

Freedom Fighter

by Dick Byron

Jet-like looks and high performance are the features of this Tee Dee powered ship.

My first experience in $\frac{1}{2}$ A stunt was in 1956 with a Junior Barnstormer powered by a Baby Bee. It was able to loop, and that was about all. My next attempt was a scaled down version of the Foxy by George Aldrich. I had much fun with this airplane but, again, only loops. The Baby Bee was not able to fly inverted unless you drilled out the tank and connected another stunt tank to the fuel pickup inside. I did not know this at that time.

My $\frac{1}{2}$ A stunt interests were put on hold when I joined the Army and they did not get fired up again until I saw Dick Mathis' Pinto design in FLYING MODELS. Without turning to the next page, I started construction. In a few weeks, the aircraft was finished and test flying was in order. The first flights were very responsive and quite fast but a tremen-

dous amount of fun. The airplane responded well and was able to perform the entire stunt pattern. However, with the straight leading edge, the airplane just did not respond as I would have liked. I had been flying 35 size stunt ships since 1955 and expected the $\frac{1}{2}$ A to fly as well, but I was very happy with it anyway.

At this particular time, I came across some color photographs of the F-5-E Tiger and really liked the profile it presented. It was ideal for a stunt ship, so I decided to build a $\frac{1}{2}$ A version first then possibly construct a 40 size later.

Construction

The construction process is exactly like a full size built-up stunt ship, except for the fuselage doublers in front. I don't feel they are needed on a $\frac{1}{2}$ A. The only trick to build-

ing a tapered wing is carving the ribs. All that is necessary is to make a plywood or metal template of the inner rib and outer rib and sandwiching enough pieces of $\frac{1}{16}$ " between them to make the required number of ribs. Drill holes through the ribs and bolt together and sand them to final shape. This is very simple, very quick, and most accurate. It will produce a set of ribs to give the required taper to the wing. The rest of the assembly is exactly the same as a full size stunt ship.

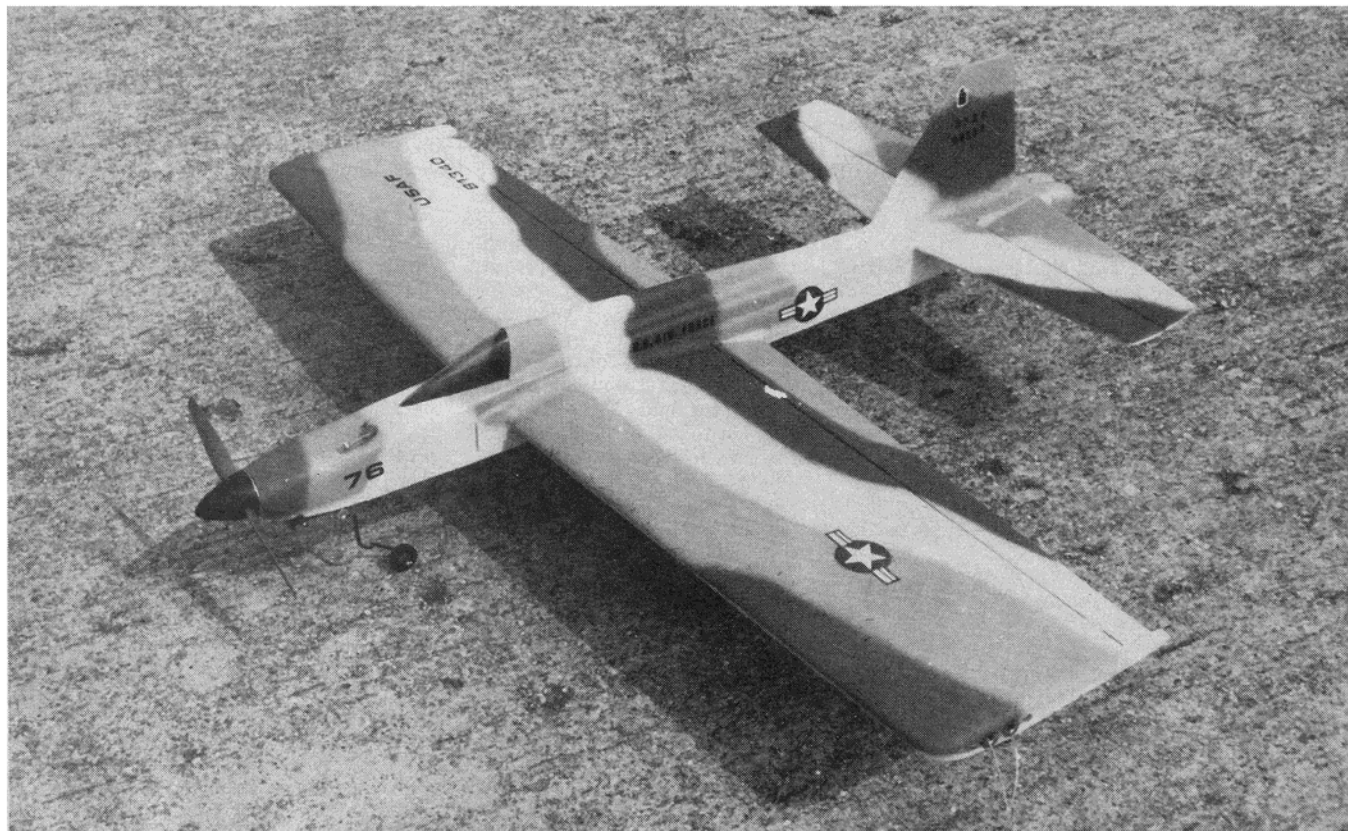
In building the aircraft, you must use contest grade wood to keep it light. "Hot Stuff" will help to cut the weight so use it everywhere except where extra strength is needed, such as around the motor mounts, plywood formers, landing gear mounts and bell crank mount.

The secret to successful stunt flying is very simple to say but hard to achieve. Keep it light, keep it straight, keep it clean, and it will fly. The only additional item is practice, practice, practice!

Of special note is the use of a heat sink on the Tee Dee engine. This is primarily used for additional nose weight, not engine cooling, but a benefit is derived in cooling as well. The fuel tank should hold 1.25 ounces or 1.5 ounces depending on how lean you run the engine. I like to get maximum rpm using K & B 1000 fuel plus $5\frac{1}{4} \times 4$ grey Cox propeller.

The Tiger was first flown on 52 foot .008 braided cable, but I eventually reduced the line length to 42 feet. The control handle was as light as possible so that I could feel the aircraft throughout the maneuvers.

PHOTOGRAPHY: BOB HUNT



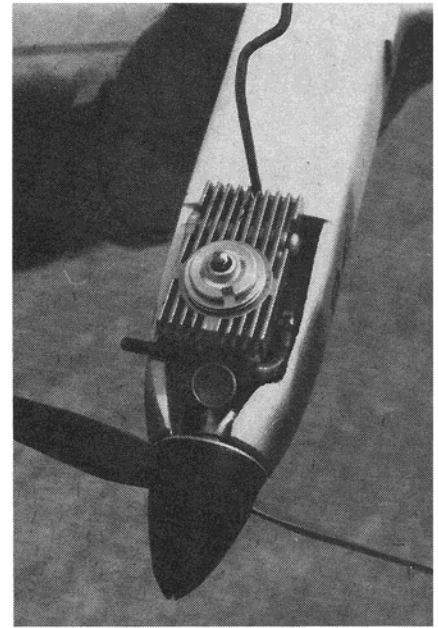
The original F-5-E placed in the 1979 NATS held in Lincoln, Nebraska. It was the only aircraft that had two complete flights with no engine problems.

One of the most important things that you must do is become totally familiar with the Tee Dee engine and keep the fuel clean and fresh. I use an old Dynamic 1/2A metal filter in the line, and I am sure it has helped tremendously. The needle valve is the custom unit produced by Kustom Kraftsmanship, P.O. Box 2699, Laguna Hills, California 92653, (714) 830-5162. If you do not use this needle assembly, you will not be happy with the engine's performance at all, as it just will not maintain a setting without it.

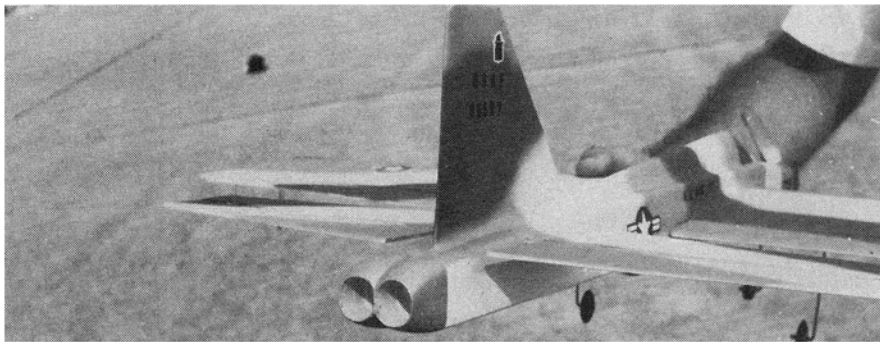
The aircraft was finished with Sig dope

throughout. The camouflage finish was applied with an airbrush, adding almost no weight at all for color paint. This was the lightest finish I could put on the aircraft. After final colors were applied, dry transfer lettering was used. Then I simply sprayed a couple of coats of Aerogloss flat clear and "presto", all the little nicks and scratches disappeared.

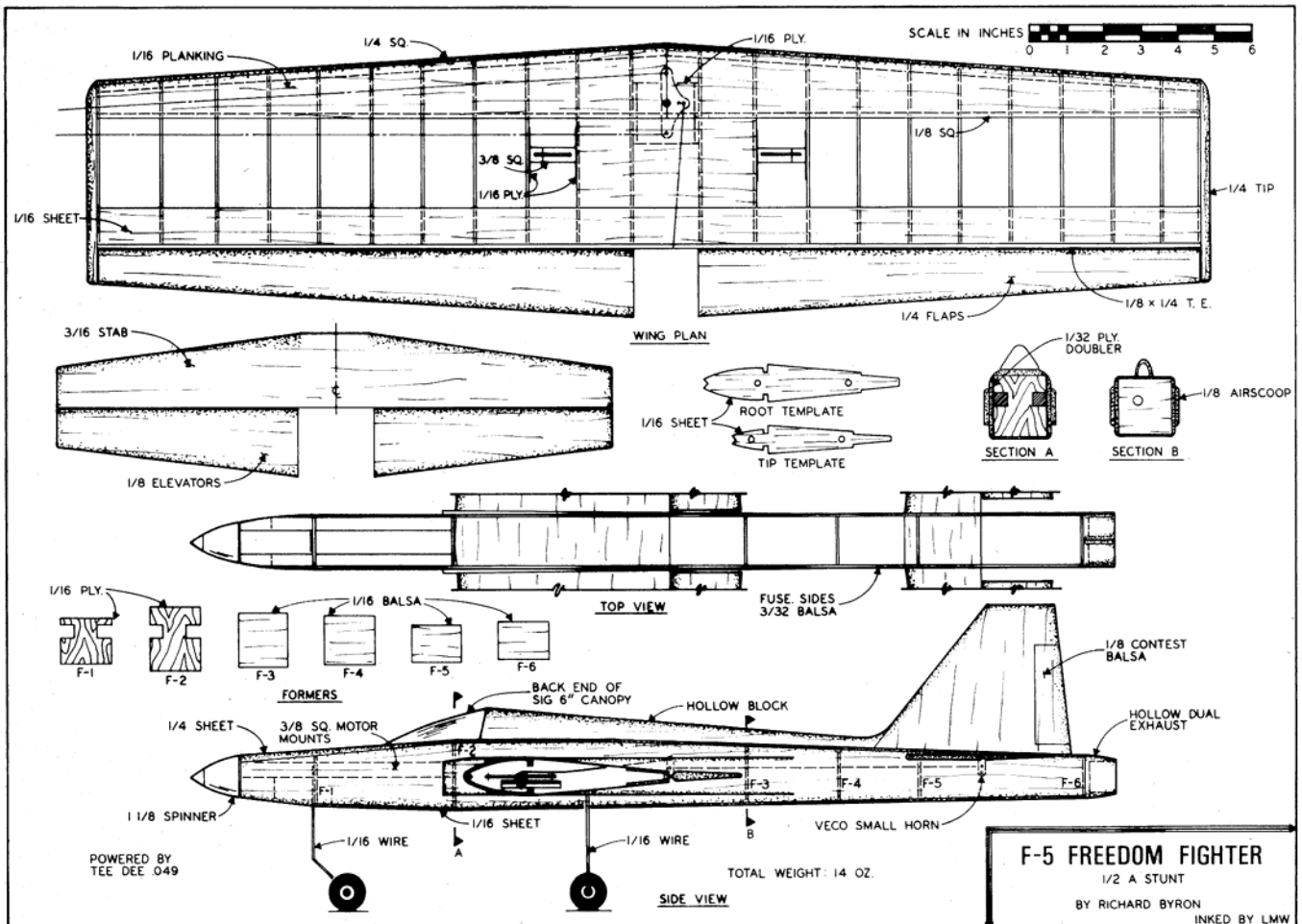
In closing, all I can say is, if you don't want a large, expensive, fuel-gulping stunt ship, but still want to fly and learn about trimming, put a Tiger in your hand and you will be pleasantly surprised at the outcome. One additional item that was overheard from a suspicious character with the initials BH, "It's cute!"



The heat sink on the head of the Cox Tee Dee .049 engine serves double duty as extra nose weight (above). 1/2A engines run just fine inverted. A photo of the rear of the F-5 shows the simulated jet exhaust outlets (left). The camouflage paint adds realism to the ship. The details help too.



FULL SIZE PLAN AVAILABLE THROUGH CARSTENS FLYING PLANS



ORDER PLAN CF-566