

ACARS, Big Brother, and the Stabilized Approach

The key to a successful landing really starts at 35,000. Being in the same place at the correct speed every time, all the time, is the ticket to a safe and smooth approach and landing.

I'm going to give you a few "gouges" that are easy to remember and will help you to plan your approaches.

But first, I should warn you that **Big Brother is Watching**. Out in the real world, if your aircraft has ACARS, you can almost guarantee that your chief pilot will automatically be sent an "event" report, should you fly an unstabilized approach.

A number of years ago, the FAA, in conjunction with the airlines and the Airline Pilot's Association developed the FOQA program – Flight Operational Quality Assurance. The program was developed to encourage safety hazard reporting to the FAA without the fear of reprisals.

So, while your unstabilized, or dangerous approach may result in some "counseling", it shouldn't result in your spending, in airline pilot parlance, 3 months "on the beach".

Let's define a stabilized approach and then look at some ways of preventing it, though proper descent planning.

Generally speaking, a stabilized approach is defined as being on course, on glide path, at the proper approach speed, at the beginning of the final approach segment, or FAF in IMC, or at 1000'AGL in VMC.

Most airline's OPS SPECS – operations specifications, REQUIRE a go-around if you are "unstabilized" at those points.

Before we begin our discussion, let me suggest that you memorize or write on a little card, the maximum gear extension (and retraction speed which is sometimes different), and the maximum flap speeds for each flap setting.

Again, **Big Brother is Watching** here too – with most modern aircraft, a speed exceedance will be automatically reported through ACARS to maintenance control, and before you reach your next stop, the aircraft and you will be taken out of service. You can expect a trip

to the Chief Pilot's Office, possibly a trip to the simulator for a checkride, and most likely, the watchful eye of your local FAA air carrier inspector. An inspection of a flap overspeed, especially with today's composite aircraft, can exceed \$25,000, so it's a very serious matter, along with the possibility of course, of ripping off part of the aircraft.

Here are some proven methods to make sure you are in the right place at the right time and stabilized on your approach.

It's critical that you get down to your initial approach altitude and don't find yourself high and fast.

While today's FMC aircraft will plan your descent from altitude to reach a crossing restriction, as they say, garbage in, garbage out. You must input the descent forecast winds and those winds must be accurate.

The Airbus FMC has the annoying habit of, once high on your descent path and after you comply with the suggestion to "add drag", and it still finds itself high on the descent path, it just drops the path calculation altogether, and you can almost hear it say – "oh, sorry about missing your crossing restriction."

It's always a good idea to have in mind how much distance you will need to get down to a certain altitude and ok, here's the gouge:

Gouge 1:

3 to 1 So, if you have 25,000 feet to lose it is going to take you 75 miles.

Now, of course, this isn't perfect and will change if you have a strong headwind or tailwind, and it might not be the most fuel efficient descent, but, believe me, it works great in most cases.

Gouge 2:

Be at 10,000 feet (add 5000' at Denver), **30** miles out, at **250** knots.

Be at 6,000 feet **20** miles out

Be at 3,000 feet **10** miles out

Gouge 3:

As you are approaching the localizer or near the final approach course, fly at 170 to 180 knots at approach flap setting – this varies by aircraft but for simplicity, let's say the 3rd notch from full, if that speed is below the maximum flap speed for the flap configuration.

Then, once you are established on the localizer at the final approach altitude:

Glide Slope Alive: As soon as the glideslope is alive or moving down, Gear Down reduce speed to your approach speed.

A Dot and a Half: At a dot and a half from glideslope intercept, increase your flap setting to one notch from full.

A Half Dot: At ½ dot from glideslope intercept, full flaps.

Ok, now you might ask, what if I intercept the glideslope at 10,000 feet and I'm flying down the glideslope – I don't want to extend the gear at 10,000 feet and waste fuel, dragging it in on final approach, with a very annoyed approach controller.

Well, I'm glad you asked.

In that case, use the simple

Gouge 3.5

3 – 2 – 1

Just use the same procedure above, but substitute 3 miles, 2 miles, and 1 mile from the final approach fix or segment to extend your gear and flaps.

This works great for non-precision approaches!!!

I hope this helps to improve the consistency of your approaches. If I can answer any questions, please don't hesitate to drop me a note:

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