



WALDO WATERMAN'S ARROWBILE

Waldo Waterman, pioneer (1894 -1976) a west coast USA pilot, based the 2-place Arrowbile design on 2 previous efforts the "Whatsit", a tailless plane of 1932.

The Arrowbile, was developed as part of the Dept of Commerce "Safe Airplane" competition in 1935 .

A Studebaker engine was mounted in rear of fuselage with a radiator up front. Power can be transmitted to a pusher prop or the 2 rear wheels. The prop was not removed for ground operation.

A tailless fuselage and quickly detachable wings allowed a 3-min conversion from flying to road configuration. Ailerons/elevons and wing-tip rudders were interconnected and turns made by turning the steering wheel (no rudder pedals). The wheel was also used to control pitch. A 3-wheel (tricycle) landing gear configuration allowed registration as motorcycle in California.

On March 21, 1937, Waterman's **Arrowbile** first took to the air

Top speed was about 70 mph on ground and 120 mph in air. It was said that spins were nearly impossible and it was very difficult to stall. Span 38 ft; length 20 ft; height 8 ft 11 in; weight 1710 lbs.

One proposal was to sell car and rent wings at local airports.

A later development the Aerobile begun construction in 1947 and was fabricated from parts of the earlier designs. Completed and test flown May '57.

The Aerobile used a similar layout to the Arrowbile but the radiator was moved to the rear and located either side of the lower cowl.



How did I come to start building an Arrowbile? Well Mike Minty and myself were talking about flying wings and his search for a plan for a STABILOPLAN. Have a look at "The Wings is the Thing" <http://www.twitt.org/> but although I had an A4 size plan I went looking for a large plan and by accident came across the Arrowbile on Bob Holman's (USA) website. Wow. I was hooked. I ordered the plans, fibreglass cowl and spats and that's when I found the lack of info the plan offered. I started and stopped a couple of times but once the fuselage was underway I knew it had to be finished.

The fuse is a close cousin to a 9 gallon keg, Ply formers, balsa sheeting/planking and piano wire forward wing support system. Pusher engine, swept back wing, radiator grill, gee if it doesn't fly it might look good in it's white and red trim livery.

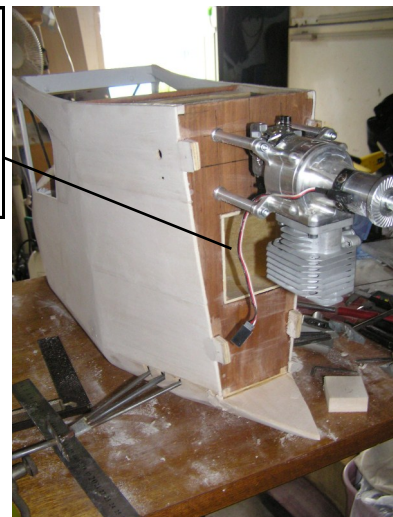
I hadn't thought of writing an article so didn't bother to take pics of the early part of the build so we start with the fuse partly built.

Here a few pics of the build.



The headlight was fashioned from a \$2 LED torch which was gutted, a lead added and the batteries relocated into the fuse with a servo controlled on/off micro switch.

Air is ducted through the grill to the engine via a 50mm square box.



3/16" and 1/4" piano wire was used to construct the undercart with wire wrap and plates for the spats soldered on.

B#**#y hard to bend that 1/4" stuff accurately.

Well we will keep building and come back shortly with the wing and fin/rudders.