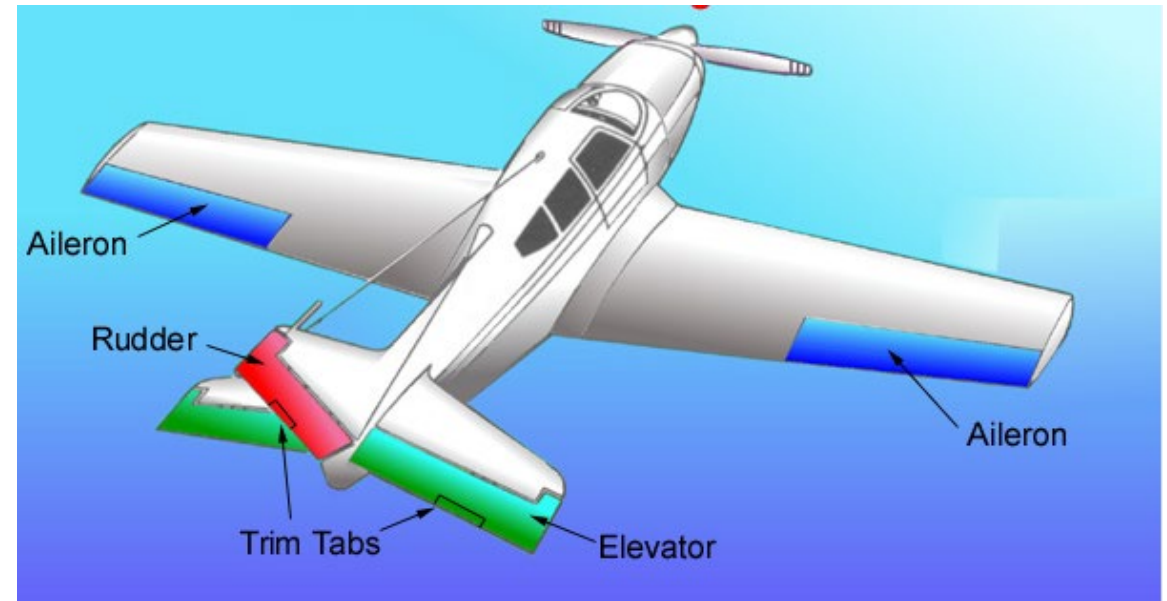
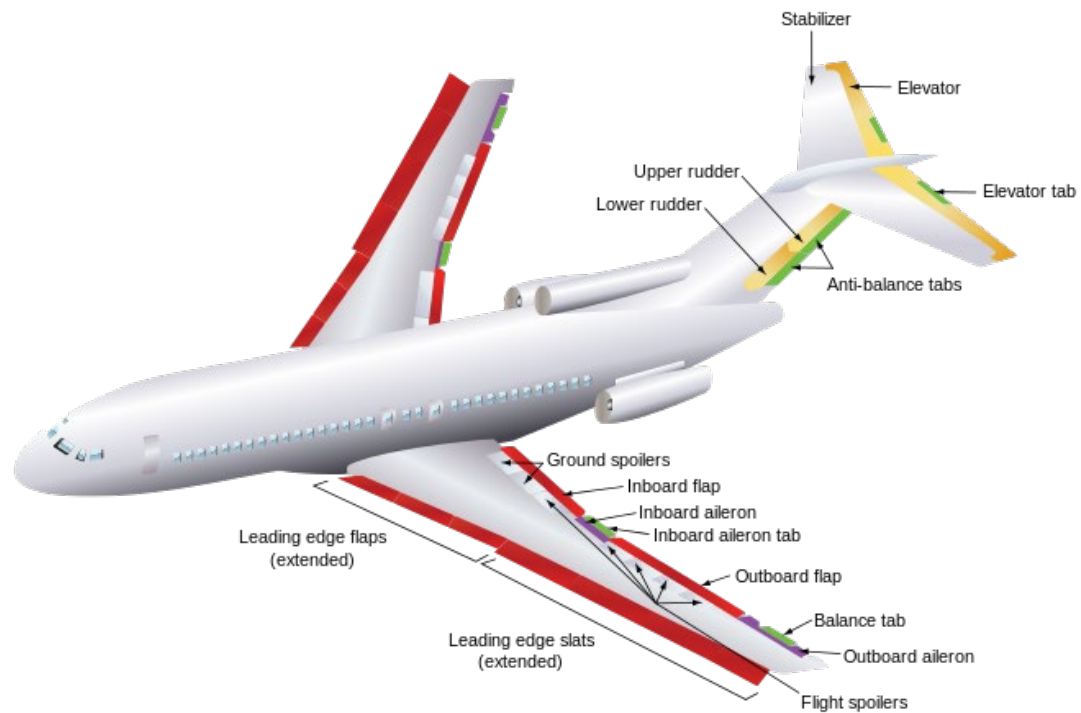


Airplane Flight Controls



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the Option!

First Some Diagrams



On the Ground

Throttle for speed

Taxi at 'wake speed'

Yoke/stick => Nothing except to counter act the wind

Left rudder pedal => Plane's nose moves left

Right rudder pedal => Plane's nose moves right

In the Air

Move the yoke/stick to the right => Plane rolls right/clockwise

Move the yoke/stick to the left => Plane rolls left/counterclockwise

Move the yoke/stick forward => Plane itches down

Move the yoke/stick toward you => Plane itches up

Left rudder pedal => Plane's nose moves left

Right rudder pedal => Plane's nose moves right

Pitch for Airspeed

Plane pitched down => Goes faster

Plane pitched up => Goes slower

Think about driving on level road then up or down a hill

...without changing the gas pedal

In the plane you 'control the hill'

If the airspeed is 90 knots and we desire 75 knots what do you do?

If the airspeed is 60 knots and we desire 75 knots what do you do?

The Recipe for Turns

When flying, you must **combine** the ailerons and rudder pedals to have a coordinated turn.

Roll right + right yaw => Plane banks to the right

Roll left + left yaw => Plane banks to the left

Flaps

Increase lift to assist in flying slower

Increase drag to help reduce airspeed

Increase decent angle without increasing the airspeed

Flaps Down - Camber

Camber Line





Any questions I can answer or follow up later on?

Traffic Pattern



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What

To assure that air traffic flows into and out of an airport in an orderly manner, an airport traffic pattern is established.

If the pilot is familiar with the basic rectangular pattern, it is easy to make proper approaches and departures from most airports, regardless of whether or not they have control towers.

Which Way do We Takeoff and Land - Controlled

For the rest of this lesson 'runway' will be not only the large section of pavement/grass/dirt used but also the direction you are using.

For each large section of pavement/grass/dirt, there are actually two runways.

Which Way do We Takeoff and Land - Controlled

On any runway you will see giant runway numbers at both ends.
The number indicate which way you takeoff and land.
Cobb County International Airport (KRYY) has runways 9 and 27.

Runway 9 = takeoff/land to the east

Runway 27 = takeoff/land to the west.

Which Way do We Takeoff and Land - Controlled

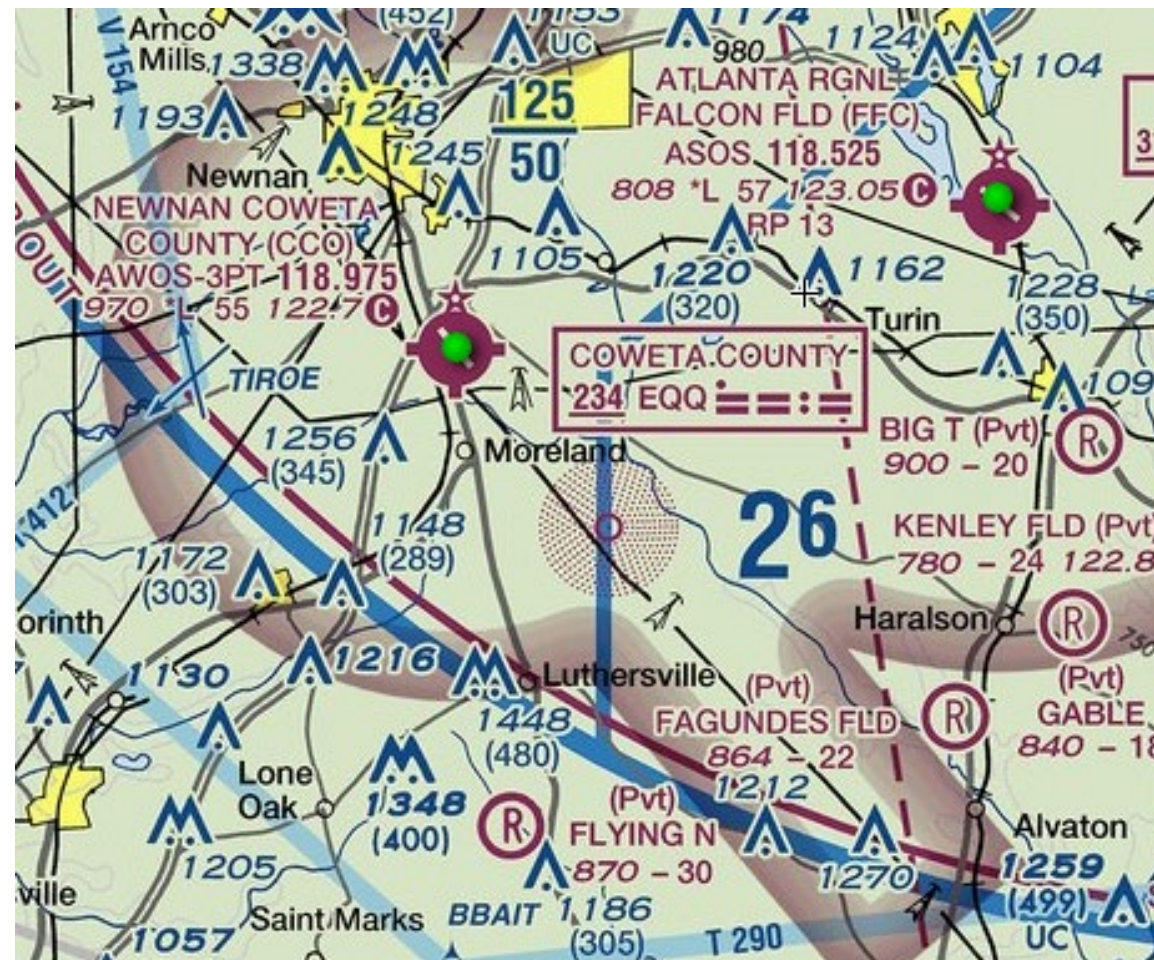
At an airport with a tower the controllers will tell you which runway to use.

At an airport without a tower ('uncontrolled'), you have a choice but some days it feels like a negotiation or stand off with other pilots.

Right or Left Traffic?

Standard traffic pattern turns are always to the left, unless the airport specifies it otherwise.

RP = Right Pattern...Right Turns



Which Way do We Takeoff and Land – Uncontrolled

Takeoff and land into the wind unless there is a good reason to use the opposite direction.

At an airport without a tower, it is up to the pilot to decide which (side of the) runway to use.

The Windsock

Most airports have frequencies that you can use to check the weather...but a windsock is always accurate and current

The wind is going into the large hole

The windsock 'points' to the runway to use.

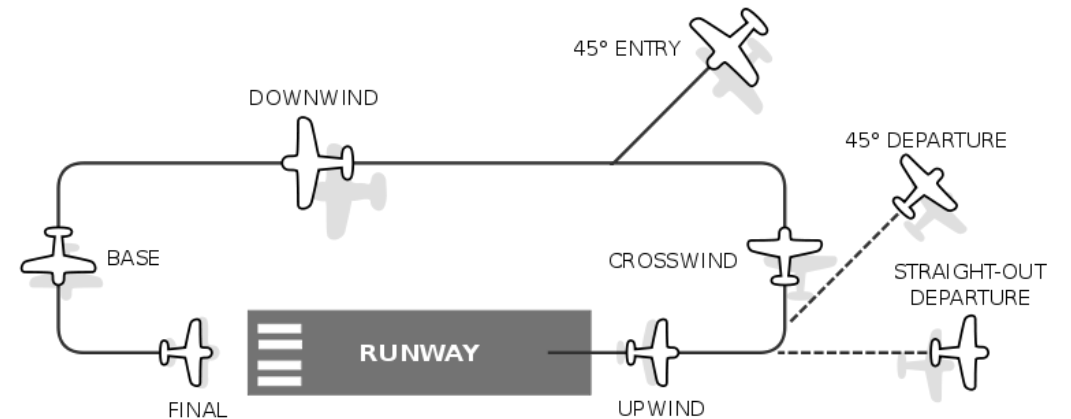


The Standard Pattern

The traffic pattern altitude is usually 1,000 feet above the elevation of the airport surface.

At some airports like the Griffin public airport it is nonstandard...it is 800 AGL

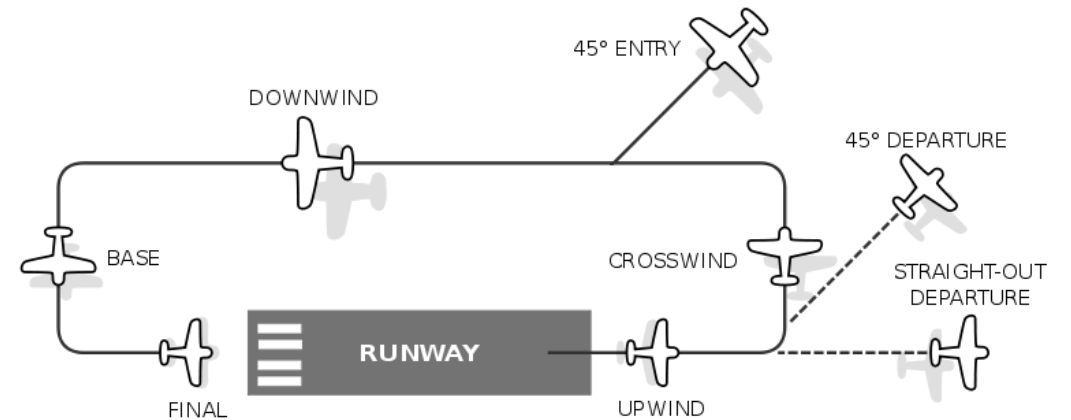
The use of a common altitude at a given airport is the key factor in minimizing the risk of collisions



Standard Entry

The traffic pattern is normally entered at a 45° angle to the downwind leg.

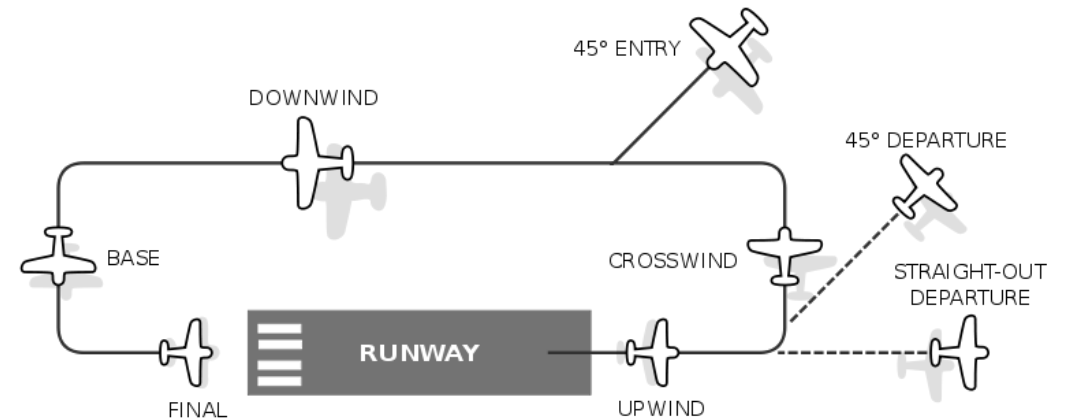
You should arrive at the pattern altitude...not above or below.



Downwind Leg

The downwind leg is a course flown parallel to the landing runway, but in a direction opposite to the intended landing direction.

This leg is flown approximately 1/2 to 1 mile out from the landing runway and at the specified traffic pattern altitude.



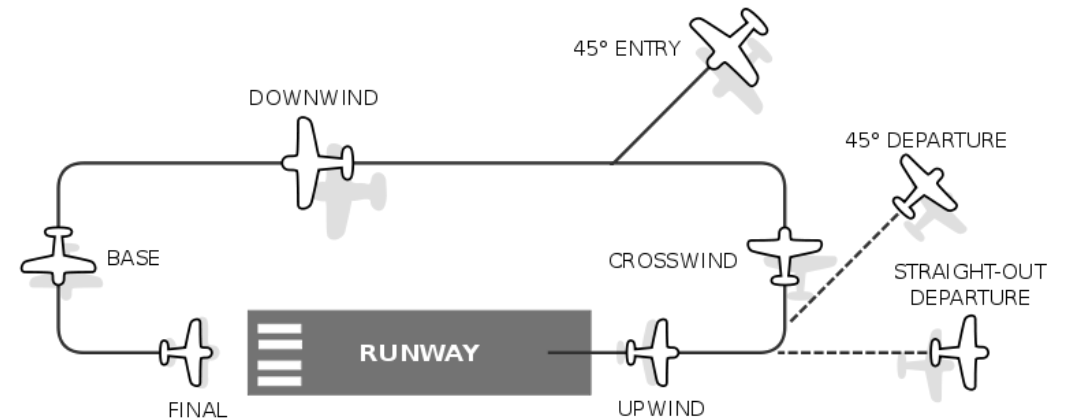
Downwind Leg

When flying on the downwind leg, the pilot should complete all before landing checks and extend the landing gear if the airplane is equipped with retractable landing gear.

GUMPS Check

Mindful of wind

Go Around Ready

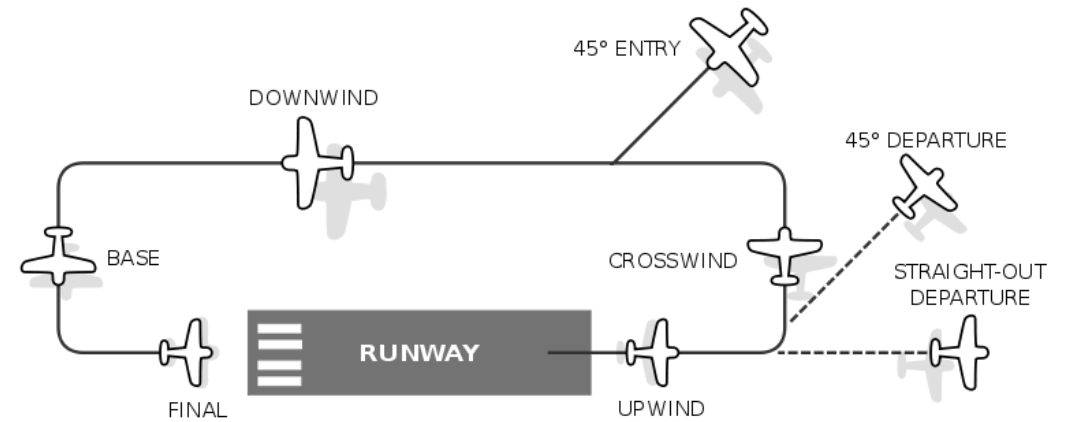


Downwind Leg

Flaps: 0

Pitch: +5 degrees

Airspeed: whatever is reasonable



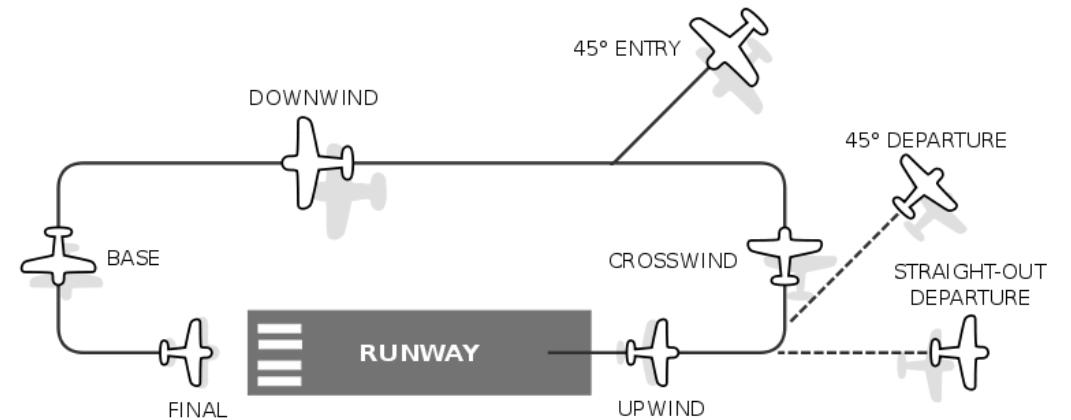
Abeam the numbers (end of the runway)

Reduce power and begin a descent.

Flaps: 10 degrees

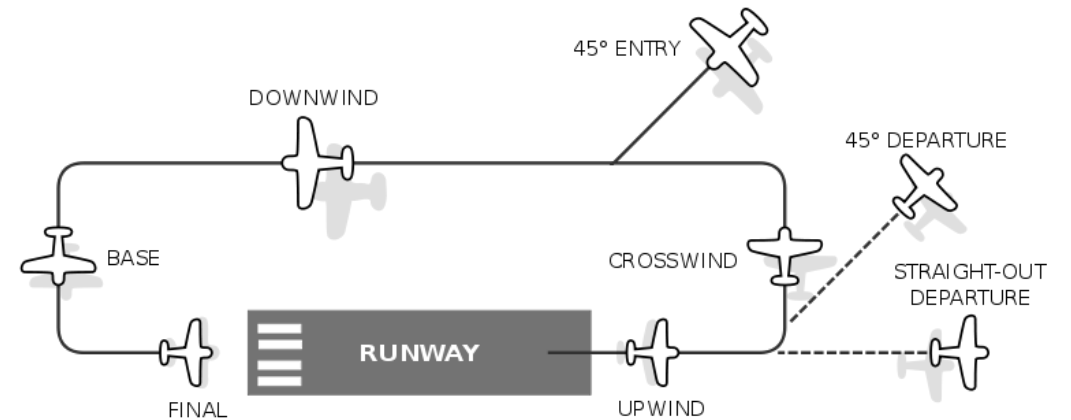
Pitch: -5 degrees

Airspeed: 85



Downwind to Base turn

The pilot should continue the downwind leg to a point approximately 45° from the approach end of the runway, and make a medium bank turn onto the base leg.

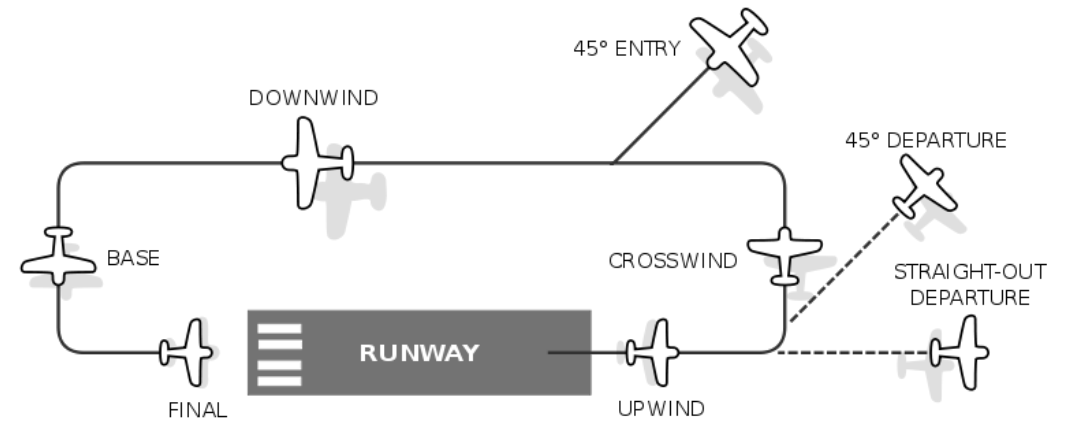


Base Leg

Flaps: 20 degrees

Pitch: -5 degrees

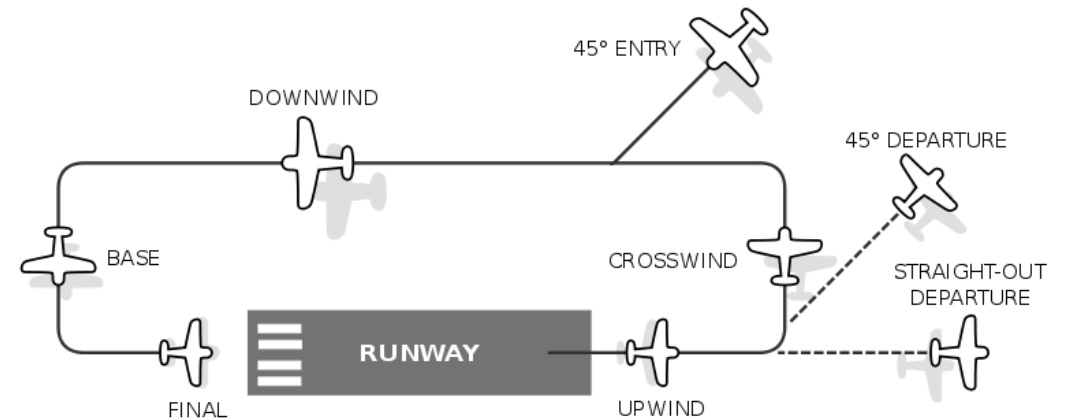
Airspeed: 75



Base Leg

The ground track of the airplane while on the base leg is meant to be perpendicular to the extended centerline of the landing runway.

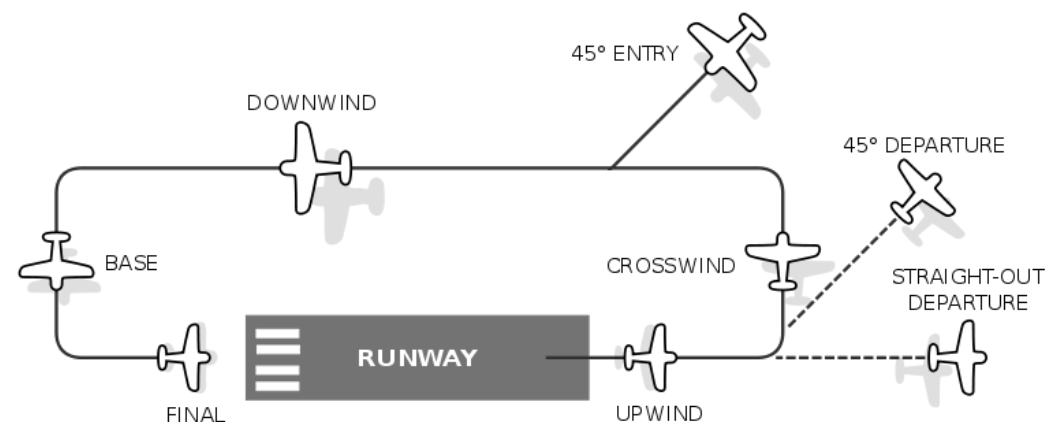
If you are in a high wind situation it is ok to have a crab angle.



Clear Right Clear Left

There could be other aircraft doing very wide patterns and not using the radios.

At most non towered airports having a radio installed is not required.



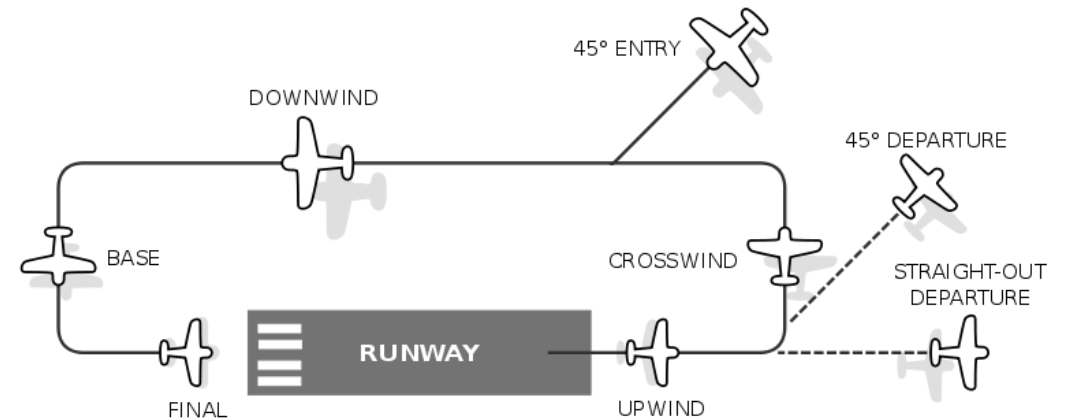
Final

Flaps: 30 degrees

Pitch: -5 degrees

Airspeed: 65, 60 at runway edge

Say out loud on loop: Speed Height Center Nose





Any questions I can answer or follow up later on?

Passenger briefing



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Safety Belts and Emergency Exits

Safety Belt

91.107 (a)(3) & 91.519

“...each person on board a U.S.-registered civil aircraft must occupy an approved seat or berth with a safety belt and, if installed, shoulder harness, properly secured about him or her during movement on the surface, takeoff, and landing”

Emergency Exits

Front doors...

If people in the back seat:

If an adult is in back, let them out first

If a child is in back alone, then you go first pull seat up and help them out



Do not smoke!

No smoking in or around planes...

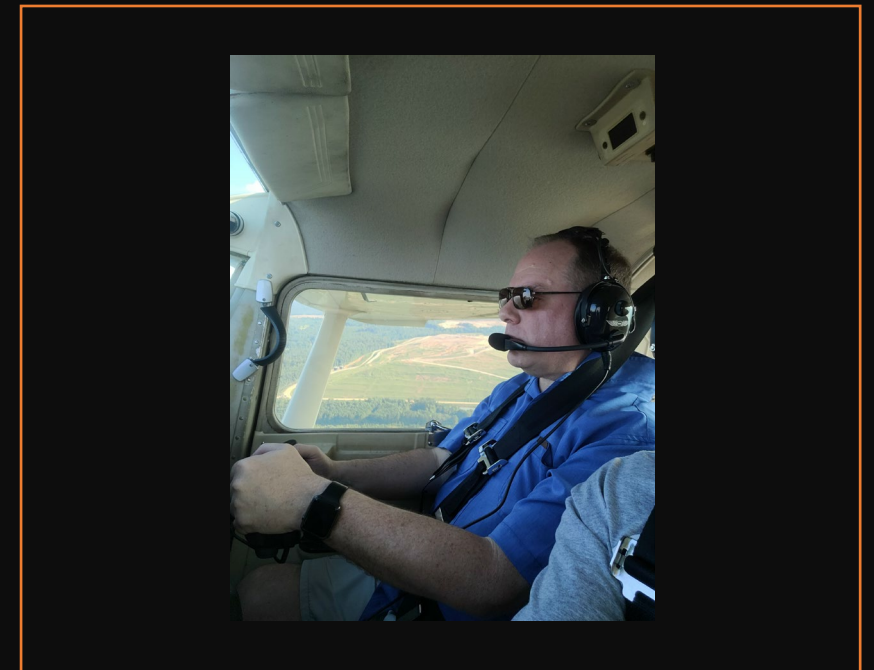
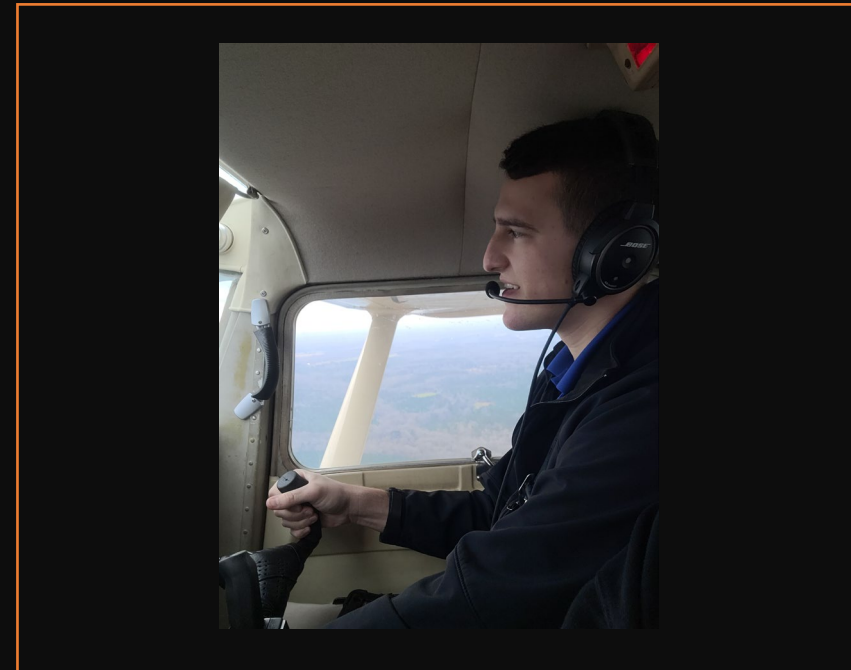
Your controls

Your Controls

My Controls

Your Controls

My Controls!!



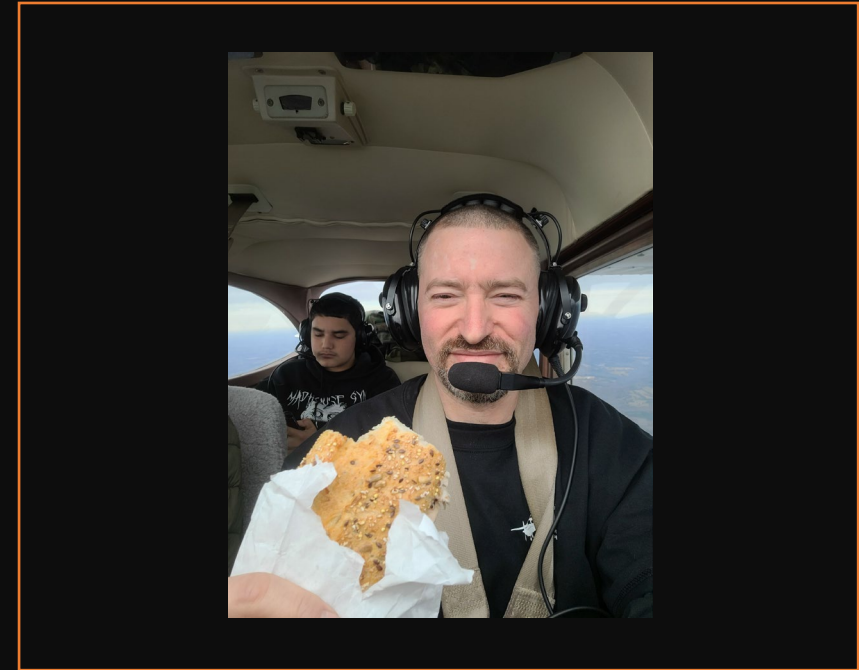
Pictures

Go ahead take pictures of us in the plane

Take pictures of the world outside of the plane

Do not block my view

Do not open the window and have your phone fly



Talking vs Quiet Time

If I am about to talk on the radio I will hold up my index finger...that means momentary quiet time

I don't always need a 'sterile cockpit' but if I don't answer you that means I am hyper focused give me a moment





Knock It Off!

Who is responsible for the safety of the flight?

...everyone in the plane

If for any reason you want to go back to the airport you may say “I had enough” or “return to base”

If for any reason, we are landing and there is an issue do not be shy...say “go around” or “Turn left immediately”



CRM

CRM = Crew Resource Management

Everyone can help no matter how many hours they have.

Anyone can read the checklist.

Anyone can look for traffic.

If you see something say something.

Clear Right! Clear Left!

During taxi when we take a turn...

Clear right!

Clear left!

Look and say it



TWTW

Routinely we should be thinking of things that could kill us or at least give us a bad day:

Terrain

Weather

Traffic

Wildlife

