

INFORMATION and RULES for Trainee Pilots



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Dear trainee pilot,

10/17

The information in this document is very important for you! Therefore you should always take it with you when you go flying! Whenever you have time (e.g. while waiting at the take off place) you can read this information. In this way you automatically learn the right things to do in unexpected flying situations!

*For your „flying career“, we wish you lots of success and a **HAPPY LANDING***

The team of the flying schools Emmetten and Titlis

A) ORGANISATIONAL MATTERS

1. Our shop in Emmetten is open as follows:
MON - FRI on personal phone enquiry
SA always 09:00 – 12:00 and 14:00 – 16:00
SO in case of flying activities usually 09:00 – 12:00
2. On our very frequently updated **homepage** you can find important news. Information of the flying areas can be found on the notice boards near the corresponding cable cars and/or at the landing fields.
3. At all our **main landing fields** (Emmetten Schlüssel and Gruob, Büelen, Brändlen) the following rules apply:
 - Cars are not permitted to drive to the landing place, not even to unload. All cars should be parked on the parking area near the cable car (or in Emmetten on the large village parking area). Please also explain this to your friends that come to visit or watch you flying.
 - Garbage bins are located at all landing places (and at the take off place) such that the area can be kept tidy and clean. Put the cigarette butts in the ashtrays that are provided.
 - Damage on the environment should be avoided and pathways should be used whenever available.
 - Unnecessary noise should be avoided. Camping is forbidden and dogs should be kept on a leash.
4. Otherwise our general business conditions apply (Allgemeine Geschäftsbedingungen (AGB)). These are available on our homepage on the internet.
5. The following rules are valid in normal situations. Exceptions may be possible.

B) INFORMATION ABOUT THE BASIC COURSES

1. General matters

- 1.1. The training periods of a beginner course (3 flights), winter-course (5 flights) and basic course (10 flights) are valid maximal for three months. After this period, you have to update the booking.
- 1.2. For the lessons on the **training hill** you should **always book at least 2 days before by online-form “Anmeldung Kurse”**..
- 1.3. For **altitude flights** (“Höhenflüge”) you should **always book between 14:00 and 20:00 the day before by online-form “Anmeldung Höhenflüge”**..

The decision whether there will be training or not, along with the place and time of the meeting point, will be announced after 21:00 on the information board of our homepage or directly on twitter. If you do not understand the message on the information board, ask your friends for help. If you still do not succeed, you can send an SMS to Chris on +41-79-3407846. He will inform you about the training details by SMS.

- 1.4. Altitude training flights are usually offered as announced in the agenda on our homepage, indicated with "Höhenflüge")
- 1.5. Whenever flight training takes place, it starts with a **briefing** which is **mandatory** to attend. The information board (see above) gives information about the meeting point and time. To avoid unpleasant surprises, it is absolutely necessary to arrive on time, in case the flight area is changed at short notice. It is also up to you to be informed about **weather forecast** which will be discussed in each briefing. Be prepared in order to benefit as much as possible from the weather discussion during the briefing.
Trainees who arrive later during the day and miss the briefing must call the office before arriving.
- 1.6. **Equipment:** During the basic course, the rental of the glider and all other necessary equipment is included in the course fee. We recommend beginning to test different equipments already from the 5th - 8th flight onwards to be ready for the continuation course. (see C.1.4.).

2. Flight techniques: Launch

- 2.1. As soon as you are at the take off place, contact the **launch assistant** ("**Startleiter**"). He will assign you a take off place where you can lay out your glider.
- 2.2. If you did not get a **radio** during the briefing, the launch assistant will provide you with one. This should be turned on shortly before you take off. We kindly remind you to treat it carefully and avoid any loss of the radio. It is up to the flight instructor to decide if you can fly exceptionally without a radio. As a rule, trainees always fly with a radio until they have passed their pilot exam, however, from the 3rd flight onwards, you should try to fly and land more and more on your own, that is, without radio assistance.
With our radios a 2-way communication is possible; however, in order to guarantee safe training conditions, we ask **you only to contact the instructor in emergencies by radio**. A forgotten flight mission is not an emergency!
- 2.3. Before you lay out your glider, consider which place is best suited to the wind, obstacles and your own safety. Take note that it must always be possible **to safely stop the take off!**
- 2.4. Launching sites are especially at week-ends often quite crowded. In order to keep the waiting time minimal, we appeal to you to put on your clothes, the harness and your helmet during the **start preparation** first and then to open the canopy. It is very annoying when pilots start by sorting the lines and then calmly do the rest of their preparations and chat to their colleagues while other pilots are waiting for a take off place. In case of very heavy traffic, we additionally recommend that the canopy is prepared behind the take off place and then transferred to the launch as a rosette (like on the training hill) immediately before taking off.
- 2.5. Before each take off a thorough **5-points check** must be done: 1. Harness: leg belts & chest belt closed, emergency parachute, carabiners, radio and helmet checked. 2. Risers, brakes/lines are free. 3. Canopy is lying as needed. 4. Wind direction/-strength is appropriate. 5. Take off place and air-space is free. Additionally, the launch assistant will check if the radio works properly.
- 2.6. **The take off can only be started when the launch assistant has given his OK and you are sufficiently concentrated and prepared for the flight.** For the take off, calmly start running while looking forward. When the canopy is above your head, brake lightly and look up to check the canopy. If necessary, run to the middle of the canopy and make any necessary corrections using the brakes. Then with dynamic, fast steps and weight shifting to the front (eagle position) accelerate until take off speed is reached. You should not adjust the harness until you have reached a sufficient distance to the ground (**at least 50m!**). If it is necessary take the brakes, lightly applied, in front of your head in one hand and with the other hand pull the seat into place. Take care that you do not fly a turn!!

- 2.7. If it is necessary to **stop the launch**, pull the brake line which is nearer to the ridge strongly and completely downwards while keeping the other hand up. The point of no return and the direction of take off abort are part of the mental preparation for the launch.

3. Flight techniques: Flight / Flight Area / Flight Mission

- 3.1. Straight after launch, you should fly directly **towards the landing field**. Keep your attention also on other users of the airspace in order to avoid collisions. If necessary, you should give way to them early enough. In areas with a characteristic valley wind system (e.g. Engelberg valley) you **must always fly upwind (in front) of the landing field**. Directly after take off, head towards your goal (in Büelen: the white, square house). Ridge soaring/thermal flying is not permitted during the basic course!
- 3.2. In normal flight straight ahead, you should fly with the glider **lightly braked** (approx. shoulder position). There results a good gliding ratio and thanks to the constant steering pressure on the brakes, you feel the glider and can react immediately in case of turbulence. If there are strong headwinds, you should release the brake a little bit more but all the same keep pressure on them. As a rule of thumb, the whole flight should be **steered negatively**, i.e., steered from a lightly braked position (hands approx. shoulder height) with counteractive steering movements of the hands (one brake is pulled as the other is released). This leads to substantially flatter turns, less pendulum swinging and additionally, it helps to reduce the rate of descent.
- 3.3. **Active flying:** It is advisable to fly actively in order to avoid dangerous situations (see point 5), i.e., such that you react immediately to turbulence in the air. This means that you should always try to keep the pressure on the brake lines such that the canopy remains vertically above you. For example, if the canopy swings forward, the brake lines should be pulled quickly and symmetrically on both sides. In general, with a suitable weight shift of your body during the turns (i.e. leaning into the turns) you can decrease the danger of asymmetric stall and in addition, you also reduce the rate of descent during the turns.
- 3.4. As a rule, each flight includes a **flight mission**. From time to time, this can be just a „pleasure flight“, in which you fly without interaction of the instructor. Before taking off, you inform the launch assistant what flight mission you wish to do during the flight. He will tell this to the flight instructor by radio.
- 3.5. The agreed flight mission is carried out in the area determined by the flight instructor, such that he can observe you. If you have a radio (usual case), wait with the mission start until he **calls you by the name** and he clearly repeats the flight mission. **In case of doubts whether you are concerned or not, it is not allowed and you may never start with a manoeuvre on your own which has to be supervised by the instructor.** Additionally, before beginning, you should always check the airspace around you, such that collisions are avoided! In flight sites with strong wind systems (e.g. Engelberg valley), flight manoeuvres may only be flown **upwind** (in front) of the landing field.
- 3.6. We have prepared **flight manoeuvre cards** (flight manoeuvre handbook), on which all flight manoeuvres are explained in detail. Usually, the cards are available at the landing field and should be consulted primary before doing the manoeuvre. Any questions should be discussed with the flight instructor. The cards can either be taken with you and returned after the flight or read and immediately returned. As a flight preparation at home, we expect you to individually study your desired manoeuvres for the day of flying using the manoeuvre cards which can be downloaded from our homepage.
- 3.7. During the flight, keep a continual check on the **wind-sock** at the landing field, such that you prepare appropriately and in good time for the landing approach. You should always check that the wind does not drift your glider in an undesirable direction.

4. Flight techniques: Landing approach / Landing

- 4.1. The **landing approach direction** is determined by the terrain and the wind. At the landing field “Berggrind” in Emmetten, the approach is by left turns for winds from Beckenried (valley winds) and by right turns for winds from Seelisberg (mountain winds). The landing field “Gruob” can only be approached with right turns and only during valley winds. In Wolfenschiessen, the landing field “Büelen” is always approached with left turns, whereas the landing field “Brändlen” is approached during valley winds with left turns and during mountain winds with right turns. Take special note that at Büelen because of the obstacles, the landing approach cannot be enlarged. Excessive height is eliminated with S-turns (see point 4.4.).

- 4.2. Fly in good time to the **descent area**, where you should decrease the height by flying circles in the same direction as you are going to fly the landing approach. As a general rule, you should fly into the descent area with sufficient height to do at least one or two circles before landing. Take care while reducing height that the wind does not drift you out of the defined descent area. In the descent area neither manoeuvres nor tight circles are permitted! **Pay attention that you distinguish radio messages which do not concern you!** (Because of the low altitude, misunderstandings can quickly lead to dangerous situations!)
- 4.3. As soon as you are at the suitable height, fly into the **downwind**. Take care that any pilots who are flying lower have right of way. During the whole landing approach, keep a continual eye on the wind-sock and the landing point.
- 4.4. If you notice that you are too high during the **base**, you can extend the approach if the terrain allows (Büelen: Never fly over the high-voltage wires!) and in the final, you may fly explicitly **S-turns** with 30-50% braking (using negative steering technique!). In contrary, if you are too low, shorten the base and approach directly the landing point.
- 4.5. If you have excessive height in the **final**, you can lower your brake position more than usual (max. 50-60%). Latest at the beginning of the final, you must get out of your harness, **taking a vertical position** with your body and be ready to run! During the last 5 seconds of the final landing approach you must not change direction and shortly before touchdown (1-2 meters above ground) you should pull the brakes completely down.
- 4.6. For a **slope landing** the procedure is the same. The final landing approach is done **along the ridge**.
- 4.7. Should the wind suddenly change direction during the landing approach, you may have to do a **tail-wind landing without changing the originally planned landing direction**. Procedure: The final landing approach is done with nearly no brakes, that means with trim speed, and the brakes are pulled abruptly and fully downwards when you are about 2 m above the ground. If you have an airbag try to fall on it.
- 4.8. After landing gather your canopy in a rosette and immediately leave the landing area. You should also turn off the radio immediately and, if you do not need it any more, return it to the flight instructor. **Get feedback on your flight from the flight instructor and discuss the flight mission for your next flight!**

5. Dangerous situations

- 5.1. In dangerous situations the general rule is to **keep calm!** Rushed actions generally produce negative results. Therefore, you should firstly analyse the degree of danger, localise it, and then undertake a considered appropriate and directed counteraction.
- 5.2. **One of the brake lines is torn or blocked:** You can steer the glider by taking the rear risers with both hands and smoothly pull them downwards. Notice that you will need more power and that the distance to the stall point is much shorter compared to the brakes. Therefore avoid unnecessary turns and manoeuvres. During landing, pull the rear risers with both hands about 20 cm downwards when you are approximately 1 meter above ground.
- 5.3. **The canopy wants to turn to one side:** Generally this behaviour is due to a knot in one of the rear lines mostly due to insufficient preparation of the canopy before the take off. If this is already noticed during the launch, you must abort it. If you are already airborne, it may be possible to land along the ridge. Otherwise you must firstly fly away from the terrain by counter-steering on the other side with the brake and weight shifting your body to assist. Once you have reached enough distance to the ground, you can try to release the knot by pulling on the individual lines that are involved. If this is not successful, you should steer directly towards the landing field, taking care that the necessary turns are kept flat and in the direction to which the canopy is drifting, just by releasing the amount of counter-steering.
- 5.4. If the **radio receiver malfunctions** you should fly directly to the descent area. Observe the red/orange rackets of the flying instructor who will give you the necessary signals pointing the desired flight direction with them.

- 5.5. If you feel almost no wind in your face after a B-Stall (see Continuation Course), or other manoeuvres, after strong turbulence or braking strongly, and your glider makes strange swaying movements, you are in a state of **parachutal stall**. By pulling a little on both front A-risers (approx. 5-10 cm), you will be able to reset the glider into a normal flying situation again.
- 5.6. Particularly during thermal flying or generally in turbulent conditions you may experience a **partial collapse (deflation)** of the canopy. This common reaction is not particularly dangerous if you respond correctly:
 In the case of an **asymmetric collapse (deflation)** of the canopy, first of all you should control the beginning rotation by pulling the brake on the open side adequately. In addition you should weight shift to the open side of the canopy. If necessary you may afterwards pump up the canopy on the collapsed side by pulling the outer brake.
 In the case of a **symmetric collapse (deflation)** the whole leading edge deflects and as a consequence the rate of descent increases. In most of the cases, the canopy returns to its normal state without intervention but, should it be necessary, it can be opened pulling both brakes in short, strong pumping movements. Very seldom, there results a parachutal stall (see description of parachutal stall above).
- 5.7. In the case you are pulling one brake too much during a turn (e.g. during practice of the examination program) and there results a **spin**, you must immediately lift both hands upwards!
- 5.8. In the case you are pulling both brakes too much and the glider starts to stall (it stops flying and starts to swing back) you must immediately lift both hands upwards. In this case you have exceeded the **stall point** (100% braking), which is very dangerous, especially when you are close to the ground (landing approach) but also at high altitudes. That is the reason why the brakes should never be pulled more than 50%, which corresponds to a maximal brake position of navel height depending on the type of glider.

C) INFORMATION ABOUT THE CONTINUATION COURSE

1. General matters

- 1.1. The information about the basic course applies for the continuation course analogous!
- 1.2. The duration of the theoretical and practical training for the pilot continuation course varies according to the booking option chosen. It may be 6 or 12 months. This duration can be interrupted in the case of sickness, accidents and/other uncontrollable major events, or in the case of a remarkable period abroad where regular course attendance becomes impossible by sending us a message in advance of the training break. The break starts to count with the date of announcement. We will not accept an announcement subsequently after your break. If your booking duration has finished but you still need additional training, it is possible to extend it by a fee of CHF 300.- for further 3 months or CHF 20.- per flight.
- 1.3. Trainees who have not flown for more than 10 weeks should repeat several take offs on the **training hill** on the occasion of a basic course before attempting an altitude flight again!
- 1.4. Starting the 11th flight, that is, at the beginning of the continuation course, you have to rent or buy your **equipment**. We will automatically charge you a rental fee of CHF 300.- from the 11th flight during the next ten flights. If you buy any equipment (particularly a glider) within these 10 flights, we will refund CHF 30.- for each flight where rental was no longer necessary. Therefore we recommend starting with the tests of different types of gliders as soon as possible (mostly from the 5th or 8th flight onwards) and, due to increased comfort to buy your own harness as soon as possible. Arrange a harness session with Martin (079 642 82 60) to be well advised.

Of course, we will advise you on the best solution for your needs. Particularly we offer attractive kinds of payment and a package deal for rental/leasing. Take note that the course fee only applies when you buy or rent your equipment from us (new or second-hand). If you bring your own equipment, we charge additional CHF 2000.- but we give you a voucher for the purchase of further equipment which is valid for 3 years. If you bring parts of your own equipment the additional fee is adjusted accordingly (canopy CHF 1300.-, harness and emergency chute each CHF 350.-). It does not matter in which school you buy the equipment (Titlis or Emmetten). You can buy or rent parts in one school and parts in the other.

- 1.5. Shortly after buying your own equipment (particularly the canopy), you must take out a liability insurance. The 5-digit **insurance number** (use the SHV application form found on their website) must be glued to the lower side of the canopy immediately after purchase and the insurance certificate (with matching numbers) should be carried with you all the times.
- 1.6. The following **documents** should always be taken with you during flights: Insurance certificate, control card, flight log book and this information sheet. Additionally we recommend wearing gloves during the flights!
- 1.7. In case you are interested in trainings according to **German or Austrian laws** let us know in good time.
- 1.8. Usually, you will fly your first 20 flights exclusively in our schools. As we offer combined trainings for the flying school Titlis and the flying school Emmetten, you don't have to care about which school it is. If you wish to fly with another flying school, you must book there in advance. Depending on the school, in most of the cases a fee will be charged per flight (between CHF 15.- and 30.-). We have agreements with several flying schools for free **guest flights**. Ask for our special information leaflet about guest flights or download it from our internet site.
- 1.9. Before you do the practical exam you must have passed the theoretical exam. The applications to do the exams are available exclusively online on the website of the **Swiss Hang-Gliding Association** (Schweizerischer Hängegleiterverband SHV) and are independent of our school: www.shv-fsvl.ch.

2. Flight techniques: Take off / Flight / Landing

- 2.1. The rules about flight techniques described for the basic course apply accordingly.
- 2.2. From approx. the 20th flight onwards, you can **fly without radio help** (but with the radio turned on). Permitted flight programs are circles, exam program, small wingovers, use of the speed system and big ears. B-stalls, spiral dives and all types of collapses are not permitted.

3. Thermal stamp / Thermal flying

- 3.1. Usually thermal currents mean also turbulences, that is, the pilot must pay more attention to his glider and the terrain. This requires a certain amount of flying experience. This is the reason why we have introduced the internal rule of the log book entry "Thermik".
- 3.2. In order to obtain the log book entry "Thermik", the requirements according to the front page of the thermal test have to be met.
- 3.3. In advance of a take off for a thermal flight, the **individual permission of the launch assistant** is required!
- 3.4. **Correct thermal and ridge soaring:** Essentially the glider is flown lightly braked during thermal flying. With a sufficiently safe distance to the ground and other obstacles (in turbulent conditions correspondingly more) you fly along the ridge, lightly braking the canopy (20-30%). Pendulum movements must be continually corrected (active flying).
- 3.5. You must **never turn towards the ridge! Always turn away from the ridge** and approach again until you fly parallel to the ridge. Additionally you must take care that you do not obstruct any other pilots flying near or behind you. For this reason **look back** before starting to turn!
- 3.6. When flying thermals in the unlimited airspace as well as when you are above the ridge (min. 100m) you can fly circles. They should be flown in the **same turning direction** as any other pilot who arrived beforehand in the thermal current. **Attention:** When flying above ridges, there is a danger that the dynamic thermal current sweeps you into the lee currents behind the ridge or cliff.
- 3.7. When **entering the thermal current**, the canopy will swing a little backwards, causing the angle of attack to increase. To avoid that this angle is becoming too large (stalling) you should release the brakes shortly and as soon as the canopy is back in position, reapply them. When **flying out of the thermal current** the canopy will swing to the front. Do the opposite: As the canopy swings forwards you should brake more strongly.
- 3.8. Additional internal school rules for thermal flying. - At **Niederbauen**: Flying is not permitted east of the take off place and west of the triple high voltage wires!

- At Büelen: Flying is not permitted south of the cable car and north of the waterfall/small canyon! Additionally at Büelen, because of the frequent turbulent conditions, a minimal distance of 50 m from the ground (vertically and horizontally) must always be maintained (Exception: When the flight instructor directly and uninterruptedly supervises you with the radio)
 If you are not able to maintain the height, at the level of the lower alpine pasture you must fly outwards into the valley, due to the cable that is attached from there to the valley floor.
 In general: **Visual contact with the take off and landing** places must always be maintained and rising more than **400 m** above the take off place is the maximum that is permitted for trainees! Thermal flights should not be longer than **30 min** (Tiredness -> Concentration lapses)! Failing to respect these internal school rules will result in a thermal flying ban!

- 3.9. **Right of way rules: Give way to the right!** Everyone flying in a thermal current must circle in the same direction! Especially along ridges there is an extremely important rule: If two pilots are flying towards each other, **the one who has the ridge on his left must move to the right early enough to avoid collision**, whereas the one who has right of way keeps to his flight path. This rule is vitally important to safety, as this situation occurs very frequently.
- 3.10. Thermal flying/soaring requires a **minimum of autonomy**. Only limited supervision is possible. If you feel unsafe and/or there is a lot of air traffic you should fly towards the landing area. There will certainly be other beautiful thermal flying days!!

D) CHECKLIST FOR ALTITUDE FLYING

The [] fields should be ticked off after successful completion! Learning tempos vary substantially from trainee to trainee and progress is to be individually adapted! The following pattern should be understood only as a guide. Programs with * should be flown only after you have acquired your own glider.

1.-2. flight

- > complete radio supervision by the flight instructor
- > no individual manoeuvres
- > as a rule with a Classic/Corrado glider
- initial flight
- 360° turn left
- 360° turn right
- slow double circles

- wingovers
- big ears
- asymmetric collapse
- rapid direction changes with stabilisation
- pleasure flight without any instructions
- exam program with time limitation

3.-4. flight

- > gradually increase independence of individual flying parts
- > landing help by the flight instructor
- > as a rule with a Classic/Corrado glider
- steering with the rear risers
- small wingovers (Mini Wingover)

16.-20. flight

- big ears combined with using the speed system*
- reverse launch (also possible on the training hill)
- pleasure flight without any instructions

21.-25. flight

- > preparation for thermal flying
- 5 flights completed without instruction (but radio remains turned on)
- asymmetric collapse with speed system*
- narrow circles*
- pleasure flight without any instructions

5.-7. flight

- > further independence
- > if possible 1st attempt without landing assistance
- > as a rule with a very tolerant training glider

25.-30. flight

- > gaining flying experience
- thermal flying (if requirements and test are completed)
- exam program with time limitation
- pleasure flight without any instructions

- getting used to a different glider
- small wingovers
- circles left and right, in combination
- big ears
- steering by weight shifting
- exam program without time limitation

8.-10. flight

- > depending on progress, individual landing approach
- > test phase for different gliders, ready for purchase or rental
- getting used to a new glider
- small wingovers
- circles left and right
- big ears
- exam program without time limitation

from the 36th flight onwards

- > individual learning progress
- > independent flying with observation by the instructor
- > exam preparation
- repetition of all manoeuvres
- exam program
- pleasure flight without any instructions
- thermal flying
- steep slope landings
- discussion of tail wind landing
- landing with the rear risers
- landing with big ears

11.-15. flight

- > making a decision about purchase/rental