



# PILOT BRIEFING

Kebnekaise Wave Soaring Camp



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## 1 INTRODUCTION

This guide is intended to be used for the briefing of the participants for the Kebnekaise Wave Soaring Camp. The leader of each participating team is responsible that all the participants of the team know this content. The review shall be made in good time before departure to camp. The team Leader is also responsible for the team and its equipment.

## 2 AIR TRAFFIC

The Air Traffic Controller in Pirttivuopio uses the radio frequency 123.50 MHz. ATC call sign is "NIKKA RADIO". Radio Language is preferably Swedish, secondarily English. All aircraft must be equipped with a radio that can use the frequency 123.50 MHz and the 121.50 MHz distress frequency. Teams that have their own ground station shall notify the camp manager so that the station could be used in case of emergencies.

### 2.1 Flightplan

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Before take-off a written flight plan is to be submitted to the camp ATC. The flight plan can be extended in flight by radio contact with ATC. The Air Traffic Controller confirms the change in flight plan.

**NOTE!** if ATC have not made contact with the aircraft 30 minutes after the flight plan has expired, **full rescue operations will be launched**. This means, among other things, that a search and rescue ARCC (Aeronautical Rescue Coordination Centre) becomes engaged. We will of course also send out all the available motor planes to aid in search.

### 2.2 Flying

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Pilots intending to start, set up his/her aircraft in the start line. The aircraft is moved gradually up to the start area which always occurs at the level of the air traffic tower. Be sure to set up the glider and tow plane along the center of the runway.



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### 2.3 Report to air traffic controller before landing

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When approaching to land you should report to the ATC your arrival to the Descend Zone (NEDFLYGNINGSZONEN) including your altitude. When appropriate pattern altitude is achieved, at least 250m and min 200m, you report the downwind when along the ATC tower. If it is crowded on the Landing strip do not hesitate to land on the runway, or even on the outside of the runway. Always notify ATC of your intentions.

ATTENTION! For GLIDERS LEFT CIRCUIT applies MOTOR PLANES use RIGHT CIRCUIT.

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### 2.4 Landing Procedures

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Aircraft that are **lowest in the Descend Zone unconditionally land first!** If there are many gliders in the Descend Zone at the same time, the distance between planes joining Downwind should have a separation of at least 30 seconds!

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### 2.5 Final landing time

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Before the flight, the Pilot is responsible to find out at the last permissible landing time. This information is located on the wall of air traffic control Tower. The time for the final landing is normally an hour before sunset (this is so that there is still light for SAR to locate a plane). Remember to keep this time in mind when filing or extending your flight plans.

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### 2.6 Bad weather

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Cancel your flight in time if bad weather is approaching. Communicate weather deterioration to fellow aviators and NIKKA RADIO. It is much more pleasant to come home and stay overnight in a warm cabin or caravan than spending the night on a mountaintop after a forced landing.

NOTE! The weather can change extremely rapidly and if the ATC commands all planes down, it is worth doing so right away as it might take some time to get down from a high altitude

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## 3 SEARCH AND RESCUE

If you lose orientation or get into difficulties, you should immediately call up any station and explain your situation, don't feel bad about it, it can happen to anyone. Kiruna tower is on frequency 130.15 MHz and does, upon request, provide the QDM-course to get to Kiruna airport.

Tow planes used during the camp and "NIKKA RADIO" uses the frequency 123.50 MHz.



## 4 FLIGHT TIMES

ATC takes notes of all gliders take-offs, landings and the tow planes used. After the flights of the day there is a copy of your flight(s) in a wooden box attached to the ATC Tower. Please do not disturb the air traffic controller with questions about flight times during the day, as he is usually quite busy handling the traffic.

## 5 AIRCRAFT CONTRAST MARKINGS

Excerpt from AIP GEN 1.5.1 and 1.5.2.

*1 Flight within the mountainous area of Sweden with single-engine aircraft and gliders*

*1.1 The below mentioned provisions do not apply to flights reaching less than 25 NM from take-off location.*

*1.2 Aircraft shall have contrasting color markings. On aero planes markings shall be applied to both sides of the wings, to the fuselage and to tail surfaces. The markings must cover an area of minimum 2 square meters. On helicopters markings shall be applied to the tail rotor guard and other suitable areas for good contrast effect to facilitate detection.*

*1.3 For alerting purposes the following shall be carried: signaling rockets with cartridges, pyrotechnic signals (day/night), mirror, torch, whistle and signal flag.*

*1.4 The rescue equipment to be carried shall be adapted to the season and the number of persons on board. The pilot-in-command shall inform the passengers where the equipment is stored before commencing flight.*

*The full contents of the above provisions can be found in the regulation of the Swedish Transport Agency LFS 2007:20 (inSwedish only).*

### **To sum it up:**

1. Aircraft shall when flying over the mountain area to be painted in such a way, or bear such markings that good contrast against the surrounding terrain is obtained. The painting or markings shall be orange or red color, but not dark red. The desired color is fluorescent.
2. In airplanes, appropriate markings applied to the wing upper and lower sides, flanks and tail. The total surface of the markings shall not be less than two square meters. Similar principles apply to the painting for it to be considered to give a good contrast.
3. For alerting purposes the following shall be carried: signaling rockets with cartridges, pyrotechnic signals (day/night), mirror, torch, whistle and signal flag and enough food and water to survive at least a night on a mountaintop.



## 6 LANDING OUT

A few tips if you are forced to land out. First and most importantly, take it very easy! Think before you act!

- Turn on the radio for reception. Avoid making too many calls with no results, the battery capacity is limited. The radio consumes about 20 times more power during transmission than when receiving. Keep your radio on the emergency frequency of 121.5 MHz.
- Do not leave the plane if you do not see any buildings. If you intend to leave the aircraft to walk to e.g. a nearby settlement, remember to leave a message indicating which way you intend to go to, what is your intentions and when you left. Attach the message securely on an easy to find place e.g. in the middle of the dashboard.
- Staying in the Swedish mountains during this time of year offers several surprises, most of them unpleasant. You must ruthlessly use the resources you have. A parachute is perhaps worth thousands wrapped in its bag, but it could save your life if used as a tent or sleeping bag. You get new parachutes in a store, new lives are harder to come by.
- It is not unusual with temperatures far below -30 degrees centigrade at night in this area even in April.
- You can get an idea on how it feels to spend the night on a mountain by leaving your warm and cozy cabin or trailer at the evening, dressed in your flight suit and stay outside one or two hours. This will able you to determine how your equipment works. Modify the equipment so that it works well and you feel okay even after a few hours outside in the cold.
- If you are to survive a night on the mountain, a crucial help is if you have the opportunity to dig yourself in the snow or not. It is important to retain the heat your body emits. It never gets colder than maybe a few degrees below zero down in the snow and you are away from a possible roaring blizzard that further cools you down. The difference in cooling capacity is huge between - 30 ° and 0 ° even not considering the wind chill factor. Ensure that there are appropriate tools to dig within the aircraft. Also have a look at AIP GEN 1.5.1.

([http://www.lfv.se/AIP/GEN/GEN%201/ES\\_GEN\\_1\\_5\\_en.pdf](http://www.lfv.se/AIP/GEN/GEN%201/ES_GEN_1_5_en.pdf))



## 7 WEATHER AND HAZARDOUS WEATHER SITUATIONS

Weather in the mountains is notoriously unreliable. Beautiful weather with blue skies and light winds may turn into a roaring 25 m/s blizzard with zero visibility in less than ten minutes.

Never leave an aircraft that is not tied down, not even for a few minutes!

### 7.1 Hazardous weather situations

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The most dangerous and unpredictable weather conditions, when flying around Pirttivuopio, occur at winds between S and WSW, especially in connection with a frontal passage. The Föhn window above Paittasjärvi south shoreline can quickly transform into complete cloud cover. If you get surprised by this at a higher altitude, you should try to remain in the wave and continue to rise to get a better overview and hopefully find some blue sky where you could get below the clouds safely.

In the past when an event like this has occurred pilots have found gaps in the clouds, at Torneträsk 50 km north, and also closer to Kiruna 50 km to the east of Paittasjärvi.

## 8 TYING YOUR AIRCRAFT DOWN

All aircraft and transport trailers shall be tied down with heavy rope. To further reduce lift on the planes, prop up the tail so that the angle of attack to the wind decreases. Planes should be tied down from the nose, tail, wing tips, and preferably also in the middle of the wing. NOTE! There will be a storm, Just be prepared for it!

## 9 EQUIPMENT

Flying and staying in the mountains might require some different equipment than what you're used to in your neighborhood. The climate is different, it's tougher, and the area is sparsely populated, far from inhabited houses. You must bring more equipment for both your aircraft and yourself. These equipment proposals are not comprehensive; please feel free to complement it.

### 9.1 Equipment for aircraft

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- Radio and equipment are described in [AIP GEN 1.5.1](#) and 1.5.2 is MANDATORY. Practice the use of the signal mirror.
- Spare Batteries, fogscreens, digging equipment, sleeping bag and flares. Road flares burn strong and long.
- Contrast markings as described in [paragraph 5](#).



## 9.2 Personal equipment

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- Warm underwear, preferably woolen or technical underwear for cold climates. (Cotton is no good)
- Padded Jacket and pants, or a good winter overall.
- Warm gloves or mittens.
- Hat, preferably with ear flaps, it is colder the higher you fly.
- Several pairs of stockings and socks. Change to dry and clean socks before you fly as this will enable you to handle the cold better.
- Insulated walking boot or snow boots. Boots with felt inserts are the best.
- Studs for walking on the ice.
- To avoid having cold feet, there are battery powered heated socks nowadays. Buy the bigger battery with enough battery capacity and make sure you can reach the switch in flight.
- NOTE! There is a saying among mountain climbers and hikers "Cotton Kills"

## 10 OXYGEN EQUIPMENT AND USE

Oxygen Equipment is a must when wave soaring. The risk of an major accident is imminent when flying over 4000 m due to oxygen deprivation as this reduces both the physical and mental ability. For "Commercial aviation" the regulations can be found in [LFS 2007:47](#)

For private flight for airplanes and gliders, the following guidelines are used to avoid damage due to oxygen deprivation. Remember that you are in Pirttivuopio already at 466 meters above sea level when starting.

### FLYING HEIGHT MSL

Under 4000 m Oxygen equipment is not normally necessary, but should be used during prolonged flight at altitudes between 3000-4000 m

4000 m - 7000 m Oxygen equipment should be worn.

7000 m - 12,000 m flying without oxygen at altitudes above 7000 is highly dangerous and life threatening! Oxygen equipment with a personally fitted mask must be used. People who expect to fly at these altitudes should have been tested in vacuum chambers with the careful study of how oxygen deficiency affects you. Emergency oxygen equipment should be kept at hand for immediate use.

12,000 m + flight is only possible using special pressure equipment (pressure suit or pressure mask). Flying with normal oxygen equipment involves **the risk of death even with** the delivery of **100% oxygen**.



Note! The above guidelines are general in nature, personal impact depends on many aspects such as your current fitness, smoking etc. If you smoke one cigarette before flying your physical altitude is already soaring at above 1000m when you're still on the ground.

## 11 COMMUNICATIONS AND TELEPHONE

Useful telephone numbers are located at the ATC tower. As everyone have mobile phones nowadays the land line phone has been discontinued as there is good GSM coverage in the area

Buses running between Nikkaluokta - Kiruna.

The bus company is "Kiruna trafik", Phone#: (0980) - 141 41

## 12 INFORMATION ABOUT KIRUNA

**Kiruna** ([Northern Sami](#): *Giron*, [Finnish](#): *Kiiruna*) is the northernmost city in [Sweden](#), situated in the province of [Lapland](#). It had 18,148 inhabitants in 2010 and is the seat of [Kiruna Municipality](#) (pop. 23,099 in 2008) in [Norrbotten County](#).

Kiruna is located 55 km east of the runway at Pirttivuopio. Days with poor flying weather you can go to Kiruna for shopping or other recreational activities. For ski enthusiasts there is an excellent opportunity for both cross country and downhill skiing. The tourist office is located in the "People's House", right in the center of the town, here you get lots of tips and ideas, as well as maps.

Tips for bad flying weather:

- ✓ Good waffles at Nikkaluokta tourist station.
- ✓ Ski or take a Snowmobile tour to Kebnekaise Mountain Station.
- ✓ Drive or take the train to the Atlantic coast and Narvik (Norway). Incredible scenery waits along the way (full day).
- ✓ Jukkasjärvi 10 km east of Kiruna. The world's largest igloo (more like a snow castle), open daily.
- ✓ The Church and the town hall in the center of Kiruna. Beautiful architecture.
- ✓ LKAB, the world's largest underground mine. Contact the tourist office for a visit (a few hours).

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