

# Training Birds of Prey

RC aircraft are a useful tool for falconers

by Eric Bjorn | Photos by the author and Shannon Penny



Eric Bjorn launches the Berghwing in preparation for a falcon training flight. The lure assembly is attached to the wing with magnets and breaks away when grabbed by the falcon.

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**L**ike many of you, I love all things that fly. In my case, this includes birds, and especially birds of prey. Three years ago, when a friend who knew I flew RC airplanes asked me to help him flight train his falcon, I jumped at the chance.

Don Hervig has been a falconer for more than 30 years and has owned and trained more than 40 birds during that span. An aspect of falconry involves the need to condition the heart, lungs, and flight muscles of these captive birds. I always assumed that birds of prey were able to fly and hunt effectively without training, but that's not true. They are little athletes that require a conditioning regimen so that when it is time to hunt, they have the endurance and speed it takes to capture their quarry.

Falconers have used helium balloons and kites in the past

to elevate a food lure into the sky to give their birds a reason to fly and climb. With the advent of drones—in our case a DJI Phantom 2 Vision quadcopter—the lifting mechanism was now more sophisticated.

During our first drone training session with Don's aplomado falcon named Brandi, I flew the drone and lure to roughly 150 feet altitude, whereupon Don released Brandi to begin her interception of the lure dangling from a 20-foot line.

The lure was attached to the line with a clothespin so that after Brandi made her "kill," the lure safely fell away. I then recovered the drone while Don recovered Brandi. The drone was an effective way to get the falcon to fly, but it had some limitations. First, the top speed of the drone was well below Brandi's top speed, so the chases a falcon experienced during a



Don Hervig (L) poses with his aplomado falcon, Piper, while Eric holds the RC Berghwing between falcon training flights.



Eric (L) sets up the Berghwing on a low pass while Don prepares Piper for flight.

hunt could not be fully simulated.

Second, and most significant, even with propeller guards there was always the danger that a falcon would attack the drone rather than the lure and risk injury. Fortunately, that didn't happen, but we looked at safer ways to train.

Fast-forward three years to the present when Don called me with another opportunity to help train his new aplomado falcon, Piper. This time, we would use an RC foam wing known as the Berghwing. It was developed by a small company based in Dubai. The Berghwing is designed to trail a lure, which is attached to the bottom of the wing with magnets. The lure also incorporates a hi-start parachute so that when the falcon detaches the lure, the parachute creates drag and the falcon is not tempted to fly too far with her snack.

Several things make the Berghwing system a huge step forward in the marriage of RC and falcon flight training.



Piper demonstrates her amazing “footing” skills as she swoops in to grab the lure trailing behind the Berghwing.

The electronics of the Berghwing system provide telemetry, stabilization, geofencing, a return-to-home function, and orbiting. The system allows a falconer to easily launch the wing, fly it to altitude, and put the wing into an altitude holding pattern until ready to work with the bird.

After the bird captures the lure, the falconer either lands the Berghwing or puts it back into a holding pattern if more training is to be done. Additionally, the Berghwing uses a ducted-fan motor so there are no exposed propellers.

What is it like to RC dogfight with a falcon? Phenomenal! It is definitely the most fun and rewarding RC flying I have ever done. We have been welcomed with open arms by my RC club of 15 years,

the Coffee Airfoilers Radio Control Club of Tullahoma, Tennessee. Our flight routine at the field involves Don getting Piper on his glove while I get the Berghwing and lure ready for flight. I launch the wing and make a tempting pass in front of Piper. Sometimes she takes after the wing on her own and sometimes Don gives her a little toss.

The Berghwing runs on a 3S 3,200 mAh LiPo battery and can outpace and out-endure Piper. As the pilot, my challenge is to entice Piper to continue her chase by not getting too much separation between her and the lure. If I am able to keep her close and fully engaged in the flight, we can get up to 3 minutes of flying evasive maneuvers. I use a combination of speed and

maneuvers to keep her from grabbing the lure too quickly.

It makes for challenging flying—not only because of depth-perception issues but because Piper uses tricks such as cutting me off in a turn, picking up speed in a dive, or varying her speed in level flight.

From the beginning, we incorporated a Firefly Q6 miniature video camera in a rear-facing setup so that we could review Piper’s flying skills up close. She is an amazing aerialist. Everything is fast for a falcon in flight, so it was fantastic to video her training at 120 frames per second, and then be able to slow it down during editing and admire her talented flying in slow motion.

After Piper makes her grab, I recover



Don releases Piper to begin a training flight. Piper's flights last anywhere from 30 seconds to 3 minutes, depending on her ability to catch the lure being towed behind the Berghwing.

the Berghwing while Don recovers Piper and we set up to do it all again. We have made as many as six training flights in a single session but normally limit ourselves to three or four.

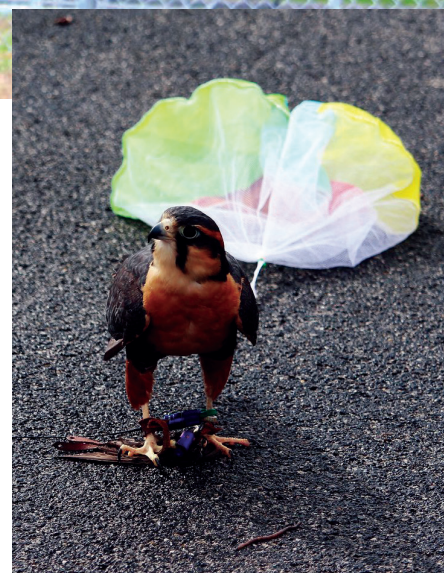
During a training session, Piper landed with the lure and almost immediately a wild marsh hawk (Northern Harrier) landed next to her and sized her up as a possible meal. Fortunately, Don was able to scare the hawk away. Since then, I fly top cover over Piper with the Berghwing until Don is able to retrieve her.

Although the Berghwing is designed to be used with a single falconer/

operator, it has been nice for Don and me to tackle this as a team and provide safe operations. We plan to put on flight demonstrations during our numerous club events this year.

Additionally, Don has ordered a peregrine falcon for this summer, which is much larger and stronger than an aplomado falcon. Don plans to begin his own RC flight training soon and we are both looking forward to some faster, longer, and higher falcon vs. RC dogfights in our future! 🦅

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After each successful flight and capture of the lure, Piper enjoys a piece of meat attached to the lure. The parachute provides enough drag to discourage her from flying to the nearby trees to eat her snack.