



FAMOUS R/C AIRCRAFT NO. 3 'MAC'S ROBOT'

By FRAN McELWEE . . . Third installment of our "Famous R/C Aircraft" series, the "Robot" started many an early R/Cer on his way, including our editorial assistant, Eloy Marez. It's still a nice trainer/sport design.

• This rudder-only single channel model was presented in the September 1951 issue of *Air Trails* as an improved version of the "Radart", which was also published in A.T., in the April 1949 issue.

The design was an attempt to make a faster flying model than was usually seen at the meets of that time. This enabled the writer to win a few meets in the East, including the Mirror Meet and a second in the Navy Bombing event at the Dallas Nats in 1951.

It was rugged; the weakest point I remember was perhaps the nose gear, which would bend back due to the rudder-only type of landings. Without elevator control, there was no flair except on the occasional recovery from a turn before touching down. Built today, it would have a spring nose gear (steerable, of course), and with elevators the Robot could make beautiful landings.

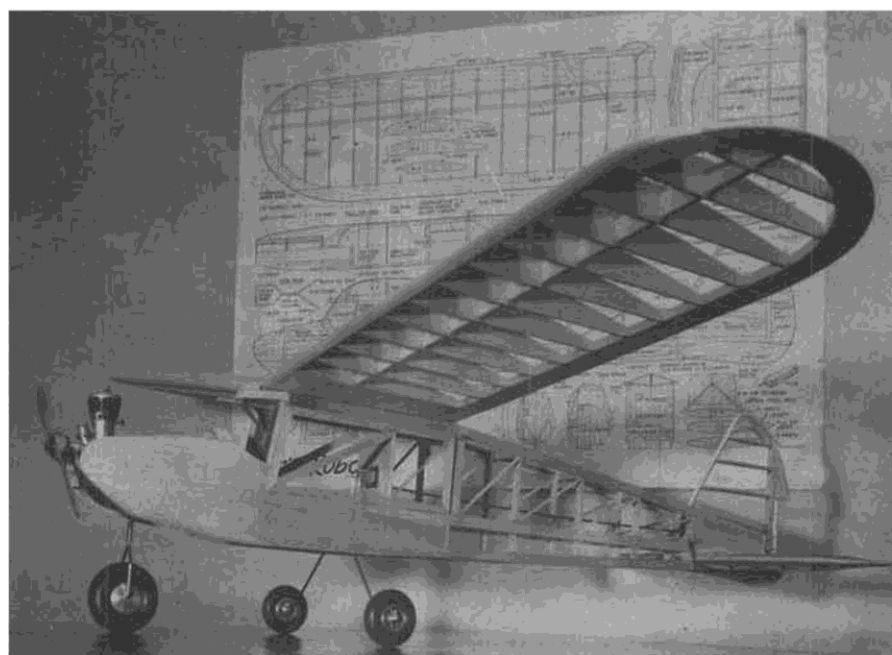
A later Robot was built at that time, to be named the "Super Robot", naturally! It had a double cross-over torsion nose gear, still not steerable. Control was handled by a T.T.P.W. system, Walt Good's brain child. It controlled two English "Mighty Midget" electric motors for dual proportional rudder and elevator, and an escapement for two-speed motor control (high and low). Power was a Fox .35 Stunt engine fitted with an exhaust throttle. The ship had a semi-symmetrical airfoil and the fuse construction was changed. Sheet balsa was used instead of the crutch. This type of construction was popularized by Hal deBolt. No flight results were achieved, as it was demolished after several minutes of the first flight. It was the lead acid

batteries made for a cigarette lighter that failed. The lead connection broke under vibration, and it did the ship in. That's an argument for not trying new things (the batteries) in a new ship!

One interesting event the Robot placed in was at the 1951 Nats at Dallas. There was an event sponsored by the Navy, called "Navy Bombing". Points were awarded for short field takeoff, bomb drop on target, and short landing.

I made a catapult out of a skein of rubber and anchored it in the expansion

joint of the runway. The Robot was pulled into the air in 19 ft. However, my friend Cliff Schaible had a larger, lighter plane, and my sling got it off the ground in 9 ft. These were the only points scored in the contest. The late great, Jim Walker, was the only other contestant, and he scored zero points! Jim did a long, unassisted takeoff, and the bombs were dropped from too low an altitude. Jim won the regular event that year, and Cliff is now known for transistorized ignition and Old Timer Texaco event



Framework shot shows something with which not many of today's R/Cers are familiar; an escapement with its rubber band power. It operated the rudder, and that was ALL!

wins.

For this, Cliff and I won a trip on an aircraft carrier. The Navy flew us from N.J. to Pensacola and back.

That Robot had two receivers in it, controlling rudder on one frequency and two-speed engine control (escape-ment) and a time-delay bomb release on the other frequency. That Robot was the original one built (No.3). The next one (No.4) had the 465 MHz equipment put out by McNabb. The main difference was in locating the rear gear further forward for easier takeoffs.

While testing for the '51 Nats, I had a flight I'll never forget. I was flying No.4 and had a tumbling, ground-looping type of landing. The ship must have been but casually inspected, for on the next flight, I immediately saw difficulty.

The plane had a very slight left turn, and on the first application of right rudder, the stab was seen to rock to 45° to the fuselage. Evidently, the rubber bands holding it on had come off as a result from the previous landing, and now I believe one rubber band secured the stab to the fuse, this one going diagonally across the tail, as it was my practice to do.

The McCoy .19 Sportsman engine was running well on the Walker pressure tank. With careful taps of right rudder, the Robot gained great altitude, even though the elevator cocked up at every command. I don't believe any turns were done in the wind which held it back, so it hadn't gone too far upwind.

Anyway, of course, it finally happened. The ship got a little too far to the left of the wind and a longer right rudder command had to be held. The stab snapped up against the fuse and came off. The ship, now with no horizontal area and with the down-thrust built in, did about 1-1/2 outside loops and then fell into an inverted spiral. With the pressure fuel system, the engine didn't miss a beat.

Since it was at a great altitude, I had time to punch the microswitch and found that rudder control would stop the spiral. Now it went for quite some distance inverted, nose high in the air with the now up-thrust.

It fell into another inverted spiral, another stop and a plateau. As luck (not skill) would have it, the last inverted flight was at minimum altitude and it nosed down in high grass. Total damage was a broken prop!

John Zaic, testing some free flights nearby, came over to inspect the "wreck". On seeing that only the prop was broken, he presented me with an English molded rubber prop with some remark like "No need to break that". The tail came down some distance downwind, and a friend chased and retrieved it for me. The Robot was soon airborne again.

The original lasted some seven years of a lot of flying, and the ship brings back many fond memories for me. ●



Here is the author, about 1951, with (l to r): No. 4 Robot, No. 3 Robot, and the Radart, which was presented in the April 1949 issue of Air Trails. You're looking at real pioneer aircraft!



The Radart and Robot appeared to be fairly similar except for the landing gear. Nose wheel was always first thing to touch ground, even on better landings.



Partially completed model posed along with some of the elaborate testing equipment that was an important part of every R/Cer's collection in the early days.

