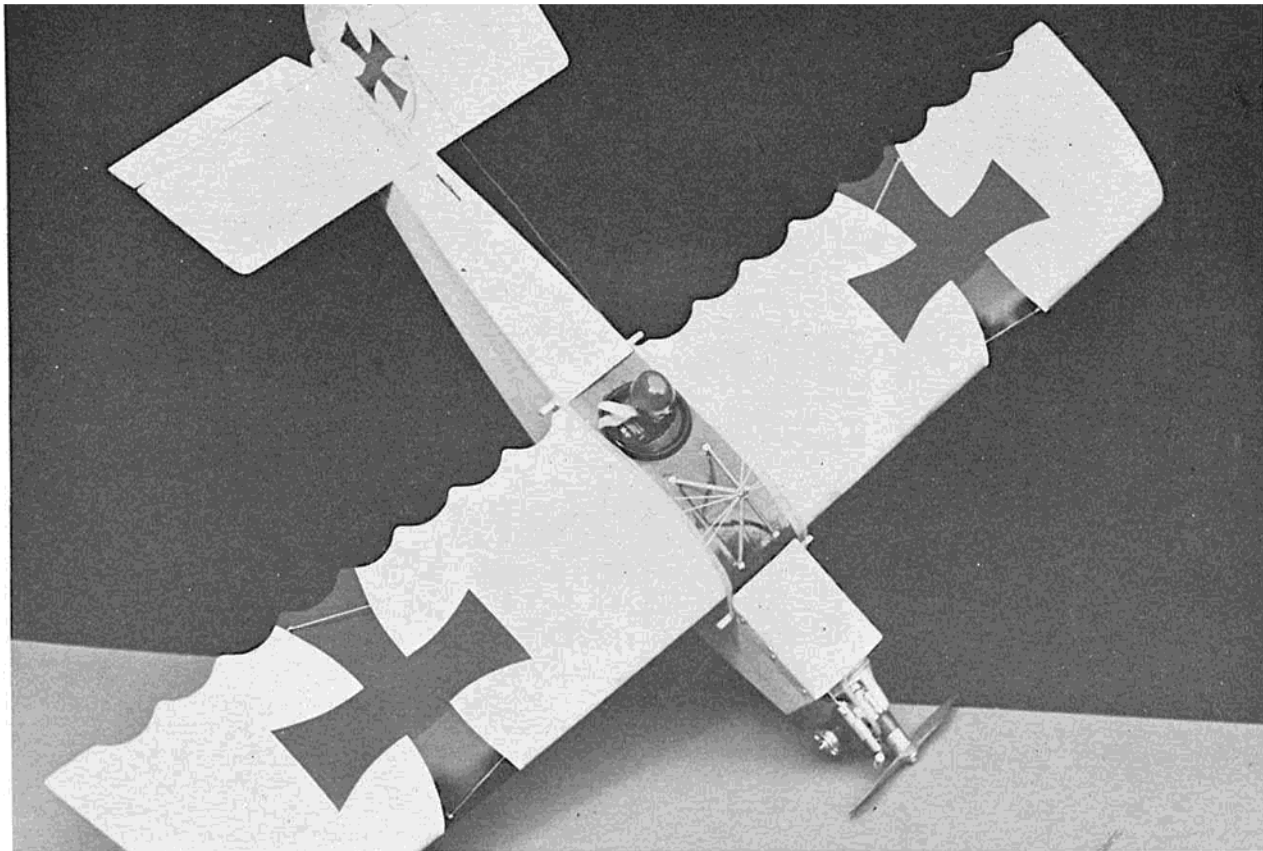




WÖLFMEISTER LR-3

BY DON DEWEY

**Scale (?) R/C Version of a Not-Obscure-Enough
WW-1 Crate. For Galloping Ghost and .049 to .09 Mills.**

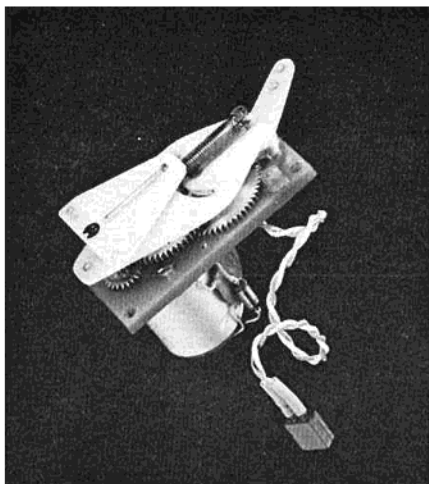


THE Wölfmeister is a scale model of a very obscure German aircraft of WWI. Authentic sources available to the author disclosed that only one was built, and that by the pilot himself, Baron Wolfgang von Reichard. During the glorious days of aviation, those days of iron men and wooden flippers, it was the aristocracy that took to the air to meet in aerial combat with their nonetheless aristocratic enemy. The Baron, whose ideas even then, were considered radical and quite impractical, was a great aviation visionary. He was also a visionary in other endeavors as well,

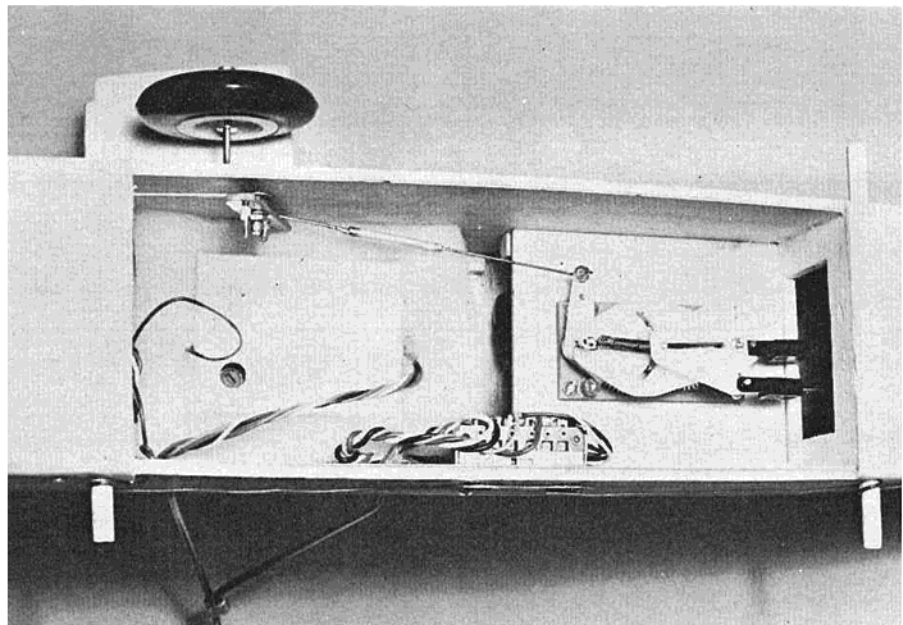
RCM's Chuck Waas holds the author's Wölfmeister . . . known in some circles as Dewey's folly.

which led to his ultimate undoing, as we shall see later.

As history discloses, the Baron, seated in his Wölfmeister, led his squadron of German aces up in the skies at each light of dawn. Flying high over the trenches in no man's land, they would look for the nearest cloud cover, where they would wait for their adversaries from the A.E.F. and R.A.F. Upon contacting the enemy, they would fly both offensive and defensive maneuvers in full sight of the foot soldiers in the trenches far below. Without firing a shot they would carry on the pantomime for a convincing length of time, then disappear into the cloud cover. From this point, German and Allied planes together, in integrated formation, flew to a small, and undisclosed village in France where an understand-



The Rand LR-3 prototype. One of the finest actuators we have ever seen or tested. Right: the LR-3 installed in the Baron's Box.



ing farmer had agreed to the use of his south forty as a landing field. From here the intrepid masters of the air would retire to the village pub. A flip of the coin would determine who would buy the rounds for the afternoon – the loser also being required to punch a few convincing holes in a few of the aircraft for the benefit of the top brass back at their respective aerodromes.

Baron Von Reichard's eventual absence from these daily sessions wasn't noticed at first. When it was discovered, the gallant band of flying men set out to discover the whereabouts of their comrade-in-arms. Primarily, that is, because he hadn't been there to buy his fair share of the spirits.

Just what fate had befallen the missing warrior was not immediately disclosed. A few days later, however, a lone SE-5 flew low over the German aerodrome and dropped a wreath with the Baron's name written upon it. Their fallen comrade, it appeared, had fought his last duel in the sky.

Fate was not to be that kindly disposed, however. As it actually turned out, the friendly farmer was not so understanding after all when he found his only daughter in his haystack with the Baron. A brief wedding, along with much beer and the ever present and somewhat ominous shotgun, took place a few days later. His comrades, to veil this tragic ending for a great flier, let it be known that their adversary had died a hero of the air.

Even today, the rotting remains of the one-of-a-kind and once-famous Wolfmeister rests in the south forty of a small farm in France. If you should ever be in the neighborhood of the Rhine Valley, look for it. You'll find a bunch of the Baron's grandchildren playing around this scourge of the skies. As a matter of fact, this is the

only way you'll be able to provide proof of scale for the next contest.

Just don't tarry too long around the Baron's haystack. . . .

Construction

Now that you're suitably turned on to get into the construction of the Wolfmeister, here are a few general notes concerning the model.

The plane was actually designed to test out the new LR-3 Galloping Ghost actuator from Rand Manufacturing Company. This actuator promised to take simple proportional off the tinkerer's bench and get into the air with the reliability of a much more exotic rig. Gone was the birdcage sticking out behind the north end of the southbound model. With this new servo, only two standard pushrods were required. Insofar as bench checks were concerned, this unit surpassed anything that we had seen to date. Now it was time to give it the acid, or flight, tests as it were.

Since I had never flown Galloping Ghost before, much less designed an airplane for this control form, I felt perfectly qualified for the task. Since we had already discovered that our old flying buddy, Herb Abrams at Rand, had put in quite a few flights on a .35 powered beast, we decided to make our test ship in the smaller range. The quickie-build that evolved looked like every other box-with-a-plank-wing, so we dressed it up a bit as a semi-scale type WW I machine. Although this is somewhere around an .049 size ship, we had a Cox .09 on the shelf and decided to use it in the nose. The actuator was installed, using the standard multi pushrod configuration with Du-Bro Kwik Links at the surfaces and Ellis keepers at the LR-3. A World Engines NND switcher was used so that a single battery supply of 2.4 to

3.6 volts could be used for the actuator, eliminating the need for a power supply on each side of the motor. A Controaire SH-100 superhet receiver was used, and it too, used the same battery supply as the actuator. The LR-3 has the arc suppression components built-in, and the use of the SH-100 (which is quite immune to noise) insured a lightweight (5 ounce) installation. To eliminate a mess of wiring, we cut down an Accu-Tie printed circuit board, scraped off some of the copper lands, and secured the NND switcher to the board with G.E. Clear Seal. All wires then terminated at this common junction board. When we turned on the switch and reached down toward the actuator to find out how much thrust we were putting out, we almost lost a finger! That LR-3 is powerful!

The first flight of the Wolfmeister was a disaster going somewhere to happen. The elevator surfaces were too large and we had used too much throw. In addition, we didn't have enough right thrust in the engine. One other minor factor was a transmitter and pulser whose modulation was not compatible with the SH-100. After launching the ship off my hill, it streaked away with a vicious left turn. After getting that under control, I found that the amount of throw used was such that if you breathed on the transmitter stick you commanded a loop! A few minutes later the incompatible system created the inevitable – a loss of signal as the ship went out of range at about 500 yards distant.

The LR-3 responded by giving neutral rudder and elevator and low motor. With the torque problem, this resulted in a gentle left turn that ended on a slope of the hill about a hundred

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feet away. The Wolfmeister looked like a prehistoric monster thrashing out its life in the ice plant!

After trimming down the elevators to that shown on the plans, plus reducing the throw and adding some additional right thrust, we purchased a compatible transmitter—the new Controlaire Galloping Ghost unit that utilizes a Bonner stick assembly for the prime control functions, and a reed lever switch for throttle control. From this point on, flying the Wolfmeister was sheer fun. The Rand LR-3 performed perfectly, and it was truly “Gallopless Ghost.” Control was precise, and instantaneous. Throttle control was excellent. The ship responded perfectly, and for all intents and purposes, was like flying one of the bigger, feedback systems. I, personally, can recommend and endorse this entire system as an economical method of obtaining proportional control of rudder, elevator, and motor, with coupled ailerons as an added bonus, if you so desire. Considering the size and weight factor, the compatibility and performance of this system, and this excellent new actuator, a whole new era is about to open for the sport flier.

The Wolfmeister is a simple airplane to build. The wing is strictly conventional in every sense of the word. The scallops, if desired, are scribed with a compass and then cut out, but only after all silkspan and dope is applied. The cabane structure is simply four pieces of $\frac{3}{32}$ " diameter aluminum tubing, epoxied to the wing center section and bolted together at the top. The rigging wires are lengths of dacron line terminated at cut-off straight pins cemented into the wing leading and trailing edges. The pilot is a standard Williams Bros. unit. The cockpit coaming is a piece of fuel line cemented down with HobbyPox glue and then painted black. No color was used except for the painted black crosses, outlined in white, and the red strip down the center of the wing to cover up the Celastic reinforcement in the center section.

The fuselage is a $\frac{3}{32}$ " balsa “box” with $\frac{1}{32}$ " ply doublers contact cemented in place from the firewall back to a line even with the trailing edge of the wing. The empennage is also of solid sheet construction. No covering material was

used and only several coats of clear dope was used for a finish. The tank compartment cover is somewhat unique, inasmuch as it is simply a piece of manila file folder stock which has one coat of fibreglass resin applied to each side. It was then lightly sanded to remove any runs, and held in place on the fuselage with six small sheet metal screws. A small metal clunk tank was used in the compartment itself. The landing gear is bent from $\frac{3}{32}$ " music wire and held in place with four nylon hold-down clips and 2-56 nuts and bolts. Wheels are standard Williams Bros. unit.

As mentioned, the engine is a Cox Medallion .09 with throttle. Prop used was a Rev-Up 7-4. C.G. for the Wolfmeister should be at the leading edge of the main spar.

If you haven't tried Galloping Ghost, or dual proportional control, you might want to start with the Wolfmeister. The equipment is completely reliable and needs none of the tinkering that has previously been associated with this type of control system. It is a lot of control for the money, and far more than the single channel flier has had available in the past.

There is no doubt about the equipment. Only the ability and the sanity of the designer of this model is in question.