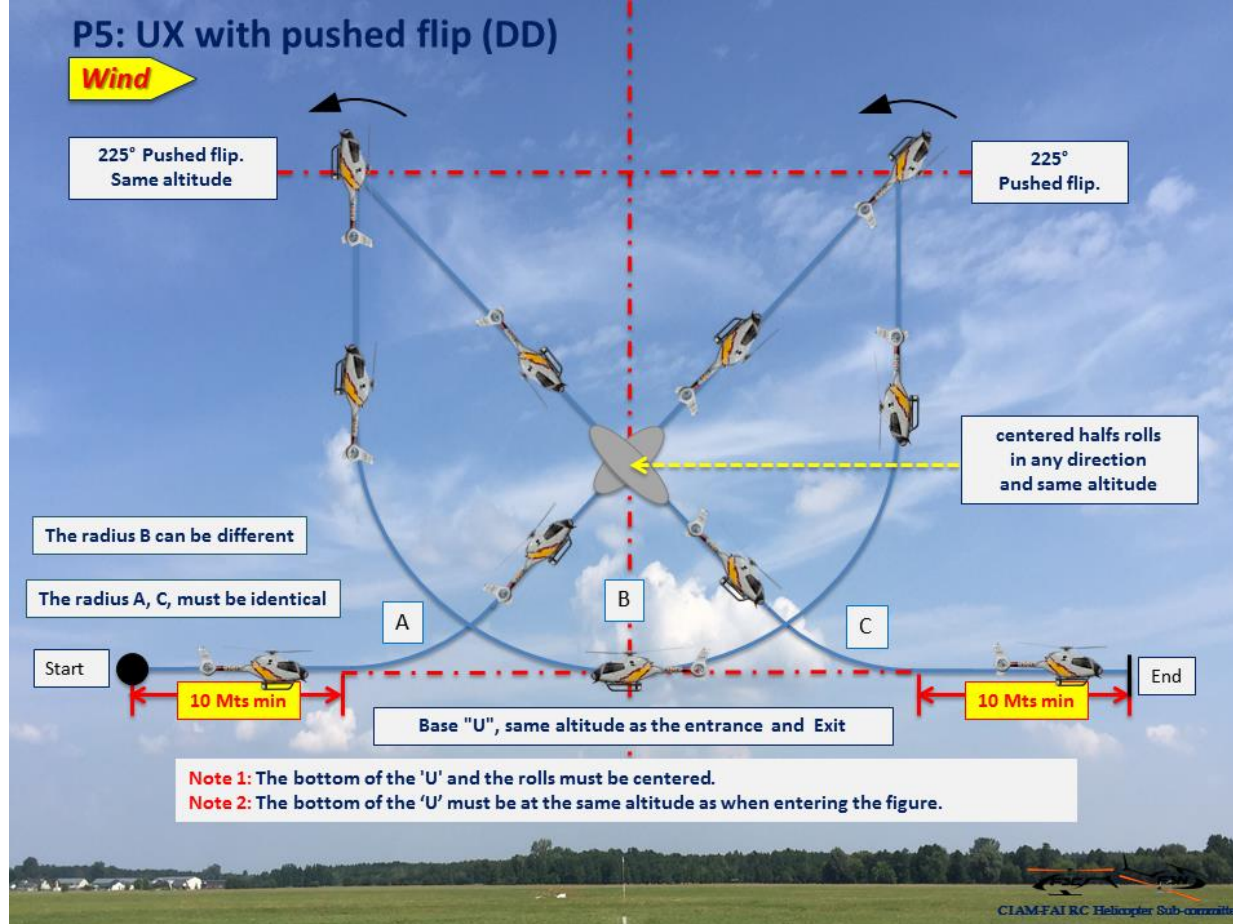


HELP FOR TRAINERS AND PILOTS

P5-UX-2020-2021

By Roger Lacôme





P5: UX with Pushed Flips (DD) K=1.0

MA flies straight and level for a minimum of 10 m and pulls up into a 45° ascent with a centered half roll in any direction. Once the MA has come to a stop, MA performs a 225° pushed flip, Performs a centered 'U', stops, performs a 225° pushed flip, Performs a 45° descent with a centered half roll in any direction. MA pulls into horizontal straight and level flight for a minimum of 10 m.

Note 1: The bottom of the 'U' and the rolls must be centered.

Note 2: The bottom of the 'U' must be at the same altitude as when entering the figure.

P5: UX with pushed flip (DD)

Geometry

Very important

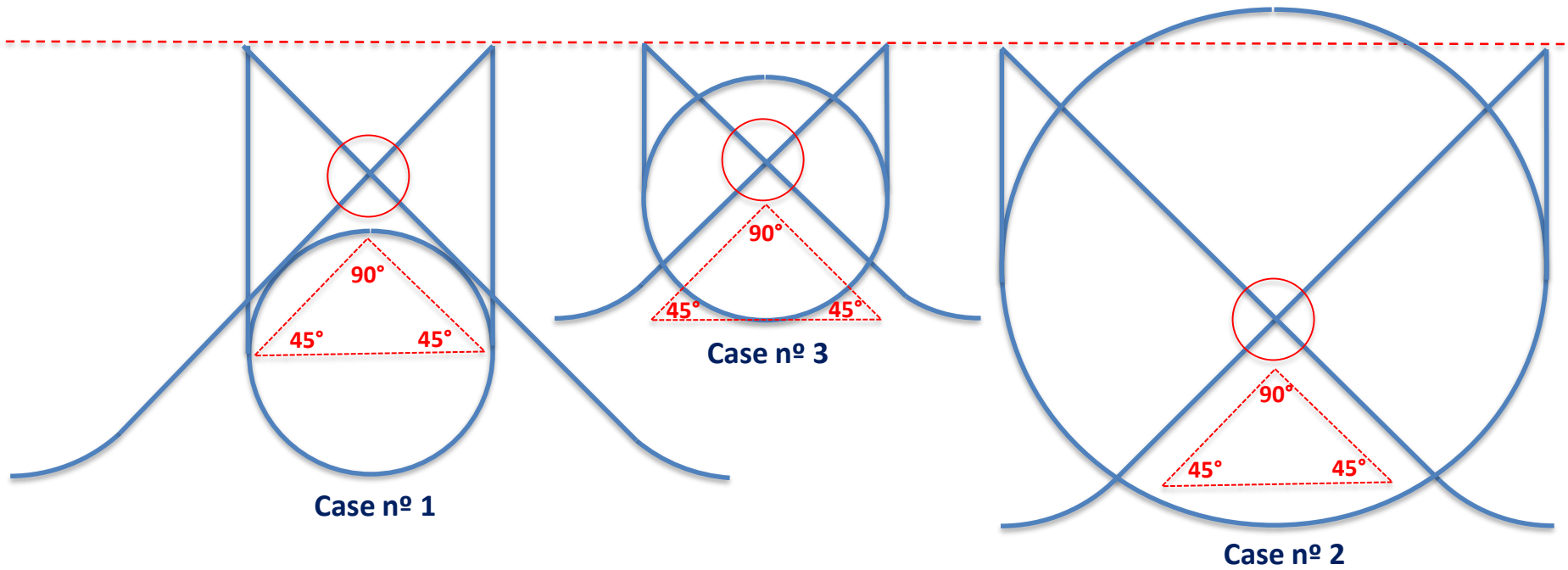
This manoeuvre can be done in various ways provided that the following concepts are respected

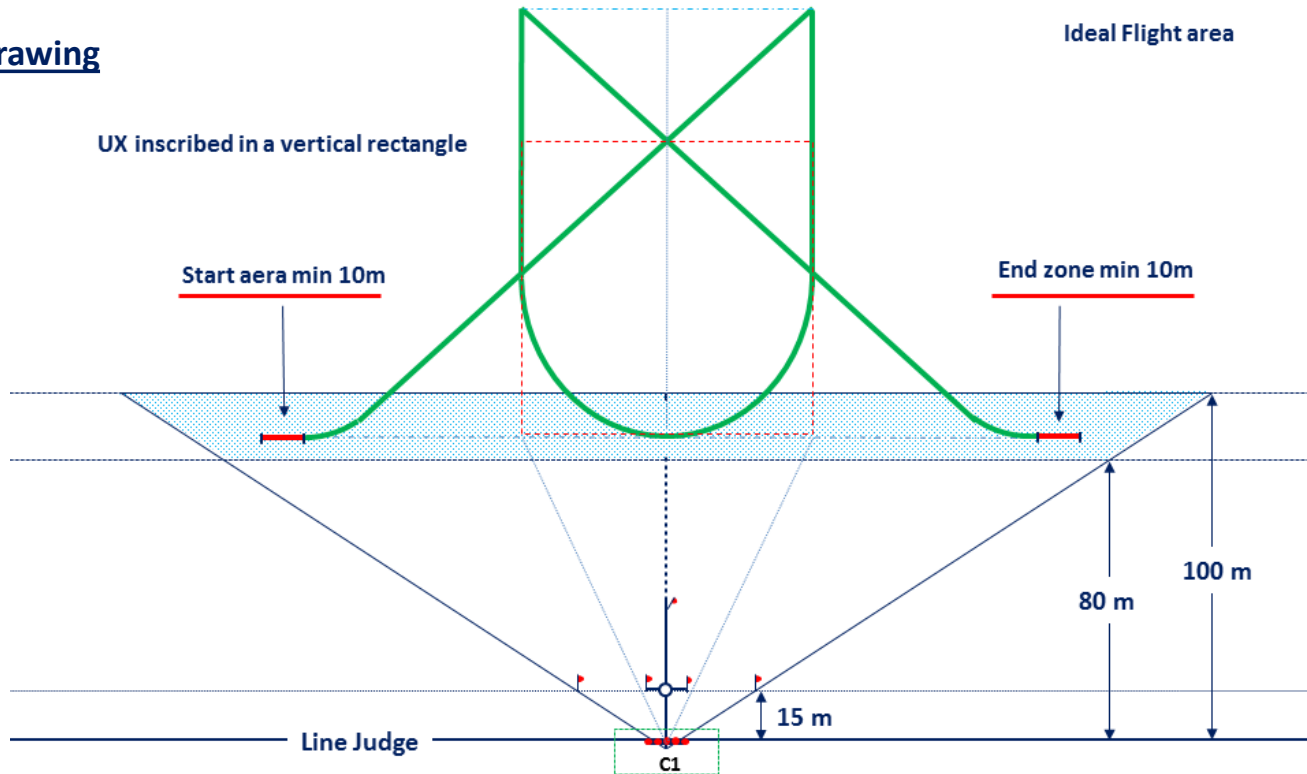
The ascending and descending lines must be at 45°

The rolls should be in the centered and at same altitude

The pushed flips should be at the same altitude

the entrance and exit and the base of the U at the same height

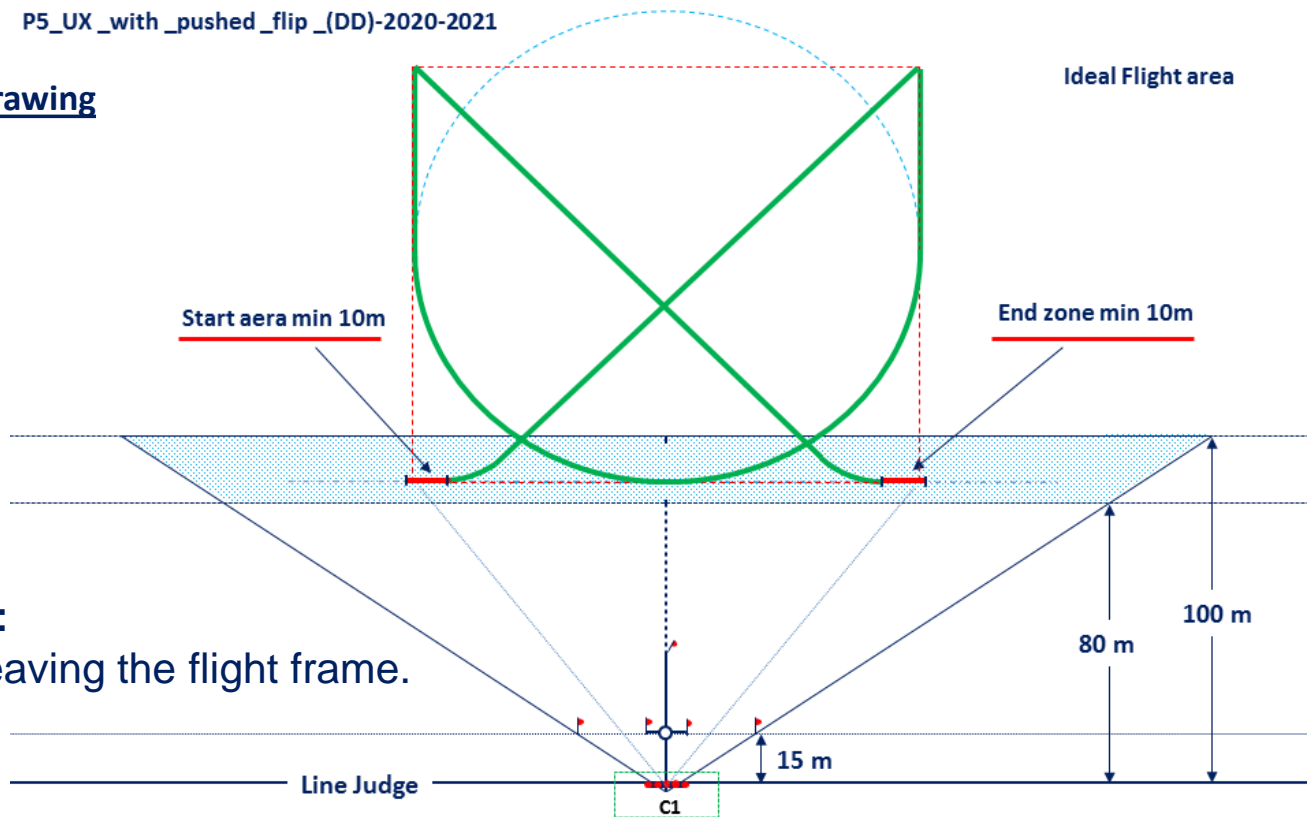


Cas nº1 Right drawing**Advantage:**

A relative safety for the pilot because the half rolls are performed high enough.

Disadvantage:

This style of configuration takes a lot of space laterally and the risk of exit the flight frame is very high.

Cas n°2 Right drawing**Advantage:**

No risk of leaving the flight frame.

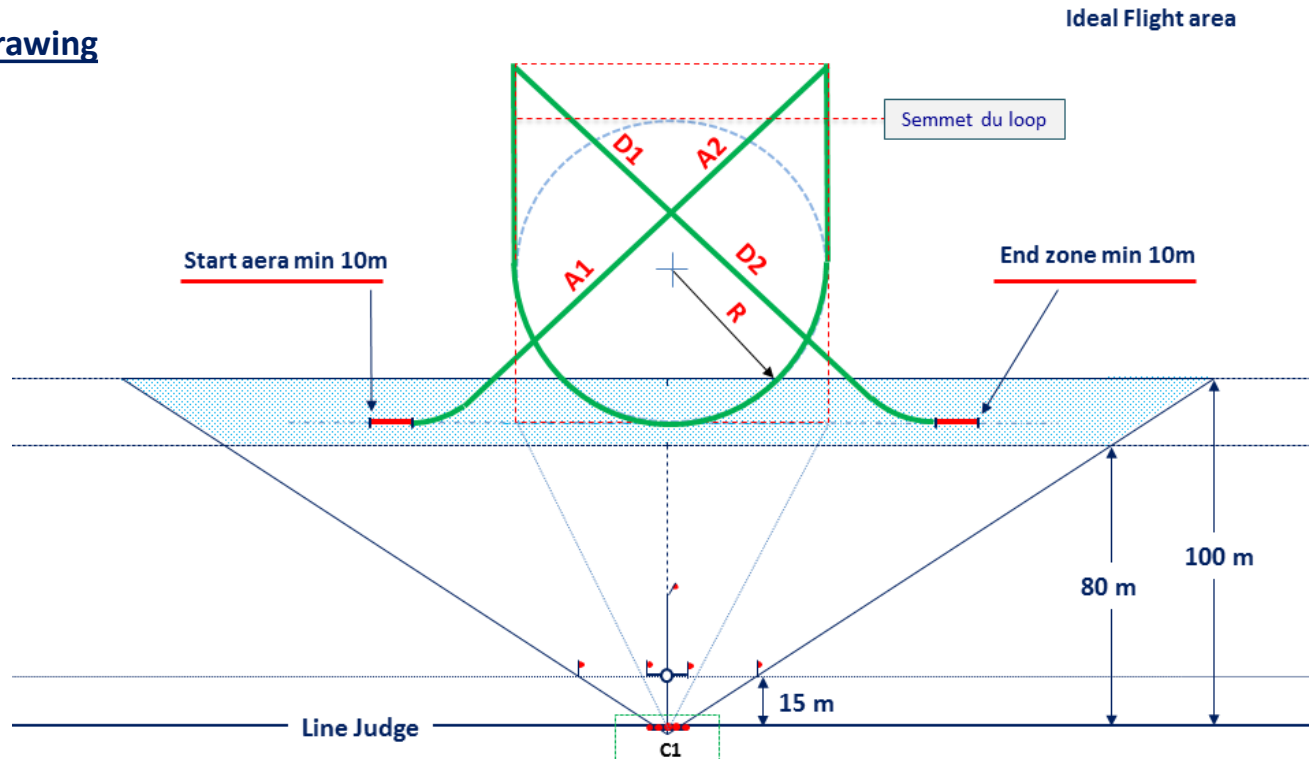
Disadvantage:

The helicopter ascends a lot after the half roll, which induces a large radius for the semi-circle of the “U” with a significant risk of exit from the flight plan.

In this configuration, it is very difficult to ascent vertically at the same distance from the center line as that of the descent.

Then it makes it very difficult to run a half-roll centered and at the same altitude as the first.

The troubles are not over, the helicopter takes so much speed in the descent that after the second half roll over recovery becomes very difficult to achieve in good condition.

Cas n°3 Right drawing**Advantage:**

Very low risk of exit the flight frame even if the helicopter approaches the judges' line due to a gust of wind since the start of the figure begins far from the start of the flight frame and therefore the figure should finish with the same safety margin.

Another advantage, after the second half roll, the driver has more time to achieve a nice straight line before recovery.

Disadvantage:

Sorry, but I don't see a major problem with this configuration.

**OF COURSE,
THERE ARE MANY OTHER
POSSIBILITIES
TO PERFORM THIS FIGURE.**

Comments:

At the sight of the above drawings, each one is free to make the figure in the way that suits him best, but it would be better to execute the case No. 3, the UX with ascents slightly higher than the top theoretical in which is inscribed the $\frac{1}{2}$ circle of the "U".

Why:

- Because with this configuration it is possible to execute the figure in a plane relatively close to the judges' line at 80m, which makes it easier to see if the helicopter leaves the flight plan.
- It is possible to execute this configuration in a fairly compact space, which limits exit from the flight plan in the event of wind.

Another important point to take in the execution of this figure is the translation speed.

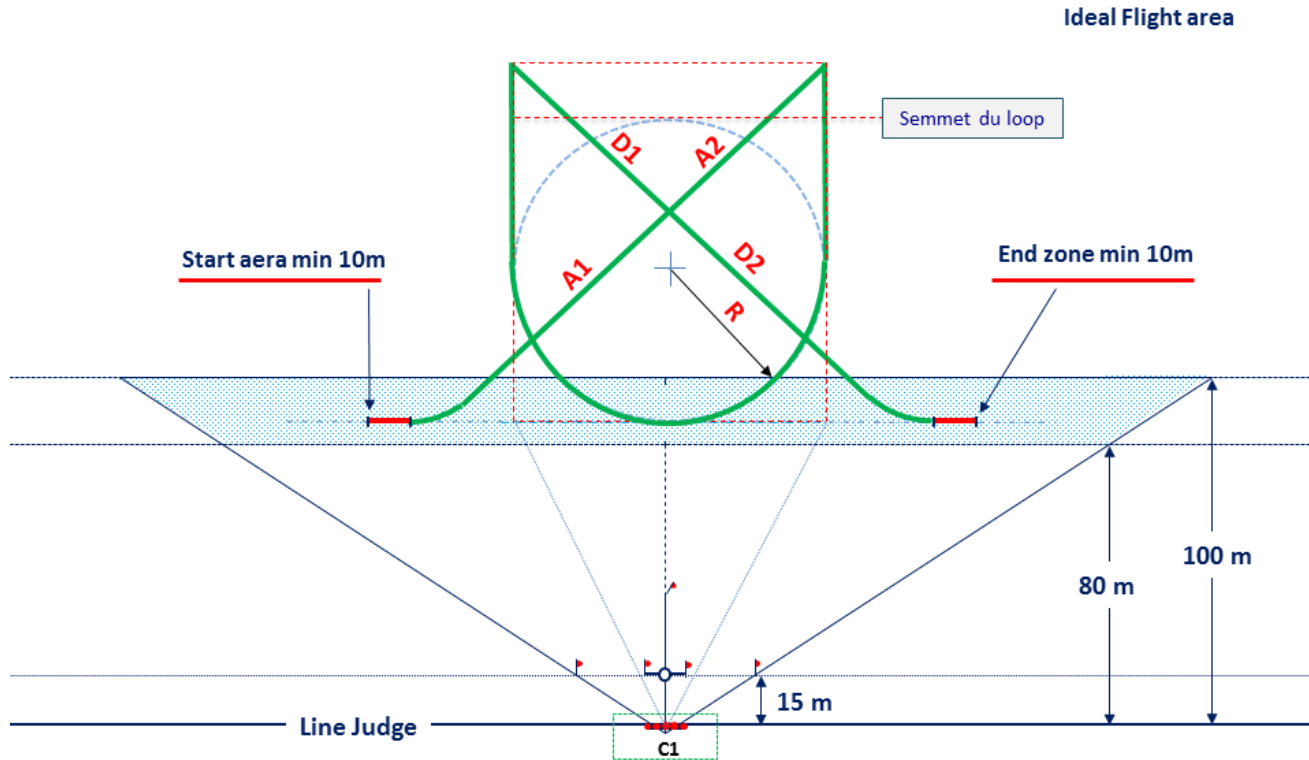
It is important not to have too high a translation speed because otherwise the helicopter will ascent very high after the first half roll, whereas on the contrary it is precisely this distance that we must try not to make too long.

Why, example with case N ° 3:

If the ascent (A2) after the half roll is not too long, the radius of the "U" will not be too large either.

I remind the important points to respect for this figure:

- That the first half roll is centered.
- That the 225° flip is made around the center of gravity, on site (on the spot) (so without losing altitude, without moving to the right or left).
- The descent must be vertical and not skewed.
- The base of the "U" must be centered and **at the same altitude as the figure entry.**
- The vertical ascent must be at the same distance from the center line as that of the vertical descent, this is one of the most important work of the trainer who of course will also monitor that the helicopter remains on the same plane during the execution of the whole figure.
- Same comments for the second 225° flip that must be performed **at the same altitude as the first.**
- Of course the second half roll should be centered, **but also at the same altitude** as the first one.
- It remains only to exit at the same altitude as the figure entry and still on the same plane.



Thanks for your interest

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