

The ElectraFlyer: Motorized Flight Without the Noise!

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Photo: Barbara Greenberg

When I was a kid I had lots of flying dreams, both the sleeping and awake kind. When I saw hang gliding on TV in the early '70s I didn't hesitate. I looked for information and found it in the back of *Popular Mechanics*. I ordered Dan Poynter's book, read it, ordered Eipper plans and built my first hang glider. I really loved the freedom and self-reliance of flying. You are responsible for your own fate – you and no one else. For years I was gung-ho, flying as much as I could, taking days off work to soar at the beach cliffs and the mountains.

In the early '80s I got a new glider (my sixth one) and converted my Manta Fledgling to an ultralight trike. Now I had a second group of guys to fly with when the conditions for soaring weren't right. I had a lot of fun flying the trike, but the noise and vibration definitely take away from the pure, bird-like flying experience.

I have followed the progress of elec-

tric vehicles for many years. They seemed interesting except for the massive pile of lead-acid batteries they had to carry for a low-speed, short-distance drive. But in the last five years things have changed. New motor designs enable high power in a small, light package with very high efficiency. Batteries have come a long way as well. Lithium-ion chemistry offers amazingly high power-per-weight (power density). Lithium-ion polymer offers the high-power density in combination with the ability to discharge quickly when desired. These cells, though expensive, are now available.

I built a lithium-ion powered scooter two years ago; it's incredibly fast and has great range. That project convinced me that batteries have finally reached the level of development to enable the dream of electric flight to become a reality.

The catalyst for my developing the electric trike was a discussion with a hang gliding and ultralight flying friend of mine. He suggested we build an elec-

tric self-launch system for hang gliders. No more waiting for the conditions to get just right for launching and soaring. No more distant travel to the good hang gliding sites.

What if we could combine the best aspects of both hang gliding and ultralight flying? What if we could fly our ultralights with very little sound other than the rushing air, no earplugs needed, no vibration? What if we could design a glider that could take off from level ground, climb thousands of feet, then turn off the thrust and soar or just fly quietly in the smooth evening air for a little sight-seeing – all without disturbing the neighbors?

I'd had some experience with the new batteries and motors, lots of ultralight and hang gliding experience, and I wanted to fly electric. I did some more research and took my ideas, notes and product information to Irwin Rodgers, the flying friend who suggested the powered hang glider. He is a great engineer and had