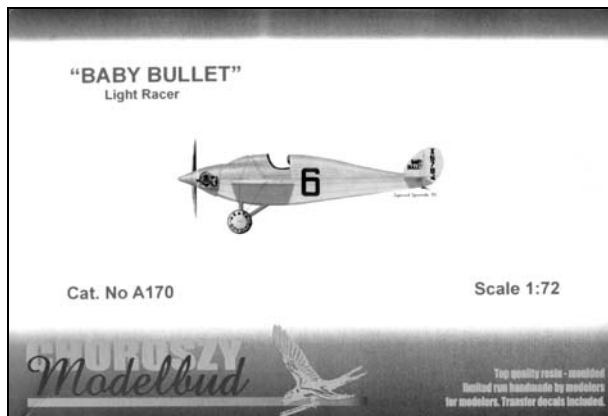


## *The 1/72 Choroszy Modelbud Heath "Baby Bullet" – Kit review*

### *Anders Bruun*



**Choroszy Modelbud Kit No. A170 "Baby Bullet Light Racer".** 1/72 kit, including 25 resin parts and complete decals. Available from Joe's Models, P. O. Box 81, Verona, NJ 07044-0081, USA, [www.joesmodels.com](http://www.joesmodels.com), e-mail: [joesmodels@comcast.net](mailto:joesmodels@comcast.net), phone: +1 973 2397682.

#### **History**

Edward Heath, born in 1888, was one of the earliest American aviation entrepreneurs. In 1910 he had made unsuccessful efforts of flying a plane of his own construction, and he entered the aircraft industry in 1911, selling material, parts and engines to airplane builders. The E. B. Heath Aerial Vehicle Co. of Chicago designed and marketed several planes of their own design before WW1, and after the war survived by rebuilding and selling spares for the war surplus planes that flooded the market, while still producing some new designs, such as the "Feather", the "Hummingbird", the "Tomboy" and the "Parasol", several of which were used in light plane races.

In 1927 Ed Heath and his partner Clare Lindstedt decided to design a plane that would be able to beat the bigger, more powerful planes, despite having only a small engine. The plane was tailored to Heath's body – he was only around 5 feet (1.53 m) tall and weighed some 110 lbs (50 kg), so it could be made very small and light. The overall length was only 14' 6" (4.42 m), with a wing span of 18' (5.49 m) and an empty weight of 235 lbs (107 kg). The engine was a 32 hp British-built opposed 2-cylinder air cooled Bristol Cherub with a displacement of 75 cubic inches (1.23 litres). The construction was conventional, with a fabric-covered steel tube fuselage and fabric-covered wooden wings, but big attention was given to streamlining. All the attachments for the rigging wires were internal and the landing gear was unsprung and had fabric-covered wheels with the rigging wires running through the hubs. It was flown for the first time on August 18th, 1928, immediately proving very fast, but due to the good streamlining and the fixed-pitch propeller it was rather difficult to fly. It could only use partial throttle, since at full throttle the engine would overspeed. When the propeller

pitch was increased to decrease the engine speed it was impossible to land the plane without cutting the ignition, since the propeller would pull too much even at idle. Being light and having a small, light propeller, a rigidly mounted engine and no landing gear suspension the plane also vibrated badly on the ground.

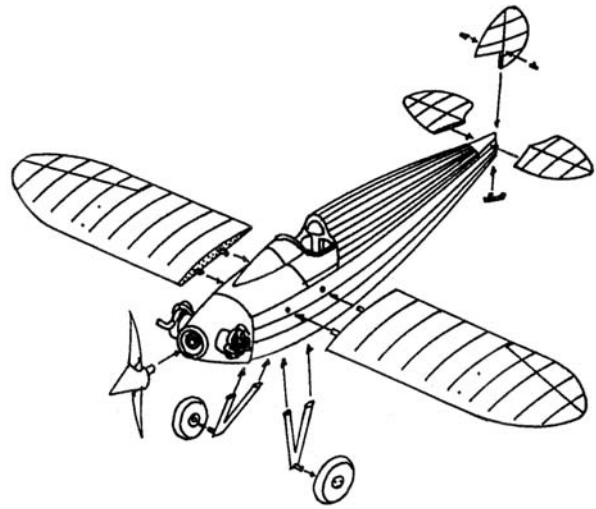
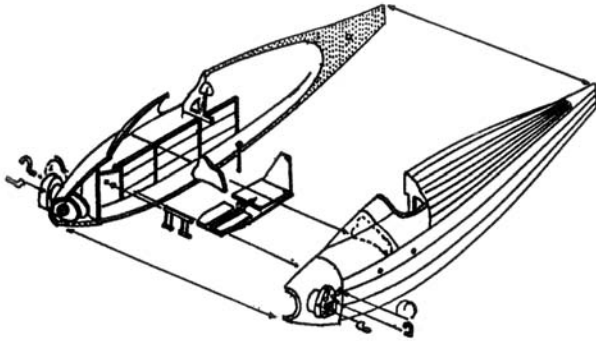
The plane had been prepared in secrecy and at the 1928 National Air Races, held at Mines Field, Los Angeles, it caused a sensation. It was clocked at a lap speed of 142 mph, hitting 150 mph on the straights. Despite having only a quarter of the allowed displacement it lapped all competitors in a 300 cubic inches race twice, and some three times. The Heath team could return to Chicago with \$ 1,500 of prize money. Before the 1929 National Air Races, the plane was modified with a cowl that covered the engine entirely and smaller, tapered wings. This was not a success – it turned out that the wing area had been reduced too much. The plane had to be flown at a considerable angle of attack, increasing the drag and actually making it around 12 mph slower than the year before. Nevertheless, it finished well in a couple of events, even though it was beaten by the new Chevrolair-powered Travel Air R in the speed events. At the 1929 NAR it was painted maroon with aluminium trim and carried race number 47. Ed Heath never flew the plane in competition again. In 1931 he was killed during a test flight and the company was reorganised and moved to Niles, Michigan. In 1932 it was decided to further modify the plane. The fuselage was extended and the fixed landing gear was replaced with a single wheel that retracted into the fuselage and wing-mounted retractable skids. The wire rigging was replaced with compression struts attached to the fuselage and the engine was replaced with a bigger 40 hp Continental A-40. The retractable landing gear proved problematic and when a final landing collapse resulted in a bent fuselage it was decided to scrap the plane. In many respects the Baby Bullet was the first of a new breed of civilian racing planes, eventually leading to midgets and the Formula One class, and it was a sad end to this beautiful and successful plane.

#### **The kit**

The first impression when opening the kit box is how incredibly small the parts are - the kit and the decal sheet would easily fit in a matchbox! The second impression is that this is really a high-quality kit. The parts are sharply defined and well cast, with only a minimum of flash. The fuselage is vertically split and the shell has very thin walls and detailed interior walls. The two halves have a locating pin at the rear and fit perfectly. The interior is complete and accurate and consists of seat/floor, rudder pedals, stick and instrument panel, all very sharply cast. Note that the panel should be mounted obliquely, at the fuselage panel line. Each cylinder of the engine should have three absolutely minute parts added. I could recognise the exhaust pipes and the induction manifold, but I actually don't know what the third pair is - perhaps the ignition wires? I'm not sure

that both of them were in my kit, but if you draw your breath too sharply you could probably inhale them without noticing, so I guess I have simply lost one of them. The tiny propeller has thin, accurately shaped blades and even an axle. The wings and tail surfaces are superb, the trailing edges are razor-thin and the fabric detailing is very good. It will be difficult to butt-join the horizontal tail to the fuselage without any aids for positioning, and I would perhaps have preferred a full-span part. The rudder horns are probably the smallest resin parts I have seen, only slightly above 1 mm long. The landing gear legs will also be difficult to attach accurately and strongly, but they were only of 7/8 inch tubing on the real plane and I guess are they simply of scale thickness! The wheels on my kit were a bit softly shaped, but nothing serious and the unusual smooth fabric-covered wheels don't have much detail anyway.

The instruction sheet contains some pretty nice drawings (even though they lack the wire between the wheel centres!), a couple of exploded construction views and an old magazine article on the construction of the original plane. The decal sheet looks very good, with complete and accurate markings and apparently very thin carrier film.



### **Conclusion**

This is a superb little kit, one of the best 1/72 R&R plane kits I have ever seen! I was particularly impressed by the fabric detail and the general sharpness. My only reservation is that some of the parts are very small and fragile, and construction will require sharp eyes, sharp tools and steady hands - and if you sneeze you will lose half the parts! When I build it I will replace some of the smallest parts, for example the landing gear legs and the engine details.

### **References**

- **Chet Peek** "The Heath Story" (Three Peaks Publishing, 2003, ISBN 1-866196-03-6)
- **Gene Thomas** "Baby Bullet - Historic Documentation for the Aero-Historian" (The Thomas Studio, 1975)
- **Jack Abbott** "Heath Baby Bullet - Part One" (The Finish Line, Volume 3, Number 2, June 1996)
- **Jack Abbott** "Heath Baby Bullet - Part Two" (The Finish Line, Volume 3, Number 3, September 1996)
- **Roger E. Lorentzen** "The Heath Baby Bullet" (in S. H. Schmid & Truman C. Weaver "The Golden Age of Air Racing - Pre-1940", EAA Aviation Foundation, 1983)

The review example was provided by Joe Francesco of [Joe's Models](#) – Thanks Joe!