



RAT-SAR

Helicopter Operations





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OBJECTIVES



- Understand the safety rules for working around a search and rescue helicopter.
- Understand how to approach a helicopter used in a search and rescue incident.
- Understand the basics of a helispot and landing zone.
- Understand how to work with search and rescue helicopters.





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Helicopter Operations



- Uses
 - Searching
 - Reconnaissance
 - Insertion
 - Extraction
- Searcher Roles
 - Aerial Observer
 - Passenger
 - Helispot preparation





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Safety Rules



1. Stay 100-150 feet away.
2. Approach and leave from front.
3. Head down.
4. No smoking within 100 feet.
5. Stay away from tail section.
6. Do not walk under tail section.
7. Wear helmet, gloves, eye protection.
8. Seat belt on.
9. Carry long equipment low.
10. Secure rope and loose stuff.
11. Be aware of static discharges.
12. Do not load without crew permission.
13. Do not load or approach without pilot signal.
14. Never stand under flying or landing helicopter.
15. Stay away during takeoff and landing.
16. Dogs need harnesses.
17. Familiarize dog to helicopter before mission.





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Approach Areas



- Front
- Side
- Always within the pilot's view
- If rear loading, do so only with pilot's permission.





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Helispot Requirements

- Clear in all directions.
- Land and take-off into the wind.
- No more than 7 degree slope.
- 15 degree angle of approach.
- Wires and towers identified.
- Cleared of anything over 12"
- Clear all loose debris.
- Proper markings / secured.
- No strobes.
- No light into pilot's eyes.
- Light onto landing pad.
- One person in charge.
- Canyon or drainage requires long angle of approach and departure.
- Caution in sand or snow conditions.



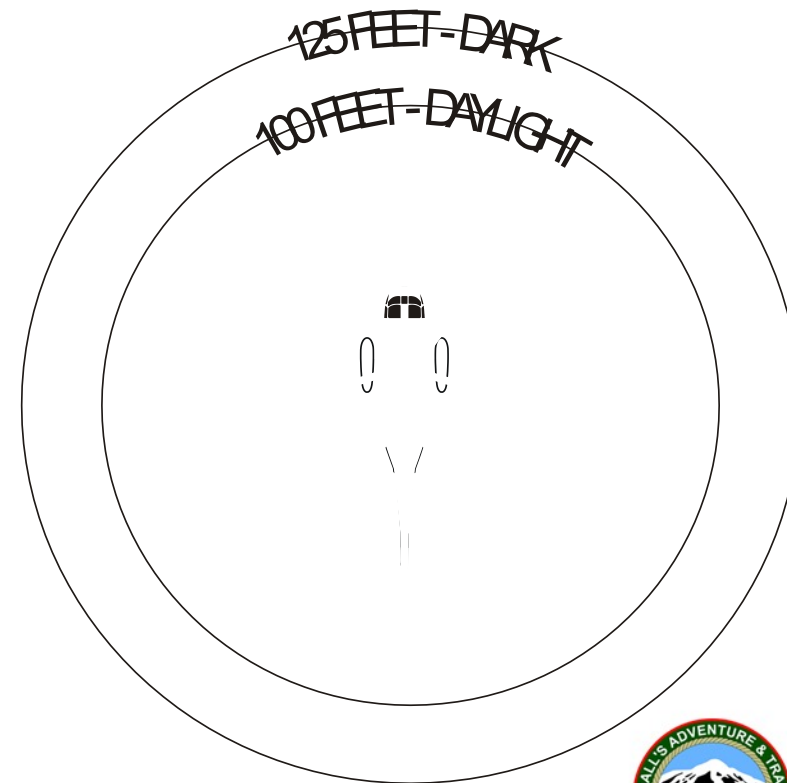


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Helispot Requirements

Landing area at least 100 ft. by 100 ft.
(30 meters)

For night time landing at least 125 ft. by
125 ft. (40 meters)





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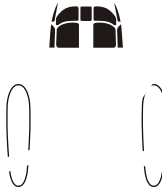
Wind Direction



Helispot



7 Meters



7 Meters





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Search Work

- Ground team must be able to communicate directly with the helicopter on their frequency (155.475 CSQ – no tones).
- Only one person on the team should communicate with the helicopter.
- All inter-team, team / IC, and cross talk should use a team frequency, not the helicopter frequency.
- ALEA can relay important communications if search parties are out of 2-way range with IC, but keep the relayed traffic to a minimum.
- Carry at least two flashlights. When being directed by the helicopter into an area it may become necessary to have only one flashlight turned on until directions can be relayed.
- Do not shine headlights or flashlights directly at the helicopter.
- Do not communicate with helicopter using North, South, East or West. Use right, left, forward and back when being led into an area by the pilot.





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Search Work (cont.)



Nitecore NU05 IR Beacon

- No “shotgun” searches when using air assets. Always work in teams / group with one person on the team in contact with the helicopter. This will help avoid confusion of who the pilots are seeing on the ground.
- Bright clothing. Preferably yellow safety vests or bright orange clothing. No camouflage clothing.
- At least one team member from each separate team on the ground should have an IR beacon on their helmet for night searches. Every person can have an IR beacon but only one person per team should have their beacon on. Suggested beacon: Nitecore NU05 (see picture above).
- A strobe can be used to mark the point last seen when necessary.
- All coordinates must be given to the pilots in Latitude / Longitude (any version), not UTM or MGRS.
- ALEA search helicopter uses callsign “Air 1”. ALEA rescue helicopter (Huey) uses callsign “Rescue 1”.





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Hasty Search Work Before Helicopter Arrives

It is ok to use ATVs or vehicles for hasty searches before the helicopter arrives as long as they stick to the roads or trails. Drivers / passengers should stay with the vehicle since the helicopter can see the vehicle or ATV and know it is not the person being searched for. Driver or passenger should not park the vehicle and walk into the woods away from the vehicle unless directed to do so by the helicopter.





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Rescue Work

- Be aware of heavy rotor downwash with the rescue helicopter.
- If you are being hoisted, pay attention to the rescue technician and follow all instructions.
- Secure all loose items and clothing before being lifted.
- Keep your hands off the hoist cable.
- Search dogs are to be muzzled and in approved harness.
- Do not try to help when being loaded into the helicopter unless asked to do so by the rescue technician.
- Patients are to be packaged on a back board and inserted into a Bauman Bag for extraction (if a back board and/or Bauman Bag are not available, notify the rescue helicopter and the rescuer will bring one down).
- Secure any loose items on the patient.
- Protect the patient (especially the eyes) due to rotor downwash.
- Listen and follow all instructions by the rescue technician.

