Aeroflash 40

By Ed Ajamian

A blend of Goodyear racer and Pattern aesthetics in a rakish .40 powered sportster.

The reassuring, steady tick of the H.P. .40 Gold Cup dispelled any doubt about engine reliability. I was standing next to my new plane, the *Aeroflash*, prior to its maiden flight and all the tenseness, pre-flight jitters, and hesitancy were in full bloom.

There is something about that moment no matter who is standing there, you or I, no matter what plane it is, yours or mine. That moment brings you right to attention and maximum concentration. Let's face it, we're about to experience that "moment of truth", that zone of "instant high", elation, exhilaration—call it what you want, you know what it is.

I'm holding my brand new Futaba 7FGK/FM that will make this traumatic/wonderful moment all come together. Concentrate. Calm down. Collect your thoughts. Don't accidentally hit the dual rate toggle switch. Make sure of the position of the trim levers. Check the runway and the take-off path. I'm standing in a small clearing of a large cornfield which has become instant "airport". Adequate but a little rough for the maiden flight of a new airplane.

Enough. It's now, not later. "Go" time. Okay, throttle to the "firewall". Power coming right in. The *Aeroflash* is snapping quickly to life, starting its roll down the runway. Faster, bouncing in the ruts, smoothing out as she gets light on the wheels. Ah, there she goes, she's up. Some quick attitude corrections necessary. Start a left turn. Roll out and level off. It all looks good. At this point, I'm sure this flight will go well.

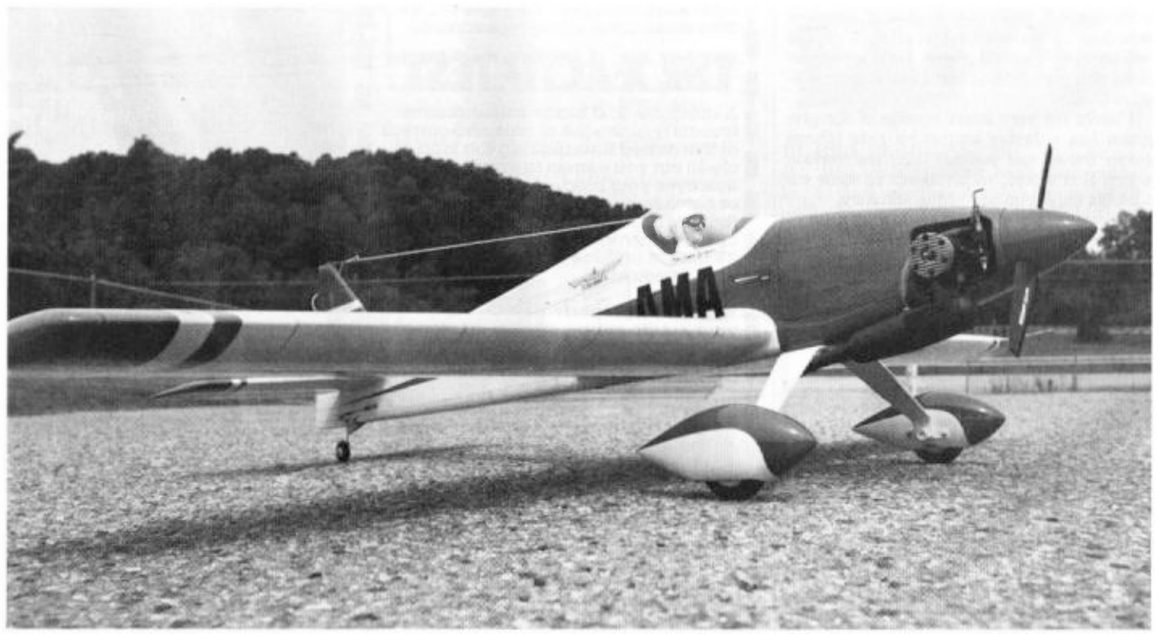
Feels a little sensitive in pitch, probably tail heavy, but it's controllable. Make a mental note to shift the C.G. *before* the next flight. Probably have to crank in some down elevator throw, but could increase the roll rate. She's holding her own. Man, this is great!

After the initial moments of that first flight, everything felt "A" okay and positively controllable so I started some aerobatics, some fast and slow flight, and some unusual attitudes. It was pretty apparent by the end of that first ride that, with the minor adjustments I had already mentally noted, the *Aeroflash* would be a something else bird, but you would have to fly her to know what I mean. This is a no nonsense, positive control machine that's a pure joy to fly because of the crisp response to every control input.

Stop and start any maneuver at the flick of a stick; spins left and right at the lightest touch—definitely not a "cadet's" airplane. Yet it still has great stability, not one of those temperamental designs that must be flown every instant without let-up. It's a hybrid type of plane, super clean aerodynamically, fast but with no bad traits. It's pretty near capable of anything you, the pilot, are capable of.

The raving could go on and on, but I would bore you. Just let me add that the adjustments made after that first flight have really made this plane. If you're convinced, let's get on with the construction.

PHOTOGRAPHY: BOB HUNT

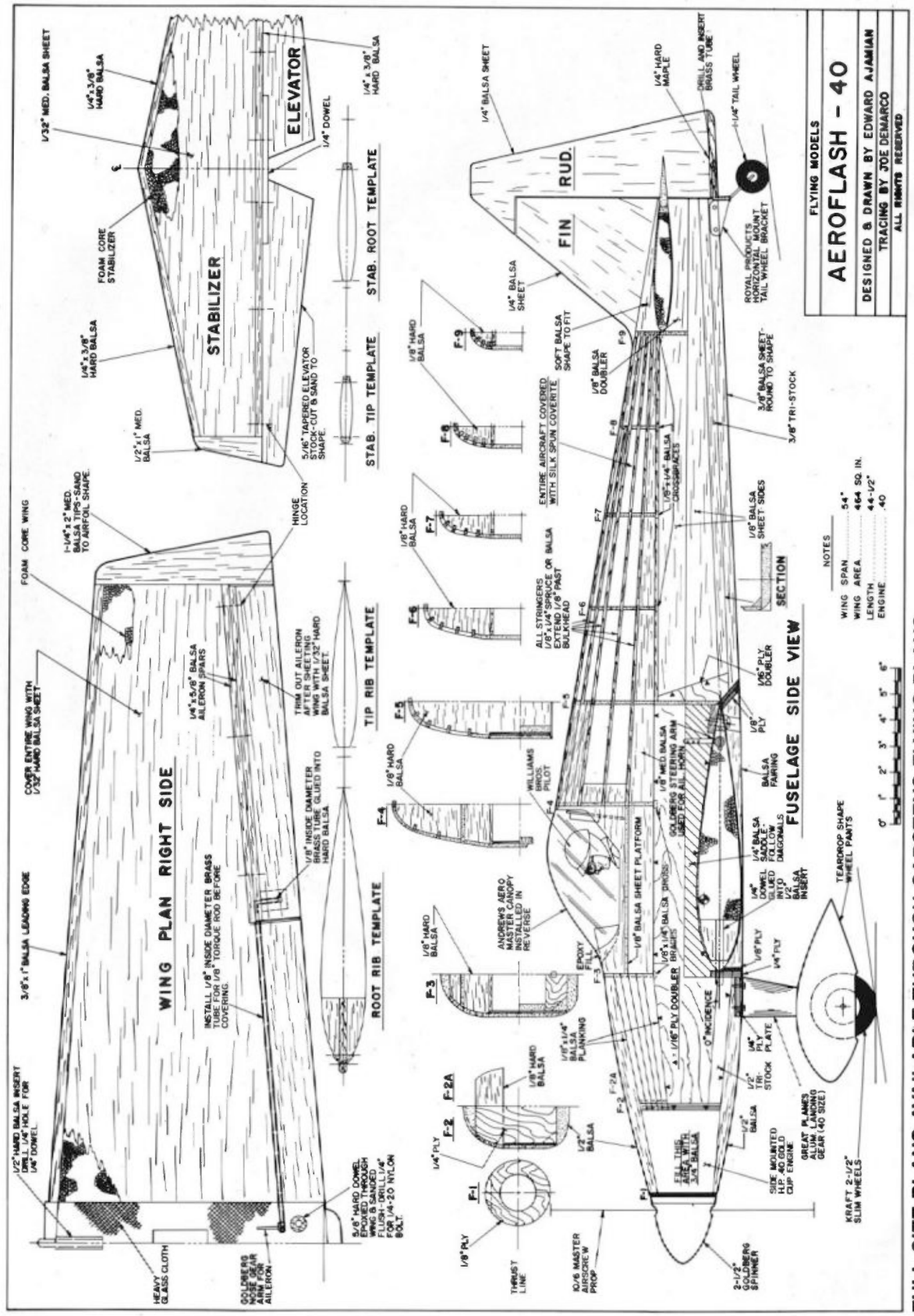


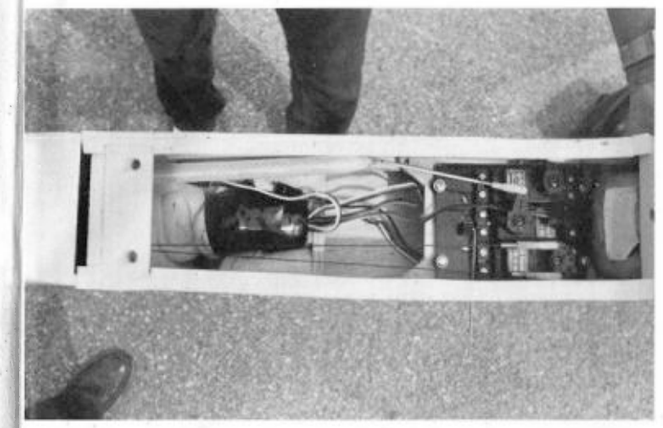
Rakish, aggressive, sharp–all apt descriptions of Ed Ajamian's *Aeroflash*, a .40 size sport ship that can take you through all the maneuvers.

The lovely finish Ed put on the *Aeroflash* started with Coverite and epoxy paint. Panel lines were inked on and the Coverite lettering put on before several coats of clear were applied.

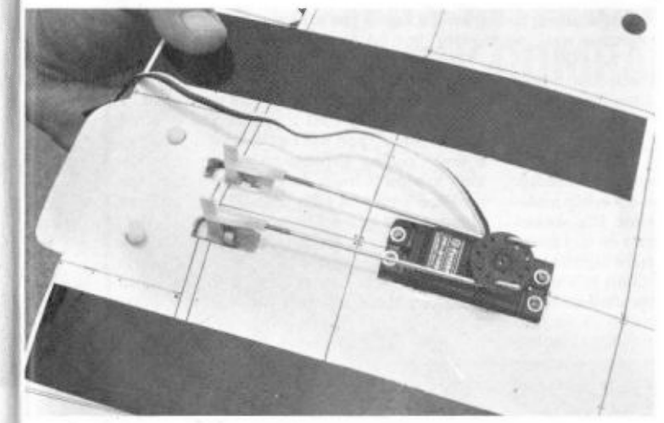
Construction

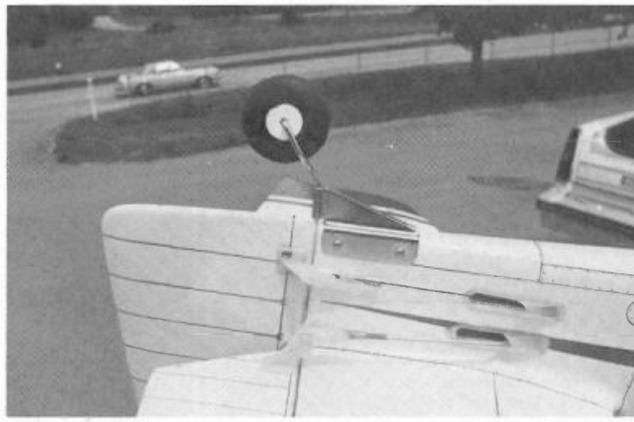
Fuselage. Everything in the plane is pretty straightforward and simple to build. The fuselage starts to take shape with two 1/8 inch thick, medium grade, balsa sheet sides. The firewall is the usual 1/4 inch aircraft grade plywood (I used Sig). Remember the tailheaviness? I used 1/8 inch balsa for all the fuselage formers, but probably could have



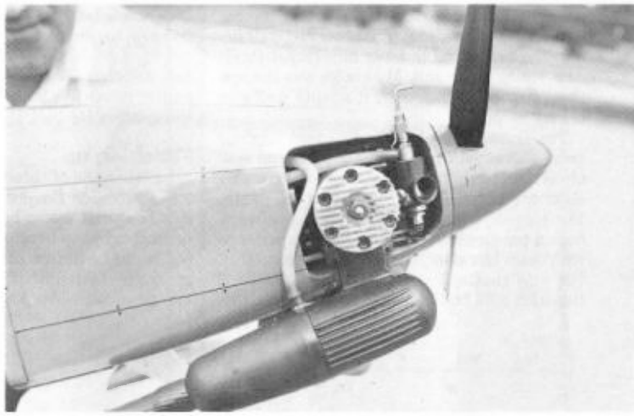


The fuselage looks narrow, but does have the room (**above**) to fit three standard servos side by side. The aileron servo mounts in the top (**below**) of the wing and goes to conventional aileron torque rods.





A Royal Products tail wheel bracket (**above**) served the author's purposes admirably both in installation and strength. For motive power, an H.P. .40 Gold Cup was used (**below**). Plenty of authoritative pull.

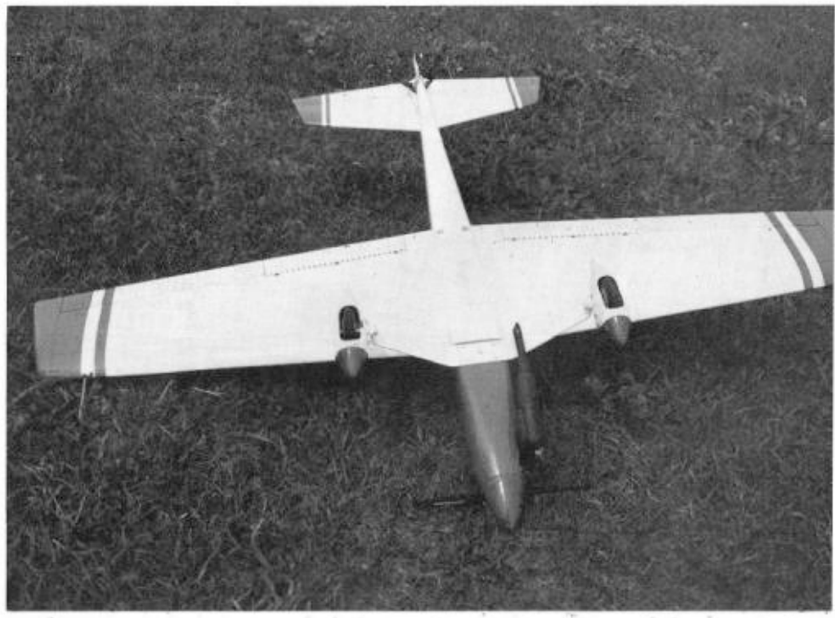


gone to 3/32 with no penalty and the elimination, perhaps, of that tailheaviness. Ply and balsa doublers around the saddle area are necessary for rigidity. The ply is 1/32 thick while the balsa is 1/4.

For the nose, I carved and shaped a cowl from 1/2 × 3/4 inch balsa blocks and faired them into a 2 1/2 inch Goldberg spinner. The 1/8 × 1/4 fuselage stringers for the turtle deck should be medium grade 1/8 × 1/4 balsa. I used spruce in the prototype *Aeroflash*, but it really didn't need it and probably helped contribute to the tailheaviness. All the sheeting and planking on the fuse was 1/8 inch balsa.

The bulk of the model was glued together with cyanoacrylate; in my case, Goldberg Super Jet and Jet. May I rave a little again? Being from the "School of Old Modelers," I've always had a definite preference towards glues that take time to dry. But! what fantastic stuff this cyanoacrylate is. I'm converted. I build almost exclusively with it. Before I get too carried away, though, I must admit that in really high stress areas, such as the firewall, I still use epoxy or alipahtic resin. Guess there's still a minute reservation in the back of my mind.

Dick Klause, my old flying buddy, doesn't know it, but the canopy for the *Aeroflash* came from an *Aeromaster* kit he has. (Don't worry, Dick, I already ordered some replacements.) Take note, the canopy is installed in



Dressing the landing gear up required the choice of some Williams Brothers' tear drop shaped wheel pants. The dural aluminum bracket came from Great Planes and is their .40 size version.

reverse. Suits the plane perfectly and looks beautiful. Just needs a little filler to fair into the fuselage.

Wing. Foam cored panels were the choice here and a beautiful set is available from Marc Salvadore, an avid R/C modeler who runs Par-Troy Sound, Sussex County Mall, Route 206, Newton, NJ 07860. The address is included because he can furnish not only the cores for the *Aeroflash*, but will cut any size or shape core according to your specifications and give you a quality product. I know, I already ordered cores for an 80 inch version of the *Aeroflash* for a Tartan Twin. But that's another project. Just be sure to use medium soft, 1/16 balsa, 3 inches wide, to sheet the core. Easy on the cement.

Empennage. The horizontal stab is a sheeted foam core which can also be ordered from Marc at Par-Troy. The elevator is 5/16 tapered balsa stock that's available from any hobby shop. Make sure it's not too soft.

The rudder and vertical stab were both cut from 1/4 inch medium grade balsa sheet and then shaped as indicated on the plan.

Accessories. The extra odds and ends are your choice, but to help out a little, I'll mention some of the items which worked well for me. The tail wheel bracket is a Royal Products' ready made unit. My choice was the one that mounts horizontally; it adapts well and is very strong.

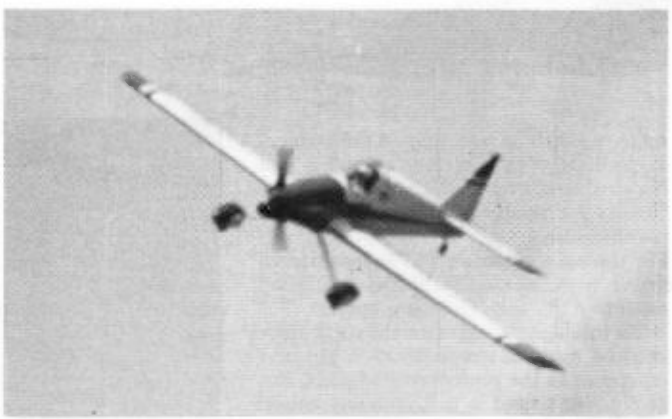
The Great Plane's .40 size dual landing gear bracket was perfect for the job and was nicely complemented by a pair of Williams Brothers balloon style plastic wheel pants. The tear drop shape they have has always been a personal favorite and past experience with them has always been highly successful. For axle shafts, I used the DuBro 1 1/4 inch threaded axle but had to extend the shaft itself another 3/8 inch to attach the wheel pants. Kraft 2 1/2 inch slim tires finished up the gear.

Dick Klause (at right), Ed Ajamian's (at left) flying buddy probably wouldn't be so happy after the first flight if he knew that the canopy on the *Aeroflash* was "requisitioned" from his *Aeromaster* kit.

Finishing up

Another one of those personal preferences. I like Silkspun Coverite as a covering material. It's what works best for me. It's always around my shop because it goes on and stays on. It can be finished to a mirror surface and gives great strength. It also takes just about any paint well. My personal preference is epoxy paint.

Can I rave one last time? (Go for it—Ed.) I can honestly say that if you decide to build the *Aeroflash*, you will be the proud owner of a super looking airplane no matter what angle you view it from. Add to that a flight experience you won't be able to stop talking about. Good luck with yours. Enjoy it! And, if you want to write and rave along with me, send the letter to Ed Ajamian, 917 Marie Court, Franklin Lakes, NJ 07417. Wait until I tell you about my next plane!



Not only does it look sharp, it also flies that way—crisp, precise response to all control inputs. Yet, it still retains great stability.

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