

ATC RADIO COMMUNICATIONS

Note: These documents are for training and reference purposes only and are never meant to take the place of your flight instructor. Always check with a certified flight instructor, your airplane manuals, and official FAA documentation during your flight training.

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WHO IS ATC?

Before we talk about how to talk on the radio, let's talk about WHO we're talking to. With so many names and frequencies, it can be confusing. Each frequency and controller have larger and larger areas that they can "control". Let's think of it like law enforcement:

ATC	What they do:	Law enforcement example:
Clearance	Doesn't control anything, just gives you information.	
Ground	Controls any vehicle movement on the ground of the airport.	Town police
Tower	Controls aircraft in the immediate vicinity of the airport, coming into or leaving the airport.	County police
Approach/Departure	Controls aircraft approx. within 50 miles of the airport.	State police
Center	Controls aircraft flying at higher altitudes. Covers several states. In some areas, Center will do the same job as Approach or Clearance. Chart Supplements will tell you who to contact for the airport you're at.	Federal police

HOW TO TALK TO ATC:

Radio communications may seem complicated at first, but with practice, you'll become a pro. Most things a controller will say are standard and always said in the same order.

The order of most of your initial communications is standard, too. Think of these four items: WHO, WHO, WHERE, WHAT.

1. WHO you're talking to
2. YOU; your tail number
3. WHERE you are
4. WHAT you want to do

And occasionally:

5. ATIS

In other words:

			Example
WHO	1. Who you're talking to	Control	<i>South Bend Approach</i>
YOU	2. Who you are	Aircraft ID	<i>Skyhawk 12874</i>
WHERE	3. Where you are	Position	<i>5 miles north of Rochester</i>
WHAT	4. What you want	Request	<i>Inbound for touch and go practice</i>
ATIS	5. You have the weather	ATIS	<i>With Bravo</i>

(Note: don't say, "**This is** Skyhawk 12874" That's implied. You can always tell an amateur because they say, "This is...")

- ATIS needs only be mentioned on first contact with a new control facility when departing or arriving into that controlled airport.
- You won't need to say all five points every time you talk.
- The idea is to keep communications brief. Practice in your head before you push the button. We often shorten communications down to just a few words, e.g. "Skyhawk 874 downwind."
- After tuning into a new frequency, wait a few seconds before speaking so you don't accidentally "step" on another pilot or controller talking on the radio.

WORK ON KEEPING IT SHORT! You can always tell a professional by how few words they say on the radio. The frequency is often busy and the controller doesn't need the radio filled up with unnecessary words.

Radio Call Template:

For going into controlled airspace:

When flying **into controlled airspace**, here is the order and the items needed:

1. APPROACH (or tower) 1, 2, 3, 4, 5
2. TOWER 1, 2, 3
3. GROUND 2, 3, 4

Radio	Frequency		What
South Bend ATIS	120.67		Listen to ATIS, write it down ["Bravo"]
South Bend Approach	132.05	WHO/YOU	South Bend Approach, Cessna 12874
South Bend Approach		WHO/YOU WHERE WHAT ATIS	Approach, Cessna 12874 5 miles north of Rochester, 2000 climbing 3000 feet Inbound With Bravo
South Bend Tower	135.67	WHO/YOU WHERE	Tower, Cessna 12874 Downwind 27L
South Bend Ground	121.7	WHO/YOU WHERE WHAT	Ground, Cessna 12874 On [taxiway] Alpha 4 Going to Wings

For going out of controlled airspace:

When flying **out of controlled airspace**, here is the order and the items needed:

1. CLEARANCE: 1, 2, 3, 4, 5
2. GROUND: 1, 2, 3, 4, 5
3. TOWER: 1, 2, 3, 4
4. DEPARTURE: 1, 2, 3

South Bend ATIS	120.67		Listen to ATIS, write it down ["Bravo"]
South Bend Clearance*	121.9	WHO/YOU WHAT ATIS	Clearance, Cessna 12874 Picking up VFR clearance to RCR With Bravo
South Bend Ground	121.7	WHO/YOU WHERE WHAT ATIS	Ground, Cessna 12874 At Wings Ready to taxi With Bravo
South Bend Tower	135.67	WHO/YOU WHERE WHAT	Tower, Cessna 12874 Holding short of 27L Ready for departure
South Bend Departure	132.05	WHO/YOU WHERE	Departure, Cessna 12874 1500' climbing 3000 [Clearance has already told them WHAT]

* not all airports have a Clearance Delivery. In that case you would go straight to Ground and tell them the same thing you would have told Clearance.

FLIGHT FOLLOWING

"Flight following" or "radar advisories" means staying in constant contact with a tower or flight control center, who watches your position and gives you reports of other traffic in your area when they have the time (which is almost always). ATC will give you a squawk code for your transponder and watch for you on the radar. There are several ways to start flight following.

At a Class C towered airport:

You can ask for help from the tower while you're still on the ground at a towered field:

Pilot: "South Bend Tower, Cessna 12874 at Runway 18, ready for departure, request flight following to Romeo Charlie Romeo (RCR)."

Tower: "12874 roger, squawk 6245."

At a Class D or untowered airport:

Tower may or may not be able to help you with this. ATC may tell you whom to contact once you're flying. Around here, it's most common to get flight following once you're in the air, by contacting South Bend Approach. To do this, tune to 132.05, and say only your call sign and wait for a response. (The approach controllers may be talking on several frequencies at once. They'll reply when able.)

Pilot: "South Bend Approach, Cessna 12874."

Approach: "Cessna 12874, South Bend Approach, go ahead."

Pilot: "12874 requests flight following to Fort Wayne at 5500 feet."

Approach: "874 squawk 5669."

Pilot: "5669, 874."

Approach: "Cessna 874, radar contact 5 miles northeast of Rochester."

Pilot: "Position checks."

The controller will then tell you when other traffic is in your area. Later, he/she will give you to another controller on a different frequency.

Approach: "Cessna 874, contact Fort Wayne on 127.2"

Pilot: "127.2, 874."

When you check in with Fort Wayne, South Bend has already told them you are coming. All you need to say is:

"Fort Wayne Approach, Cessna 12874, 5,500."

This tells them you're on frequency with them, and that your altitude matches what they see on your screen.

PILOT/CONTROLLER PHRASES

Things you might want to say:

(Note: in the following explanations, "ATC" means "air traffic control," also known as the controller. The explanations all assume that you are flying in tail number N12874. As noted, 12874 could be abbreviated to just 874 **after the first call.**)

"..."

Repeat whatever they said. If they say, "874 cleared to land," you say, "Cleared to land, 874." (Note: Typically when reading back, we put the aircraft ID at the end.) It lets them know that you got your instructions, and that you'll follow them. These conversations also get put on to the tape recording, so if anything goes wrong you're safer.

Roger/Wilco

"Roger" means, "I understand." "Wilco" means "I will comply." These are abbreviations used sometimes when the airwaves are very busy, but as a general rule, they aren't a good idea. The problem is that the ATC does not know what you think you understand or will comply with. "Roger," by the way, does not mean "Yes."

Affirmative/Negative:

Pilot-speak for "Yes," and "No." (Short words sometimes can be cut off by the microphone or misunderstood) These are used only in response to a question from ATC.

Say again:

This is the proper form to ask ATC to repeat something.

Request

Use this word to ask for something or prepare ATC for an upcoming request. Example: You're flying in Class C at an assigned altitude of 5,500 feet and there are clouds ahead "South Bend Approach, 12874 request."

South Bend Approach responds: "12874 go ahead."

You answer: "12874 would like to descend to 3,500 because of clouds." Use this word also to make a request at any time, without waiting, e.g. "South Bend Tower, 12874 requests the right base to 27R"

Looking for traffic (or just "Looking")

An acknowledgement after ATC tells you about another aircraft in your area.

Traffic in sight

ATC has given you a traffic report and you see the other aircraft.

Negative contact

ATC has given you a traffic report, and after a reasonable search you still don't see the other aircraft.

Student pilot:

You will be amazed at how much help, cooperation, and forgiveness you can get when you tell them you're a student pilot. If you're having trouble understanding what they're saying or what they want, this is a good phrase to start with. There is no shame in telling them this. Example: "South Bend tower, Skyhawk 12874 student pilot say again?"

Things an air traffic controller might say:

Cleared...

ATC has given you the permission and right to do something. "Cleared to land, runway 36"
"Cleared for takeoff."

Cleared for the option

Said when preparing for a landing, without further clearance you may do any of these things as you wish: full stop, stop-and-go, touch-and-go, or go-around.

Go ahead

Talk to ATC. Perhaps the airwaves have been very busy and you finally manage to get in, saying, "South Bend tower, Skyhawk 12874." Then wait until the tower says, "Skyhawk 12874 go ahead." It's your turn to talk, now.

Report...

ATC is telling you that when you arrive at the given position, you should radio the tower and tell them so. "Report downwind": when you're established on the downwind and are at midfield, call the tower and say, "Skyhawk 12874 downwind." "Report base": call the tower as you start to turn base and say, "Skyhawk 874 turning base."

Say intentions

The controller wants to know what you plan to do. They want to know what you want to do, or what you think you're doing. Then they can give you appropriate guidance.

Maintain...

Stay at a given altitude. "Climb and maintain 4500" means you should climb up to 4500 MSL and stay there until they tell you otherwise. "Maintain 1500 until NIPSCO": do not descend below 1500 until you reach this landmark.

Climb to/descend to...

Go to the altitude they give you.

Fly heading...

Turn to the direction given. "Fly heading 180": go south until told otherwise.

Make [left/right] closed traffic

You are going to work in the traffic pattern, and make left or right turns, as instructed.

You're number [three] following a...

You are in the traffic pattern, and there will be planes landing in front of you. "You're number three following a Cessna" means that one plane is cleared to land, there's a Cessna behind that, and you should be looking for the Cessna so you can follow behind it.

Traffic at two o'clock [high], [three miles] is a [Baron].

The standard traffic advisory: in this example, look forward and to the right for a twin plane above you and a few miles away. This advisory will often be accompanied by information on the direction that the Baron is traveling.

Confirm...

ATC wants you to repeat some instruction you've been given.

Hold short of...

Said when taxiing. Stop before reaching and do not cross the HOLD SHORT MARKINGS on the given runway or taxiway. Always repeat this instruction back to the controller.

Hold short of the ILS critical area

Stay behind not just the runway hold-short solid lines, but behind the ILS hold-short line (looks like a ladder with double rungs).

Line up and wait

Go on to the runway and wait in position to take off.

Recycle

ATC isn't reading your transponder, so they want you to turn your transponder off, then turn it back on again.

Ident

Push the little button on the transponder. This makes your radar blip blossom on their screen, so they can find you easily and know who you are.

Radar contact

ATC is informing you that it has you on radar. You don't need to respond to this.

Contact [tower] on [135.67]

ATC is "handing you off" to another controller, telling you to change your radio frequency and talk to someone else. In this example, you would respond, "12874 contact tower," switch your radio frequency to 135.67, and report by saying, "South Bend Tower, Skyhawk 12874, 27L."

Monitor Ground point Nine

Monitor means to change to that frequency and listen. No need to say anything until they talk to you.

Ground point Nine: All ground frequencies start with the digits 121. Example: 121.7, 121.9, 121.8. So if ATC says "Ground point Nine", you know the first three digits are 121. Therefore, you are tuning in 121.9.

Cleared out of class [D]

ATC is informing you that you are leaving its airspace and can go on your own recognizance. This phrase is often followed by...

Radar service is terminated

ATC is telling you that it will not provide separation or traffic advisories anymore. This phrase is often followed by...

Squawk VFR

Change your transponder code to 1200. And this phrase is often followed by...

Frequency change approved

This call is permission to stop communications with ATC, usually because you're leaving their airspace and continuing on a visual flight.

Resume own navigation

The controller is done giving you headings, he/she is giving you control of how you want to get to your destination. If you're navigating with GPS, now is the time to hit "direct, enter, enter" and start following it to your destination.

Taxi to [runway 27R] [via November and Juliet]

A taxi clearance: if cleared to taxi TO a runway, you are allowed to cross all other taxiways and on the way there, but you must hold short of any runway they have not specifically cleared you to cross, and also hold short of the final runway. They always give the destination first (Runway 27R), and then directions on how to get there (via November and Juliet, cross 27L).

Extend downwind

Don't turn from downwind to base yet. This is to separate your plane from other traffic in the pattern. This is often followed by...

I'll call your base

Stay on downwind, at traffic pattern altitude, until the tower tells you to turn in.

Do a 360 and re-enter the [downwind]

The controller wants you to do a standard two-minute turn-around-a-point in the pattern (360 degrees of turn), and reenter the pattern wherever you left it. This is for spacing purposes. A 360 gives you the perfect opportunity to use that stuff you learned in "turns around a point," and to practice one.

Multiple targets from surface to [3,000 feet]

A "target" is an airplane, or something showing up on their radar. So they're telling you that

there are several airplanes in the area you're about to fly through. This might be near an airport or fly-in.

Continue, traffic is holding in position

ATC may tell you this if they have cleared you to cross a runway or land on a runway and it appears that another aircraft is taxiing to your runway. Always verify the traffic is actually waiting for you.

EXAMPLE CONVERSATIONS

Example conversation **approaching** a Class C controlled airport:

Pilot: South Bend Approach, Cessna 12874

Approach: Cessna 12874, go ahead

Pilot: Cessna 12874, 5 miles north of Rochester, 2000 climbing 3000 feet, inbound with Bravo

Approach: Roger, squawk 1234

Pilot: Squawk 1234, 12874

Approach: Cessna 12874 radar contact 7 miles north of Rochester, altitude 2500

Pilot: position and altitude checks (you're telling them that what they see on their screen is the same as where you are)

Approach: Fly heading 360, vectors for 27L

Pilot: Fly 360

Approach: Report airport in sight

Pilot: Airport in sight

Approach: cleared visual approach 27L (note: if you are unsure of where YOUR runway is, feel free to ask ATC for "vectors to final" where they give you headings to line you up with the runway).

Pilot: Cleared visual 27L

Approach: Contact tower on 135.67

Pilot: Contact tower, 874

- *Switch to Tower frequency* -

Pilot: Tower, Cessna 12874, visual [or downwind] 27L

Tower: 12874, cleared to land, 27L

Pilot: Cleared to land 27L, 12874

Tower: Say parking

Pilot: Wings Aviation, 12874

After landing:

Tower: 874, contact ground [or “stay with me” ...don’t change frequencies]

Pilot: Contact ground, 874 [or “stay with you, 874”]

Example Conversation **departing** a controlled airport:

Pilot (after listening to ATIS): Clearance, Cessna 12874, picking up VFR clearance to RCR with Bravo

Clearance: Cessna 12874, fly runway heading, maintain at or below 3000, squawk 4556. Contact Ground-point-seven when ready to taxi.

Pilot: Fly runway heading, maintain at or below 3000, squawk 4556, contact ground when ready to taxi.

After switching to ground

Pilot: Ground, Cessna 12874, at Wings Aviation, ready to taxi with Bravo

Ground: Cessna 12874, taxi to Runway 27L via Alpha (taxi instructions always start with your **destination** and then **how to get there.**)

Pilot: Taxi Runway 27L via Alpha, 12874

After passing the last taxiway to the runway, it is expected that you automatically switch to tower frequency.

Pilot: Tower, Cessna 12874 holding short of 27L, ready for departure.

Tower: Cessna 12874, winds are 250 at 10, gusting to 15, fly runway heading, Runway 27L cleared for takeoff.

Pilot: Fly runway heading, cleared for takeoff 27L, 12874 (the winds are just information, no need to repeat it back)

After taking off

Tower: Cessna 12874, turn left heading 180, contact Departure.

Pilot: 180, contact Departure, 12874

After switching to Departure

Pilot: Departure, Cessna 12874, 1500 climbing 3000 (this tells them your altitude and their computer match)

Departure: Cessna 12874, roger, maintain VFR at or below 3000, resume own navigation.

Pilot: Maintain VFR at or below 3000, resume own navigation, 12874

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