Landing

Note: these are my personal tips and not necessarily procedures.

Bring thrust levers back to idle at about 20' in normal conditions. In gusty condition you may want to carry thrust longer. In gusty conditions I use 10' to go to idle. The aircraft has plenty of airspeed and energy with managed speed being flown and you will not need to delay thrust reduction to ensure proper flare in normal conditions. Don't let nose drop when normal nose down pitch is added at 50' in flare mode. I was used to flying smaller (and shorter geared!) jets and found it helpful to move my aim point on the runway from the 1000' marker to halfway between the 1000' and 1500'. Try to have the flare started by the 10' call. Do not carry thrust to the flare as the autothrust will begin to command climb thrust as speed deteriorates if you do not bring back idle. This will cause a "thrust bump" that will have you floating down the runway with excess energy.

On touch down use positive nose down to lower the nose. Be careful not to let the nose ride up when reverse is selected. Select Full Reverse as you lower nose. As the aircraft slows through 80 knots slowly push the thrust levers back toward idle reverse so as to be at or near idle reverse at 60 knots. Be sure you push the thrust lever all the way back through the detent into forward idle. Then retard the lever again against the stop to ensure minimum forward thrust in idle.

Landing Callouts:

"Pitch" or **"Bank"** if limits exceeded (PM)
"Deployed" when spoilers extended (PM)
Any abnormalities (**Single Reverse**, **No Reverse**, **No Speedbrake**,

No roll out, etc.) (PM)
"Manual Braking" when PF overrides autobrakes (PF)
"Autobrakes Off" when autobrakes disengage (PM)
"80", at 80 knots (PM)
"60", at 60 knots (PM)

Flaps 3 landings will tend to float more than Flaps Full. Be very careful when using Flaps 3 on shorter runways that you ensure touch down in a timely manner. Aircraft seems to level out in flare with Flaps 3 more quickly than with Flaps Full. Use a more "subtle" flare with Flaps 3 than with Flaps Full.

PM should make **"Pitch"** callout if the nose is at 10° or higher (A319, A320) or 7.5° (A321) during flare. Note that some aircraft had an automated PITCH callout installed. PM should make "Bank" callout if bank reaches 7°.

Crosswind Landings – Despite rumors, the Airbus uses conventional crosswind landing technique. Two points however; first, as the Airbus uses roll rate for the ailerons the pilot cannot HOLD the sidestick in the crossed control position. The sidestick must be released once the bank angle is established. Think of "bumping" in the needed bank. It is more intuitive than it sounds! Second, the sidestick is as sensitive in the flare as in cruise. Care must be taken to use measured inputs to the sidestick. The OM recommends aligning the aircraft with the runway centerline during the flare with the rudder. I normally use about 30 ft. to start aligning the nose. Be gentle with the rudder, it won't take much! Maintain the aircraft on the centerline with roll control. Release all roll input when the aircraft is on the ground. Autobrakes are required for crosswind component of 10 kts. or more. Recommend autobrakes for "short, wet, cross, cat" - Short runway, wet or contaminated, crosswind and CAT II/III

A persistent myth is that the Airbus will blend back to direct law during the flare mode. This is not completely true. The aircraft remains in normal law but normal law has a flare mode that begins at 50'. At 50' it takes a "snapshot" and the adds adds a pitch down at 30'. The pitch mode will change to a direct stick to elevator mode with some "damping" for load. Why do they add this pitch down? It is just to add an artificial feel of nose heaviness. Autotrimming is disabled in Flare mode. If autotrim was not turned off for the flare autotrim would just trim off your flare. Then you would balloon and pitch over, it would retrim and you would start all over again. So the pitch over is to give you an artificial back pressure to feel during the flare and Autotrim is turned off to prevent you getting into a situation of "chasing" the pitch. This will give more direct control to pitch but it is not a full blend back to direct. You will go to direct once you are on the ground.

Another common problem is that some folks will reduce the power very slowly. However, remember that autothrust is active until the thrust levers are all the way to idle (assuming autothrust is already active). So once you bring the thrust levers out of the Climb detent you aren't actually reducing thrust until the levers get all the way back to where autothrust has them commanded. You will only be limiting the amount of thrust that can be commanded. If you bring the levers back slowly you are only reducing the maximum amount that can be commanded but not actually reducing the thrust until you get them very far back. If you wait too long you get the thrust bump we just talked about as autothrust is still trying to maintain the speed.

In gusty conditions don't be afraid to use the full throw of the sidestick! In normal smooth air the stick can be very sensitive to slight pressures and is easy to overcontrol. However, in gusty conditions you may need to use full throw of the sidestick. You can always take it back out if you don't need all of it.