

Elk River Airport Pilot's Manual

The Elk River Airport is a private facility for the exclusive use of the Elk River Property Owners Association members and their approved guests. Any and all commercial activity is strictly prohibited. Landing of aircraft not owned or controlled by members, or their approved guests is strictly forbidden.

Although every effort has been made to provide useful and accurate information regarding usage of the Elk River Airport, the Elk River Property Owners' Association, its employees, agents, and members make no warranties, express or implied, or representations as to the accuracy or sufficiency of the information contained herein. The POA, its employees, agents and members assume no liability or responsibility for any errors or omission in the information contained herein. The POA, its employees, agents and members expressly disclaim any liability for any special, incidental, or consequential damages, including without limitation, any property damage or personal injury resulting from the use or misuse of the information contained herein ***All pilots and aircraft owners making use of the airport are expected to comply in all respects with applicable provision of the Federal Aviation Regulations ("FARs"). The POA shall notify the Federal Aviation Administration of any violations of the FARs by pilots or aircraft owners. Further, the POA reserves the right to ensure the safe and efficient operation of the airport through the imposition of sanctions for violations of these policies and procedures. Such sanctions may include fines, and/or temporary or permanent suspension of the right of a pilot or aircraft owner to make use of the airport.***

Introduction to Elk River Airport

The airport is a unique amenity available exclusively to Elk River property owners and their guests. The POA encourages everyone to experience the scenic mountain beauty and convenience of flying into and out of Elk River Airport. However, mountain flying is substantially different than the usual experience of landing at a conventional "flatland" field. This manual is meant to review the process for landing and take-off in the mountain environment - in particular, at Elk River. Attached as an appendix to this manual is a summary of the specific rules and policies related to the use of the airport. All pilots using the airport are required to strictly adhere to these rules and policies. **As pilot in command, you are responsible for the operation of your aircraft. The comments in this manual are for informational purposes only. Please refer to the above disclaimer.**

Elk River Usage Policy

Elk River POA reserves the right to require both POA Members and eligible guest of POA Members to pay certain fees associated with the use of the airport. Information regarding the amount and nature of these fees can be obtained by contacting Elk River POA.

All fees will be billed directly to the member, as no cash payments are allowed. Landing and departure logs maintained by Elk River Security will be used to ensure proper billing.

Members are required to register all aircraft to be used at the Elk River Airport. They must annually also provide an insurance certificate naming the Elk River POA as an additional insured, and a waiver of subrogation. Liability coverage must be at least \$1,000,000 per occurrence with passenger bodily injury of at least \$100,000 per person.

Summary of Elk River Airport Procedures

Runway 12 is the preferred runway for landing and runway 30 is the preferred runway for take off.

- Expect potentially significant changes in wind direction and velocity over the approach end of runway 12.
- Higher terrain exists in close proximity to the approach end of runway 12.
- A slightly higher approach angle is suggested to compensate for the higher terrain and the possibility of occasional wind shear. In addition, due to the higher terrain at the approach end of the runway, the initial heading for the approach should be approximately 140 degrees until the aircraft is aligned with the runway on short final.
- Two PAPI lights are located on the right side of runway 12. Note that the indicated glide path angle is greater than 4 degrees.
- Maintain strict alignment with the centerline! Remember, runway width is only 75 feet, and the existence of hills and trees on either side of the end of runway 12 allows for little deviation from the centerline.
- It is important to fly a controlled and stabilized approach as go arounds are not recommended. Runway 12 has a significant upslope and higher terrain exists at the departure end of the runway.
- Always plan an alternate landing - NCo6, TRI or HKY – if local weather conditions make landing at Elk River difficult or inadvisable.
- Due to the slope of the runway and the nature of the surrounding terrain, landing on runway 12 is recommended. Wind speed and direction may indicate a landing on runway 30. Be advised that the terrain at the approach end of runway 30 is higher than that at the approach end of runway 12, requiring a steeper approach and that you will be landing on a downward sloping runway. Due to terrain and runway slope, takeoffs on runway 12 are strongly discouraged.
- Consider carefully the effects of density altitude on the performance of your aircraft both for landing and departure. Remember, density altitudes of over 6000 feet are not unusual during summer months!

General Flight Planning and Elk River Airport Information

Elk River Airport is located approximately two miles west of Banner Elk, North Carolina. The runway is located at 36-09-37.4520N, 081-53-48.4090W on the 150 radial from the Holston Mountain VOR (HMV-114.6) at 20.1 nautical miles DME, and on the 305 radial from the Barretts Mountain VOR (BZM-110.8) at 36.3 nautical miles DME.

The runway is day-VFR only and is 4600 x 75 feet and is at 3468 feet MSL. No fuel is available at Elk River.

Atlanta Approach is the controlling air space to the south and east of the field on 125.15, while Tri-Cities Approach controls the airspace to the north and west on 134.42. The minimum vectoring altitude for

aircraft approaching Elk River is 8500'. Both HKY and KTRI offer excellent alternate sites for landing with excellent ILS approaches. Both fields are about one hour's drive from Elk River. Elizabethton (0A9) is a 30 minute drive from Elk River, has jet fuel and avgas and a non-precision approach. Rental cars are readily available at HKY and TRI but need to be reserved in advance at 0A9. Never hesitate to divert to one of these airports if weather conditions at Elk River Airport are not within your limits!

If you are INEXPERIENCED in flying in a mountain environment, please consider making your first landing at Elk River with winds less than 10 knots and wind direction within 10 degrees of either side of the runway centerline.

Suggested Procedures Prior to Landing at Elk River

- Check the Elk River Airport web site at www.elkriverairport.com for current weather data including wind direction and velocity, density altitude, and runway cameras to assess visibility and cloud cover. Weather conditions in the mountains can be subject to rapid change and can vary greatly from location to location. It is advisable to check the weather at nearby reporting stations. The nearest reporting stations are 0A9, KTNB, KTRI, KGEV and KHKY.
- Reference your Pilot Operating Handbook (POH) to familiarize yourself with the appropriate operating procedures for your aircraft for short field landings, short field take-offs, downwind landings, downwind takeoffs, crosswind landings and airspeed and descent rates for landing.
- Pay extra attention to calculating weight and balance. Remember, density altitudes during summer months may exceed 6000 feet or higher - a careful review of the POH for your aircraft should allow calculation of expected landing distance.
- Practice downwind take-offs and landings with at least 10 knots of tail wind. As previously stated, landings on runway 12 are preferred and takeoffs on runway 12 are not recommended. As a consequence, it is quite common to encounter a tailwind when taking off or landing at Elk River. (consult your POH for the amount of runway your aircraft requires for these types of take-offs and landings, and consider the effect of density altitude, runway slope and aircraft weight on performance in these conditions).
- Familiarize yourself with procedures for handling wind shear. It is not unusual to encounter wind shear or downdrafts on short final approach to runway 12.
- Pay close attention to wind direction. Often the wind will be from the WNW, which will require that a landing on the preferred runway 12 be made downwind. Although the runway has a significant upslope and is 4600' in length, wind conditions may dictate a landing on runway 30. Due to the terrain at the approach end of runway 30 and the downslope of the runway, many pilots choose not to land on runway 30 and will divert to an alternate airport. Look at the sectional for this area to familiarize yourself with the terrain including mountain heights and landmarks. Within 10NM there are multiple mountains that are 1500 feet or higher than the runway altitude at Elk River.
- A recommended ceiling of 2000 feet AGL or higher is suggested prior to landing at Elk River on your first fly-in visit.

- Be sure to make the appropriate calculations to account for density altitude for landings, as this will affect the aircrafts' performance. Density altitude is also an issue for take-off on warm summer days.

NOTE: Plans to fly in or out of Elk River should include contingencies for all types of emergencies, engine failure, and/or loss of power in particular.

The Approach to Elk River

The CTAF for Elk River is 122.975. Conventional transmissions should be made starting at 10 miles out, stating direction of approach and altitude. The Elk River Security Office monitors this frequency and can provide traffic advisories and wind conditions (terrain may prevent the Security Office from hearing your call depending on altitude) **NOTE: If significant gusting conditions exist, the pilot is strongly encouraged to consider diverting to an alternate airport.**

Radio Position Reports on Elk River Unicom 122.975

1. Outside of 5 miles state altitude, bearing and distance from Elk River.
2. Approaching downwind
3. Established on downwind
4. Turning onto base including gear down and locked call
5. Turning final
6. Clear of the runway

The terrain surrounding the airport makes it difficult for other aircraft to visually identify other traffic inbound to or outbound from Elk River. **It is extremely important that you make all position reports.**

The Elk River runway has a significant elevation change from the TDZE of runway 12 to the parking area. The up-sloping runway will be appreciated as you decelerate after touchdown, as your ground speed will be higher than landing at lower altitudes. It is for this reason, as well as the surrounding terrain, that landing on runway 12 is highly preferred over landing on runway 30. It is not unusual for wind direction to differ by 180 degrees at opposite ends of the runway! Thus, prior to landing on runway 12, strong winds may result in the pilot sensing a wind direction change or shear on final approach prior the numbers. A slightly steeper approach is suggested to compensate for the terrain as well as possible wind shear. When flying a steeper approach, closely monitor your airspeed. A stabilized approach is important as go arounds on runway 12 are strongly discouraged.

The pattern altitude for the approach is 5000 feet, with the left base to final on runway 12. On the downwind leg, the end of the runway will be temporarily obscured by the hill on the northwest side of runway 12. There is a church and cemetery approximately one mile west of the approach end of the runway which can serve as a useful visual clue for the final descent to the runway.

After crossing over the church, runway 12 will soon come into sight, initially you will see the four green hangers located on the south side of the runway. The PAPI lights to the right of the runway will provide assistance in maintaining the appropriate glide path. Be aware that the glide path as indicated by the PAPI lights is approximately 4.5 degrees and is steeper than normal due to the rising terrain at the approach end of the runway. As the pilot rolls out on final from the left base turn, the "sight picture" is unlike that customarily associated with approaches to conventional air fields. This is due to the up sloping runway and the high terrain at the approach end of the runway which necessitates a steeper approach and an initial final approach that may not be aligned with the runway. These factors will combine to produce the optical illusion of too steep an approach path. **It is critical at this point for the pilot to fly a stabilized approach at normal approach airspeed. If this is your first time at Elk River, it is**

suggested that you fly down the runway at an altitude of 5000' MSL to look over the environment and judge wind conditions.

Landing at Elk River Airport

- **Runway 12 is the recommended runway for landings.** Pilots, especially pilots new to the airport, are discouraged from landing on Runway 30. High terrain at the approach end combined with the downhill slope of Runway 30 can make landings exceptionally difficult.
- **Runway 12** is the recommended runway for two principal reasons: (1) the uphill slope of the runway extends its functional length, and (2) there are fewer obstructions at the arrival end of the runway.
- **Two PAPI LIGHTS** are located on the right side of runway 12. Be aware that the glide path indicated by the lights is approximately 4.5 degrees.
- It is best to arrive to land at Elk River from the south as Beech Mountain is to the north/northeast of Runway 12.
- Arrival traffic for Runway 12 **must fly a left pattern at 5000 feet MSL.** Trim aircraft for level flight and on speed.
- At the 90 degree position, attempt to be at 4500 feet MSL and on speed with the aircraft trimmed for landing.
- As mentioned earlier, consult your POH with regard to the expected landing distance for the density altitude and aircraft weight. Once you have made the commitment to land and have "made" the runway, you should put the aircraft on the ground as soon as possible. Do not be concerned with making a "pretty" landing or "greasing" it on the runway as that tends to make you high and fast and will result in a float down the runway. There are no style points!
- Focus on flying the proper pattern paying close attention to air speed and descent rates for your particular aircraft. A good rule of thumb is to turn final at approximately 1000 feet above touch down on a 2 to 3 mile final, power, airspeed, and descent rate should all be stabilized.
Remember, a go around from a balked landing on runway 12 is strongly discouraged.
- Consider flying a steeper approach to compensate for high terrain and occasional wind shear.
- Pilots arriving in the morning should be cautious as the sun can severely limit visibility when making the turn from base to final. In addition, early morning ground fog is common at Elk River.

Given the higher groundspeed over the numbers resulting from the altitude and density altitude effects, **touch down before the 2000' marker is recommended.** Remember, although your airspeed over the numbers will read the same (or perhaps slightly higher than your home field), your ground speed at landing will be higher, which will require a little more aggressive braking after touchdown.

NOTE: Do not over apply braking pressure and lock up your brakes. This may result in a blown tire.

Parking at Elk River Airport

There are two primary parking areas for aircraft. The lower area is located adjacent to the Elk River Security Office. This area is accessed by a taxiway located approximately 500' from the approach end of runway 30. The upper parking area is located immediately adjacent to the approach end of runway 30. Parking space is limited and, particularly on weekends or holidays, you may be required to park at mid-field or on grass. If this occurs, security personnel will provide transportation to and from your aircraft. No vehicles or pedestrian traffic is allowed on the runway. Immediately after parking the aircraft, pilots must check in at the Elk River Security Office and provide the aircraft tail number, names of pilots, aircraft owners and all passengers and an estimated date and time of departure. Wheel chocks and orange safety cones are available for your use. Vehicle parking at the airport is restricted to aircraft owners only.

Departures from Elk River Airport

- Consult your POH for the effects of weight and density on takeoff roll distance. In addition, consider the effects of a tailwind (if any) on takeoff roll.
- You are strongly advised to use Runway 30 for take-offs for two principal reasons: 1) The downhill slope of the runway is of help in achieving proper air speed for rotation, and 2) there are fewer obstructions at the departure end.
- **For piston powered aircraft, remember to lean the mixture to maximum power setting, as the density altitude will significantly affect engine power.**
- Departures from runway 12 are strongly discouraged due to the up-sloping runway and sharply rising terrain at the departure end of the runway.
- Most runway 30 departing traffic will fly an initial heading of 320 degrees to assist in terrain avoidance before turning on course.
- Before taxi, monitor 122.975 for incoming traffic. Call Elk River Unicom on 122.975 for traffic advisories and announce intentions when taking the active runway for departure.
- Call Elk River Unicom declaring that you are talking off from Elk River and from which runway you are departing.
- When departing from runway 30, the air traffic control frequency is Atlanta Center on 125.15. Due to mountainous terrain, you may experience difficulty in contacting the Center until you are above 6000' MSL.
- IFR clearances and void times can be obtained from Raleigh Clearance prior to departure at 888-766-8267. Be ready to go as, typically, your void time will be no more than ten minutes after receipt of your clearance.

Useful Phone Numbers

Elk River Security Gate: 828-898-9706

Elk River POA: 828-898-9791