Kit Review (June, 2005)

Roden PKZ-2, kit No. Ro-008, 1/72 scale

I must admit that this kit was purchased on a whim. It's unusual design attracted my eye immediately.

A Brief History

The PKZ-2 was the idea of Lt. Stefan Petroczy who served with the Austrian Army in World War I. He wished to design a replacement for the traditional, and large kite balloons currently in use for observation duties. Kite balloons were considered to be unreliable and dangerous due to their highly explosive and volatile hydrogen gas.

The end result was that of a helicopter, which resembled a three pointed star when viewed from above. There were three lobes, each consisting of a metal tube frame that supported a rotary engine with a drive shaft that ran to a central shaft. All three engines were coupled together to turn two contra-rotating propellers to counter the effects of torque. An observer was to be placed in a basket mounted above the propellers.

The machine was tethered to three winches anchored to the ground, with a line running to the tip of each lobe. The winches controlled the altitude. Even with it tethered down, stability proved to be a problem.

Apparently numerous test flights were performed, with a few flights attaining close to 50 meters in height. A crash during a demonstration for military commanders on June 10, 1918 resulted in the cancellation of the project a couple of days later.

I don't know what potential observers would have felt looking at the craft, but I'm sure that some of the concerns with the design that come to my mind, must have also been of a concern to them.

The observer was to be issued a parachute for emergencies, but how would he have avoided the large propellers rotating just a few feet below during a jump? And in the event of a crash, one would have to expect that the props would certainly maim or kill the observer!

How were the engines to be started? All contemporary photographs of conventional winged aircraft show rotary engines being started from a swing of the propeller. Maybe it was intended that some unfortunate ground personnel to use a short ladder or stool, reach up to the lower prop and give it a swing! Given the large mass of the engines and props, this would require someone with a bit of heft to his body, or possibly two persons, to overcome the inertia. And he had better make sure to dodge out of the way of the props as they rotate just above the head.

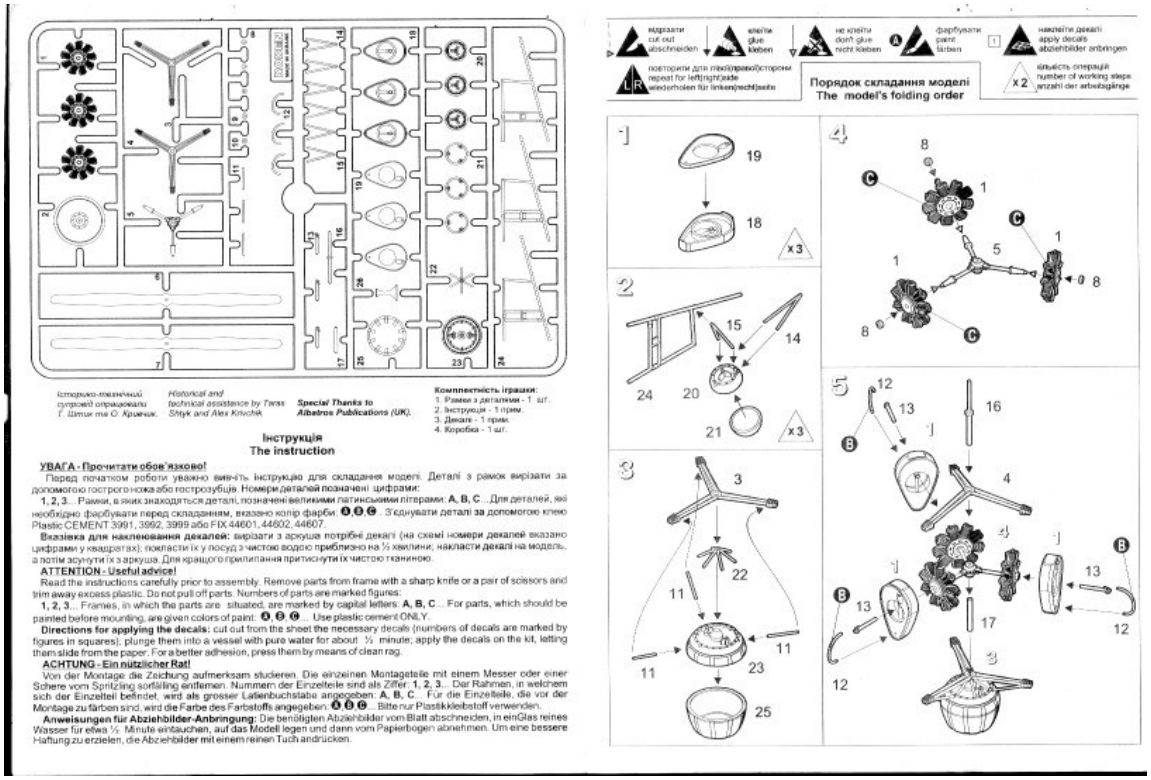
If you want to learn a bit more about the PKZ-2, visit this URL:
http://avia.russian.ee/vertigo/petroczy-r.html

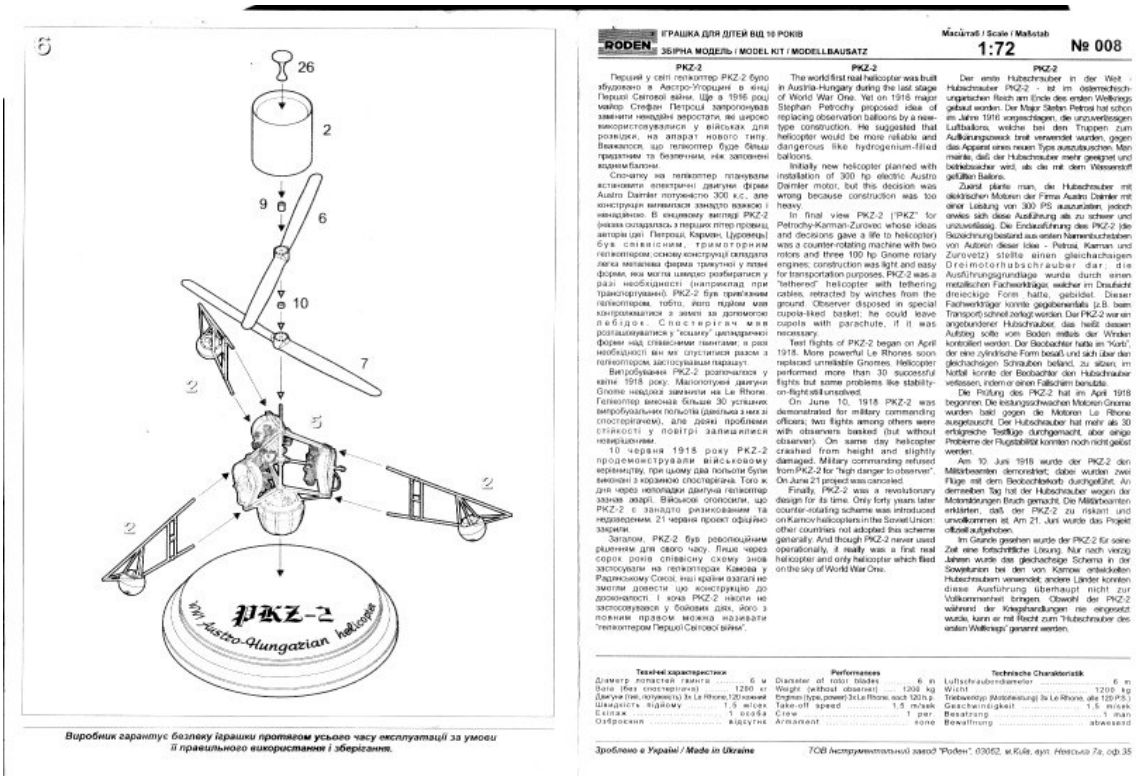
General Comments on kit, decals, instructions and construction

On to the kit. This is packaged in a typical Roden thin cardboard box, which opens from either end.

Inside there is 1 sprue, consisting of 50 parts, one brown coloured plastic circular base and a small decal sheet. The decal sheet has only 4 images. Two of the images are white bordered, straight sided, black crosses and the other 2 are in a stylized font, with one decal containing the words "PKZ-2" and the other a semi-circular image containing the phrase "WW1 Austro-Hungarian helicopter". Both of these are intended to be placed on the base. The decals are of the typical Roden quality - thin and with good register and colour density.

Instructions come as a single sheet of paper, folded in half along the long edge. It contains of a brief history of the PKZ-2 in Russian, German and English, and details the construction in 6 straight forward steps. A painting guide, in colour, is furnished on the back of the box.





The detail is excellent, but it appears the molds were a bit misaligned. All the struts had a raised edge to them resulting from the two mold halves not aligning at their edges, causing a slight overlap with the backside of the other half of the strut. I scraped these ridges to remove them, but this leaves them with a slight oval cross section instead of the intended round cross section. I decided I could live with this, and once they are painted he shape difference was not unduly noticeable. Those that are sticklers for accuracy, would probably want to replace the struts with round plastic rod.

I generally followed the instruction sheet and its construction sequence. Most of the model was built in sub-assemblies - one each for the lobes, one for the central prop shaft and its supports, the two props and the observer's basket . The hole for the prop shaft is too small, so it was widened very slightly to allow the props to slide onto the shaft.

The individual assemblies were painted separately. The larger parts, such as the observers basket, were air brushed, while the struts were mainly hand painted. Those wishing to do all the paining by hand would have no trouble doing so. Paints used were Aeromaster and Testors ModelMaster enamels. I did not completely follow Roden's suggestions regarding colours, but opted for simplicity, and painted many parts the same colour to avoid frequent switches to new colours while spray or brush painting. I doubt very much that anyone really knows the exact colouring of the craft anyway.

Once all sub-assemblies were complete, the whole model was brought together, and joined with super glue. This proved to be the trickiest part. Aligning the sub-assemblies so that they were straight took a lot of patience. Parts were held together until the glue had just set, and then adjusted before it had a chance to cure completely. Particularly

troublesome were the three booms holding the engines and outriggers, and the observer's basket mounted at the top of the aircraft.

The final step was to spray the entire kit with Aeromaster flat acrylic. Rigging was done with No. 9 guitar wire and painted Neutral Grey.

Conclusion

If your interest is unusual subjects, or have a desire to build a fairly simple kit, then this is the kit for you. The only caution I have is that final assembly can be quite trying, but patience will reward you with very unusual helicopter model.

Kit Pros:
1. Excellent decals.
2. Unusual subject.
3. Parts have very little flash.

Kit Cons:
1. Molding slightly misaligned on the struts.
2. Parts are very delicate and easy to break. The plastic is a bit soft and care should be taken to prevent a break or gouging while separating or trimming with a hobby knife.
3. Difficult to keep all the parts aligned.