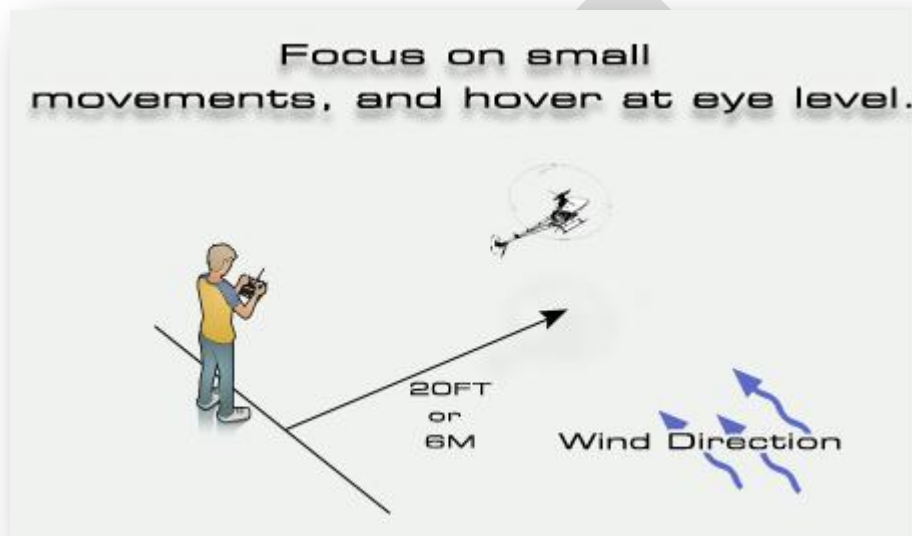


## The RCHA Achievement Scheme

### Entry level – “A”

Before starting any days flying you must carry out pre-flight checks as per the RCHA safety guidelines.

#### A) The Stationary Hover

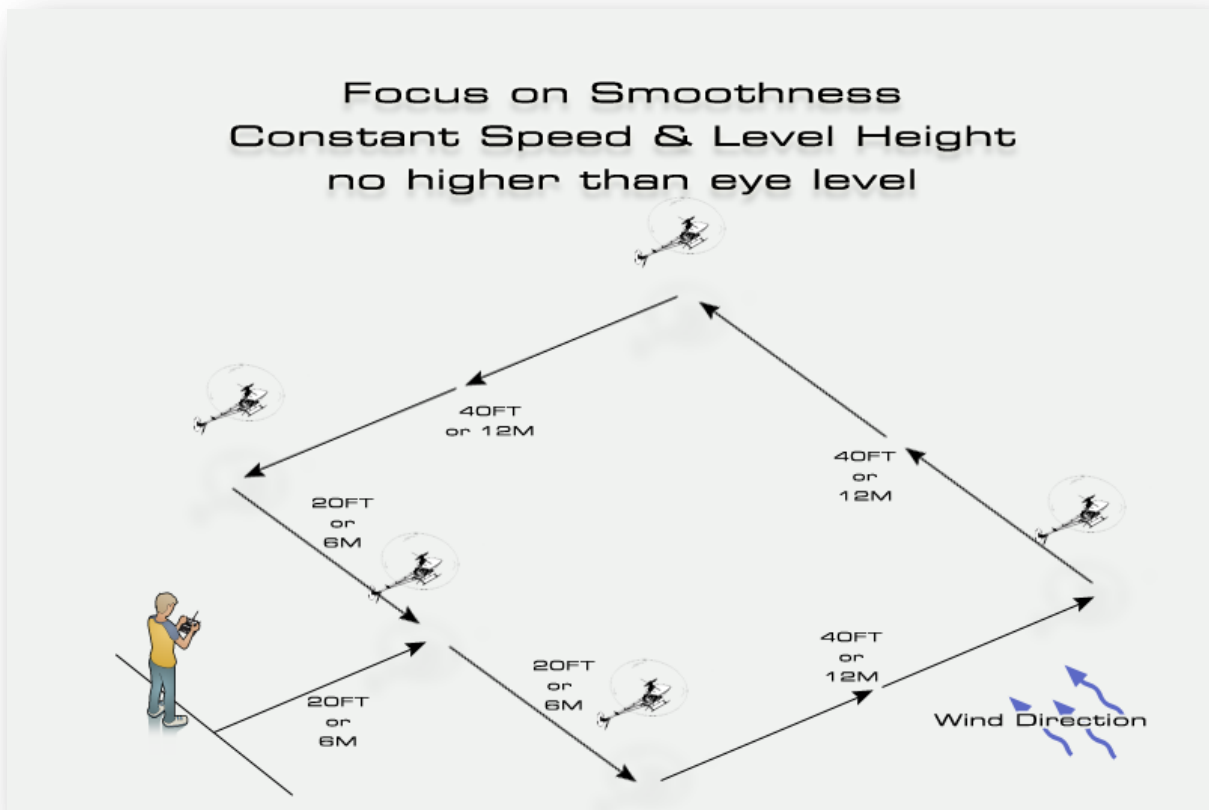


Spool up the rotors with the helicopter no less than 20ft in front of you, upon the helicopter becoming light on the skids take off with tail-in hovering at all times. Hover the helicopter no less than approx 3ft off the ground and no higher than eye level.

***“The objective is to be able to hover the helicopter within fixed position giving some degree of latitude taking into account flying conditions.”***

Once hovered in a fixed position for approx 1min bring the helicopter down to land.

## B) The Flying Box



Repeat A – Once in your hover in front of you, using the cyclic gently tilt the helicopter either left or right and move the helicopter for approx 20ft (6M) – keeping the speed slow and constant and the height again no higher than eye level but no less than 3ft, the tail should remain at all times pointing straight back locked into position. Before you have reached the 20ft (6M) point, start to slow the helicopter in readiness to again hover at the end.

Once stopped and hovered for no more than 30 sec's gently tilt the cyclic forward and move the helicopter now again slowly and maintaining a level flight with the tail maintaining the same position for 40ft (12M) – again before reaching the end, slow down to a steady hover.

Once stopped and hovered for no more than 30 sec's gently tilt the cyclic left/right (depending on where you started from) and move the helicopter now again slowly and maintaining a level flight with the tail maintaining the same position for 40ft (12M) – again before reaching the end slowing down to a steady hover.

Once stopped and hovered for no more than 30 sec's gently tilt the cyclic backwards and move the helicopter now again slowly and maintaining a level flight with the tail maintaining the same position for 40ft (12M) – again before reaching the end, slow down to a steady hover.

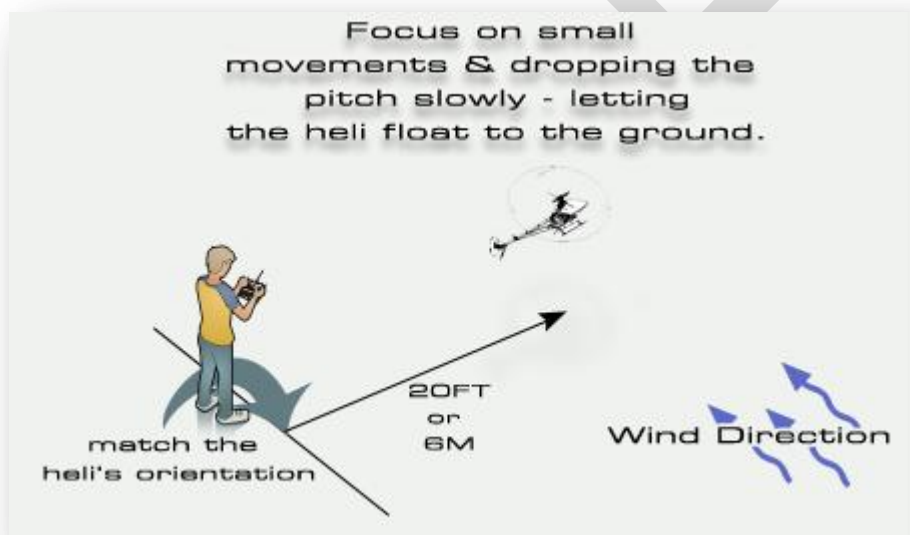
Once stopped and hovered for no more than 30 sec's gently tilt the cyclic left/right (depending on where you started from) and move the helicopter now again slowly and maintaining a level flight with the tail maintaining the same position for 20ft (6M) – again before reaching the end slow down to a steady hover the helicopter should now be back directly in front of you.

Now land the helicopter.

**“The objective of the Flying box is to put your co-ordination level to test in using the cyclic to control the speed combined with the pitch and throttle controls ensuring a reasonably level flight. Control is the key, with smooth constant speed, no large upwards or downwards movements and controlled stops and hovers throughout the exercise.”**

**Pointers: - You can if needs be rather than hovering at each corner do a short landing and take-off – but you must inform the examiner before attempting the test. This can be useful especially if nervous to give you a small pause between each stage.**

### **C) The Mini Auto**



The mini auto requires four key requirements.

- **A steady throttle hold setting**
  - Set at a point where the clutch is not engaged, but is maintaining a smooth idle running of the engine.
- **An idle 1 setting**
  - Where the throttle is no less than 50% across the whole throttle range.
- **Must be done side on to the wind.**
- **A pitch range that must include the lowest setting of -2 degrees**

Spool up the rotors with the helicopter no less than 20ft (6M) in front of you, upon the helicopter becoming light on the skids take off with the tail pointing directly to you. Hover the helicopter no more than approx 3ft off the ground, keeping the tail pointed towards you at all times.

Engage Idle 1 – the headspeed of the helicopter may well increase depending on the transition from normal to idle. Ensuring in a steady hover and that idle 1 is engaged, engage throttle hold.

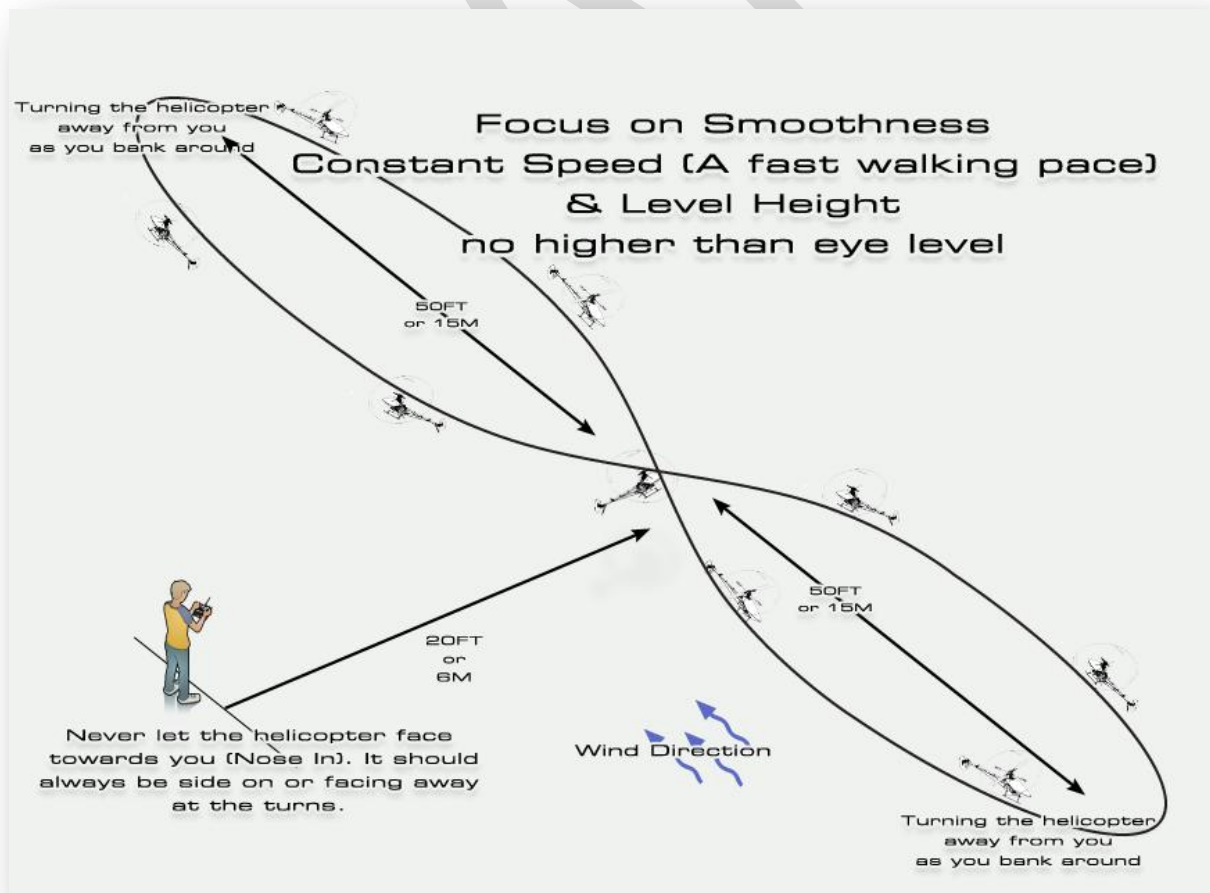
Gently reduce the pitch to zero, allow the helicopter to descend and land it should be a slow floating and gently land **no sudden dropping of the stick to the bottom** this will more than likely cause damage to your helicopter.

*“The objective of the mini auto is to get you to start the process to learn full auto rotations, these mini auto’s will let you get a feel for how your helicopter becomes more docile as the headspeed winds down and floats gently to the ground under full control”*

**Pointers :-** if using a rate mode gyro or non tail drive helicopter this must be especially done side onto the wind as the helicopter will want to turn (weather vane) into the wind.

**(A tip : if the heli turns – turn your body at the same time and direction keeping you parallel to it the heli will make it easier and not get confused with orientation)**

## D) The Lazy Eight



The lazy eight is most challenging manoeuvre within the A class. The focus is even more so focused on safety as much as smoothness, control and utilising the majority of the helicopter controls to ensure a smooth flight.

Spool up the helicopter until light on skids and attain a hover tail in.

Turn 90 degrees right or left and gently use forward cyclic to put in some forward speed now control the cyclic, pitch and slight aileron to put the helicopter into a gentle left/right turn, whilst using the rudder to control the direction of the helicopter.

When on the way around the helicopter must NEVER be facing you but at ALL times either side on or when at each end as turning that the helicopter is turning away from you.

**“The objective of the Lazy eight is to show your ability to control the speed, pitch control, rudder inputs to ensure the helicopter is positioned where it should be to give a lazy eight shape. Whilst maintaining a flight height of no more than eye level and being in total control at all times.”**

**Pointers: - Always do the lazy eight into the wind to ensure the heli is not pushed towards you or away from you. If needs be turn your body to mirror the helicopter orientation this will help you with your own inputs.**

#### **Examination Key Pointers.**

- **Be aware of your surroundings – other pilots, animals or the general public especially if flying in a public park.**
- **Always fly at 90 degrees to the wind, so as to avoid the heli being pushed towards you or away from you, especially if taking the exam in windy conditions. (Safety First)**
- **All forward or sideways movements for the flying box and the lazy eight should be flown no faster than a fast walking pace, no higher than eye level.**
- **In the mini auto you will more than likely not get to the bottom of the stick before the heli is on the ground, but just see how long you can keep it just off the ground before the headspeed decays so much that no more lift is being produced.**
- **We encourage the pilots to do the flying box in one go with no landings to keep the fluidity of the test and recommend plenty practice in this format.**
- **Safety is paramount at all times.**