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*Glacier flying in a Piper Super Cub...*

# Adrenaline rush

**'You're hired!'** We fly with Sir Alan Sugar on his 60th birthday

# Top of the world

**Flying in the Swiss Alps and landing on glaciers in a Piper Super Cub. Does life get any better?**


**WORDS** Dave Calderwood **PHOTOS** David Spurdens

# A perfect day!

**SILENCE. Clear blue skies. Brilliant, dazzling snow. Pure air so crisp, cold and dry you can feel it clearing out your lungs. The rim of mountain peaks around the snow field make it feel like the top of the world. Actually, it is the top of the world.**

**We're standing on the Glacier du Trient, at an altitude of 10,500ft. It's on the Swiss side of Mont Blanc and very close to the French border. We've just landed, on the glacier, in a 25-year-old Piper Super Cub specially equipped with skis, and got out to stretch our legs and take the air.**

**We don't go too far because there's a very real risk of hidden crevasses which may be hundreds of feet deep. The snow is three-four inches deep and it's just perfect.**

# FLIGHT TEST

THE two-seat Super Cub is parked across the slope and painted several shades of bright orange and red – Breitling colours. The Swiss watch company paid for the paintjob. It leaps out of the surroundings.

This has been the most fantastic day's flying. Not just for me – even Blaise Morand, the Swiss mountain flying instructor who has been guiding us in and around the mountains, on and off the glaciers, says so. We've struck lucky with perfect mountain flying weather – little wind, clear skies, firm snow.

The wonderful conditions – best of the winter, says Blaise – mean we've been able to land on this glacier at will. Not exactly touch and goes – you can't do that when there's a wall of rock at one end of the improvised runway – but land, ski-taxi to turn around, then take off the same way we came in.

Not just this glacier. Yesterday, we were able to fly in and out of the Aeschhorn glacier up near the famous Matterhorn. That was higher still, at 12,000ft. The extra 150ft makes a noticeable difference in both the performance of the aeroplane – engine and handling – and the pilot. We're all noticing the thin air and lack of oxygen. Except Blaise, of course, since he's born and bred locally and he's the pilot equivalent of a mountain goat.

Blaise makes flying round the mountains and landing on glaciers look easy. It isn't. These huge lumps of mildly radioactive granite are itching to kill you, given the slightest chance. They're benign today, in this wonderful calm weather, but as any climber or skier knows, mountain weather brings out the beast in them.


Blaise Morand, instructor for the Groupe des Pilotes de Montagne, and immaculate pilot of the 180hp modified Super Cub.

## MOUNTAIN RATING

We've been trying to set up this feature for several months. The weather had to be right, said Blaise, and on one Monday in early March we got the call. "This week. It's perfect."

We dropped everything, flew out to Geneva Airport, then made our way round Lake Geneva, past Lausanne, up to Sion, a small town not far from Brig. The airport here combines all types of civil and military flying, all hassle-free. An example to the world.

Here's where the Groupe des Pilotes de Montagne, a section of the Aero-Club de Geneve, bases itself from October to April. Blaise is the President and also one of 20 or so mountain flying instructors in Switzerland. He teaches a course which adds a rating to your PPL(A) and allows you to fly solo, or with a passenger, and land on the glaciers. The rating is recognised in Switzerland, France and Italy, and it also allows you to land at mountain grass strips (in summer) and altiports, such as the famous one at Meribel.

We started with a briefing from Blaise in the café at the airport.

"It's a very special discipline," says Blaise, who speaks better English than my O-level French. "You need to be a good pilot, relaxed in their aircraft with good pilot skills – a clean and safe way of flying.

"The second quality is to know about the mountains. The environment is very special. We are flying very close to the wall of rocks. Sometimes pilots stop because they don't like it.

"Quite often there is a strong wind and it's very turbulent. It's like a sport – you must be forceful."

So, sharp stick and rudder skills, get used

**'These huge lumps of mildly radioactive granite are itching to kill you, given the chance'**

Above and right: take-off is downhill and you're committed! There's no second chance and you launch off the edge of the glacier into the abyss. Yee-ha!


Super Cub is a brilliant plane for flying in the mountains – fuel-efficient, responsive, light, safe and with excellent short-field performance.


BREITLING

# FLIGHT TEST

to flying close to rocks, and it might be bumpy. Oh hell, what have I let myself in for!

We take off from Sion in formation with another Super Cub flown by Pierre Zen-Ruffinen, president of the local gliding club and a qualified mountain pilot. He's flying the cameraship. Our Super Cub has one big advantage – an extra 30hp over the standard 150hp of Pierre's aircraft. It's also fitted with a four-blade prop to reduce noise. Both aircraft have long, under-slung silencers fitted. The Swiss like quiet.

Both aircraft fly smoothly along one side of the valley, climbing at a steady 70mph Indicated Air Speed (IAS). The airfield was at a mere 50cft so it's long haul up to 12,000ft. 70mph is the 'reference' speed, according to Blaise. We do almost everything at that speed – climb, cruise, approach.

As we turn to fly between the mountain peaks, we cross ridges at the approved 45-degree angle – to allow us to turn away should we hit a downdraught – but there's no wind today. If there was, we'd use the uplift on the upwind side of the ridge to help the climb. Then suddenly we're in among the snow fields and we have to fly a big, wide orbit to gain more height. Some of these darn rocks are very close to the wingtips. OK now, but if it was windy...

**'First we fly a circuit at around 1000ft above the glacier, checking the wind and getting a feel for the site'**

**CIRCUITS AT 12,000FT**

Blaise points out the glacier ahead. First we fly a circuit at around 1000ft above the glacier. We're checking the wind and getting a general feel for the site. We're looking for potential obstacles and the perfect landing/take-off area. It's not just lumps of granite. The glacier is a moving mass of ice and the ice boulders as it heads over the edge of the glacier bowl would rip a ski off instantly.

And it's not just the wind which has to be right. The light is crucial. Today is sunny and the surface of the snow is easy to read. As any skier knows, when it's overcast and the light is flat, all sorts of dips, bumps and ruts can lurk unseen. We can see a wave-like pattern on some of the snow and that's to be avoided, says Blaise.

We descend to 500ft for a second circuit, this time inspecting the surface more closely and also judging the slope. There are 25 glaciers available to the mountain pilots and all are different and change constantly. This time, we're picking our exact point of landing and the track we're going to roll – ski – out on. "Choose the longest, with no rocks. The take-off roll must have no bank (side to side slope)," says Blaise.

A third pass is at just 100ft above the surface and effectively we're now downwind. "We must be very precise," says Blaise. "We must stay calm," says the voice in my head. The nervousness is building and I can feel my fingers tingling, ready for the landing, even though I'm only following Blaise on the controls for this first landing.

"Blimey, we're close to the mountain." This thought, as we hug one side of the glacier bowl, is quickly followed by surprise at the amount of power we're using. The tacho is showing 2200rpm, IAS is 70mph. Blaise lowers the flaps – another modification which the other Super Cub doesn't have – and we're flying right at the

## GROUPE DES PILOTES DE MONTAGNE

WHAT a cool rating to have on your licence: 'Mountain Pilot'. But it takes some doing.

Before you can take the flight test, you need to have between 250 and 400 landings in all sorts of conditions on glaciers. It takes time to accumulate all these in your logbook and to have them signed off – probably two seasons of winter flying.

Realistically, unless you have a holiday home out there, it's unlikely anyone outside the area could reach the required standard – and maintain currency.

But you can still enjoy glacier flying. Just contact Blaise Morand at the Aero-Club de Geneve and arrange a flight with him. It costs 417 Swiss Francs per hour (about £200) and worth every centime. You may have to wait for good weather – it isn't always as perfect as this.

*W: www.aeroclub-geneve.com*

**A huge winter playground, just for ski-planes! Not all glaciers as as big as this.**

**Before you even attempt to land, you must make low passes to assess the wind and the surface. No room for mistakes up here!**

**View from the cameraship, a second Piper Super Cub, flown by Pierre Zen-Ruffinen, president of the local gliding club and another accomplished mountain pilot.**

## MOUNTAIN PHOTOGRAPHER

I'VE spent a lot of time taking photos on mountains. Two years ago on the North Face of the Grand Motte, I and a snowboarder narrowly avoided being killed in an avalanche that claimed the lives of two other Englishmen who passed us. I know how unforgiving mountains at these altitudes can be. One wrong decision or a bit of bad luck and it's all over. This time I wasn't in the decision-making process and as we flew straight towards a glacier at high speed, I just had to trust the pilot. Fortunately Pierre flew the cameraship superbly to allow me to bring back these photos. I hope you like them. – *Dave Spurdens*

▮ Only once has Blaise Morand had a mechanical failure on a glacier – when the landing gear broke, luckily with no injury. Instructor and student were taken off by helicopter, which then returned to lift off the stricken aeroplane. Expensive!

▮ It's vital to stick to areas you've recce'd – crevasses can lurk under the surface and you don't want to find hidden rocks.

# How to... land on a moving mass of ice at 12,000ft

**BEFORE you go anywhere near making a landing, you have to assess the glacier with at least two passes. First, to assess the wind. Second, lower, to check the surface and pick the exact spot you intend to land on. You're looking for the smooth bits, with no rocks or ice boulders lurking – they could rip off a ski as soon as you could say, "snow joke". Remember, at this altitude the thin air means the aircraft isn't performing at its best.**


**» 4 KEEP GOING!**
DON'T even think about easing off the power until you're on the level – which can be deceptive. Nowhere is really flat. If you're not stopping, you're already planning the take-off.

**» 3 POWER UP**
YOU'RE landing uphill and you've no brakes! So you've got to keep moving forwards with lots of power – keep the ski-taxi speed up until you reach a flat area. Stick right back.

**» 2 TOUCHDOWN**
LANDINGS are always three-pointers –tail down. The last thing you want to do is catch an edge or, worse, have a ski tip dig in. Landing is at 40mph IAS – about 49mph True Air Speed.

**» 1 APPR**
THIS is a big g plenty of room are tiny. You're the aircraft in of power at 70 aiming for the you picked dur recce.

## THE APPROACH


» Watch the mountain...


» Look ahead at the surface...


» Keep the power on...


» Ease the throttle a bit...


» Nose high for landing...


» And keep the power on!


» 1 APPROACH
THIS is a big glacier with plenty of room but some are tiny. You're dragging the aircraft in under lots of power at 70mph IAS, aiming for the exact spot you picked during the recce.
» 7 ROTATE
Actually, it's more a case of flying when the ground drops away, hopefully before the ice boulders at the edge of the glacier. As soon as you're airborne, nose down to pick up air speed.
» 6 TAKE-OFF
Stick right back, set the flaps, full power and accelerate downhill, saying a quiet prayer. You're going out of the glacier the same way you came in – there's no other choice!
» 5 WING UP
IF you're going to stop for a breather, park with the right wing up – the one with the most fuel in. That's so the weight is in the right place – and the fuel will gravity feed to the engine OK.
» And keep the power on!

# FLIGHT TEST

glacier. Of course, we're not descending, the glacier surface is on a slope and it's rising to meet us. This was all in the pre-flight brief, of course, but it's just clicked. Doh! I knew that!

As we sweep in over the snow, aiming for a point where there's already some ski tracks, Blaise reduces power to 1800rpm, raises the nose just a tad, and we touchdown at around 40mph IAS. True Air Speed at this altitude is around 50mph.

**SKIING AEROPLANE**

As soon as we're down, Blaise pulls the stick back to keep the nose high, and keeps the power going. We don't want to slow down because we're on a 30 degree upslope. There's no brakes, of course, and we haven't enough power to take off uphill so we ski on under power to a relatively flat area at the top of the glacier. Skiing an aeroplane, another first!

Blaise guns the engine, boots in hard left rudder and we carve a lovely turn in the snow and head downhill. There's no mucking about here. Stick hard back, full power, still carrying some flap, and we aim for the edge of the glacier. Don't even think about engine failure.

Fortunately for me, this is quite a large glacier and we're off and flying long before the edge. As soon as the aircraft is airborne, Blaise relaxes back pressure on the stick to put the nose down and build up air speed. We head out into the open valley, circle and position ourselves for another approach.

Time and again we practice the approach and landing. Touchdown is smooth. For some reason I thought it would be bumpy. Landings and take-offs are always three-pointers with the nose high – the last thing you want to do is catch a ski-tip in the snow. Yee-ouch! That's another reason why we drag the aircraft in under lots of power – to get the correct aircraft attitude set up.

I'm surprised how well the Super Cub handles in the thin air. I had expected it to wallow and feel like a drunken marshmallow but no. It was accurate, smooth and felt very safe.

It's also a very strong and simple aircraft, with little to go wrong. The controls are from another era, with a stick between your legs, throttle is a knob on the left window ledge, sliding forwards and backwards, and the rudder pedals are simple metal bars. The flaps are operated by a typical Piper 'hand-brake' lever, with another lever down by the side of the front seat to pump up and down the hydraulically-deployed skis. Skis for snow, wheels for tarmac.

**FUEL-EFFICIENT**

Despite the aircraft's age, it's in lovely condition. There's nothing tatty about the airframe – far from it – and the well-silenced engine runs very smoothly. There's hardly any vibration or noise, with just a hint of exhaust gas and petrol hanging in the air, just like a classic car.

The Super Cub is also fuel-efficient which matters when you may have quite a distance to cover going to and from the glaciers and there's nowhere remotely safe to put down. It's precisely for these reasons that the mountain pilots love it.

According to Blaise, the only other aeroplane that's any good in the mountains is the Swiss-built Pilatus PC-6, a turbine-powered seven-seater.

**'Blaise guns the engine, boots in hard left rudder and we carve a lovely turn in the snow'**

Recognise the mountain? It's the famous Matterhorn, not far from the Mountain Pilots base at Sion Airport.

## TOP OF THE POPS

WE were amazed to find the Valais region (where Sion Airport is) has 300 sun-filled days a year, the airport operates military, biz jets, commercial jets and GA in complete harmony, ATC is outstanding, restaurant brilliant, landing fees 9 Swiss Francs (around £3.60) for the Super Cub and everyone is incredibly friendly.

One Yak pilot said parking fees are £90 a month. Fuel is about 20p cheaper per litre than the UK. In the old town of Sion we found excellent restaurants serving local wine (which we tested fully!).

If you want to find out where to stay, the Swiss Tourist Board is the best we've come across. Oh, and the skiing at nearby Crans Montana is excellent. Valais has gone to the top of our list.

– *Sam Spurdens*

**W: www.valaistourism.ch**

VALAIS SWITZERLAND

Much better way of getting to the top of a mountain than a ski lift!

See bonus pictures on iLOOP

We return to Sion for lunch – this is the French part of Switzerland, remember, and they have their priorities right. Later, we set off for another sortie to catch the evening light. The valley floor is in shade but we soon find the sunshine up at 12,000ft, snow-capped peaks all around us in this winter playground. I have to pinch myself. It's so special up here.

Another session of landings and take-offs but I'm aware that we've had the best conditions. To get the rating, you must experience all types of weather and log more than 250 take-offs and landings.

Finally, we make a full-stop landing and get out of the Super Cub on the glacier. Another of the Groupe des Pilotes 'planes has appeared. It's a club member who spotted the weather was perfect and is out for a jolly. Then a Cherokee also painted in Breitling colours circles round the glacier bowl, taking a good look at the three aircraft parked. He's not fitted with skis so can't land. Another out for a perfect flight. These people are so lucky!

"It's so different at this time of day," says Blaise. There's a bit of a poet in him when he talks about his mountains. "At 11am it's so violent." He's talking about the brightness of the snow.

It's 1830 and we have to head back to Sion. Reluctantly, we climb back in the Super Cub, switch the fuel tap to the right wing tank – the uphill wing – and ski-taxi round to head downhill and home.

In formation with Pierre all the way – except for when we were zooming round the cols and peaks, "OK, we're a bit crazy," says Blaise, we land together at Sion and taxi to the fuel pumps. Tiredness swoons over me. High altitude and high adrenalin does that to you.

But it's a fantastic feeling. Perfect day? You bet!

## IN DETAIL

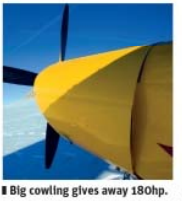
## In the cockpit




**PIPER SUPER CUB PA-18-180M**

**1** Carb heat and cabin heat. **2** Fuel tap. **3** Throttle. **4** Radio. **5** Air Speed Indicator. **6** Altimeter. **7** Direction Indicator. **8** Attitude Indicator. **9** Tachometer. **10** Radio nav. **11** Ignition and primer. **12** Manifold pressure. **13** Stick. **14** Flap lever. **15** (Main pic and top inset) Hand pump to lower and raise skis. **16** Wing root-mounted fuel gauge.

Skis are lowered for snow landings.



Big cowling gives away 180hp.

Tailwheel has its own mini ski.

### PIPER SUPER CUB WITH SKIS

**Cruise** 70mph
**Stall** (clean) 43mph
**Rate of climb** 1500ft/min
**Fuel burn** @ 75% 36 lt/hr
**Range** 400nm
**Ceiling** 19,000ft

**SPECIFICATIONS**

**Power** 180hp Lycoming
**Prop** 4-blade, Hoffmann
**Length** 6.88mt
**Wingspan** 10.74mt
**Seats** 2, tandem
**Mtow** 794kg
**Empty weight** 586kg
**Useful load** 208kg
**Fuel capacity** 136 litres

**PRICE**

**Not available new.** Around $80-100K for a well-equipped, good condition used model

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