
4	Request / type of message	"...taxi, IFR to Kansas City."

- Once ATC abbreviates your call sign, you may use the abbreviated form — but don't abbreviate first.

4. Key Words and What They Actually Mean

Word / Phrase	Meaning	Does NOT mean
Roger	I have received all of your last transmission.	Yes, approval, or "I'll comply"
Wilco	I have received your message, understand, and will comply .	—
Affirmative	Yes.	—
Negative	No / permission not granted / that is not correct.	—
Unable	I cannot comply with that clearance or instruction.	Silence — say it out loud
Stand by	Wait; I'll get back to you.	Approval or denial
Say again	Repeat your last transmission (or the part named).	—
Negative contact	I don't see the traffic you called / I couldn't reach the facility on that frequency.	—

REMEMBER

- **Roger ≠ yes.** Answer a yes/no question with **Affirmative** or **Negative**.
- **Stand by ≠ approval.** Nothing has been cleared until ATC actually says so.

5. Frequency Changes

- **Acknowledge first, then switch.** A quick readback of the new frequency confirms you got it.

- **Timed or fix-based changes** ("At ALPHA, contact Center on..."): **stay on the current frequency until reaching the fix/time**, then switch.
- If you can't raise the new facility, go back to the previous frequency and say so.

6. Numbers, Altitudes, and Time

- Say digits individually; "**niner**" for 9.
- Altitudes: thousands and hundreds — **12,500 = "one two thousand five hundred"**; 4,000 = "four thousand."
- At/above FL180: "**flight level**" + digits — FL190 = "flight level one niner zero."
- Time: FAA operations use **UTC ("Zulu")** on the **24-hour clock** — 1430Z = "one four three zero Zulu."

7. Readbacks

- Airborne pilots should read back the parts of clearances containing **altitude assignments, vectors (headings), and runway assignments** — mutual verification.
- **Always include your call sign** so ATC knows who acknowledged.
- **Charted altitudes on DPs/STARs** generally are **not** read back **unless the controller specifically stated them**.
- On the ground: **always read back hold-short instructions**.
- Readback is a safety net, not a guarantee — if ATC's response doesn't match, speak up.

8. When and How to Comply

- Execute clearances **upon receipt** unless ATC says otherwise.
- "**Immediately**" means **urgent, for safety** — act now, no delay.
- Climb/descend at an optimum rate; if you can't maintain **at least 500 fpm** when practicable, **advise ATC**.
- If you can't comply with anything, say "**Unable**" promptly — don't quietly do something else.

9. Pilot's Discretion (PD) Descents

- **PD** = you choose **when to start** and **what rate** to use, and you may level off temporarily at intermediate altitudes.
- **Once you vacate an altitude, you may not return to it** without a new clearance.
- A plain "**descend and maintain**" with no PD means **start the descent promptly** — it is **not** pilot's discretion.

REMEMBER

- **PD trap**: left 9,000 heading for 5,000? You can level at 7,000 — but you **can't climb back to 9,000** without asking.

10. Amended Clearances, Safety, and Deviations

- **New altitude + crossing restrictions omitted = restrictions canceled**. If ATC changes or restates your altitude and doesn't restate prior altitude crossing restrictions (including on DPs/STARs), those restrictions are canceled.
- **PIC is the final authority**. If a clearance would compromise safety or cause a regulation violation, **request an amended clearance**.
- **Emergency deviation**: do what's needed, **notify ATC as soon as possible**, and **get an amended clearance**.
- **TCAS RA**: follow the RA, **tell ATC ASAP**, and return to your clearance once clear of conflict.

REMEMBER

- **Omitted = canceled**. When the new altitude clearance doesn't repeat a crossing restriction, that restriction is gone.

11. "Cleared as Filed"

- Covers your **filed route and destination** (as amended by any DP issued).
- Does **NOT** include your **filed en route altitude** — ATC states the altitude separately (often "maintain ___, expect ___ in ten minutes").
- If no altitude is given, **ask** before departure.

REMEMBER

- **As filed ≠ altitude.** Route and destination yes; filed cruise altitude no.

12. Ground Operations

- **Line up and wait (LUAW)** = taxi onto the runway and hold. It is **not a takeoff clearance**.
- **Runway crossings require explicit clearance** for each runway — a taxi route alone doesn't authorize crossing.
- **Read back all hold-short instructions** with your call sign.
- Unsure of your position or the route? **Stop and ask** — that's always the right call.

REMEMBER

- **LUAW ≠ takeoff.** Wait for "cleared for takeoff." If held a long time, check in with tower.

13. Light Gun Signals (Lost Comm)

Signal	In Flight	On the Ground
Steady green	Cleared to land	Cleared for takeoff
Flashing green	Return for landing	Cleared to taxi
Steady red	Give way to other aircraft and continue circling	Stop
Flashing red	Airport unsafe — do not land	Taxi clear of runway in use
Flashing white	N/A	Return to starting point on airport
Alternating red/green	Exercise extreme caution	Exercise extreme caution

Quick Reference — Top Traps & Rules

Topic	Rule of Thumb
Big idea	Understanding is the most important thought.
Before talking	Listen — frequency clear?
Call-up order	Facility → full ID → position (ground) → request
Roger	Received — not yes
Wilco	Received, understand, will comply
Stand by	Wait — not approval or denial
Unable	Say it; don't silently deviate
Freq change	Acknowledge, then switch ; timed change = stay until the fix/time
12,500 ft	"One two thousand five hundred"
Time	UTC / Zulu , 24-hour
Readback	Altitudes, headings, runways + call sign; hold-short always
Charted DP/STAR altitudes	Not read back unless ATC stated them
"Immediately"	Urgent — safety
Climb/descent rate	≥ 500 fpm when practicable, or advise ATC
Pilot's discretion	Start when/at what rate you want; can't return to a vacated altitude
"Descend and maintain"	No PD = start promptly
New altitude, restriction omitted	Restriction canceled
Unsafe clearance	PIC = final authority → request amendment
Emergency / TCAS RA	Deviate, notify ATC ASAP , get amended clearance
Cleared as filed	Route + destination — not altitude
LUAW	Not takeoff clearance
Runway crossing	Explicit clearance required
Steady red (in flight)	Give way, keep circling