Procedures with Helicopters and Helicopter Missions

General

This article outlines recommendations for air traffic controllers when dealing with helicopters, particularly under Visual Flight Rules (VFR). Helicopters can also fly under IFR, but this is relatively rare.

> Regardless of the flight rules, helicopters generally follow (almost) the same rules as fixed-wing aircraft.

This means that regular VFR arrivals/departures, traffic patterns, and practice approaches with helicopters should be handled by air traffic controllers in the same way as they would for a fixed-wing aircraft.

Callsigns

All helicopters registered in Germany have the **registration "D-H...."** and, depending on whether they are flying privately or for an organization/airline, can call with either their registration or the operator's callsign, just like regular airplanes.

Police helicopters in Germany belong either to one of the 16 state police helicopter squadrons or the Federal Police. Their respective call signs can be found in this article.

Rescue helicopters can belong to either state or private organizations. The respective call signs can also be found in this article.

A rescue helicopter on an active mission may optionally append "**RESCUE**" to its callsign during the initial call, although it may also be on a mission without this addition.

Transponder Code

Rescue helicopters generally squawk **0020**, although there may be local exceptions. On radar, these aircraft are displayed as "RESCUE."

Police helicopters generally squawk **0036** (state police) or **0023** (federal police). This is displayed on the radar as "POL" or "BPO." At night, they may squawk **0037**, which is displayed on radar as "BIV", indicating that the pilot is using "**Bi**ld**v**erstärkerbrillen" (night vision goggles).

If the pilot of a rescue or police helicopter is squawking the standard VFR code 7000, you should assign a realistic squawk code as an air traffic controller.

For all other helicopter flights, the same transponder codes apply as for any other VFR aircraft.

Ground Movement / Takeoffs and Landings

Unlike fixed-wing aircraft, helicopters usually do not have wheels for ground movement but instead have skids, allowing them to only land and take off vertically. Therefore, helicopters do not taxi but instead "**air-taxi**," typically at a height of about 3 meters (10 feet) above the ground. Taxi clearances should be adjusted accordingly (see phraseology examples).

Some exceptions exist where helicopters have landing gear with wheels instead of skids. For example, the Bell 430 is optionally available with wheels. However, since helicopters are not visible on VATSIM, we generally assume an air-taxi.

Additionally, a helicopter may take off from any intersection along a runway, including the end of the runway for a vertical takeoff. Many pilots prefer a horizontal takeoff though, so enough runway should be made available. Normal **runway separation**, as with fixed-wing aircraft, applies. Helicopters can also take off from a **helipad**, if available at the airport. A takeoff from a regular General Aviation Terminal (GAT) position is generally not permitted.

The same applies to landings: Helicopters can land either vertically or normally on a runway, and a landing clearance should only be given when the runway is clear, just as with a fixed-wing aircraft.

Hovering

Hovering means staying stationary in the air. Aerodynamically, helicopters can achieve this by balancing lift and weight, and keeping the helicopter level so it does not tilt in any direction.

However, this is a demanding procedure, especially without technical assistance, as it requires constant control inputs from the pilot to maintain the hover.

Therefore, you should **ask the pilot** if they are capable of hovering before giving such an instruction. Especially with simpler helicopters (e.g., Robinson R44), the pilot may prefer to fly less

demanding full circles.

For controllers, instructing a helicopter to hover is one of the most efficient delay tactics, as it requires very little space and does not affect other aircraft. Therefore, hovering can be done close to or even between runways.

Off-field Landings / Takeoffs

Off-airport landings/takeoffs refer to any landings outside of an airport. Legally, Germany's Aviation Act (§25 Abs. 1 LuftVG) mandates that all landings must occur at an airport, and off-field landings are prohibited.

However, exceptions apply when a *landing is required for safety reasons or to assist in an emergency involving life*. This is typically the case for police and rescue missions.

It is not the air traffic controller's responsibility to verify the authorization for an off-airport landing. If a pilot requests an off-airport landing, you can assume they have the necessary authorization, particularly on VATSIM.

No takeoff or landing clearance is issued for off-airport landings or takeoffs. Specific phraseology examples can be found below.

Airspace Minima

In **Class G** airspace or during **Special VFR**, helicopter **pilots** must maintain a **minimum flight visibility of 800 meters** (compared to 1500 meters for fixed-wing aircraft).

Controllers must also ensure a minimum **ground visibility of 800 meters** for helicopters under **Special VFR** within a control zone (1500 meters for fixed-wing aircraft).

Priority Missions

Rescue and police helicopters often fly priority missions, though this is not always the case. Controllers should confirm whether the pilot is on an urgent mission or requires priority.

If so, this means allowing the helicopter to fly the most direct route to its destination. In real life, this often involves flying a single heading from start to finish, potentially cutting directly through an airport's approach or departure sector. This may require delaying other departures or, in the worst-case scenario, forcing an aircraft to go around so the helicopter can reach its destination without delay. If the situation is less urgent, the helicopter may hover near the final approach sector or make a slight turn to cross the final approach course at low altitude (minimum 4 NM), staying therefore below arriving aircraft. Clear communication between the controller and pilot is crucial.

> On VATSIM, however, according to the Code of Conduct point B6, no flight can demand priority over others.

A pilot may request priority, but as a controller, you are not obligated to treat them as such.

In reverse, other traffic should only be delayed if all involved pilots agree. Especially during high traffic, other pilots should not be disadvantaged for a police or rescue helicopter.

Phraseology and examples

Communication with rescue and police helicopters is almost always conducted in **English**. On VATSIM, however, pilots may occasionally communicate with you in German.

Since helicopters often fly to destinations outside airports or make other unusual requests, standard phraseology may not always apply. A simple "Proceed as requested," with additional instructions if necessary (e.g., "Stay east of runway XY," "Standby for crossing final runway XY"), is often the best approach.

Ground Movement	
Phraseology EN	**Phraseology DE**
A: Frankfurt Tower, D-HAAG, request air-taxiing	A: Frankfurt Turm, D-HAAG, erbitte Schweben
G: D-HAAG, Frankfurt Tower, air-taxi to holding point runway 18 intersection S via Y7, Y5 and S, report ready	G: D-HAAG, Frankfurt Turm, schweben Sie zum Rollhalt Piste 18, Rollbahneinmündung Sierra über Y7, Y5 und S, melden Sie abflugbereit

Takeoff / Landing on a helipad	
Phraseology EN	**Phraseology DE**
A: D-HAAG, wind 210 degrees, 5 knots, cleared for takeoff (from) helipad	A: D-HAAG, Wind 210 Grad, 5 Knoten, Start frei vom Helipad
A: D-HAAG, wind 210 degrees, 5 knots, cleared to land Helipad	G: D-HAAG, Wind 210 Grad, 5 Knoten, Landung Frei Helipad

CTR crossing	
Phraseology EN	**Phraseology DE**

A: Frankfurt Tower, Christoph 2 Rescue	A: Frankfurt Turm, Christoph 2 Rescue
G: Christoph 2, Frankfurt Tower	G: Christoph 2, Frankfurt Turm
A: Christoph 2, just airborne at the Uniklinik, request to proceed direct to Darmstadt City	A: Christoph 2, gerade bei der Uniklinik abgehoben, erbitte direkten Flug nach Darmstadt
G: Christoph 2, roger, QNH 1006, runways 25 and 18, proceed as requested	G: Christoph 2, verstanden, QNH 1006, Pisten 25 und 18, fliegen Sie wie gewünscht
G: Christoph 2, traffic, Boeing 737 on 3 miles final runway 25L, report in sight	G: Christoph 2, Verkehr, Boeing 737 im 3 Meilen Endanflug Piste 25L, melden Sie in Sicht
G: Christoph 2, cross behind mentioned traffic to the south, caution wake turbulence	G: Christoph 2, kreuzen Sie hinter genanntem Verkehr den Endanflug Piste 25L, Vorsicht Wirbelschleppen

Off-field landing

Phraseology EN	Phraseology DE
A: Christoph 2, short prior Uniklinik, request to leave	A: Christoph 2 kurz vor der Uniklinik, erbitte Verlassen der Frequenz
G: Christoph 2, (wind at the field 210 degrees, 17 knots*) approved to leave frequency, report prior airborne again*	G: Christoph 2, (Wind am Flughafen 210 Grad, 17 Knoten*) verlassen der Frequenz genehmigt, vor dem Abheben wieder melden*

*Ein Windcheck vom Platz ist optional, aber gerade bei stärkeren Winden für den Piloten hilfreich. Wenn die Landung direkt im Anflug- oder Abflugsektor ist, kann man explizit als Lotse anweisen, dass der Pilot sich **vor** dem Abheben melden soll, um ggf. Verkehrsinformationen zu geben

Off-field takeoff

Phraseology EN	Phraseology DE
A: Frankfurt Tower, Christoph 2	A: Frankfurt Turm, Christoph 2
G: Christoph 2, Frankfurt Tower	G: Christoph 2, Frankfurt Turm
A: Christoph 2, airborne again at Darmstadt, request to proceed direct Uniklinik	A: Christoph 2, wieder abgehoben in Darmstadt, erbitte direkten Flug zur Uniklinik
G: Christoph 2, roger, QNH 1006, runways 25 and 18, proceed as requested	G: Christoph 2, verstanden, QNH 1006, Pisten 25 und 18, fliegen Sie wie gewünscht

Further prhaseology examples can be found in this article (German).

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