

WHAM HELICOPTER OPERATION GUIDELINES

The purpose of these guidelines is to promote the safe operation of helicopters and to integrate helicopter flying and fixed wing flying in the best interests of both pilot groups. As with all flying the key is courtesy and good communication.

GENERAL

Helicopters work in three phases of flight, forward motion (or backward or sideways), hovering (or slow flight) and the point in between called transition. When flying forwards helicopters are operated in a similar manner to fixed wing aircraft and can be flown in the circuit like other aircraft. A helicopter begins and ends most flights from a stable hover. From start of blade rotation, to stable hover, to forward flight can take a significant amount of time that can tie up the runway or taxiways for fixed wing aircraft. The same holds true during transition from forward flight to hover and touch down. As well during shut down there may be a significant amount of time before the blades actually come to a stop.

In a fixed wing aircraft an emergency landing is flown in a very similar manner to a power on landing except it may be much steeper. Consequently every landing provides some degree of practice for emergencies. The same does not hold true for a helicopter where an engine out situation is different from a normal landing. An autorotation landing in a helicopter occurs using a steep approach (to keep rotor speed up) until very near the ground at which time pitch is increased to slow the descent to touch down. To be successful requires practice and helicopter pilots regularly practice this maneuver.

For all of the above it is good practice to start and end a helicopter flight in a designated area away from the regular flight line and to practice some maneuvers (hovering, and autorotation) outside of the regular pattern area when the field is busy.

PRACTICE AREA

To assist in the above and to best integrate helicopters and fixed wing flying, a designated area has been create to start and end helicopter flights. This area is not marked on the ground but is identified as near the button of the inactive runway. The following drawings (not to scale) illustrates this concept when the east pit is in use.

Particular attention must be paid to stay off the inactive runway in case it is needed for an emergency landing.

SAFETY

The main rotor head, tail rotor and control mechanism of a helicopter are made up of a number of moving parts and linkages. It is vital to safe operation that they are checked on a regular basis to ensure they are firmly attached and functioning correctly. While manufacturers recommendations vary from helicopter to helicopter, most require critical linkages be checked before each flight. Additionally many have requirements for regular lubrication of moving parts.

Most helicopters have gyro stabilization of the tail rotor and some have electronic governors to control engine and head speeds. This adds more electronic connections and a greater battery load. Battery voltage should be checked often and where required servo lead extensions or other connections should be secured.

Most helicopters use computer radios which can be operated in a number of modes depending on whether or not the helicopter will be used for regular or acrobatic flight modes or if the pilot is practicing auto-rotations. Consequently there are numerous switch combinations to control such functions as idle-up, throttle-hold, heading-hold, etc. As a helicopter started with switches set incorrectly can result in the engine going immediately to full throttle with the main blades quickly coming up to speed, it is vital that switches be set in the proper position for start up and that they be checked and double-checked before actually starting the machine.

The pilot should be included in the pre-flight check as well. Flying helicopters requires a significant amount of attention and concentration which can be impaired by fatigue or illness. If tired or not feeling well, pilots should carefully consider whether or not they should fly.

STARTING

Helicopters may be started in the pit area but blades may not be put into motion until outside the pits. When carrying a helicopter it is good practice to have one hand guarding the throttle stick so it cannot be accidentally pushed to full throttle. Some people have used a rubber band slipped over the stick to hold it down.

HELICOPTER PAD

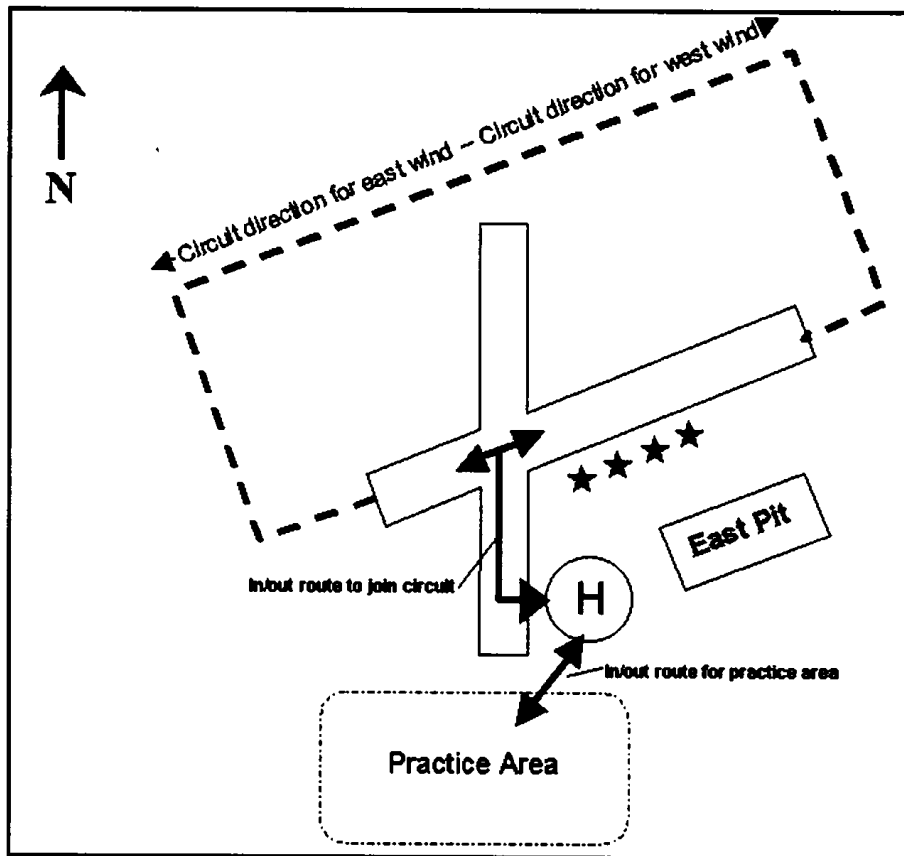
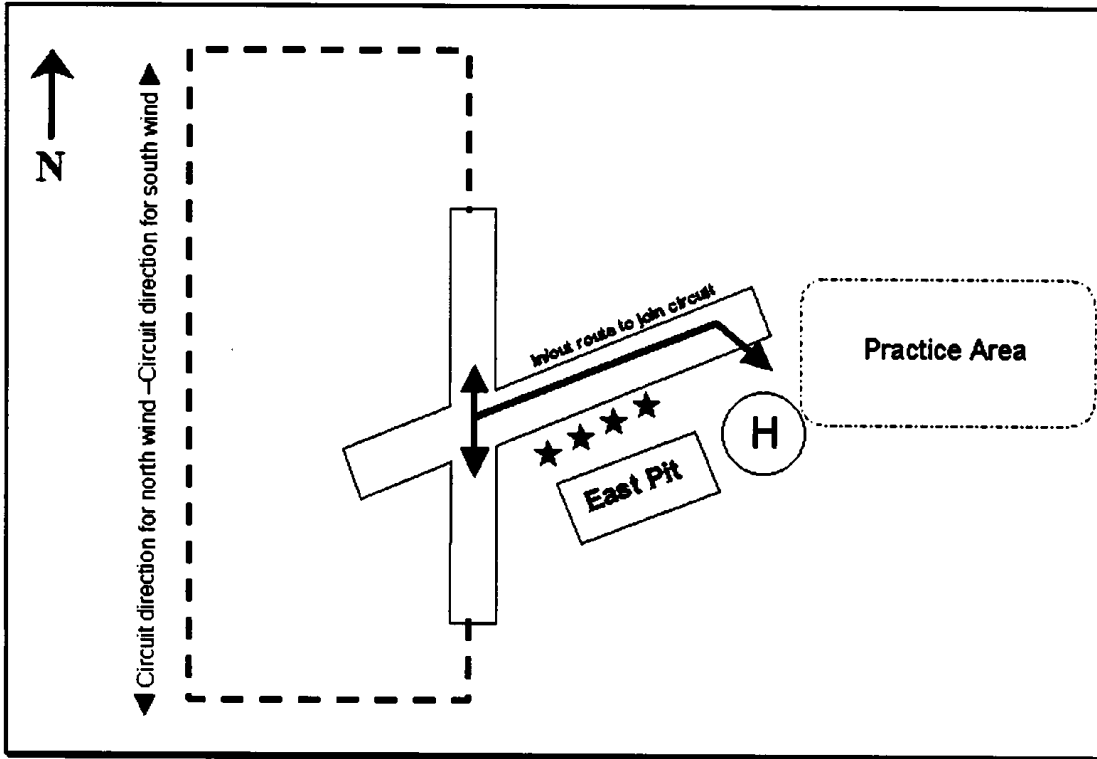
The area in the above diagram identified by the capital letter "H" is the area where helicopters should take off and land when the field is busy. The helicopter can hover in that area and either fly to the practice area or join the circuit with the pilot walking over to one of the pilot stations. At the end of a flight the helicopter can be flown (or hover taxied) back to the Helicopter Pad area for landing and shut down.

FLYING IN THE PATTERN

Flying a helicopter in the pattern is in most cases little different from other aircraft. As with fixed wing aircraft aerobatic manoeuvres which result in the aircraft using the centre line of the runway in both directions (stall turns,etc) or which otherwise disrupt the traffic pattern should not be done without the agreement/consent of the other pilots in the circuit. Except on the busiest of days, there are usually breaks in flying which would allow practicing these types of manoeuvres with no one else in the air.

Helicopters should not be flown in a manner or location where a loss of control can result in injury or damage to property. Under no circumstances are helicopters to be flown over or into the pits or parking areas.

Flying from East Pit



Flying from West Pit

