



Sport Electric *Frechdax* by Hobby House

In the evening sun, flying over the glider airfield Dorsten, the Frechdax shows its style, and why it has become such a popular airplane for modelers in Germany.



Thomas proudly holds up his Frechdax. This is an attractive model.

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Translation: Sandra Gillmeister
Photos: H. J. Fischer

Electric-powered models now come in many sizes, shapes, and styles. There are many types available from both small and large manufacturers. This is especially so in my country of Germany, where internal combustion engine noise pollution has been a problem for years. The continued development of electric power in Europe has resulted in e-models with the performance of glow/gas. Further, these new power systems are priced about the same as an internal combustion engine.

In Design

Andreas Peters of the Modellbau-Centrum in Herten, Germany, had an idea. He wanted to design and build a

small electric-powered model. He wanted a model for the "normal" modeler, of complete wooden construction, with a nice appearance, and he wanted it to be an airplane that could be built at an affordable price.

As a long-time modeler and glider pilot, he remembered the Hegi Company's Frechdax. For this firm, which closed about 30 years ago, the famous design engineer W. Sârgel developed the Frechdax for a combustion engine. This very successful model was available as a fast-to-construct kit with the Taifun diesel engine. It was a favorite with many model pilots.

After many inquiries, Mr. Peters of Hobby House decided to revive this model with the same appearance; the name "Frechdax" was used again. He adhered to the old shapes and measurements, but brought the model's construction and electric-powered motor up

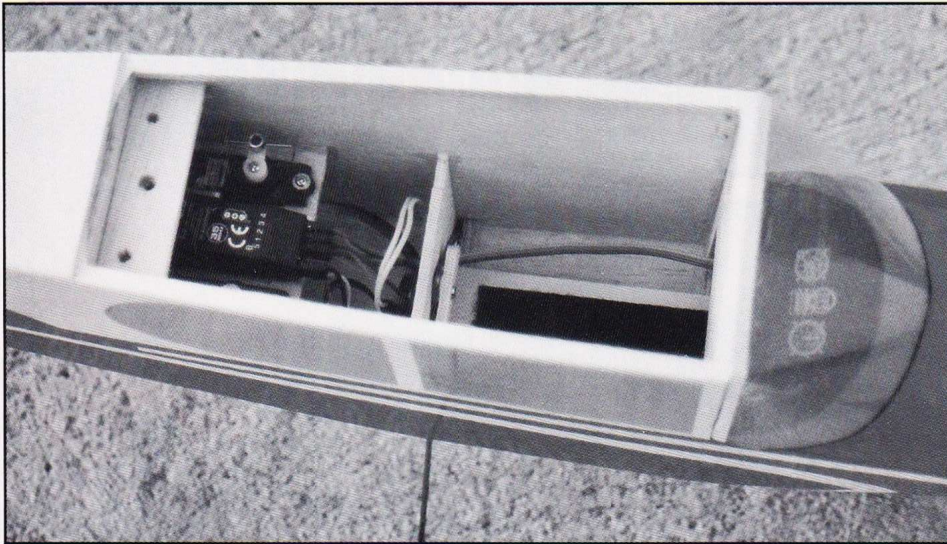
to today's standards.

The result is a model that is not just a fundamental kit for younger or older electric-power pilots. It is also very appealing to model pilots of all skill levels who enjoy the fun of flying vintage, classic-looking models.

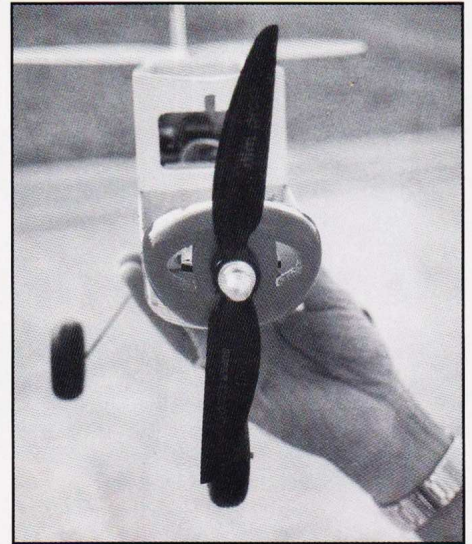
Construction

The model was redesigned using computer-aided design (CAD), and the wood was cut by laser. Even with laser-cut parts, the Frechdax requires about thirty hours of building time.

The construction of this model is not very difficult. Under the guidance of an experienced model builder, even a beginner can build it. However, attention to detail is necessary when building the cowling, the arched fuselage nose, and the balsa block. I recommend moistening the planking with water before bending and gluing. Also, the front frame of

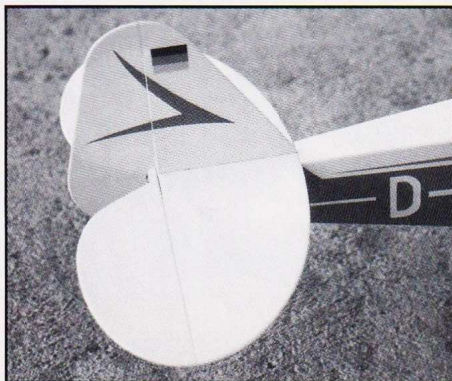


A look into the fuselage without the wing attached shows how much room there is for your gear: receiver, servos, and battery pack.

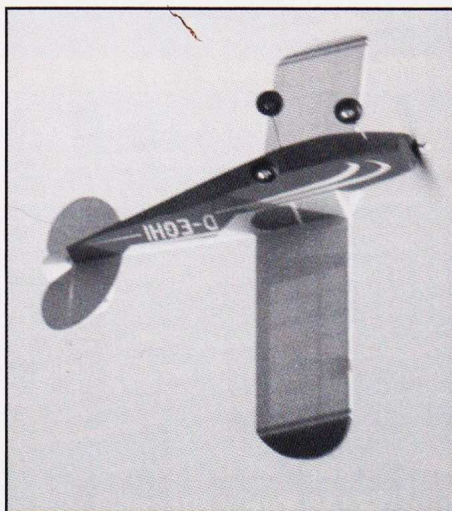


Looking at the Frechdax head on you can see it means business — FUN business. Notice the nice opening in the cowling to keep the S-400 cool.

balsa must be sanded to its proper shape. It might even be wise to build a cowling out of ABS plastic; the shape is somewhat difficult to mold, however. Once the front of the airplane is built, though, only a few hours are required to build



Here is a look at the rear end of this fun little model. It has a lot of the Cub look to it in its all-wood construction.



Even as a sport model, the Frechdax will loop and do big lazy barrel rolls.

the fuselage.

The steel wires for the three-legged undercarriage are easily built. The landing gear rigs with the help of metal-clamp screws. In case of rough landings, only the screws get loose, and they may be fixed quite easily.

Like the fuselage, parts of the wing are made out of laser-cut balsa wood parts. The ribs attach to the solid balsa main spar and the trailing edge. The leading edge is round, which makes sanding pretty much unnecessary. At the root area, the ribs get a sheet of balsa, which is typical of this type of airplane. The wing attaches to the fuselage by means of a plywood hook at the leading edge and a plastic screw at the trailing edge.

The tail feathers are laser-cut, too. They only require a bit of sanding to finish.

I recommend you use Oracover™ to cover the Frechdax. It covers well and

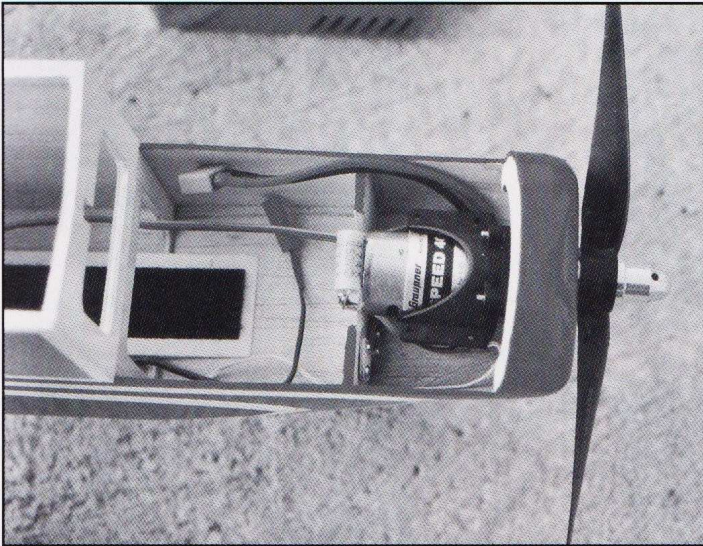
offers color designs that will enhance any model.

The electric motor mounts to the fuselage front with a few screws. The fuselage has more than enough space inside to fit the battery pack to the hard balsa floor. The 7/8-cell speed controller can mount on top of the battery, or just behind the motor, with Velcro® tape. The receiver and the servos for the rudder and elevator are installed in a plywood servo tray, slightly in front of the wing's trailing edge. Standard servos will fit in this model, too, so the cost can be kept to a minimum. To set the airplane's center of gravity (CG), just move the battery pack forward or aft until it balances. The exact CG is shown on the plans.

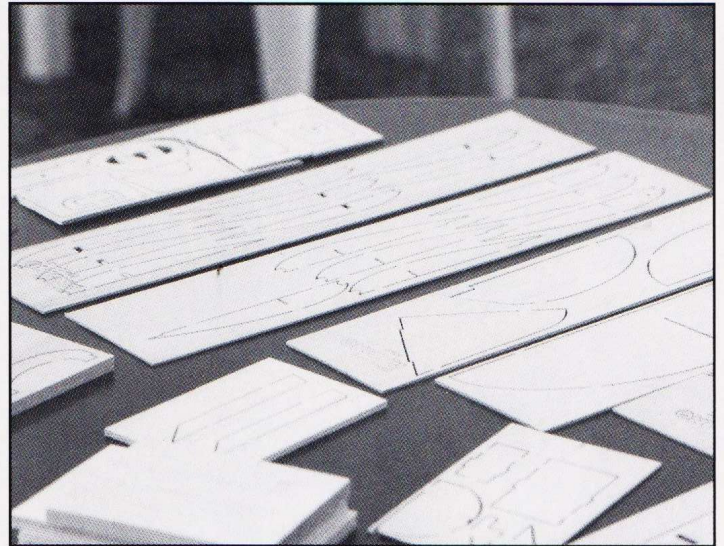
The model's control horns are made out of 0.8-mm (0.32-inch) plywood. The servos drive the control surfaces through "Bowden" or similar type cables.

PRODUCT:	Kit plan
MANUFACTURER:	Hobby House - Germany
MODEL TYPE:	Electric sport
PILOT SKILLS:	Beginner / Intermediate
WING SPAN:	1100 mm (43.3 in.)
LENGTH:	740 mm (29.1 in.)
FLYING WEIGHT:	700 g (24.7 oz)
FLYING TIME:	7 to 15 minutes
COVERING:	Oracover®
FUNCTIONS:	Rudder, Elevator, and Throttle
CONSTRUCTION:	Built up CNC wood parts
POWER:	Graupner Speed-400
GEAR BOX:	1.85:1
BATTERY:	7/8 cells, Sanyo 500-1100 mAh
SERVOs:	Standard size

SPECIFICATIONS



This model uses the trusted and dependable Graupner Speed-400 motor, which turns a Graupner Slim Prop #1372/20.5/10. There's a lot of room in this model for radio gear.



Laid out and ready for building, the CNC-cut wooden parts look to make things a lot easier for the builder.

The kit costs about 109 deutsche marks (DM) here in Germany (\$50 in U.S. dollars [USD]). It comes without the engine and the three lightweight wheels. The electric motor, gearbox, speed controller, propeller and battery will run about 150 DM (\$75 USD).

Mr. Peters of Hobby House flew the Frechdax several times at the airfield in Dorsten for photos. Equipped with the Graupner Speed-400 motor and an 8-cell battery pack, he was able to get at least fifteen minutes of flying time out of the Frechdax every flight. The Frechdax even took off from the rough grass at Dorsten just fine.

The Frechdax flies well. It will do all the maneuvers any two-channel model can. It will even do aerobatics — loops and rolls. It will fly slowly, too — so slowly that, with the motor off, the pilot can hand catch it. The Frechdax is a perfect airplane for a beginner to practice with because it is quite stable. In most cases, if it gets out of "shape," the pilot need only let go of the controls and reduce power, and the model will right itself.



This view from the right side shows off the dihedral angle of the wing, which gives the model much of its stability, making it a good trainer. Because of its clean lines and finish the Frechdax looks very much like a sport aircraft.

The model does have the one problem associated with tricycle landing gear airplanes. When landing on a rough grass runway, it is difficult to prevent the model from stumbling on its nose gear. It is, however, strong enough that damage is typically not a problem. Even the "real" glider pilots were impressed when the pilot landed the Frechdax on a concrete strip near the glider hangars, and it taxied up to the hanger with its landing light on.

If you like to build models, and you like to fly electric powered R/C aircraft, the Frechdax may just be the airplane

for you. It is also a very nice model to take to work with you for those "after work" flying sessions. There may be a larger version coming in the future, too, which means even more fun. ■

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Frechdax

by Hobby House

SEMODELER