



**ModelAir -Tech R/C Model Aircraft Products and Engineering**

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5/7/95

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**1/4 Scale PIPER CUB** built from Nosen kit first flown today using electric power supplied by a **MODEL AIR-TECH H-1000DP** dual motor belt reduction drive unit

Specs. Follow:

**Reduction Ratio** = 3/1

**Prop** = Zinger 18 X 6

**Batteries** = 24 SR 1500 MAX cells

**Motor Current** = 27 amps

**Flight time** = approx. 5 1/2 minutes

**RPM** = 5,000

**Gross Weight of CUB** = 15 1/4 pounds (was originally built with gas power in mind).

**Motors used** = TWO Graupner SPEED -700 (9.6 volt) plain bearings (at approx. \$25.00 each from Hobby Lobby)

**Battery Weight** = 47 ounces (almost 3 pounds)

**H-1000DP belt drive weight** = 10.6 ounces

**SPEED -700 motor weight** = 11.3 ounces each

Cub was off the ground in about 20 feet. At altitude you could easily throttle back and maintain good controlled flight.

But if you think that was good—don't give up the first time around --- try again with other parameters. After having just finished that first flight session with the Cub, we were able to get delivery on two of the new Graupner SPEED -700 (12 VOLT) motors from Hobby Lobby. These new higher voltage versions of the "700" are expected to sell for \$41.00 each. The big plus is that they can handle more battery cells.

5/27/95

Tom installed two of the new SPEED-700 (12 volt winding) motors in the 1/4 scale Cub again with our H-1000DP dual motor belt drive. We still used the 3.0/1

pinion pulley. But with the higher powered motors the choice now was a Zinger 20 X 11 prop, running on 32 SR 1500 cells, turning 4,000 rpm at only 19 amps. The one thing learned very quickly on several bench test runs is that when going above 18 inch diameter props, on our H-1000DP belt drive, you must increase the prop shaft diameter from 1/4 inch to 3/8 inch. That change will be incorporated into all new H-1000DP units (expected to use the larger diameter props). The bottom line is that our 1/4 scale Cub now weighs 16 1/4 pounds and still gets off the ground in about a 20 foot run. But the best part is that we now obtain easily 9 1/2 minute flights on the 1500 cells with the prospect of 12 minute flights on 1700 cells. Flights are very realistic --- in fact they are spectacular!

**Update from Ken:**

I saw this plane fly a demo at the Electric Nats in Muncie. It does, indeed, fly well. Giant scale has arrived in the electric arena. Flights are quite long and majestic. The flights are also much more realistic than the glow versions that I have seen of the Cub.

**The AMA Electric Nats: A Report**

**Why should I read this? I am only a sport flier and not a competitor!!!**

**I REALLY DON'T CARE ABOUT THE NATS... but PLEASE, DO YOURSELF A FAVOR and READ THIS - Ken**

I hope that you have started this article because it is not about what BIG BOY did what at something you don't know or care about. As all of you know, I try to put in only articles that are of general interest to most of you, hopefully this will be one of them.

**Why the Electric NATS?**

It gives competitors a chance to shine and show off what they know and how well they fly at certain tasks, but that's not all! It gives you a chance to learn and apply what you have learned immediately. The electric NATS is unlike anything you'd expect. The BIG BOYS are there to win, of course, but it's not a cut-throat competition. They help everyone by dispensing what they know. The information they can give you, in a couple of days, is worth the price of the trip. Hands on is the best and fastest way to learn. If you are new to "the game" of task



**Gerhard Speilman's twin Lazy Bee flying at Muncie.**