



The AMA History Project Presents: Biography of WALTON (WALT) HUGHES



Written & Submitted by RS (03/2013); Reformatted by JS (03/2013)

Walton Hughes His Airplanes and his Stunt Carburetor by Dick Sarpolus

Control Line Stunt has been a part of the model airplane hobby for a long time, and the history of the event is taken very seriously by its participants. Tradition, and nostalgia, play a big part in the way this type of flying is done today. Modern technology of course shows up and is utilized, as in any competitive endeavor, but the ways of the past and the old aircraft designs are also part of the current scene through special events which mandate their use. This reverence for the past is evidenced by the interest in the pioneers and the old timers of C/L Stunt; their past activities and aircraft designs are researched and reported on for today's fliers to enjoy, and to replicate to enjoy and relive those earlier days of the event.

One of the men active in C/L Stunt during the early 1950s who left his mark on this part of the hobby, although the time of his involvement was brief, is Walton J. Hughes. His skills were impressive and his contributions may not be recognized by many of today's C/L enthusiasts, so we'll review some of his modeling activities. I was fortunate to live a few blocks away from Walt Hughes in Cranford NJ during the time frame he was active in the hobby, and he had an impact on my modeling. Leon Shulman also lived in the same town at the time, and I was lucky to belong to the same flying club as Reinhardt, Scarinzi, and Hunt; I watched Walker fly three Fireballs at the same time, and in later years was able to meet Palmer, Aldrich, deBolt, and others in the hobby, so I definitely have a real appreciation for our long time C/L Stunt heroes.

I met Walt Hughes when I submitted a twin engined stunter to Air Trails for possible publication; they sent Hughes over, as one of their writers, to evaluate the airplane. No surprise that my plane wasn't ready for prime time. But Walt took me to his workshop, and my eyes opened at the sights there. His airplanes were simply beautiful examples of the way to build a model. Clean in design, smoothly finished, nicely trimmed, light, and his engines ran the way I wished mine would. A little research shows that he had six published stunt/sport type C/L designs in the years 1950, '51, and '52, in Air Trails and Flying Models magazines. I think he also did a few scale projects, but I don't have that information.

His first published design is the one of most interest to Old Time Stunt guys, and copies have shown up at the Vintage Stunt Championships over the years; it's the Guided Whistle and was in the May 1950 issue of Air Trails. At a wingspan of 51" and an area of about 500 sq. ins., powered by an Atwood Champion .49, it's pretty typical of stunt designs at that time. Mid wing, bubble canopy, rounded surfaces, upright engine, forward landing gear, straightforward construction techniques, it was state-of-the-art. A little small by today's standards, it did have a fairly thick wing and if built lightly I'd think it would do the job on the old stunt pattern. With an Atwood .49, this thing must have been moving fast through the pattern! If only that landing

gear wasn't so far forward. I can note that Joe Gilbert did a very credible job with his Guided Whistle powered by a Super Cyclone on ignition at the 2007 VSC meet in Tucson.

Hughes had an early appreciation for light airframe construction; his stunt designs weren't built from balsa logs, they were made up of thin sheet balsa. He flew with Red Reinhardt and developed light weight aircraft designs with him. Bob Hunt tells me that Red admired Hughes greatly, considered him a super modeler. At the 1949 Mirror Meet, Red and Walt placed 1st and 2nd in Stunt.

Next we have his Little Missile, from the June 1950 issue of Flying Models. In this smaller airframe, 32" wingspan and 180 sq. ins., he used a K&B .09, and it had some advanced styling features – a swept wing, wingtip plates, and twin fins on the stab, along with an open cockpit. No landing gear, this one was for hand launched fun flying. Light construction, it must surely have been lively.

His High Pressure Pete was in the December 1950 Air Trails, a half-A airplane pulled by a little Baby Spitfire .045, and except for the forward located landing gear I'd think it would be a good flying airplane by today's standards. A little small at 26" span and 130 sq. in. wing area, probably sized that way because the K&B .049 had so little power. Again, light construction and a nice looking airplane.

The Lil Lightning from the February 1951 Air Trails, although exotic in styling with its upswept twin booms, twin fins, and trike landing gear, couldn't be considered a real stunt model. At 25" wingspan, it was a good looking half-A sport machine.

His AT Interceptor from the April 1951 Air Trails was a twin-engined project with some interesting technology, but had a close to flat bottom wing section so wasn't a full stunter. Loosely based on the Lockheed P-38, the styling was sleek, with very graceful lines and fully cowled engines. He got twin engine reliability from the two K&B .049s by running them on a Jim Walker pressure tank fuel system in the center fuselage with a fuel regulator out on each engine. The construction of this 30" span design required a lot of balsa carving and shaping, and although Hughes' original looked awful good, I'd bet it wasn't often duplicated. It was fun just looking at the great double page spread cutaway drawing in the magazine.

One more design, his Double Whammy from the Air Trails 1952 Annual. This was a biplane project; 38" span with Fox .35 power. It's cool looking, with negative stagger wings and a fully cowled-in engine, pretty light construction and fully symmetrical airfoils. Walt said in the Double Whammy article that it would "do 8 or 10 consecutive vertical 8's without any trouble." Sounds good to me.

Walt had some other talents that most modelers of the time may not have known about, as the magazines back then didn't always give credit to their writers. He did his own photography work, and had a full darkroom, b&w of course, in his workshop. For Air Trails magazine, Walt Hughes was doing the engine test/review articles, although no one was ever listed as the person behind those articles. At times in his workshop, I would see the engine being reviewed completely disassembled by Walt. He would photograph the engine parts, then reassemble the engine, and run it to take the test data for the review article. I don't know if he made the engine

drawings used in those articles; might have been someone else who didn't get any credit for his work.

Hughes developed, produced, and sold one accessory item for C/L Stunt fliers that might be of interest to today's modelers, and might be worth some further consideration of its features today. I don't recall exactly what he called it, but I'd refer to it as a "stunt carburetor." It was a machined aluminum venturi insert, incorporating the needle valve assembly, that was to be placed in the air intake of a Fox .35, K&B, McCoy, whatever, and was claimed to provide steadier running and improved stunt flying performance. Versions were made to suit the different engines. The fuel inlet was positioned behind the venturi opening, and was located slightly below the smallest diameter of the air opening. The insert itself had a tapered air inlet, and it then tapered out below to the crankshaft port opening. When the engine's standard needle valve was removed, the Hughes device was pushed into the intake and stayed there by the tight fit and the fact that the lower end was split for a slight spring effect. Today I'd think the stunt guys response would be – "Who needs it?" since our engines run as well as they are.

Hughes had machine tools in his workshop, a lathe, etc., and he produced these devices by hand. This was way before the CAD/CAM CNC machinery age, and he made each part with care. The American way. The body of the insert was machined of aluminum, and the fuel inlet fitting, needle valve itself, and adjustment retainer, were made of brass. That to me was the item's downfall; I think it didn't stand up to the stresses of normal use.

I had at least a half dozen of these things, and I used them in my Foxes and other engines of the time. I remember them as definitely improving the stunt flying performance of the engines – but hey, I was a kid and what did I know. Under the vibration of a Fox .35, it wasn't long before that brass needle valve was loose in the aluminum body, and any performance benefits of the thing were likely lost. At any rate, I don't think Hughes' "stunt carburetor" gained too many fans, and he I'm sure didn't make a million bucks with it.

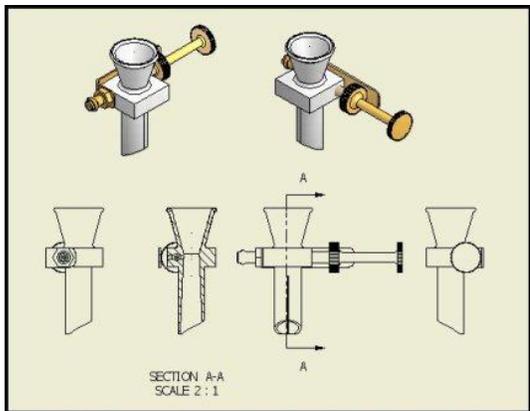
Looking back, Walton Hughes had about a half dozen C/L stunt designs published in the model mags during the early 1950s, he did a bunch of engine test articles, and he developed a "stunt carburetor". He was a great modeler and a good guy. I well remember the stacks of model airplane magazines he gave me; I wish I had them today. Why was he only active in the hobby those few years? That we don't know. He's part of our model airplane history, and will be remembered certainly around the C/L Stunt circles.

Another bit of C/L history, Ray Borden, my good friend who did the CAD drawings of Hughes' airplanes and carburetor for this article, is also the guy who designed the very first C/L flying wing. It was his Flip Flop, and Ray was pictured with that flying wing on the cover of the December 1948 issue of Flying Models, which contained the construction article. This history stuff is fun.

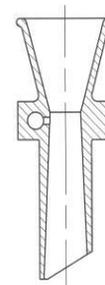
-Richard Sarpolus



Photos of Walt Hughes' "stunt carburetor" that he developed, produced, and sold, made to fit various engines, in the early 1950s. Machined of aluminum and brass, this device was intended to provide improved stunt flying performance from the engines of the day. With its upper and lower taper, and the location of the fuel inlet, Hughes claimed this better performance.



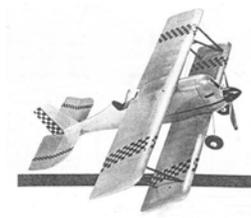
CAD drawing of Hughes' "stunt carburetor". CAD drawing done recently, when Hughes made his carb in the 1950s there was no CAD to make it easier.



Cross section drawing of the carburetor to show its principle of operation.



The AT Interceptor



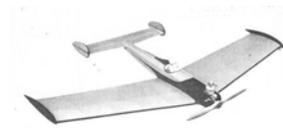
The Double Whammy



The Guided Whistle



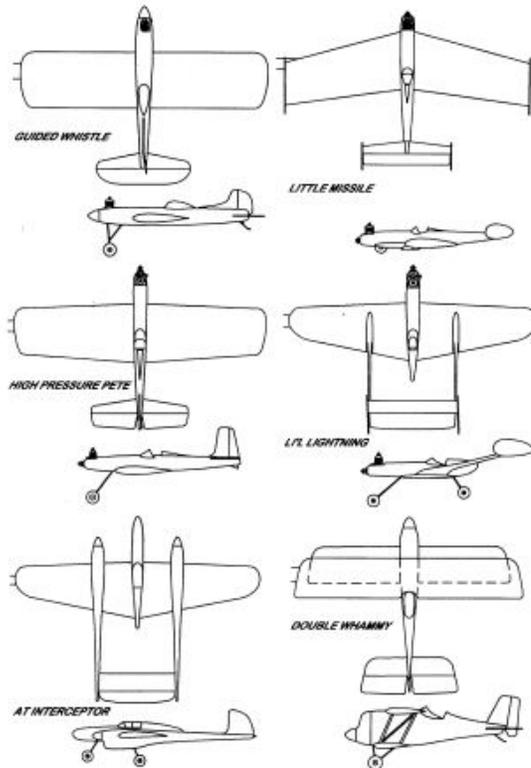
The High Pressure Pete



The Little Missile



Joe Gilbert's Guided Whistle flying at a VSC contest. (Photos by Dave Russom)



Outline drawings of the six C/L stunters designed by Walt Hughes and published in the model magazines between 1950 and 1952. (Drawing by Dick Sarpolus and friend.)

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