

The following pages were excerpted from our [IFR Communications Manual](#).

IFR Communications

A Pilot-Friendly® Manual



Master IFR Radio Communications with this Simple Guide

Request a Specific Approach

When conditions at your destination are marginal, or there's more than one published instrument approach, you'll get a heads up as to which approach to expect. The simplest way is via the ATIS for that airport (page 10). The controller will also tell you the approach in use, and will often ask if you have the current ATIS information.

A controller telling you which approach to "expect" ② isn't a clearance. It's subject to change due to weather, winds, and runways in use.

Whatever approach ATC has in mind, you can request a different one. Reasons might include your comfort level flying a particular type of approach, your airplane's capabilities (equipment or climb rate for the missed approach), weather along the approach path, or equipment at the airport. Or, you may just want to practice flying a specific approach.

Simply ask for what you want ③. There's no need to state a reason, if it's a request. You should tell the controller why if you simply can't accept an approach, such as your onboard equipment is broken.



- ① PILOT
NorCal Approach, Cirrus Eight Eight Seven Two Bravo, level one two thousand with information Victor.
- ② APPROACH CONTROLLER
Cirrus Seven Two Bravo, NorCal Approach. Expect vectors to the ILS X-Ray Runway One Six Right. Descend and maintain ten thousand.
- ③ PILOT
NorCal Approach, Cirrus Seven Two Bravo. Request vectors for the RNAV X-Ray One Six Left approach.
- ④ APPROACH CONTROLLER
Cirrus Seven Two Bravo ... uh ... we can do that. Fly heading three two zero, vectors for the RNAV X-ray One Six Left approach. Descend and maintain one zero, ten thousand.
- ⑤ PILOT
Heading three two zero. Leaving twelve thousand for ten thousand. Thanks.
Cirrus Seven Two Bravo.

Northwest-bound on V105 approaching RYANN
Southeast of Reno, NV
NorCal Approach 119.2

There are limits to what a controller will approve. Had you requested an RNAV approach to Runway 34L or 34R, it would likely be declined, as that would be against the flow of other traffic into Reno.

TIP

If visibility is low, request the approach with the best approach and runway lighting.

GET THE DESTINATION DATA EARLY SO YOU CAN MAKE APPROACH PLANS

When your destination airport has approach control services, has two or more published instrument approach procedures, and the visibility is below three miles and the ceiling is below the highest initial approach altitude for those approaches, your controller (or the ATIS) should let you know which approach to expect. That's the norm when IFR to a towered airport destination.

When you're flying IFR to a non-towered airport, the controller will ask if you have the current weather, or give you the nearest weather if there's no automated weather at your destination. If conditions aren't VFR, the controller will then query, "Say approach request."

Either way, it behooves you to get all your destination airport information as early as practical. This is where datalink weather, such as FIS-B, is extremely helpful. You can take a guess which runway(s) and approach(es) are likely in use before you can even tune the ATIS or ASOS.

● IFR

50m ago
(ADS-B)

**KSNC 271735Z AUTO 00000KT 1SM +RA
SCT008 BKN021 OVC035 10/09 A2985 RMK
AO2**

Remember, that these are METARs, and the winds are shown in degrees true, not degrees magnetic. Depending on where your destination is located, that could make a big difference. They're also only updated hourly.

You can ask ATC for weather at an airport well ahead of you, so long as they aren't too busy. If they are, there's always leaving the frequency to call Flight Service (page 70).

If the weather at your destination is low, you might want to ask your controller if any aircraft have had issues on the approach or gone missed approach. That might affect your approach planning and request.

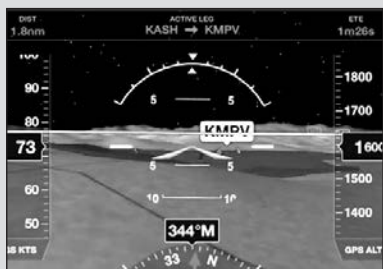
NIGHT ARRIVAL? FLY AN APPROACH

If the weather at your destination meets certain criteria, you may simply get a vector for a visual approach (page 98). You're still IFR, but you'll be flying to the airport visually, and it's assumed by the most direct route. More importantly, you take responsibility for terrain and obstacle clearance.

That might be fine with you, or it might be an invitation to ruin your day. If it was night time, or even if the airport was unfamiliar to you, flying a published approach keeps you clear of terrain and sets you up for a straight-in landing. The published approach costs more time than the visual, but it enforces more structure, which can be safer.

When you're descending for the destination and the controller tells you to expect the visual, or gives you a vector for a visual approach, that's the time to request a published approach. This request can't be denied. You're IFR and

entitled to fly a full approach whenever you request one (although there may be a delay).



PLANNING THE DESCENT

Descent planning is a science of numbers—if you can start down whenever you please. It's a game of trust when ATC has control of your altitude. If you're part of a long line of aircraft arriving at a busy hub, it's usually not an issue. Every inbound flight follows the same path, and someone ahead of you would have already made a snide remark about the "slam dunk" approach. Approaches to smaller airports might not work out as well.

For this reason, start figuring out your descent while you're still enroute. If you're getting nervous about losing enough altitude for the approach, ask for a lower altitude. If need be, you can request a few turns in a hold at the beginning of the approach to lose altitude, as well.

THE STRUCTURE OF APPROACH CLEARANCES

Before getting into examples of approach clearances, it's worth breaking down their structure. The number of elements in the clearance increases as the approach clearance gets more specific, but they come in a predictable order.

"[Call sign] cleared approach," is the simplest form, although you'll rarely hear it. "Cirrus Seven Two Bravo, cleared approach," would give you permission to follow a published route (such as an airway) to any feeder, or IAF, for your destination airport. This is for low-traffic airports only.

"... cleared [approach type] approach" works when there's only one of a specific type of approach to the airport. If the only ILS at the airport is to Runway 07, then you could hear "Cirrus Seven Two Bravo, cleared ILS approach."

"... cleared [approach type]-[letter] approach" is for approaches with only circling minimums. These approaches serve no specific runway. Letters are from the start of the alphabet, such as "Cirrus Seven Two Bravo, cleared VOR Alpha approach."

"... cleared [approach type] [Runway] approach" is used when there are approaches of the same type to multiple runways. If there were RNAV approaches to Runways 30 and 12, then, "Cirrus Seven Two Bravo, cleared RNAV Runway 30 approach," specifies which one you're cleared to fly.

"... cleared [approach type] [Runway] [letter] approach" happens when there are multiple approaches of the same type to the same runway, such as two versions of an ILS with different requirements. These letters are from the end of the alphabet, such as "Cirrus Seven Two Bravo, cleared ILS Zulu Runway 22R approach."

"... cross [fix] at or above [altitude] ..." can come at the start of the clearance to prevent early descent. Approach clearances automatically grant descent pilot's discretion, if the pilot is on a published route (airway, feeder, or approach). So, "Cirrus Seven Two Bravo, cross HAVEN at or above 3000, cleared ILS approach," means pilot's discretion to 3000 feet until HAVEN, and pilot's discretion on descents for the remaining approach.

INE		AL-6863 (FAA)	17061
Idg	N/A	RNAV (GPS)-D STEVEN A BEAN MUNI (SBH)	
E	N/A		
Elev	1825		
DME/DME RNP-0.3 NA. Obtain local altimeter setting on CTAF; when not received, use Berlin altimeter setting.			
		MISSED APPROACH: Climbing right turn to 6000 direct SHINY and hold, continue climb-in-hold to 6000.	
AWOS-3PT 118.00		BOSTON CENTER 124.25 290.5	UNICOM 122.8 (CTAF) 0

NE		AL-909 (FAA)	17061
APP CRS 075°	Rwy Idg TDZE Apt Elev	6389 241 244	ILS or LOC RWY 7 SANFORD SEACOAST RGNL (SFM)
Local altimeter setting not received, use Rochester, NH altimeter setting: increase all 479; increase all MDA 40 feet and S-LOC 7 Cat B and Circling Cats B/C/D visibility 1/2 mile and XAWFE fix minimums S-LOC 7 Cats C/D and Circling Cat C visibility 1/2 mile. pter visibility reduction below 3/4 SM NA. **DME from ENE VOR/DME			
MISSED APPROACH: Climb to 2500 direct ENE VOR/DME and hold, continue climb-in-hold to 2500.			
DS-3PT 1025	PORTLAND APP CON *	CLNC DEL 121.725	UNICOM 123.075 (CTAF) 0

"... [distance] from [fix], fly heading [number], maintain [altitude] until established, ..." would be added if the aircraft was being vectored to the final approach course, and ATC combined the final heading with the approach clearance: "Cirrus Seven Two Bravo, four miles from SAPPI, fly heading 270, maintain 2000 until established, cleared RNAV Runway 29 approach." The distance is required any time the aircraft isn't established on a published route, including clearance to the IAF for a TAA (See "Terminal Arrival Areas Simplify Vectors and Communications" on page 109).

A controller may even toss in one more instruction, such as contacting tower or maintaining best forward speed until a specific fix.

Because approach clearances follow this standard format, and controllers issue them all day, they tend to say them at espresso speed. If you miss some items, read back the parts you understood, and then add, "Say again approach clearance."

A detail overlooked by many pilots is that "or" in an Approach Chart such as the "ILS or LOC Rwy 07" means there are actually two approaches co-charted. The approach clearance will be for one of those approaches. If you specifically want the localizer approach, you should ask for it by name. Your clearance would include "cleared localizer Runway 07 approach." You might hear this if the glideslope was out of service and only the localizer approach was available.

You could hear at any time, **"Cancel approach clearance."** This means exactly what it says, and should be followed immediately by instructions, such as a heading and/or altitude to fly (page 97).

Receive an Approach Clearance (with Vectors to Final)

- (1) **APPROACH CONTROLLER**
Cirrus Eight Eight Seven Two Bravo, turn left heading one seven zero, vectors for the ILS Runway Three Five approach. Descend and maintain one thousand eight hundred. Verify you have Sugar Land information Mike.
- (2) **PILOT**
Left to one seven zero, leaving four thousand for one thousand eight hundred. We have Mike. Cirrus Eight Eight Seven Two Bravo.
- (3) **APPROACH CONTROLLER**
Cirrus Seven Two Bravo, turn right heading two six zero.
- (4) **PILOT**
Right two six zero. Cirrus Seven Two Bravo.
- (5) **APPROACH CONTROLLER**
Cirrus Eight Eight Seven Two Bravo, three miles from HULLO, turn right heading three two zero, maintain one thousand eight hundred until established on the localizer. Cleared ILS Runway Three Five approach.
- (6) **PILOT**
Right three two zero, one thousand eight hundred until established. Cleared ILS Runway Three Five approach, Cirrus Eight Eight Seven Two Bravo.
- (7) **APPROACH CONTROLLER**
Cirrus Eight Eight Seven Two Bravo, contact Sugarland Tower, one one eight point six five. Good day.
- (8) **PILOT**
Contact Tower. Cirrus Eight Eight Seven Two Bravo.

Sugar Land Regional Airport (KSGR)

Sugar Land, TX

Houston Approach 123.8

Even though virtually all instrument approaches are designed so you can fly them without assistance from ATC, the assumption is you'll want ATC vectors onto the final approach course.

The first part of vectors to the final approach course (a.k.a. "vectors to final"), is similar to approaching a towered airport VFR. The tower controller might have you approach straight-in if you're aligned with the landing runway already. You might enter on a long base. Or you might fly a downwind, turn base, and then turn final. The same is true when vectored IFR, except the controller will have you turn "downwind" (1) or "base" (3) miles from the airport. This sets you up for the approach clearance.

The secret to mastering approach clearances is that they all follow a common format (see "The Structure of Approach Clearances" on page 89 for the complete picture). The format for vectors to final comes in two flavors.

The more common one for less busy airports is something controllers call "position, turn, altitude, and clearance," or "PTAC" (5). The format is:

[Call sign] [**Position** relative to the FAF].
Turn (left/right) heading [Intercept to the final approach course], maintain [**Altitude**] until established [On the localizer or inbound-course], **Cleared** for the [Name of approach].

The controller may include instructions to contact Tower, or change to CTAF, along with the approach clearance, or give it later (7).

The approach clearance is long, so just read back the essential bits: heading, altitude, and approach name. Things happen fast (especially if you have a tailwind), so it's usually best to start your final turn as you read back your clearance (6). That said, verify that the position the controller states makes sense, and compare the assigned altitude with what you must descend to on the approach. The altitude restriction is only until you're established, after which descent

If you specifically request it, you can get vectored to intercept inside the approach gate, but no closer than the FAF. It's best to ask for this in plain English, but sometimes you'll hear it requested as, "a tight turn onto the localizer."

VECTORS ACROSS THE LOCALIZER

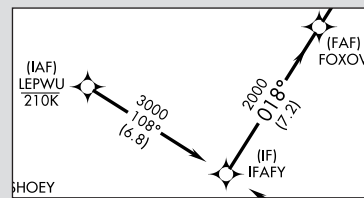
If you were on a vector to the final approach course, and you crossed right through it without a word from ATC, what would you do? You might hold your heading thinking there was a good reason, or you might turn thinking you were forgotten or lost communication.

That's why a controller must inform you whenever a vector will take you across the final approach course, along with the reason, such as: "Expect vectors across final for spacing." (Fun factoid: ATC uses the word "across" rather than "through" because "vectors through the localizer" could sound like "vectors to the localizer," which is exactly the opposite intent.)

If it looks like you'll be crossing the approach course and you haven't been warned—speak up. There are airports where continuing on the last assigned heading could take you into mountains, radio towers, or through the final approach course of another airport. If you can't get a word in on a busy frequency, just push IDENT on your transponder. That'll get the controller's attention.

APPROACH ABBREVIATIONS TO KNOW

You won't hear a controller use these terms, but their roles impact your clearances.



Initial Approach Fix (IAF). If you navigate an approach without any ATC assistance, you start at an IAF, which is the first fix in the approach sequence.

Intermediate Fix (IF). An approach could have one or multiple intermediate fixes between the IAF and the FAF. ATC can vector you to an IF, or onto a segment of the approach connecting an IF or FAF.

Final Approach Fix (FAF). This is the last fix you must be able to identify before descending to a published MDA or DA for the approach. ATC can't vector you onto the approach less than three miles from the FAF unless you request it (see "Controllers Vector You Towards an Unmarked Approach Gate" on page 91.) Usually, the letters "FAF" only appear on RNAV Approach Charts.

KEEP THOSE WAYPOINTS AVAILABLE ON YOUR GPS

If you're receiving vectors prior to the IAF or IF, don't assume you'll be vectored all the way to the final approach course unless the controller says, "vectors to final approach course." You may be vectored for a bit, and then cleared direct to a fix on the approach. You may be asked to maintain an altitude until crossing a fix, which you need the GPS flight plan to identify.



If you activate the "Vectors to Final" feature of your GPS, you may lose all of the fixes outside the FAF—which you now need. This can happen with RNAV approaches, as well as when using GPS to augment ILS approaches.

Newer GPS navigators may keep the fixes visible, but still remove legs from the flight plan you are now expected to fly.

