

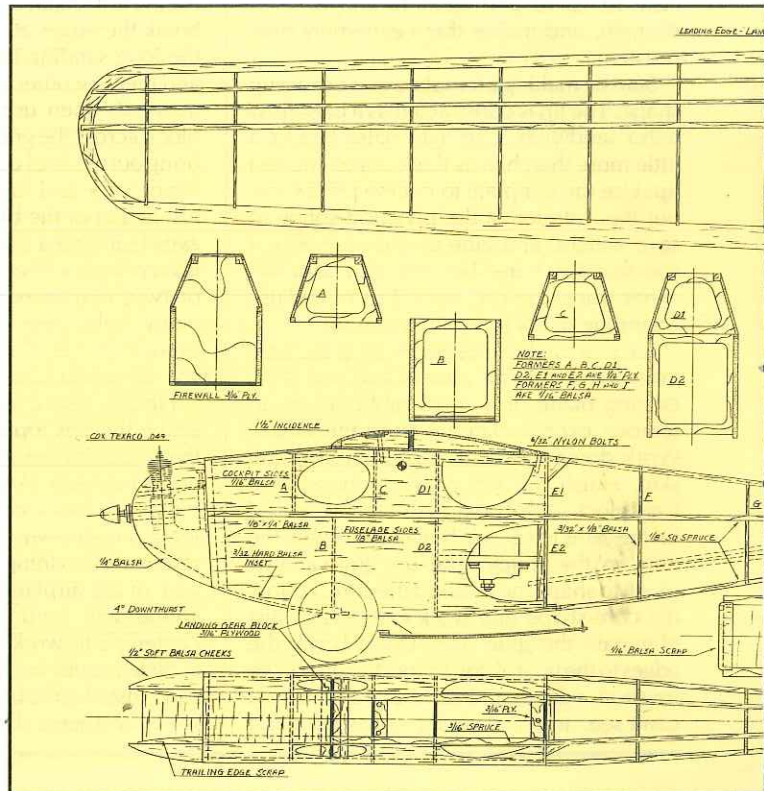
THE MESSERSCHMITT M.17 FOR 1/2A TEXACO SCALE

With its clean, glider-like layout, this 1925 ultralight two-seater can be a real contender in scale duration events.

BY VAN HEREFORD • PHOTOS BY GEORGE DWYER



■ ABOVE: Designer Van Hereford is rightly proud of his little bird. The inspiration for this model came from the Peanut version by Dave Linstrum, published in the January '93 *Model Builder*. ■
RIGHT: The M.17 floats by at the end of another long flight. In order to perform well on such low horsepower, many aircraft of the early '20s relied on efficient, high aspect ratio, glider-like planforms, and therefore make excellent choices for scale duration models.



MESSERSCHMITT M.17

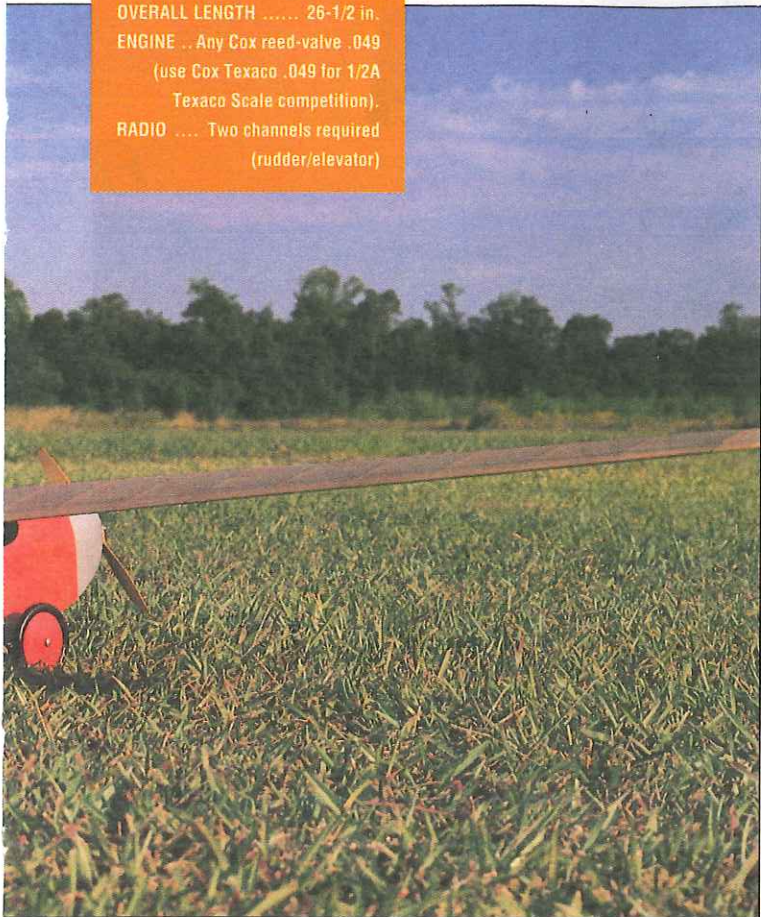
DESIGNED BY VAN HEREFORD

- WINGSPAN 59 in.
- WING AREA 290 sq. in.
- FLYING WEIGHT 16.2 oz.
- WING LOADING 8 oz./sq. ft.
- OVERALL LENGTH 26-1/2 in.
- ENGINE ... Any Cox reed-valve .049
(use Cox Texaco .049 for 1/2A
Texaco Scale competition).
- RADIO Two channels required
(rudder/elevator)

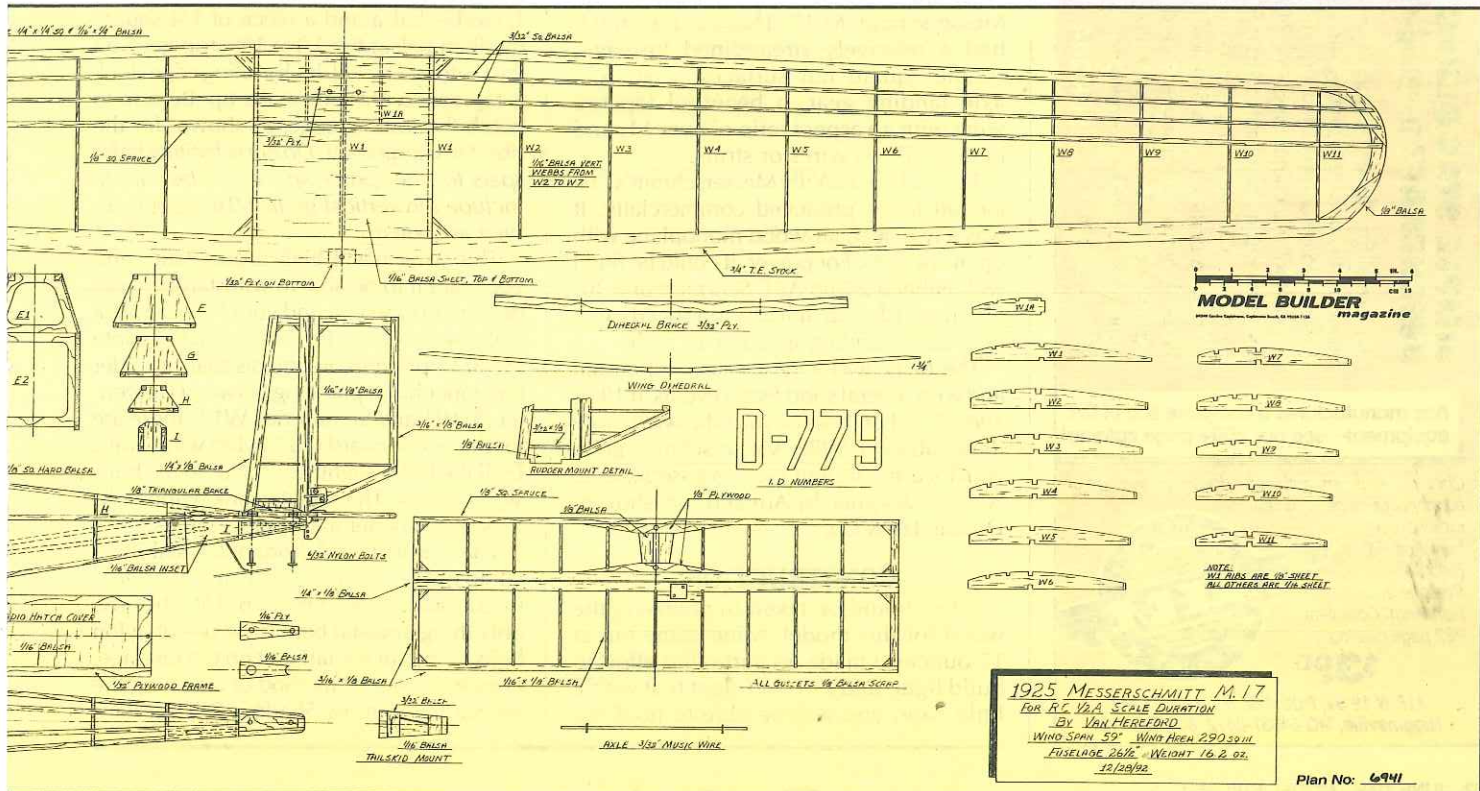
Late last year our club held one of its Radio Control Duration "Climb and Glide" meets (AMA provisional events #702 and #703), and several of our friends from Houston attended.

One of them, Ben Beerbower, entered the RCD event flying a 1/2A Texaco Scale model of the English Electric Wren. What a beautiful little plane! I was particularly impressed

with the way it flew against our non-scale models, which were designed specifically for the RCD event. He took home a 2nd place trophy! I decided that I had to try my hand at



An easy hand launch sends the mini-Messerschmitt is on its way skyward. R.O.G. takeoffs from level ground are no problem with that narrow wheel tread and low CG. Who will be the first to do a scaled-up version for electric power?



1925 MESSERSCHMITT M.17
FOR R.C. 1/2A SCALE DURATION
BY VAN HEREFORD
WING SPAN 59" WING AREA 290 SQ. IN.
FUSELAGE 26 1/2" WEIGHT 16.2 OZ.
12/29/92

Plan No: 6941

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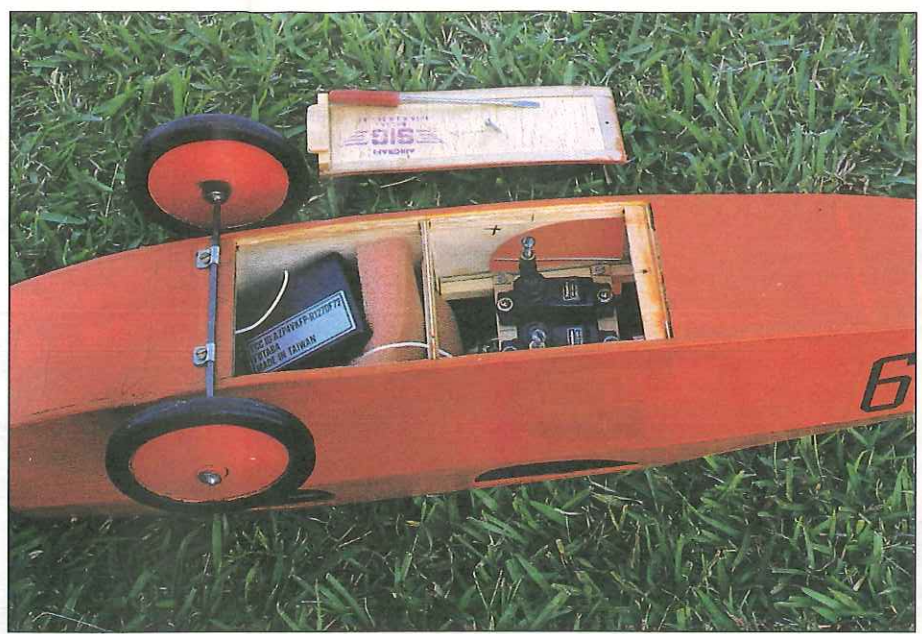
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Access to the radio is through a hatch on the bottom of the fuselage. Straight-axle landing gear is secured with straps cut from an aluminum beverage can.

designing one of these 1/2A Texaco Scale models. But what should it be? During the next few weeks, I thumbed through a large number of my old model magazines looking for a proper subject. There were so many good candidates to choose from. What about a Heath Parasol or an Aeronca C-3? The Corben Super Ace has always been a favorite of mine. But then, the Bristol Brownie, with its low wing, would make an unusual subject with good flying qualities.

I finally narrowed my choices to Les Long's Wimpy, a beautiful low-wing homebuilt, and the Henderson Longster, which was an attractive parasol homebuilt. Then the January 1993 issue of *Model Builder* arrived, and I saw Dave Linstrum's Peanut Scale model of the Messerschmitt M.17. This was the one! It had a relatively streamlined fuselage, simple square tail surfaces, a straight axle landing gear, a beautiful tapered wing with an aspect ratio of over 11, and best of all, no wires or struts.

The M.17 was Willy Messerschmitt's first aircraft to be produced commercially. It was a two-seat, all-wood monoplane with open cockpits. For power, it could be fitted with either a 24-hp ABC Scorpion or a 30-hp Bristol Cherub. It had a top speed of 93 mph and a landing speed of 40 mph.

The M.17 was a very successful design and won several sport flying events in 1924 and 1925. For those of you who want more information on Willy Messerschmitt, go to your local library and ask for *Messerschmitt, Aircraft Designer*, by Armand van Ishoven, Doubleday & Co.

CONSTRUCTION

Care should be taken in choosing the wood for this model. Mine came out at 17 ounces. I made no particular effort to build light, and I'm confident that with a little care, you will be able to hold the

weight at or below the required minimum of 16.2 ounces.

The M.17 is simple to build for a scale model, and anyone who has built two or three models should have no problem building this one. Do take the time at the hobby shop to carefully pick out your wood. I usually go through the whole supply of each size I need, looking at each piece to make sure I get pieces that are straight and of the proper strength and weight. Carefully study the plans, reading all the notes, before beginning construction.

A step-by-step description of the construction sequence would be of little use here, but a few notes may be appropriate. When building the wing, note that the leading edge is laminated from a strip of 1/16x1/4 balsa and a piece of 1/4 square medium balsa; the 1/16x1/4 strip goes on the bottom. The 3/4-inch trailing edge stock is tapered to 1/2-inch at the tip. Be sure to notch the trailing edge, as shown, for the ribs. Most important: *Do not substitute balsa spars for the spruce spars, and be sure to include the vertical grain 1/16 sheet webbing as shown.*

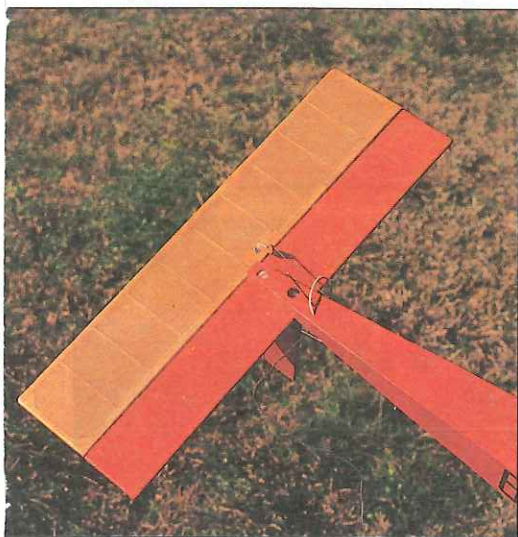
This wing has a high aspect ratio, and you want it to be able to withstand a rapid descent in case you find your M.17 a speck in the sky and rapidly getting smaller. Note the 3/32 ply reinforcements that fit under the upper balsa planking between the center rib W1 and the sub-ribs W1A; these are for the two forward 6-32 nylon wing bolts. Drill the holes slightly oversize so the bolts slip in easily. The countersunk nylon bolts look much better than rubber bands.

The vertical and horizontal stabilizer could not be simpler. Once again, be sure to cut notches for the 1/16x1/8 ribs. The only thing unusual here is the use of nylon bolts to mount the tail unit on the fuselage. I began using this method of attaching the tail surfaces on my Shadow RCD designs

quite some time ago and find it to be very neat and practical. It comes in handy when it's necessary to make changes in the stab incidence, just like we used to do with free flight models when using rubber bands. It is also very handy to be able to remove the tail surfaces when making repairs.

The fuselage is also quite basic. The forward fuselage sides are medium 1/8 sheet balsa with 1/8 square spruce longerons top and bottom. The longerons are joined at the rear by a scrap of 1/8 sheet that runs from former 1 to the rear, and the grain is vertical. The second side is constructed on top of the first to insure that they are identical. After taking them up, add the 1/16 sheet balsa insets between the last upright and former 1. These add greatly to the stiffness of the fuselage and provide an anchor for the elevator pushrod tube on the right side.

Join the two fuselage sides with formers B, D2 and E2. Make sure everything is square. Pull the fuselage sides together at the rear and glue them to the 1/4x3/16 tail post. Add all cross members, bottom and top. When dry, you can add the firewall and the rest of the formers and upper longerons. The axle is mounted to the landing gear block using two 1/4-inch wide aluminum straps.



Empennage assembly is held on with two 6-32 nylon bolts, can be quickly removed for safe transport.

Pin the wing to the fuselage, taking very careful measurements to make sure the wing is aligned squarely. Run a 1/8-inch drill through the three holes in the wing and drill through the 3/16 ply blocks in the fuselage. Take the wing off and tap the three mounting holes using a 6-32 tap.

The original M.17 had a very simple color scheme of amber (a dark honey color) and natural fabric. The fuselage, wheel

hubs, and the leading edges of the wing, rudder and stabilizer were amber. The cowl was aluminum, and the identification numbers were black. I used silk on my model and tried to simulate the natural fabric by mixing a small amount of tan in the clear dope. Since I had a can of orange Aerogloss, I used that instead of trying to mix the amber color for the fuselage and trim on the wing and tail surfaces. Of course, other coverings such as MonoKote or Micafilm will do just fine. We've found

that dark opaque finishes are best for keeping these models in sight at high altitudes. I would suggest that the bottom of the wings, fuselage and stabilizer be sprayed or covered with a darker color.

FLYING

Before the first flight, make sure the model balances just ahead of the main spar, as shown on the plans. The original balanced perfectly with the battery pack in the compartment in front of former B and the receiver between formers B and D2. The wing should have the same amount of washout under each tip—use at least 1/4 inch washout. Lay each wing on a flat surface to make sure there are no unwanted warps.

Test glide the model by giving it a firm toss into the wind slightly nose down. Use shims cut from a matchbook cover under the front or back of the stabilizer until you achieve a smooth, flat glide. Now you're ready for a powered flight. I used an APC 7x6 prop on my model. Keep it in a shallow climb until you're at about 100 feet, then begin to feel out the controls. The M.17 is extremely easy to fly and has exhibited no bad habits. Stalls are gentle and straight ahead with no tendency to fall off on either wing.

These models can often get to extreme altitudes and, therefore, require a great deal of concentration. Never take your eye off your model, even for a moment, unless you have a partner who has it in sight. A friend of mine was flying once, turned around to sit down and when he turned back, his model had vanished, never to be seen again.

Another "It will never happen to me" issue concerns the receiver switch. Turn it on before launching! Since we are flying without throttle control, it is very easy to overlook this essential detail while starting the engine and preparing to launch. Make a habit of moving your controls just before each launch as a double check.

I'm sure you will enjoy flying your M.17 as much as I have. If you decide to build one, I would be pleased to hear from you and see a picture. My address is 1855 S. Woodhaven, Baton Rouge, LA 70815.

Good luck! **MB**

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