

APPI PPG

LECTURE 4:

PRE SOLO

FLIGHT



Introduction

- The following information outlines what is required for the student to make a safe and successful First Solo Flight. It is therefore vitally important that you understand the following lecture and if anything is not clear you must say!

The Flight Plan

- Firstly, you need to be aware that this is only an outline of your intended flight plan as no flight goes exactly to plan! However it is very important to always have a flight plan every time you fly.
- Having checked and laid out the equipment, clipped into the harness and wing, and gone through all necessary pre flight checks, you will be ready to take off.

Take Off

- During your First Solo Flight there is a chance that an Assistant Instructor will help you. The CFI will be up wind of you and the Assistant will be fitted with a radio and headset so he can hear the CFI's instructions.
- If it is a Forward Launch the Assistant will simply apply pressure to your chest strap during the launch phase during which you should keep your arms straight. Once the wing is overhead you will feel a release of pressure, at this point the CFI will tell you to let go of the A Lines and, if necessary, to apply both brakes to stop the wing over shooting. If necessary the Assistant may make small adjustments to the wing to ensure it is overhead before peeling away. In the event of an aborted take off he will put his hand in front of your face meaning you should kill the engine.
- If it is a Reverse Launch the Assistant of CFI may launch the wing for you. If you are launching the wing yourself make sure you launch it directly overhead by building an even wall before inflating the canopy.
- Once the wing is directly overhead wait for the CFI's instruction to turn left 180 degrees into the wind. Make sure you step forwards rather than backwards when you turn into wind to maintain forward movement. As you turn use your arm to block the risers and prevent them from catching on the helmet or headset.
- Listen for the radio commands by the CFI and act accordingly in order to make sure that the wing is settled above your head.

- On the command 'Power, Power, Power' gradually but fairly quickly, begin to apply the throttle.
- At this point remember to stand up straight, lean back against the thrust and take big long strides as you increase the power.
- Your hands should be in the neutral position. Once your ground speed has increased the CFI will instruct you to apply both brakes no lower than your shoulders to ensure a controlled take off. Make sure you keep running!
- At this point the wing will start to take the weight of you and the paramotor. Make sure you keep the wing in to wind and that you keep running; even once you are airborne!
- No matter what, do not jump, lift your legs or stop running at this stage!
- As you take off maintain full power and continue to apply both brakes no lower than your shoulders.
- Keep the wing into wind and continue climbing on full power. Do not attempt to get in to the seat at this stage!

Getting in to the Seat

- The CFI will guide you through a circuit after you have taken off. You will only begin this circuit pattern when you are at a safe height to do so. The CFI will then position you downwind of the landing area before turning you into wind.
- If the CFI is happy that you are at a safe height and in a safe location he will instruct you to gently decelerate, not completely but enough to maintain level flight.
- He will then ask you to follow your left hand up to the toggle pulley and release the toggle; this reduces the chances of the toggle being sucked into the prop.
- He will then ask you to get into the seat using your left hand while raising your legs at the same time.
- If successful he may ask you to adjust the secondary strap and then retake the toggle.
- If you are not successful he may ask to either try again, this time with two hands, or he will tell you to retake the toggle, get back on the power and then perform another circuit before coming back round to try again.
- The dangers of getting into the seat include allowing the toggle to be sucked into the prop, putting the throttle cable in the prop hence why we use the left hand, losing too much height and turning across the wind line towards an obstacle due to a lack of control.

Flying Circuits

- The circuit pattern is defined as into wind, cross wind leg, down wind, Base leg, which is cross wind down wind of the landing area and, if approaching for landing, Finals.
- Remember to keep the power on so you do not lose altitude during the downwind leg and always gently brake no lower than your shoulders. When one hand is braking during a turn the other should be in the neutral position.
- Follow the CFI's instructions and carry out safe, stable and controlled circuits. Attempt to stay at the same height for the whole circuit unless instructed.
- Due to your increased ground speed your turns will start to feel slower and you will cover more distance during the turn. Whatever you do; do not apply more brake in an attempt to make the wing turn faster. If you do you run the risk of causing a flat spin, which is a stall on one side!
- Remember to be gentle when using both the brakes and the throttle. If you are jerky on the controls the wing will respond in an equally jerky manner.
- Continue to listen to the CFI's instructions and carry out the pre planned flight plan as instructed.

Landing

- During your circuits you will have passed directly over the flying site. The CFI will get you to practise setting up on a Base leg and then on a final approach in to wind. You will repeat this procedure until the CFI is happy you are ready to land.
- Remember to not only allow plenty of height but also distance during your base leg and final approach as this gives you time to position yourself correctly. Also make sure the landing area is clear and you are heading in to wind.
- During the Base leg the CFI will ask you to get out of the seat by releasing the secondary strap and thrusting your hips forward. At the appropriate height and location the CFI will instruct you to turn in for your final approach.
- He will then ask you to gently decelerate and kill the engine at no lower than 50ft. Remember to hold the kill button for 5 seconds. From this point onwards you should NOT make any major adjustments with the toggles. At approximately 5m/15ft AGL during your glide in towards the landing area the CFI will ask you to apply a touch of both brakes down to your ears. This will give you more of a feeling for the wing. Do not release them after this stage!
- Look ahead of you, not down at the ground, and listen to the CFI who will ask you to start your flare at approximately 2 meters above the ground.
- You should finish your flare just before you touch the ground and be ready to run off any extra speed as your feet touch the ground.
- Do not make any major brake inputs during the final glide as this can cause the wing to roll or pitch resulting in bad landings. In some cases the anti torque system will cause the wing to steer off the wind line in which case simply apply a touch of brake to keep the wing on course, into wind.

Radio Procedures and Hand Signals

Radio Commands from the CFI

- 'Kill, Kill, Kill' – kill the engine by holding the kill button for 5 seconds.
- 'Power, Power, Power' – gradually but rapidly increase the power, smoothly.
- 'Decelerate' – gradually back off the power, smoothly.
- 'Both Brakes' – brake down to your ears but no further.
- 'Flare' – Gradually but rapidly apply both brakes evenly as low as possible.
- 'Out of your seat' – thrust your hips forward and prepare for landing.
- 'Hands Up' – put your hands in the neutral position and do not apply brake.

Signals from the Student

- Kick, Kick, Kick – Yes.
- Tap your legs together – No and/or lost communication.

Hand Signals from the CFI (Demonstrate the correct signals)

- Kill Engine.
- Lost Radio Communication.
- Power Up and Power Down.
- Out of the Seat.
- Turn Left and Turn Right.
- Do not Land.
- Hands Up.
- Land Now.
- Flare.

Conclusion

- You will only attempt your First Solo Flight once both you and the CFI are 100% certain that you are ready to do so.
- Only take off when the wing is directly overhead. The CFI will inform you when to apply power and, if necessary, when to 'Kill, Kill, Kill'. If in doubt, kill the engine.
- Remember the need for speed! Do not jump, sit down, steer off the wind line or be erratic with the brakes or throttle.
- Do not rely upon radio communication. In the event of lost communication stick to the flight plan. Fly directly over the CFI who will provide hand signals. The Pilot should acknowledge these signals accordingly. Do not panic!
- Remember, you are now responsible for the flight. The CFI cannot anything to help you apart from give instructions or hand signals so stick to the plan!

ANY QUESTIONS?

END OF LECTURE 4