



Unusual & Dangerous Approaches Part II

By Arturo Weiss

In Volume 6 Issue 6, I wrote about some of the worlds most unusual and dangerous airport approaches. Because the laundry list of these challenging airfields is quite extensive, my editor allowed me to write this follow-up (sequel, if you will) on this subject, but with an additional list of airfields for you to try out. I trust you will enjoy this one as much as the last, but please remember; this list is not inclusive of all the airports on my long list. If all goes well, perhaps a Part III of this subject will be published in the future.

So, where do we start? Well, how about the islands of Southeast Asia? Grab your passport and headset as we Head South!

Kai Tak's Checkerboard Approach

A few years ago, Hong Kong celebrated the opening of a new airport: Chep Lap Kok International. It's predecessor, Kai Tak was limited in its size and there just wasn't too much room for expansion. However, one of the biggest reasons for this move was its famous "checkerboard" approach. Now left for the history books, this treacherous approach is a classic and probably the grand-daddy of dangerous air carrier approaches. However, holders of older versions of Microsoft's Flight Simulator (like '98) will be able to enjoy this approach as airline crews did in days

past. Unfortunately, 2002 users will not see the famous checkerboard nor receive the decommissioned IS signal, but will still be able to see the remnants of the now closed airport. FlightSoft's Ultimate Hong Kong Simulation for FS2002, however, brings this favorite back to life!

The checkerboard was actually an Instrument Guidance System (IGS) approach, which as all instrument pilots have learned, is a variation of the typical ILS approach. As you may know, ILS approaches terminate at a runway centerline (plus or minus 30 degrees) and IGS approaches terminate off runway center leaving a pilot to pick up the threshold visually and then maneuver the airplane in for the rest of the landing approach. Boiled down, this



Approaching finals in the 747.
Notice Checkerboard Hill ahead to the left.



The challenging and dangerous final turn to Rwy 13

approach consisted of an IGS approach that, under the planned conditions, would have the airplane pop out of the clouds and spot this checkerboard patterned box (hence the name "checkerboard approach") on a hillside. At this point, pilots would then look right and spot the runway about 40 degrees off the nose of the airplane. Then it was time for the famous steep turn. Crank and bank over to line up with a runway about a mile ahead of you. Not easy to do in a heavy Boeing 747. All of this is happening, as the flight crew would configure the aircraft for landing. Flaps, gear checked, and speed control was all handled during this last phase of the landing approach. Finally, the airplane touched down on the runway...provided everything worked out to plan. Things didn't always work out, however, and there have been many an airplane crash into the airport property or into Victoria Harbor's cold waters.

As I mentioned before, Kai Tak is now closed so flight crews need not fear the dreaded "checkerboard approach" any more. However, we flight simmers can still shoot this approach and enjoy all of its excitement without the bodily injury so often associated with the real thing. I invite you to give it a shot. My advice is to try the approach in good weather conditions first. This way you can see what it is all about and know

what to expect. Then go ahead and lower your cloud ceilings and visibilities and give it another try. I promise sweaty palms and an increased heartbeat while flying in this scenario. If not, then you must obviously be dead or under heavy medication!

Madeira, Portugal

The airport on this Atlantic Island colony is truly a fun adventure. While not a big deal with smaller light aircraft, this international airport boasts a rather interesting approach for larger jets. As you can see by the adjoining pictures, Madeira (LPMA) is situated at the very edge of the island. Rather than having it perfectly parallel to the coast, airport engineers were forced to place the runway slight angled to the terrain. This results in a somewhat impaired final approach course, making straight in low approaches impossible for large jets. Therefore, airline crews need to adjust their final approach to accommodate a "dogleg" pattern, where the base to final portion of the pattern is not quite squared off. In fact, if turning a right base for runway 5, you are forced to skim the hillside on the way in.



Turning final to Madeira. Watch out for sea breeze crosswinds!



Climbing out over the nice blue sea

Cedar Key, Florida

Some airports are set in a relatively flat terrain area, but can still pose a natural threat to unwary pilots. In these cases, visual illusions, caused by the limitations of the human eye, can play dangerous games with unprepared fliers. One example of this can be found at the Lewis Airport (KCDK) in Cedar Key, Florida. This small airport is located on an island just off the Florida mainland. It is attached by a single bridge and is known for its quiet, laidback lifestyle. Because of its location and flat terrain, the island can trick even the most experienced pilots, especially at nighttime. Since the airport is surrounded by water, there are few visual cues to aid during landing. Even during the day time, judging one's height above the water is tricky, but night time makes it near impossible! Just ask any coastal pilot, and he/she could probably tell you some stories. Flying out over a large body of water during night conditions is really an Instrument Flight Rules (IFR) situation and should really be left to those with good instrument training. Because you have no horizon and no other buildings, lights etc to compensate, pilots will often experience a "black hole" effect and become disoriented. This is due to the eye's limitation and the brain's inability to figure out what is going on.



The flat landscape of Cedar Key



Can you spot the runway in the dark?



Approaching Glenwood Springs



Battling the strong crosswind at KASE. Note the windsock.

Such is the case for Cedar Key. When approaching at night, it can be near impossible to spot the runway from even a couple miles away. Even then, you need to be careful when maneuvering in for a landing, as the lack of visual cues could make you fly lower than normal or just lose your orientation altogether. Cedar Key is not the only airport with this problem, as even landlocked airfields can pose the same threats as their water-bound brethren. Just a couple hours south of Cedar Key, is the Dade-Collier airport (KTNT). This airline training field is located right smack in the middle of the Everglades National Park. Nothing but swamp surrounds this airport, which hosts various airliners doing around the clock touch-n-goes. Like the ocean, the swamp provides a horizon-less sky at night and therefore the same dangers too. So, try these airports out and remember to refer to your instruments at all times.

Rocky Mountain High

The Rocky Mountain region has always had a stigma about housing some of the U.S.'s most dangerous approaches. Unfortunately,

this legacy includes the deaths of several pilots. In 2000, a corporate jet crashed during an approach to the Aspen-Pitkin County airport (KASE) during inclement weather. As in the Himalayas and other mountainous regions, the combination of high-density altitudes, rising terrain and unpredictable weather form a deadly combination. The majority of the airports located in this region fit this profile and caution must be exercised when flying in and out of these airfields.

While there are many to talk about, let me pick just one of these airports for now. The Glenwood Springs (KGWS) airport is on the Denver sectional at Lat/Long N39.30.5 W107.18.7. It can also be found via the DBL (Red Table) VOR 113.0 270 degree radial at distance of 19.8 DME. This is a daylight only approach with no instrument approach services available. In the real world, a "Super Unicom" automatically broadcasts updated AWOS weather information as it changes. With winds so variable here, especially during the afternoons, these constant updates are

a great feature. The preferred runway is 32 for approach and 14 for departure. There is reason why this is so. The airport elevation is a high 5840 feet. Combine that with summertime temperatures in the 90's, and you get very poor climb performance. With that said, the rising terrain is the main reason for this preferred runway policy. Departing out of runway 32 ensures obstruction clearance, while approaching via the other runway does the same for landings.

Speaking of takeoffs, careful consideration should be used when flying out of this special airport. Because of its elevation and guaranteed high-density altitudes, aircraft performance is very inhibited. For a recent flight out of GWS, I used Microsoft's default Cessna 182 RG. Using a typical short field takeoff technique with brakes applied and full power added, I still used almost all of the available runway to reach my rotation speed of 60 knots. Even after liftoff, the climb performance was poor, averaging about 300-500 feet



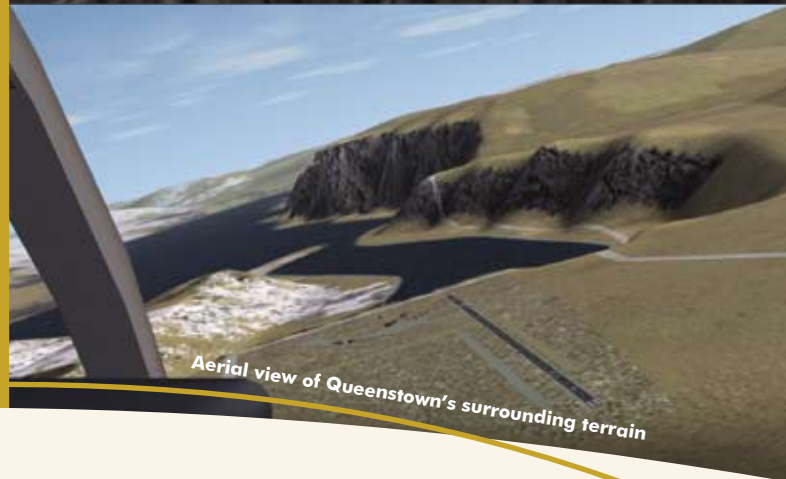
St Bart's geography (Flight 1's West Indies Add-on)



No room to fall short at Queenstown in FS2002



Final at St Bart's... bleed the airspeed... full flaps!



Aerial view of Queenstown's surrounding terrain

per minute max climb rates. I never did get above the 8,000-foot level and was forced to skirt around terrain just to climb my way up to that meager altitude.

St. Barthelemy (St. Bart's)

The Caribbean provides for some great sightseeing, but you can also get yourself into a lot of trouble with certain airport approaches. Let's take St. Barthelemy TFFJ (a.k.a. St. Barts). This tiny Caribbean island boasts probably the most dangerous approach in the region. Once again, rising terrain and a short runway are the main culprits. The amazing part is that commuter airlines fly in there all of the time. Just talk to regional airline pilots, like those flying for LIAT, a Caribbean carrier flying Dash 8s. I would suspect that all food has been picked up prior to this nerve-wracking approach!

As in most dangerous airport approaches, Mother Nature's handywork has a bearing on the difficulty level of this approach. Pilots flying into St. Barts must be aware of the rising terrain both on the approach AND departure ends of RWY 10. Charts

for TFFJ clearly note that this approach is VERY difficult and departures for RWY 28 are outright prohibited. Part of the problem with this tiny airport is its short runway length. With only 640 X 15 meters to spare, every bit of concrete is precious. Even light-twins get a chance to wear out their brakes during landing. Therefore, speed management is crucial for a successful landing at St. Barts, because slower than required speeds will have you hit the hillside short of the runway, while excess speeds will cause you to overshoot the runway and splash into the crystal clear water of the lagoon. Local residents have almost become immune to the rather unusual approaches these pilots are forced to make over their tiny town. Almost skimming the top of the hill on approach to RWY 10, crews are forced to quickly chop the power and descend rapidly along a steep approach path. As I said before, speed is crucial during this phase and those flying along will feel a definite pull on the stomachs!

Queenstown, New Zealand

New Zealand is known for its beauty, hospitable people and pure excitement. Queenstown is New Zealand's, and for that matter, the world's adventure capital. Hanggliding, bungee jumping and everything else fun can be found on NZ's South Island center of adventure. Its airport (NZQN) is just as adventurous as the bungee jumpers down the river. Why you ask? Well, rising terrain in all quadrants is a prime reason. Approaches to RWY 23 can expect strong downdrafts as well. Add to that heavy bird activity around the field and you've got your hands full on short final. Nevertheless, Queenstown is a beautiful spot to fly into and well worth the work. After all, how many of us neglect the "other side" of our planet?

That's A Wrap!

Well, once again we've managed to cover the best (and often scariest places to fly). Remember, one pilot's adventure can be another's headache. So, fly safely, have fun and most importantly try to keep the blue side up! ➔