TRIANGLE NORTH EXECUTIVE AIRPORT
SAFETY GUIDELINES

It is the intention of Triangle North Executive Airport (KLHZ), to provide this **advisory** guideline to ensure Triangle Skydiving Center, Inc. (TSC), Total Flight Solutions , members of the LHZ Pilot's Association and any other existing or future tenants or customers have a mutual understanding of our unique operating environment and to ensure a safe operation for all participating members.

These advisory guidelines are provided in addition to all Federal Aviation Requirements (FAR) documented by the Federal Aviation Administration (FAA) and United States Parachute Association (USPA) as an additional layer of safety at and around KLHZ.

This is a public document and it can be accessed via the airport website at http://www.franklincountync.us/services/airport. Anyone can go to any internet terminal to read and/or print this document. To enable access to transient pilots, there is a link to the airport website at http://www.aopa.org/airports/KLHZ and at http://www.airnav.com/airport/KLHZ (the link on the airnav page is near the very bottom of the page).

Each pilot based at this airport is responsible to understand and abide by these guidelines. A copy of this document will be printed and supplied to all current and future tenants of the airport as well as a printed copy displayed prominently in the terminal lobby including visual reference to all procedures and traffic pattern utilization. Each operator/PIC shall be expected to review KLHZ operation procedures quarterly.

It is the responsibility of Total Flight Solutions, Triangle Skydiving Center, and any other resident organization to ensure that their customers understand and abide by these guidelines.

Independent instructors are responsible for obtaining a copy of this document and ensuring all students understand and abide by these guidelines.

There is a link in the "About" tab at the top of the Triangle North Pilots Association website at http://lhzpa.org.

This airport does not have a control tower and only a single runway with a grass landing area alongside. However, we have the following activities, often occurring simultaneously:

- Fixed wing operations, including single- and multi-engine piston and turboprop airplanes, one twin jet, two self launching gliders, and a towed glider with the Civil Air Patrol. A few airplanes do not have radios.
- Helicopter operations; there are several based at this airport.
- Fixed wing and helicopter flight instruction at Total Flight Solutions.
- Skydiving at Triangle Skydiving Center. It can be busy on the weekends and most runs include at least a few students.
- There are two hot air balloons that operate in the neighborhood.

Noise Abatement Procedures

KLHZ has two noise sensitive areas on the western side of the airport.

- The first is approximately 1 mile south and .1 mile west of centerline departing runway 23.
- The second is approximately 1 mile north and .4 west of centerline departing runway 05.

Both areas are over homes with RED roofs. Please fly neighborly.

In order to ensure that both of these noise areas are avoided please expedite climb out and maintain runway heading until 2 miles from KLHZ, then turn on course.

Runway and Taxiway Right-of-Way

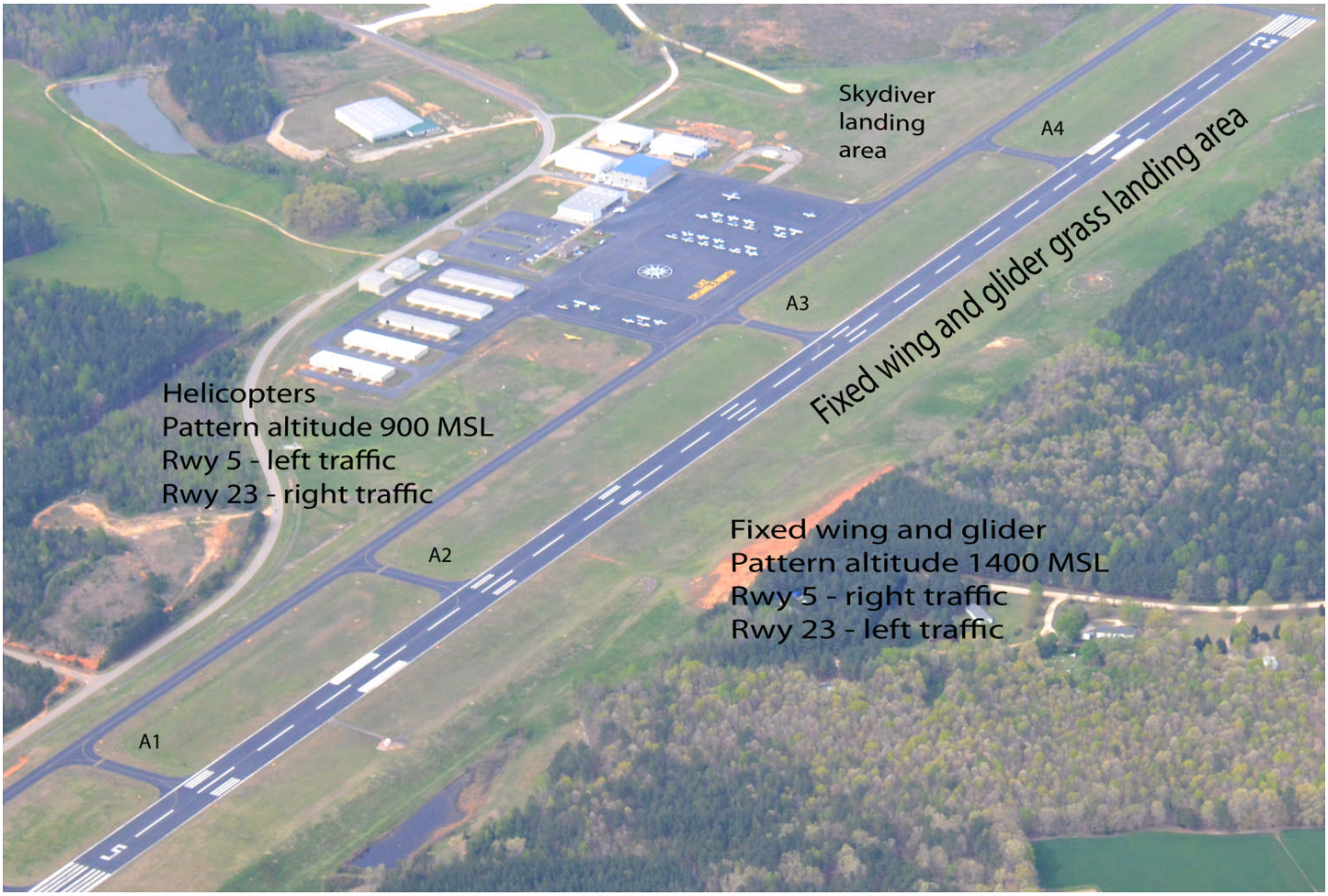
Taxiways and runways at KLHZ experience unique usage due to the complex environment here. FAR 91.113 specifies right of way rules. The following clarifies right-of-way procedures to ensure a safe runway and taxiway environment in our environment.

- Rotorcraft generally use the the parallel taxiway instead of the runway for takeoff and landing.
- Rotorcraft shall not directly over-fly any aircraft on the taxiway at an altitude of less than 300AGL/700MSL.
- Taxiing Rotorcraft shall give way to any aircraft on the taxiway. Separation shall be 100 feet between rotorcraft and taxiing aircraft.
- Fixed wing aircraft on final have the right-of-way over any aircraft not yet on the runway.
- Rotorcraft on final to the parallel taxiway will sidestep if a fixed wing aircraft is on the taxiway.
- All pilots should be aware that rotorcraft fly slower and steeper approach angles than airplanes including power off procedures that involve a descent rate of 1500-2000 FPM.

There is a lot going on here. Keep your head on a swivel and your eyes outside.

Periodic review of this document.

We intend to meet approximately twice a year to review this document and update as necessary. The next scheduled review will be in December, 2014.



The photo above shows the airport and labels various areas for various activities. The remainder of this document describes additional details about our operation here.

Powered Fixed-Wing Operations

Fixed-wing traffic will utilize a left-hand pattern to runway 23, right-hand pattern to runway 5. Pattern altitude will remain fixed at 1000AGL/1400MSL on the downwind leg.

Fixed-wing traffic will operate at pattern altitude (1000 AGL/1400 MSL) anytime within 2 miles of KLHZ.

Fixed-wing traffic departing from KLHZ shall maintain runway heading until 2 miles from KLHZ then turn on course. This procedure will ensure appropriate separation and noise abatement.

KLHZ reminds you to remain diligent in your "see and avoid" responsibilities at all times.

Flight training procedures (to include altitudes and locations of operation while operating in the vicinity of KLHZ) will be available upon request at the Total Flight Solutions office.

Pilots executing an instrument approach, practice or actual, should call position reports as a distance from the airport rather than crossing a waypoint or fix. All Air Transport Pilots have instrument ratings and about 90 percent of Commercial Pilots have instrument ratings. But only about 20 percent of Private Pilots have instrument ratings. "2 mile final runway 5" means something to a Private Pilot about to turn base. "Crossing JEBIX ILS runway 5" has no meaning to a pilot that is not instrument rated.

Glider Operations

Self Launching Gliders

When the engine of a self launching glider is running, the pilot observes the same rules of safe conduct as powered airplanes.

There are two self launching gliders that operate routinely at KLHZ. They normally take off under power, and land as a glider. Each of the gliders will announce on arrival that they are landing as a glider. When they are landing as a glider, they assume the right of way of a glider.

Aero Tow Gliders

The Civil Air Patrol (CAP) normally operates aero tow gliders on Wednesday afternoon and on Saturdays.

A CAP Air Boss will maintain continuous radio contact with LHZ traffic advising of operations of the glider on CTAF frequency. The Air Boss will speak freely with other aircraft to advise the status of the glider operation.

A goal of the Air Boss is to occupy the runway in preparation for take off no longer than 3 minutes. It is understood that the goal is to occupy the runway for the shortest period of time possible.

The tow plane will normally fly straight out until 500 AGL, then turn crosswind in accordance with the local traffic pattern, east of the runway. Typically the tow plane will turn 270 degrees and tow the glider over the center of the airport. The goal is to keep the glider upwind of the airport whenever possible. Since the wind is nearly always from the west, this means that the towplane and glider will usually turn and fly over the airport headed west.

The glider will normally release from the towplane at 2000 AGL. The towplane will break left, and the glider will break right. The towplane will enter the traffic pattern and the glider will continue with its operations.

The towplane normally makes its traffic pattern with the rope attached. Here at LHZ, the towplane makes a low pass at about 200 feet, drops the rope in the grass and lands long on the remaining runway.

Glider Approach and Landing

Gliders observe the same traffic pattern as powered aircraft, and may circle to lose altitude in the traffic pattern area. The glider pilot will communicate with powered aircraft to minimize any possible delay and to maximize safety.

In light traffic conditions, the CAP glider will land on the runway, in order to quickly swap cadets for the next flight. In heavy traffic conditions, the glider will land in the grass.

The self launching gliders typically land on the runway as a glider and then start the engine after landing to taxi off the runway.

Nearby glider operations

There are multiple gliders based Crooked Creek, seven miles Southeast of KLHZ, and at Ball, eight miles North-Northeast of KLHZ. These folks use 123.3 for communications. They do not have transponders and are mostly composite so they are not visible to ATC. They generally maneuver up to 6000 feet and sometimes come within a few miles of KLHZ. These aircraft also have a small cross-section and they are difficult to see.

Rotorcraft Operations

Flight training procedures (to include altitudes and locations of operation while operating in the vicinity of KLHZ) will be available upon request at the Total Flight Solutions office.

Rotorcraft will utilize a right-hand pattern to taxiway Alpha parallel runway 23, left-hand pattern to taxiway Alpha parallel runway 5. Pattern altitude will remain fixed at 500 AGL/900 MSL on the downwind leg.

If PIC of rotorcraft feels that any operation to the west is unsafe he/she may choose to operate from the runway making left traffic for runway 23 and right traffic for runway 5 provided that he/she can avoid the flow of fixed wing traffic and makes all appropriate radio calls. (takeoff, crosswind, downwind, final).

Rotorcraft shall operate at pattern altitude (500AGL/900MSL) anytime within 2 miles of KLHZ.

Rotorcraft making a runway departure from KLHZ shall maintain runway heading until 2 miles from KLHZ then turn on course. This procedure will ensure appropriate separation AND noise abatement.

When parachutists are in the air over KLHZ:

> Rotorcraft shall not operate north of taxiway Alpha 3 at an altitude higher than 8AGL.
>
> Rotorcraft shall not proceed any further north nor operate any longer than necessary North of taxiway Alpha 3 to ensure either safe shutdown or departure from the ramp.
>
> Rotorcraft departing to the northwest from taxiway Alpha must remain south of extended Alpha 2 centerline until 2 miles from KLHZ then turn on course.

KLHZ reminds you to remain diligent in your "see and avoid" responsibilities at all times.

Skydiver Operations

Daily skydiver jump run information (to include exit altitude, direction, and position in reference to KLHZ) will be available upon request at the Triangle Skydiving Center office. Note that this is dynamic situation. Winds do change and customers often arrive at random times during the day.

Jump operations will be conducted in accordance with US Parachute Association Basic Safety Requirements as well as 14 CFR FAR's parts 61, 65, 91, and 105.

Parachutists will be notified of all KLHZ policies regarding separation requirements and shall be notified that the ILS antenna is in close proximity to that landing area. Avoidance is critical to avoid injury to jumpers and damage to expensive safety equipment and would jeopardize instrument operations to the airport.

Jump operation communications will be broadcast over the Common Traffic Advisory Frequency (currently 123.00). They will be provided by the pilot of the jump plane from TSC before, during, and after every load and include:

- Normal Takeoff: "Triangle one taking off runway 5/23 with skydivers"
- 5 Minutes before exit: "5 minutes until jumpers in the air over Triangle North"
- 2 Minutes before exit: "2 minutes until jumpers in the air over Triangle North"
- Exit Call: "Jumpers in the air over Triangle North"

Once jumpers have exited the jump plane, a status report will be broadcast on CTAF from the ground every two minutes: "We do have canopies over the field at Triangle North." When all jumpers have landed, a status message will be broadcast: "All Jumpers on the Ground."

The jump plane can carry 16 jumpers and, usually, jumpers are all released at about 13,500 feet MSL. Occasionally, a few will be released at a lower altitude, and the jump plane will then resume climbing. The jump plane maneuvers so that it is flying into the wind when jumpers are released. The first jumper is released directly over the landing area and it takes a few seconds for the remaining jumpers to exit the aircraft. The wind will tend to blow jumpers back over the landing area.

After the jumpers are released, the jump plane descends aggressively to 4000 MSL, and then descends somewhat less aggressively to enter the normal pattern, lands, and parks ready to take another load. On a busy weekend, the jump plane will often keep the engine running and "hot load" the next group of jumpers.

After exiting the aircraft, jumpers freefall until they deploy their parachutes. All parachutes must be deployed by 3000 AGL/3400 MSL, but less experienced jumpers will deploy at a higher altitude. It takes about one minute for a skydiver to freefall from 13,500 MSL to 3400 MSL. It generally takes about two minutes for a wingsuit user to descend the same distance. Once under canopy, the jumpers descend, steer the canopies around, and finally enter a small pattern and land into the wind.

All jumpers are directed to land in the landing area near the TSC hangar as depicted in the photo on page three.

Historically, about four times a year on average, a skydiver's parachute does not deploy properly. In this event, the malfunctioning parachute is jettisoned or "cut away" and the reserve chute is deployed. The "cut away" canopy will drift with the wind and will land somewhere eventually. Whenever this happens, TSC ground will issue a warning over the CTAF: "Cutaway, Triangle North traffic be aware there is a cutaway over the field."

Generally, we have winds from the West, and when the winds are from the East, it is generally stormy. Jumpers are directed by TSC to remain on the Northwest side of the runway. However, due to winds, about once a year a few skydivers end up Southeast of the airport. In this event, additional CTAF radio calls will be made by TSC. In addition, jumpers are directed by TSC to cross to the Northwest side of the runway as high as possible but absolutely above 1000 AGL. If they cannot cross to the Northwest side of the runway above 1000 AGL, jumpers are directed to land Southeast of the runway and TSC will send a vehicle to pick them up.

Hot Air Balloon Operations

There are two balloons, a yellow one and a red one, that operate in the neighborhood. They are, of course, unpowered and subject to the winds on any given day, and they are about 85 feet tall.

When departing from KLHZ, the launch point is a few hundred feet Northwest of the ILS antenna, which is 1000 feet Northeast of the arrival end of runway 23. The balloon will quickly ascend to 1500 AGL and departure direction could be just about anywhere, but prevailing winds are generally from the West. Winds vary with altitude, sometimes more than 90 degrees with a change in altitude of a few thousand feet.

Sometimes the balloon will be launched elsewhere and will land somewhere on the airport property. The balloon pilot does have a radio and will announce his position and intentions. This is a good place to land a balloon because there are very few obstructions.

They fly about 100 times per year on average and about fifteen of those either take off or land at the airport.

Frequently asked questions

Question: In previous versions of this document, there was a statement about parachutists not descending below 3400 MSL. That has been removed. What is the story?

> Answer: This was a misinterpretation of one of the FARs. Far 105.23 states (in blue): No person may conduct a parachute operation, and no pilot in command of an aircraft may allow a parachute operation to be conducted from that aircraft, over or onto any airport unless—
> (a) For airports with an operating control tower: (there are three sub-sections, but this does not apply to KLHZ.)
> (b) For airports without an operating control tower, prior approval has been obtained from the management of the airport to conduct parachute operations over or on that airport. (Airport management approves so we are covered.)
> (c) A parachutist may drift over that airport with a fully deployed and properly functioning parachute if the parachutist is at least 2,000 feet above that airport's traffic pattern, and avoids creating a hazard to air traffic or to persons and property on the ground. (After discussing with FSDO, this was intended for military and other operations where parachutists would deploy the parachute at a high altitude and then steer the parachute for a relatively long horizontal distance. Sometimes this would be over an airport enroute to the intended destination. In this case, the parachutist must remain more than 2000 feet above pattern altitude. Note that this situation does not require approval from local airport management. Also note that if parachutists must remain 2000 feet above the traffic pattern, there is no way to land in the approved area. It does not apply in our case, so the item was removed.)

Question: In previous versions of this document, there was an item stating that airplanes on taxiways should stop when they heard the radio call for "Jumpers away." This has been removed. What is the story here?

> Answer: After a lot of discussion, no one could remember where it came from and, besides, it was not useful from several perspectives.