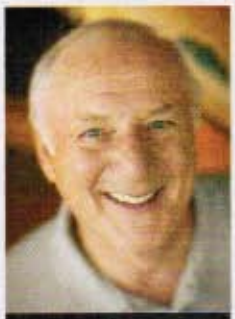
BY BARRY SCHIFF

Look, Ma! No gas!

A friend, Steve Kivo, called excitedly, "Hey, Barry, how would you like to see that electric airplane from China?" A rhetorical question; he knew that I would. "It's being flight-tested here in Camarillo. Meet me at Avantair for a close-up look."



Barry Schiff was awarded in 1982 the Gold Proficiency Award from the Federal Aero Club of Switzerland.

I hurriedly left home and 15 minutes later was introduced to the electrically powered Yuneec and its test pilot, Dave Morss. The composite V-tail aircraft is manufactured in Shanghai by Yuneec International, an offshoot of Helang Electronics, the world's largest maker of radio-controlled airplanes. Matter of fact, the first flight of Yuneec's first full-size, electric airplane took place in 2007 via remote control. The current airplane first flew in June.

Heart and soul of the Yuneec is a 37-pound, 40-kilowatt (54-horsepower) motor, also manufactured by Yuneec, that requires no maintenance other than possibly an inexpensive replacement of the bearings every 2,000 hours. The motor otherwise has an indefinite life, but a replacement costs $4,000.

A 37-pound, 54-horsepower motor (left) powers the Yuneec, an electrically powered aircraft manufactured in China (below), which was flight tested in California recently.

The brushless motor is driven by six 18-cell, lithium-polymer batteries that weigh 124 pounds. Cross-country flying requires extreme patience because of limited range and a "refueling" time of three hours to recharge the batteries—at $3 to $5 per charge. The batteries are good for about 600 charging cycles and cost $6,000 to replace ($10 per flight).

The instrument panel is unique. Gone are conventional engine gauges. Instead, the pilot deals with propeller rpm, volts, and kilowatts (load) to determine remaining battery power. There's no throttle, either, just a sliding rheostat.

Starting the motor is as quick and easy as turning on an electric fan, and there is no power delay (spin-up time) when the "throttle" is opened. There is no tachometer redline as the rpm of the three-blade propeller is voltage limited (even in a dive). The Yuneec climbs at a steady 900 fpm up to about 9,000 feet at which point battery power wanes quickly. Cruise at 80 knots, and the batteries last only 15 minutes. Cruising at 52 knots, however, provides an endurance of 90 to 100 minutes.

The good news is that when power dies or the "throttle" is retarded, the propeller stops (which might be unnerving to some). This and the high-aspect-ratio wings provide a glide ratio of 25:1.

Besides the obvious advantages of not needing oil or avgas, not carrying fuel improves crash survivability. Also, gross weight and CG do not change during flight. The prototype has spoilers that will be replaced with flaps on production models.

Yuneec plans to certify the airplane in Germany as a light sport aircraft and take advantage of reciprocity to obtain U.S. compliance. Production airplanes reportedly will be available in a year and sell for $90,000.

It is easy to question the practical value of an airplane that has such limited speed and range (unless equipped with a *really* long extension cord). This breakthrough technology is reminiscent of when Benjamin Franklin witnessed in 1783 the world's first manned flight. A skeptic asked him, "What's the use of this flying?" Franklin replied, "What's the use of a newborn baby?" AOPA

Visit the author's Web site at www.barryschiff.com.