

Learning to Hover

The machine is all trimmed, tracked and ready to fly, now it's time for your first flying lesson!

Hovering is the most important flying skill to learn. You take off in a hover and you land in a hover. If you can't hover, there's no hope for you :).

The amount of time taken for people to learn to hover varies from person to person. Some people pick it up within a few flights, others never progress much past it. It's all up to you.

Now, you want to learn to hover, so strap the training gear back onto your helicopter and go through all the procedures you have to do (checking heli, getting your frequency, range checks etc) before flying.

Now that all that's done, crank up the heli and carry it out to a designated hovering area that's obstacle free. Make sure you're not in the way of anyone, or anything and set your helicopter down on the ground.

How, make sure your transmitter aerial is fully extended and walk about five meters behind the helicopter. You always want to be behind the machine when you're learning, otherwise you will get disoriented.

Your first hops

OK, so now you're standing about five meters behind your machine, which is sitting there burbling away, waiting. Take a few deep breaths and slowly start moving your throttle stick forward. You'll hear the engine start winding up and the rotors will start turning. It's all on now!

Keep advancing the throttle stick slowly and as you get around mid-stick, the helicopter will probably start to get 'light on its feet'. Don't worry; your training gear will stop it falling over.

The aim of these first few flights is to get a 'feel' for the helicopter. You don't want to be a hero and try and fly around cause 90% of the time the heli will bite you on the ass. Little steps...

You'll probably notice that the heli will be moving around on it's training gear, and may or may not be where you first put it down on the ground. Don't worry about that, just try and get a feel for what the helicopter feels like when it's about ready to take off.

Gradually start advancing the collective until the helicopter is just off the ground. Don't let it climb too high though cause you'll probably lose it. Just get it to the point where it's lifting off the ground. While it's off the ground, use your cyclic controls to stop it drifting around. If it starts moving off and you don't feel you can bring it back, just drop the collective slowly and it will settle on the ground (now you know why you brought the training gear!).

Walk up behind it and try again, and again and again and again. Keep trying until you can keep the helicopter within a two-meter radius. If you can do this in one tank of gas, good on you, if it takes ten tanks, who cares? As long as you're having fun!

Controlled tail in hover

OK, so now you can keep you machine in within a two-meter radius, you're doing well! The story is now to try and keep the machine in one place.

So, lift off again, and try to anticipate its movements and correct for it. Helicopters have natural tendencies to wander off to the side on take off, so try to counteract this when you lift off.

The exercise now is to take off; hover for 10 seconds in one spot and land again in the same place you took off. Keep doing this until you can confidently take off and ascend vertically, hold the machine in a hover about five feet off the ground for ten seconds, then put it back down in the same place.

Keep trying until you can do it!

Moving around

Now you can hover pretty well, it's time to start moving things round a little. Pick a spot about about 4-5 meters away. You're going to take off from your present spot, hover over to your new spot and land.

The purpose of this exercise is to get you used to the cyclic controls.

So spool up the helicopter and take off like you practised earlier. Once you're about 5 feet off the ground. Slowly and gently move the cyclic stick slightly in the direction of your landing spot. Don't give it too much stick else it'll take off on ya! Feel free to walk behind the helicopter if it makes it easier for you.

The best way is to give the cyclic a slight nudge in the direction you want to go then back off nearly straight away. The helicopter will start sliding in the direction you gave it, but if you keep holding in the same amount of cyclic you gave it, it's going to pick up speed pretty quickly, so back off.

Now your machine should be sliding towards your new landing pad. As it gets near the new pad, slowly feed in a bit of opposite cyclic

(i.e. opposite direction to where the helicopter is heading) to slow the helicopter down. Once it's at a stop, slowly descend until the heli is on the ground.

Congratulations! Now keep doing this until you can confidently move the helicopter from point to point and set it down accurately.

Here in New Zealand, the Clubman class of competition is mostly made up of manoeuvres that judge your precision hovering skills.

Controlled side on hover

Good, so you can take off, hover, move to a point, hover and set it down ok? It's time to start working on your orientation.

The desired outcome of this lesson is to have you being able to hover your machine side on from each side. This starts to become more important so you can progress with your flying.

The way I learned side on orientation is hovering the helicopter to a point that was forward and to the right or left of me. So while it was still tail in to me, I was looking along the side of it. This gets you used to looking at the side of the machine. Make sure you do this from both sides. You don't want to practise a lot from one direction and be useless on the other.

As you become more and more confident with each side, gradually move the helicopter further back towards yourself so you're looking at more of the side of the helicopter and less of it's tail.

Keep doing this until the helicopter is hovering side on to you. Once you're comfortable with hovering the helicopter on each side of you, move it back until it's tail is right in front of you (where you lifted off) and slowly start applying rudder to bring

the nose of the helicopter around. Keep applying rudder until the nose is at about a 45-degree angle of what it was.

As you become confident at being able to keep the helicopter stable on this heading, keep feeding in a little bit more rudder and repeat the process. Keep doing this until the helicopter is fully side on to you. Ensure you do this for both sides of the helicopter. It is important not to develop a 'favourite' side.

Higher altitude hovering

Right, you can now hover tail in and side on comfortably. Well done! You can either choose to skip this part and go straight to figure eights, but you'll still have to come back to it eventually, so why not get it done now?

When I say higher altitude, I don't mean 100ft, I don't even mean 50ft. I mean being able to keep a stable hover about 20-30ft off the ground. The aim here is to get used to looking at the helicopter from the bottom.

So, lift off from the helipad as normal and bring the helicopter to a nice stable hover with the skids of the machine at eye height (this is the altitude that competition hovering in NZ is done). Keep it nice and steady. Once you're comfortable, slowly raise the collective so that the helicopter slowly starts climbing. Let it climb for about five feet or so and then stop and try and hold it in a steady hover.

Never let the helicopter get so close that you're looking straight up at it (i.e. over your head) cause it's likely you'll get disoriented and crash. Always keep it forward of you.

As you get comfortable, climb an additional five feet and repeat the process. Do this until the helicopter gets to around 50 feet or so. Once you can do this, move on to the figure eights!