

Comments on Harbor Freight Models

There are two different electric free flight models offered by Harbor Freight Co. One is a high wing tractor, the other a twin-rudder pusher. Both are courtesy of your friends with the Chinese People's Liberation Army, those ever so nice folks who offered warm greetings to our troops in Korea in the 50's and who recently forced down a Navy EP3 recon plane over the South China Sea. With that "nonjudgmental" introduction, here are a few comments based on your friendly editor's experience.

The tractor model has a 14" wing span (about 31 Sq In) and uses a 1.2V 250 mah NiMH battery running a direct drive electric motor. The model weighs 40 grams. Charging is by means of a pair of AA flashlight batteries. These give out relatively fast, so you might get more use with a Radio Shack D Battery holder, soldering the charge jack onto that. After a couple of minute charge, the model needs to be tossed straight ahead with a bit of vigor, and it will fly level for 30 feet or so before beginning to climb. If it catches a thermal, you may lose it.

The pusher model has a very efficient, high aspect ratio, undercambered 22" wing, with about 63 sq. in. of area and weighs 56 grams. It is a very low drag model. I haven't removed the motor from one yet, but it appears to be the same motor as in the tractor, wired backwards, and using a 1.2v 280 mah NiMH battery. Be warned that the batteries in both these models come fully charged from the factory, so don't charge it for the first flight and don't launch it without first running the motor until the battery is depleted. If there is any wind at all, you'll never recover the pusher model because the motor runs over 4 minutes when fully charged, and the tractor motor runs slightly less. (Ask **Cliff Betz** of Louisiana how we both found that out.) Let the motor run down in your shop, and use the flashlight batteries to charge it at the field. You aren't likely to be able to fully charge the battery with flashlight batteries, but you can get good flights with a 2-3 minute charge. The climb of the pusher model is shallow, but steady, and if you get a two minute motor run, you'll start worrying about losing it.

The stock number for the pusher model is 43678-3NVB. That will get you one for \$6.99 rather than the normal \$13.99 price. The stock number for the tractor model was published in the May-June issue of this exciting newsletter. Harbor Freight is a rip-off outfit when it comes to postage, so expect ridiculous shipping costs unless you order \$50 or more.

Now that I've flown the things, I now want to know what I can do with the battery and motor in a "real" model rather than some piece of Communist styrofoam. I have a little 20" span 80sq.in. Lidberg Mini-Spearhead which I've flown with a Hi-Line Mini-6 motor using 3 50mah NiCads. It weighs 73 grams. It flies OK, but nothing exciting. I built another copy of the Spearhead, making it as light as possible, and installed the battery and motor from the Chinese tractor model, and ended with a total weight of 49grams. It flies, but won't climb, I suspect there is just too much drag for that direct drive motor. I'm convinced that the motor battery combo will fly a relatively low drag dime scale job like gangbusters.

As for the motor battery combo from the pusher model, I haven't torn one apart yet. If, as I suspect, the motor is the same as that in the tractor, the only difference is that the battery will run longer. Look for more experience in future exciting issues. If any readers have experience using these motors I'd enjoy hearing from you..... George White