

# Dutch Rolls

## Essence

Rock the wings left and right while on a constant heading.

## Objective

See and feel the difference between coordinated and uncoordinated flight.

## Applicability

- banking into and out of turns
- correcting any deviations in bank

## Takeaway

Coordinated banking requires linking aileron and rudder inputs together.

\* Rudder in less amount

## Parameters

Start level, trimmed for slow cruise

\* 30° bank angle | comfortable rate of roll, just enough to remain on HDG

## Performance

1. HDG reference
2. Feet off the rudder pedals, look over the nose

Technique: Twist ailerons only

Be ready to: \* feel the adverse yaw | \* see the reference point move side to side

Repeat once: | left - right | level

3. Look left wingtip, repeat 2

4. Look right wingtip, repeat 2

5. Include rudder, look over the nose

Technique: Together: left aileron, left rudder | right aileron, right rudder

Be ready to: \* feel, see... | \* anticipate and neutralize... ...any side loads

Repeat twice: | left - right | left - right | level

6. Look left wingtip, repeat 5

7. Look right wingtip, repeat 5

## Tips

Ignore the ball. It lags.

Focus more on aileron than rudder but keep them synchronized.

Relax and sit with the airplane.

Apply relaxed and fluid control inputs. Hands and legs.

Symmetry: 30° bank on each side.

Pitch very smoothly: 30° bank has a G required of 1.15 Gs.

Upgrade parameters:

\* Change **one** at a time

Start level, trimmed for **slow flight** OR Start **climbing**, trimmed for  $V_y + 5$  / cruise climb

\* **45°** bank angle | **faster** rate of roll