# FINAL

https://www.youtube.com/embed/9oDXI_JPQto

## Speed Control

Speed control is different from executing base turns

It is Much easier to do!

It is much harder to trust!

To succeed to must be able to give proper speed control. Not too much, not too little, but preferibly EXCACTLY as I will now describe it... Its a step by step recipe devided into

- Downwind checking in
- Turning Base more than 10 miles
- Turning Base less than 8 miles
- Intercepting ILS
- Established ILS
- Within 10nm
- Within 6nm

Lets begin! The different topics are short.

## Downwind checking in

Airplanes SHOULD be handed over by EKCH_W_APP/EKCH_O_APP maintain 220kts. if less then its for small corrections, and will make no difference.

you first principle lesson is this:

## ***DO NOT change that speed!!!***

The video explained it, I will not explain it again, do not reduce speed so early. It creates troubles you cannot yet see.

220 should be kept until the very moment a base turn is commenced, and should only be different if you have a VERY good reason and is a skilled F_APP controller.

## Turning Base more than 10 miles

Normally (Almost always) when you give a base turn it will be for a minimum of 8 mile final or longer from 2500 feet or higher, and in this case...

**The base turn is where you reduce the speed to 200kts.**

Don't do less, don't do more, but trust that this is a great speed to work with!

**By the way remember to descend them to platform altitude no later than here. preferibly descend them even when they check in**

*Are there any cases where I should NOT use 200kts on base???*

Glad you asked... Yes there is! You may consider less or more when:

- Crosswind of more than 15 knots expected
  - e.g. 22L in use wind 150 at 16 knots. You can expect strong tailwind on right base
- In above case assign 180-190 on the segment with high tailwind base
- Keep 200 on the headwind base
  - Consider 210 in really strong crosswind.
- Other case where you should use another speed is the case described below

## Turning Base less than 8 miles

Sometimes we give a 6 miles final @ 2000' or even 5 miles final @ 1500'. In this case the base leg is situated around 8 miles from the runway, and thats just too close to the runway to have 200kts.

In this case, reduce straight away to 180, or at least be ready to reduce to 180 when established on base.

## Intercepting ILS

When intercepting the ILS is the next thing thats a lesson in trust!

Do NOT change the speed until he is established, and you can see excactly how close you are to the 3nm separation between airplanes.

Only if you see you are below 3nm on an intercept should you reduce speed. Like here:

## Established ILS

Once established on the ILS, it is probably time to reduce the speed.

It depends however on the distance to the aircraft in front.

If aircraft in front is still far ahead?

Keep 200 until 10dme, and then reduce to 180, or 160.

If aircraft in front is a factor

Reduce to 180 when on the localizer, to allow to keep distance to preceeding. Eventually preceeding will slow to 160, and he will catch up to 3nm separation.

If aircraft in front is 3nm ahead

Match the speed to him. But do not go 160 until within 10nm final, otherwise you will slow the aircrafts behind too much.

### Within 10nm

Regardless of separation, and aircraft should be reduced to 180 no later than 10nm final

### Within 6nm

Regardless of separation, and aircraft MUST be reduced to 160 no later than 6nm final as pr. ICAO DOC 4444.

Issuing 160 until 4DME is always the best thing!

180 until 6DME is also an approved option

# Base turns

Giving the base turn at the perfect moment is tricky, but you have to first of all train yourself to not hesitate. It is earlier than you think.

Remember to be ready to put an aircraft on a vector, if you base turn appears later than the Vectors fix (ABEGI,ADOVI,ERPUK,DOPEM)

Regular base turn

The regular base turn is the easierst and most predictable. However, it also takes away a lot of flexibility. Once he is on base, he is easily more commited to the final turn.

Therefore knowing WHEN to issue that base turn to have a perfect 3nm separation is important. Lets look at some different situations to help you.

## 1 - Basic Base turn with preceding already on final

This is by far the easiest. Situations is

BMA2060 on base, speed 220

NSZ81E on final, speed 200

BMA2060 Radar target (Square) is passing NSZ81Es point of his 3nm arrow pointer.

Thats when to turn base. You have a window of +/- 5 seconds to issue the instruction.

You can even issue it slightly before if you like. Especially if you feel it is a slow pilot.

Now BMA2060 is on base, As you see in red you have to evaluate his arrow pointer to the radar target of NSZ81E. Normally it will be enough to an almost immediately turn to intercept.

Blue denotes his 3nm pointer if he had turn directly inbound. There would still have been distance to spare.

Therefore do not hesitate. Give him the inbound turn.

Note at this point NZS81E is 180 as he should be on localiser, and BMA2060 is 200 as he should be on base, so the speed difference will help!

As the inbound turn is given the distance is 3.3nm.

NSZ81E speed is 160 until 4DME

BMA2060 is reduced to 180 as he is inside of 10nm final.

The speed difference will equalize to the fact that becuase BMA2060 has still an intercept heading, separation would normally increase.

Keep BMA2060 on 180 until he is established.

They are established, separation is 3.2 nm. Thats fine!!

Reduce to 160 and handover to TWR. Thats it!

**Remember!**

**When aircraft target passes preceedings 3nm arrow point, turn base!!**

## 2 - Base turn with preceding on intercept

This is relatively easy. You do the same as above, because on intercept there is so little extra track miles, that its a matter of seconds for the turns. Just keep it simple and stick to same procedure as above.

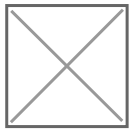
Again, its fine to issue the instruction even a few seconds before!!

3 - Basic Base turn with preceding also on base

This is tricky. You have two different scenarios. From same side or opposide side

Opposite side

Here you have two airplanes on same downwinds, BEL5EP already has base turn instructed. WHEN do you turn in TSA1631??



You just gotta get a feeling for it. Learn how long time it takes for people to start their base turn after instruction is given. and then you must:

Issue the instruction so that base turn from TSA1631 is **COMMENCED** when is passing the extended base path of BEL5EP

Now they should be flying towards eachother but a slight offset. Be carefull with altitudes here. It is easy to mistakenly create Loss of Separation here.

As you turn BEL5EP. BE READY!! To turn TSA1631 inbound right after. It is very difficult to judge but use best judgement on where the 3nm arrow of TSA1631 is, to judge. Lets go through it.

AAs soon as BEL5EP starts the turn, you can see that TSA1631 already has more than 3nm. This is normally because:

Since TSA1631 was number 2 it was likely turned on base slightly later, hence is further from Localizer than BEL5EP. Take into consideration the ~2nm offset, then the difference in location from localizer gives the last mile, and you can turn TSA1631 in immediately after

It worked!!

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