

Mechanical Falcon Keeps Bird Pests At Bay

While trying to come up with a way to control bird pests that would be effective but didn't involve shooting or poisoning, Wilfred Emonts was inspired by the sight of a flying toy bird.

Emonts, who lives in Tottenham, Ontario, is a professional falconer. He's spent more than 20 years using falcons to scare problem birds away from nearby Toronto's Pearson International Airport. It's a never-ending battle and the pest birds often get so used to falcons being around that they fly just far enough away from the airport to be safe. Once the falcons are gone, the birds come right back again.

Toy birds, called ornithopters, fly by flapping their wings like a real bird. After seeing one, Emonts started working with Sean Kinkade, an ornithopter expert, to design a radio-controlled robotic hawk that works and looks like the real thing.

Emonts calls his mechanical bird Robofalcon, and he formed Intercept Technologies to produce and market it.

Robofalcon gets all its lift and thrust from its wings, while the tail is the rudder and elevator. It can be powered by either a gasoline engine or electric motor. It uses parts similar to other remote-controlled toys. The steering mechanism comes from a remote-controlled boat, which allows the wings to be locked in place so the Robofalcon can soar.

It flies like a hawk, soars like a hawk, and looks enough like a hawk to scare bird pests away from the airport. Because it's radio-controlled from the ground, Robofalcon can be made to fly and turn in pursuit of a specific bird or group of birds. It can swoop low, flap its wings to regain height, and then soar overhead — all just like a real hawk or hunting falcon. The operator can chase birds as long or as far as the radio signal and their line of sight will let them.

Unlike other radio-controlled aircraft, Robofalcon doesn't need a runway. "That's the great thing about Robofalcon. You can launch it by hand no matter where you're standing," Emonts says. "It flaps and you just give it a toss. We land them on their bellies with their wings up."

While the current model works great, Emonts is working on making Robofalcon even more realistic. One goal is to refine the controls to the point where it will be able to light and perch on a building.

Intercept Technologies offers Robofalcon in various sizes, from a Peregrine Falcon (for small birds like starlings) to a Golden Eagle (for larger birds like turkey vultures). Rather than selling them, Emonts leases his robotic falcons to airports, golf courses and landfills. He says they'd also be helpful in keeping bird pests away from high-value small-acreage crops. "We lease them for the time period you



Radio-controlled "Robofalcon" soars through the sky like a hawk to scare pest birds away. It can be powered by either a gas engine or electric motor.

require and provide training and maintenance. By the time we complete the training, your Robofalcon is assembled and ready to use," Emonts says. Lease fees are determined by the length of the lease and the amount of use per month.

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New Way To Power Wheelchair

Power can be added to nearly any manual wheelchair with this new PowerTrike™ attachment, marketed by American Wheelchair, Pinellas Park, Florida.

PowerTrike is an add-on front fork that includes handlebars, a wheel, electric motor and battery pack. It can be attached to virtually any standard folding or sports wheelchair. Once attached, the chair has the power to "go boldly where few manual wheelchairs have gone before," the company claims. This includes traversing across fields, firm sand, gravel roads, and even dirt paths.

"The sturdy 150-watt brush motor can propel rider and chair to speeds of up to 11 mph. The 20-in. front wheel allows the chair to handle rough terrain.

The PowerTrike assembly includes a docking device, which attaches to the wheelchair frame. Once it's in place, the Power Trike handlebar, wheel and motor

assembly can be attached or detached in a matter of seconds.

A battery condition indicator mounts on the handlebars, so you'll know when the battery is low or ready to go. The lead acid gel maintenance-free batteries can be fully recharged in 1 to 4 hours. On a full charge, PowerTrike has a 15 to 20-mile range.

The PowerTrike frame is made of aircraft-grade lightweight aluminum and weighs, without batteries, just 24 lbs. It has twin dual caliper brakes, with a parking brake lock on the right lever and a power cut-off on the left lever. Speed control is a twist grip. It has a turning radius of 53 in. The company says PowerTrike is easy to use, but adds that it might take a little getting used to, so cautions against heading off-road right before logging some time on a hard surface.

You can order a free video on the PowerTrike by calling American Wheelchair



Add-on front fork is powered by an electric motor and battery pack. It attaches to virtually any standard folding or sports wheelchair.

at their toll-free number (800 449-8991) or from their Website: www.americanwheelchairs.com/powertrike.shtml.

Contact: FARM SHOW Followup, American Wheelchairs, 6550 102 Ave. N. Ste

#6, Pinellas Park, Fla. 33782 (ph 727 549-0604 or toll-free 800 449-8991; fax: 727 549-0614; Website: americanwheelchairs.com).

"Made-It-Myself" Chisel Plow

"I wanted an inexpensive chisel plow that wouldn't leave a lot of residue on top of the ground. So I rebuilt an old moldboard plow, mounting chisel plow sweeps on them. It works great and I saved a lot of money," says John Strockoz, Little Marsh, Pa.

Strockoz paid \$100 for a used Deere 4-bottom plow. He used a torch to cut the frogs in half vertically and threw away the right side halves. He had a machine shop bend 3/4-in. thick steel into curved sections which he welded onto the cut-away frogs. Then he drilled holes in the curved sections and bolted 3-in. wide chisel plow sweeps onto them.

"I've used it for two years and couldn't be happier with it," says Strockoz. "I run the sweeps 7 to 9 in. deep. They throw soil off in one direction - to the right - whereas a standard chisel plow throws the soil both left

and right and therefore leaves more residue on top. I can go about a gear faster than if I were pulling a conventional moldboard plow. I had been using a chisel plow equipped with a disk on front, but it left too much residue on top of the ground. My moldboard chisel plow leaves enough residue to help prevent erosion, but not enough to cause problems at planting. The only limitation is that it only covers a relatively narrow width. I'm sure this concept would work on a larger plow.

"I paid \$7 apiece for new chisel sweeps, \$7 apiece for new shoes, and \$21 on each curved steel section. My total cost was less than \$300."

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John Strockoz rebuilt an old moldboard plow, replacing moldboards with chisel shanks.