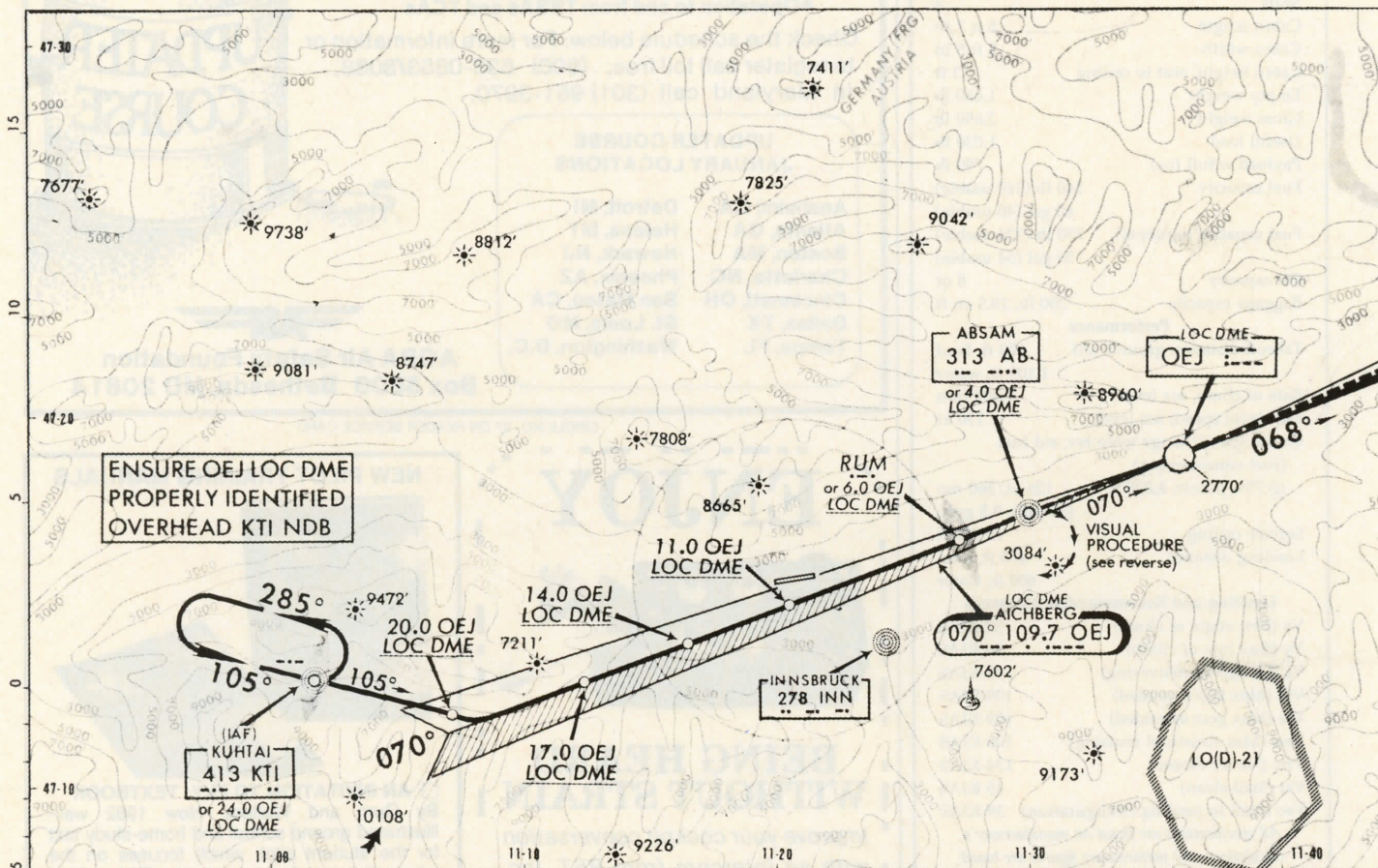


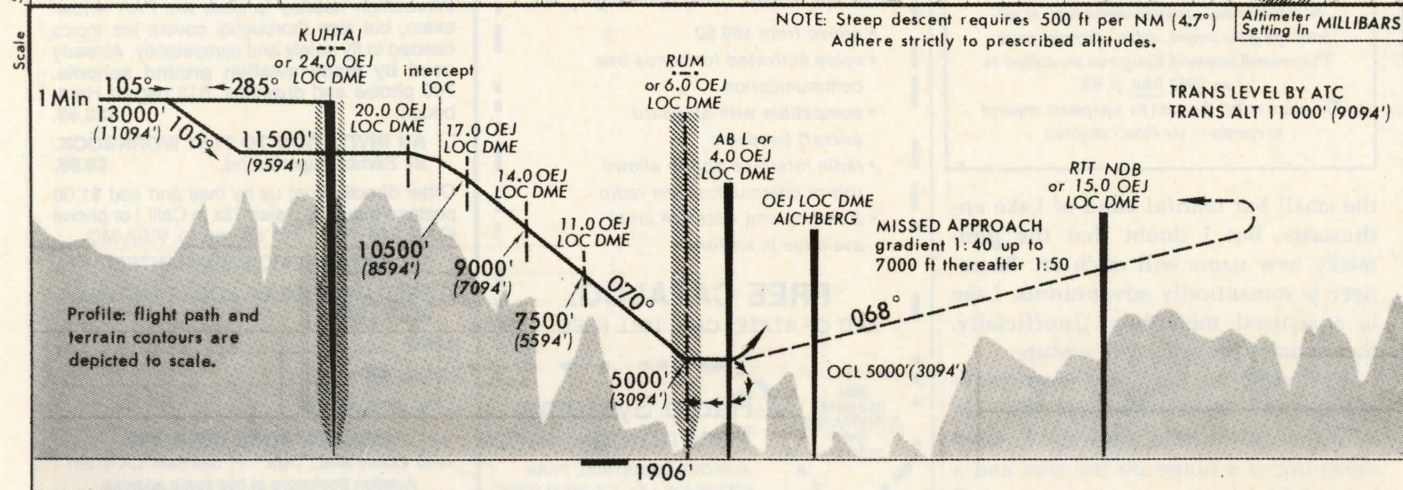
# MONKEYS ON THE RUNWAY

Extracts from the Hairy Approach file



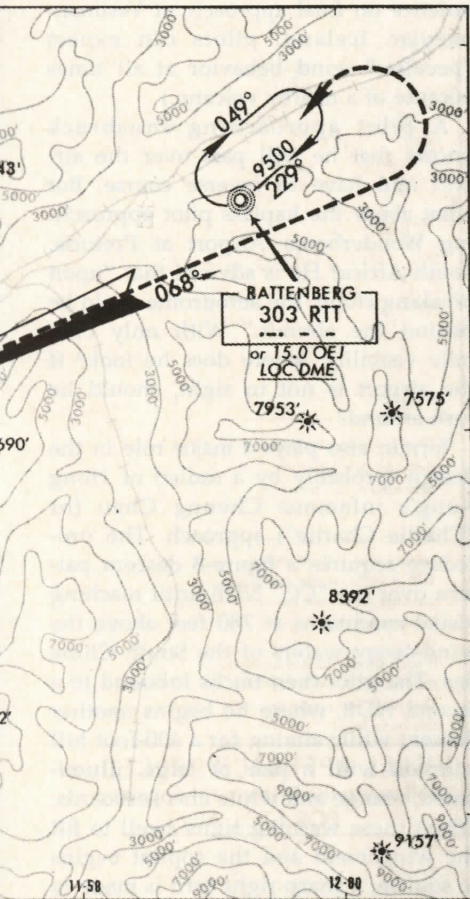
NOTE: Steep descent requires 500 ft per NM (4.7°) Adhere strictly to prescribed altitudes.

Altimeter MILLIBARS Setting In



Most instrument pilots have been told that one IFR approach is essentially the same as every other. "Master the local procedures," they are advised, "and you will have no difficulty elsewhere. It simply is a matter of following the lines on the chart and abiding by the constraints."

As do most generalizations, this has notable exceptions. As you fly farther afield, you will discover some fascinating, amusing, difficult and even hazardous IFR procedures that make those at home seem prosaic by comparison.



*Pilots are advised to make their first attempts at the treacherous, stepped-descent approach to Innsbruck, Austria, in clear weather. After doing this, some have decided that, in bad weather, the approach is best left to mountain goats and skiers.*

Some approach plates and area charts are so cluttered with teardrop turns, sweeping arcs, segmented routes and racetrack patterns that they appear to be creations of a cartographer gone mad. Some are so complex, they almost dare a pilot to accept the challenge. Such charts, which resemble Count Aresti's blueprint for an aerobatic routine, should be studied on the ground because reviewing them in the air could induce vertigo or airsickness.

Perhaps the world's most absurd IFR approach is at Ipoh, Malaysia. Upon reaching the missed approach point (MAP) at 372 feet above ground level (agl), the pilot must proceed visually over and between obstacles to the airport—which is 36 miles away. There is no minimum visibility specified for this straight-in, nondirectional radio beacon (NDB) approach, which is just as well. Under the best of conditions, a pilot cannot see that far from such a low altitude.

Despite the obvious advantages of VORs and instrument landing systems (ILSs), the NDB remains the world's most common approach aid. Incredibly, there still is one approach based on the archaic, four-course range (RNG). When shooting the RNG-A approach to Chihuahua, Mexico, one must follow the A (· -) side of the north leg from the cone of silence to the seven-mile-distant airport. This probably sounds like gibberish to new pilots, but it may coat the eyes of others with a nostalgic mist.

In contrast, Chicago's O'Hare International Airport holds the record for the most full-ILS approaches: 11.

One must be careful when planning to execute a VOR approach to Kennedy International Airport because many general aviation aircraft are not capable of maintaining the 13,900-foot minimum descent altitude (MDA). By the way, this Kennedy Airport serves La Paz, Bolivia, where the elevation is 13,310 feet mean sea level and a portable oxygen bottle is needed just to preflight the airplane. (The main runway is as long as the airport is high.)

Some approaches keep a pilot flying in circles. The NDB approach to San Vicente del Caguán, Colombia, for example, requires a pilot to descend for several thousand feet to the MDA and MAP while in a holding pattern. A missed approach requires him to remain in the pattern and shuttle up to the starting point (and continue in the holding pattern).

A missed approach in the Soviet Union involves flying a rectangular

pattern around the airport and includes instructions to execute another approach; no further clearance is necessary. In case of communications failure, therefore, a pilot may be destined to execute a series of approaches and misses until fuel runs out. Perhaps the Kremlin wants him to keep trying until he gets it right.

Even if an American pilot had permission to fly his aircraft in the Soviet Union, he would be unable to execute many of the IFR approaches there. This is because most airports are served by radio beacon landing systems. These are similar to ILSs but require special equipment normally not available to pilots of the Free World.

Incidentally, the enroute, IFR chart of the Soviet Union shows only one east/west airway spanning this vast country, it extends from Moscow to Yedinka, a navaid on the east coast. Airway Red 22, which seems an appropriate name, is 3,558-nm long and has a VOR at each end. Enroute, one must follow a chain of 21 NDBs; many of these are hundreds of miles apart. Some superhuman navigation is required because cross-track excursions of more than five kilometers (2.7 nm) from the airway centerline are forbidden.

When in Russia—and also the People's Republic of China—pilots must maintain metric altitudes (such as 4,500 meters), so have a metric conversion chart handy.

Although some missed approaches require complex maneuvering, none are as ominous as those at Cape Newenham, Sparrevohn Air Force Station, and Utopia Creek, Alaska. Because of the surrounding terrain, the approach plate for each of these airports contains this forboding note: "Successful go-around improbable."

An IFR approach to Castlegar, British Columbia, is not fun either. To find the airport, a pilot must follow a segmented trail of NDBs while descending into a long, deep, narrow valley.

On a more amusing note, there are two approaches in the world where the final approach course consists of a DME (distance measuring equipment) arc from a nearby vortac. These are at Chincoteague, Virginia, and Pinang Island, Malaysia.

A few places do not use the MDA as it is used elsewhere. A pilot shooting an NDB approach to Nosy-Be, Madagascar, for example, must execute a missed approach as soon as he reaches the MDA. The MDA there is treated as a form of decision height. Too bad.

Upon reaching the MDA, the pilot probably will be too far from the airport to see it.

The most common reason for an approach procedure to be complex is high terrain near the airport. Nowhere is this more accurate than at Innsbruck, Austria. The airport and the city lie at the bottom of a bowl rimmed by lofty, alpine granite. The IFR approach to Innsbruck's only airport can be so treacherous that the Austrian government advises all pilots intending to use the procedure to practice it first during VFR conditions. Some who have heeded this advice have opted never to repeat the procedure when flying IFR.

After intercepting the Innsbruck

localizer inbound, the pilot uses DME indications (there is no glideslope) to program descent along a steep, 4.7-degree (500 feet per nm) profile. While descending, however, the aircraft will pass over the airport and continue toward an NDB, the missed approach point. At the beacon, the pilot must either pull up (which requires a maximum-gradient climb) or continue visually to the airport, which is seven miles behind the tail.

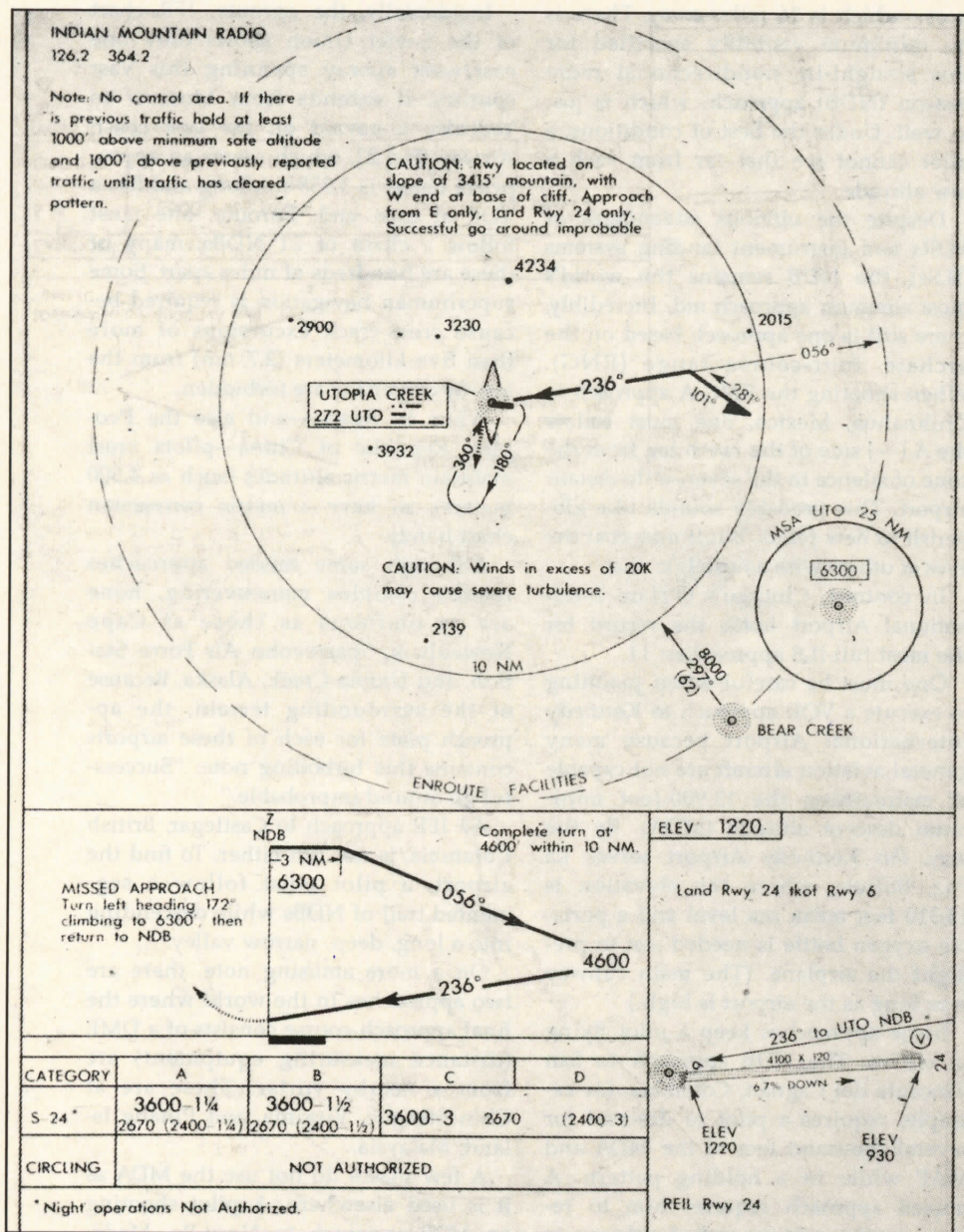
The flip side of the double-size approach plate details the visual portion of the procedure. Upon reaching the MAP, a pilot desiring to proceed visually must execute a 180-degree turn using a radius of less than one mile.

Upon completing this turn, the aircraft passes over the second decision point where the pilot is given one last chance to look toward the airport and decide if he really wants to continue. (If not, the turn is maintained and he returns to the beacon, the original MAP.) Consider that the airport will be seven miles away and that the minimum visibility required for the approach is only 3,000 meters (less than 2 nm). Complicating matters is a note on the approach plate stating that a strong wind from the southeast may produce severe turbulence and downdrafts. (At Cape Lisburne, Alaska, surface winds in excess of only 10 knots produce severe turbulence on final approach; at Vestmannaeyjar, Iceland, pilots can expect "peculiar" wind behavior at all times because of a nearby volcano.)

A pilot approaching Innsbruck knows that he will pass over the airport and have to reverse course. But what about the hapless pilot approaching Wonderboom Airport at Pretoria, South Africa? He is advised that "upon breaking cloud, the aerodrome could be behind the aircraft." With only one-mile visibility, where does he look? If the airport is not in sight, should he turn around?

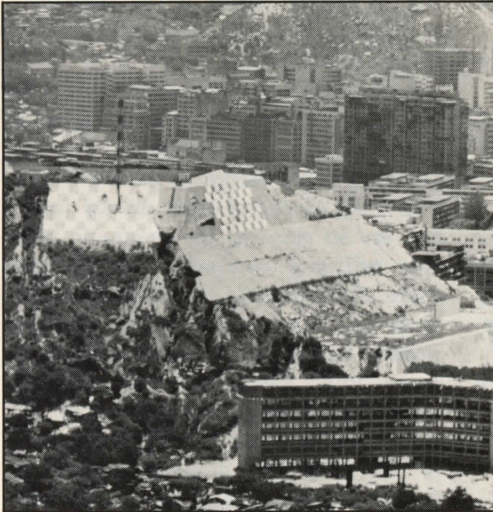
Terrain also plays a major role in the design (probably by a sadist) of Hong Kong's infamous Cheung Chau (or "Charlie Charlie") approach. The procedure requires a figure-8 descent pattern over the "CC" NDB until reaching visual conditions at 780 feet above the wind-swept waters of the South China Sea. The pilot then tracks inbound to a second NDB, where he begins another descent while aiming for a 400-foot hill adorned with a pair of large, illuminated, orange and white checkerboards. When these warning signs swell to fill the windshield and the copilot begins to squirm, a sharp right turn is made to avoid the hill and to align the aircraft with the runway, which is less than a mile away. When pilots depart in the opposite direction, they are cautioned not to turn right after takeoff unless planning to penetrate the People's Republic of China and be fired upon without warning.

Although terrain poses some unusual problems, there are other hazards with which to contend. When approaching Gambell, Alaska, for example, pilots must monitor the NDB's aural identifier to ensure they are not homing in on signals being transmitted from within the Soviet Union, which is only 41 miles away. (At their closest points,



There is only one way into Indian Mountain Air Force Station, and the pilot had better get it right on the first try. The station is perched precariously on a steep slope in Utopia Creek, Alaska. A cliff blocks one end of the runway, making a "successful go-around improbable." Military pilots have all the fun, however; the station is closed to the public.

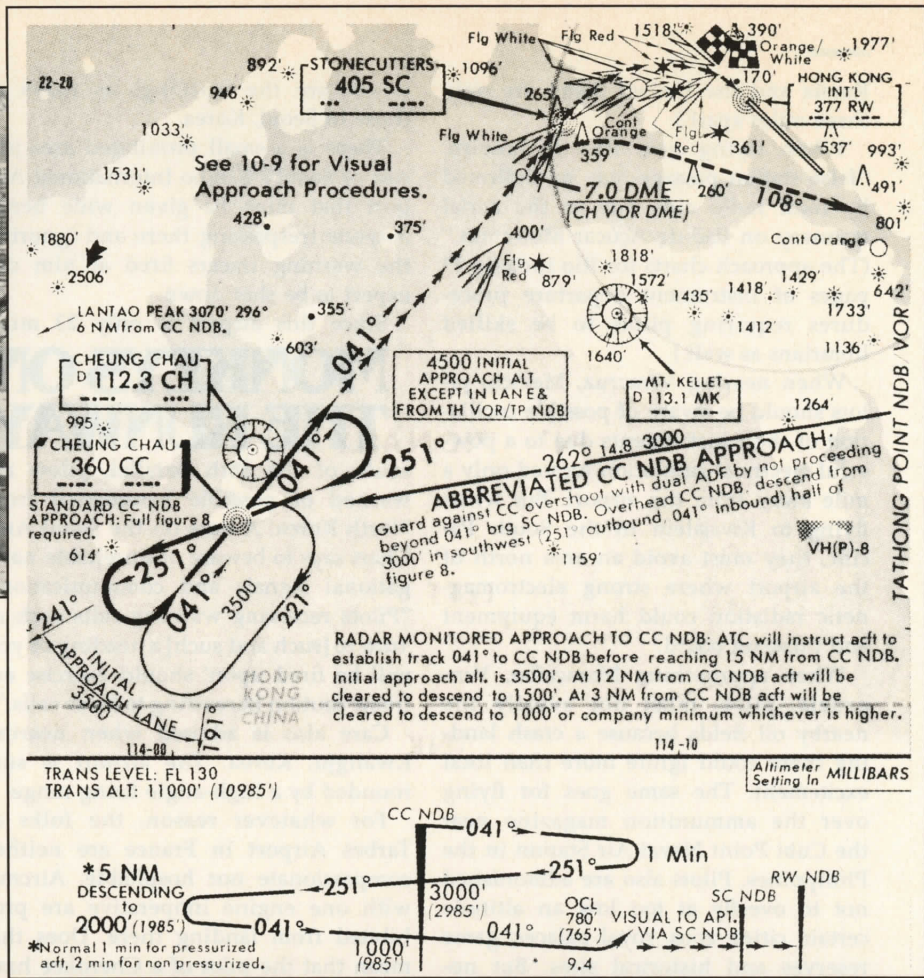
BARRY SCHIFF



Hong Kong's Cheung Chau approach requires flawless NDB tracking and nerves of steel. Descend over the South China Sea in a figure-8, head for a second NDB, and make a sharp right turn at the checkerboards. One wrong turn can lead to hard mountains or hostile missiles.

# MONKEYS ON THE RUNWAY

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continued

Russia and the United States are only three miles apart.)

When flying near Rio de Janeiro, "false station passage may be indicated by local radio aids due to the aerial tramway on Paõ de Açúcar Mountain." (The approach charts for Rio include 35 pages of instrument departure procedures requiring pilots to be skilled librarians as well.)

When nearing Veracruz, Mexico, pilots should be aware of possible oscillation of their instruments due to a powerful electrical substation located only a mile away from the airport. But when flying to Kwajalein in the South Pacific, they must avoid an area north of the airport where strong electromagnetic radiation could harm equipment and those on board.

When approaching Maracaibo, Venezuela, pilots must not overfly the nearby oil fields because a crash landing there could ignite more than local excitement. The same goes for flying over the ammunition magazine near the Cubi Point Naval Air Station in the Philippines. Pilots also are admonished not to overfly at too low an altitude certain cities, zoos, royal palaces, game reserves and historical sites. But no-

where are the warnings as harsh as those in Seoul, Korea.

There is a small prohibited area just east of Seoul's Kimpo International Airport that must be given wide berth. Anyone trespassing there and ignoring the warning tracers fired at him can expect to be shot down.

Since this airport is only 23 miles

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south of the 38th parallel, pilots are warned of possible harassment from North Korea. A note on the Seoul Area Chart says to beware of unreliable navigational signals and communications. "Pilots receiving warning calls such as 'turn to [such and such] a heading or you will be fired upon' should exercise extreme caution in reacting to these calls."

Care also is advised when nearing Kwangju, Korea. The airport is surrounded by a high-angle firing range.

For whatever reason, the folks at Tarbes Airport in France are neither compassionate nor hospitable. Aircraft with one engine inoperative are prohibited from landing there. Does this mean that the pilot of a Cherokee hav-

ing an engine failure while approaching Tarbes is expected to pull up and go elsewhere?

At a latitude of 82.5 degrees north in Canada's Northwest Territories, Alert is the world's most northerly airport. (The most southerly is at the South Pole.) But Alert and other nearby facilities are so close to the magnetic pole that ordinary compasses are useless there. Consequently, all bearings, directions and courses shown on the approach plates are referenced to true north. Pilots should not even contemplate approaching these airports in IFR conditions without having the means to reference their directional gyros to true north prior to beginning a descent.

At one time, there reportedly was a military landing site on the ice pack north of Canada. But since ice drifts, pilots approaching this base had to tune in an NDB first and listen for a Morse code message advising them of the airport location and runway alignment for that day.

A pilot desiring an IFR approach in most places must obtain an air traffic control (ATC) clearance first, but this is not applicable everywhere. At Sfax, Tunisia, and Skukuza, South Africa, for

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example, ATC services are not available. Pilots should broadcast their intentions in the blind on a discrete frequency prior to beginning an approach and arrive at a mutually agreeable method of separating themselves from one another.

Caution is advised when receiving weather information from Entebbe Tower in Uganda. Always ask if the reported ceiling is the height of saturated air or the height of the clouds of swarming insects that drift over the airport from adjacent Lake Victoria. If it is the latter, prepare for a clogged pitot on final approach.

Pilots are accustomed to warnings about animals on the runway. These usually refer to deer, antelope and cows. But when landing at some foreign airports, pilots may have to compete for space with kangaroos, hyenas, "strolling dogs," monkeys and holy cows. In New Zealand, sheep are so abundant on some airports that pilots are warned, "Caution: runway greasy—braking action poor." A strip in Africa is slick because of worms.

Birds can be a problem, but at Salalah, Oman, pilots must be alert for "large, predatory birds." (Eagles, con-

dors or F-5s?) At Comox, British Columbia, bird activity on the airport is particularly intense when ceilings are low. The birds apparently recognize foul weather and ground themselves accordingly, which is more than can be said about some pilots. Finally, be careful when flying into Bahrain International Airport on the Persian Gulf. Lesser sand plovers and sandpipers that migrate from Russia (probably without clearance) roost on the airport and often fly back and forth across the runway in such great numbers that they are visible on radar.

When the runway finally is in sight, an instrument pilot's problems usually are over, but not always. Imagine landing at Eskilstuna, Sweden, only to discover that a road—with traffic—crosses the runway. Also be careful at Minchumina, Alaska; in the winter, snow is removed only once a week to facilitate mail delivery. The airport at Kuala Lumpur, Malaysia, has a unique feature, a runway used only by those who need to make a gear-up landing.

At Point Barrow, Alaska, the runway consists of 5,000 feet of stainless-steel planking. To prevent the surface from becoming slick during rain and snow,

the center third of the length is coated with antiskid paint. Imagine braking heavily with one wheel on steel and the other on antiskid paint; the pilot might get a panoramic view of the airport that he did not expect.

Most pilots should avoid the VOR-A approach to Kenmore Air Harbor, Washington, unless they want to go for a swim. This approach, like a few others in Maine and Louisiana, leads only to seaplane bases. But even seaplane pilots should avoid the NDB approach to Nortrym. After breaking out of the overcast, they will find themselves over the turbulent waters of the North Sea (near Norway) with only an oil rig on which to land.

When approaching Barton Airport at Manchester, England, pilots are advised not to overfly the nearby cemetery (who there would be disturbed?). On the other hand, the cemetery at Yurimaguas, Peru, is on the airport and, according to local gossip, is for the convenience of pilots who fail to survive their own carelessness. □

*Barry Schiff, AOPA 110803, is a captain for a major airline, an FAA-designated examiner and has more than 16,000 hours in 200 types of aircraft.*

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