

Jef Raskin's "Max Plank"

Jef Raskin is no stranger to the pages of *RC Soaring Digest*. His articles on slope aerobatics have provided information on the current state of this event, and have stimulated both thought and further discussion. Jef's aerobatic design, the "Anabat 2," has been described and advertised in *RCSD*, and is available from Anabatic Aircraft and Northeast Sailplane Products. Recent correspondence from Jef included information about a modification of the "Anabat 2" to a tailless design. Here's what Jef had to say about the resulting "Max Plank" design.

"My son and I have been enjoying a flying wing that we call the 'Max Plank.' It is small, with a span of 36", a chord of 8", and a rectangular planform. It uses aileron-elevator mixing at the transmitter and the usual elevon setup, and flies very well in a wide range of lift.

"This 'wing is hands-off stable. I made one for my 5 year old daughter as a free flight model. She tosses it around - even off the slope where we do R/C soaring - and it always quickly resumes straight and level flight, however bad the launch, so long as there is at least four or five feet of altitude.

"Anybody who thinks that a plank cannot be both very stable and very aerobatic should fly one of these. Rolls are very easy in the 'Max Plank' by simply putting the stick hard over. With the elevons having 25% of the area of the wing and large throws (30 degrees), rolls make the 'plane look like a propeller. Loops are best at large radius, as pulling up too tightly results in a high-frequency oscillation of the airplane in straight ahead flight. This stops when back pressure is released.

"The day before yesterday I was out slope soaring my four channel Anabat 48 and my son Aza, now 9, was flying his 'Max Plank.' I was working on spins (seeing how flat I could get them) and he was practicing landings. His first two landings were good, but on the third landing he slammed it into a rock outcrop with a crash loud enough to make everybody look. I was sure something was broken, but all that had happened was that one wing leading edge corner was pushed in about a sixteenth of an inch, leaving its flying qualities unaffected.

“Here are the coordinates of the airfoil for scratch-builders. Since it is symmetrical, only one surface is given. The coordinates have not been published previously.

“I designed the WE3008 airfoil by a long string of gradual improvements. A number of fliers have built flying wings with this airfoil, some planks like mine, most of them with taper and/or sweep. They have all flown well.

“The airfoil is the same symmetrical WE3008 that I use on my Anabat line of slope soarers, so its inverted performance is as good as its upright performance. This section is 8% thick with no camber; as for any symmetrical section, the pitching moment is zero and the zero lift angle is 0 degrees. In practice the elevons are very slightly reflexed. Beginners use a further forward C.G. and more reflex, more expert fliers move the C.G. back and use almost no reflex.

“It is easy to turn an Anabat 2 kit into one of these wings. Just cut off the fuselage 10" behind the trailing edge of the wing, taper the rear portion of the fuselage, attach the fin at the top of the end of the shortened fuselage, eliminate the stabilizer, and place the two servos side-by-side to operate the ailerons as elevons.

“I can build a ‘Max Plank’ in about three hours. Like the Anabats, it is nearly indestructible. It is also very convenient to carry to the field since it will fit on the ledge behind the back seat in most cars without any disassembly. Actually, it is impossible to disassemble since it is built in one piece. The ‘Max Plank’ has become my standard ‘plane-that-is-always-in-the-car,’ and I feel free to try to fly it almost anywhere.”

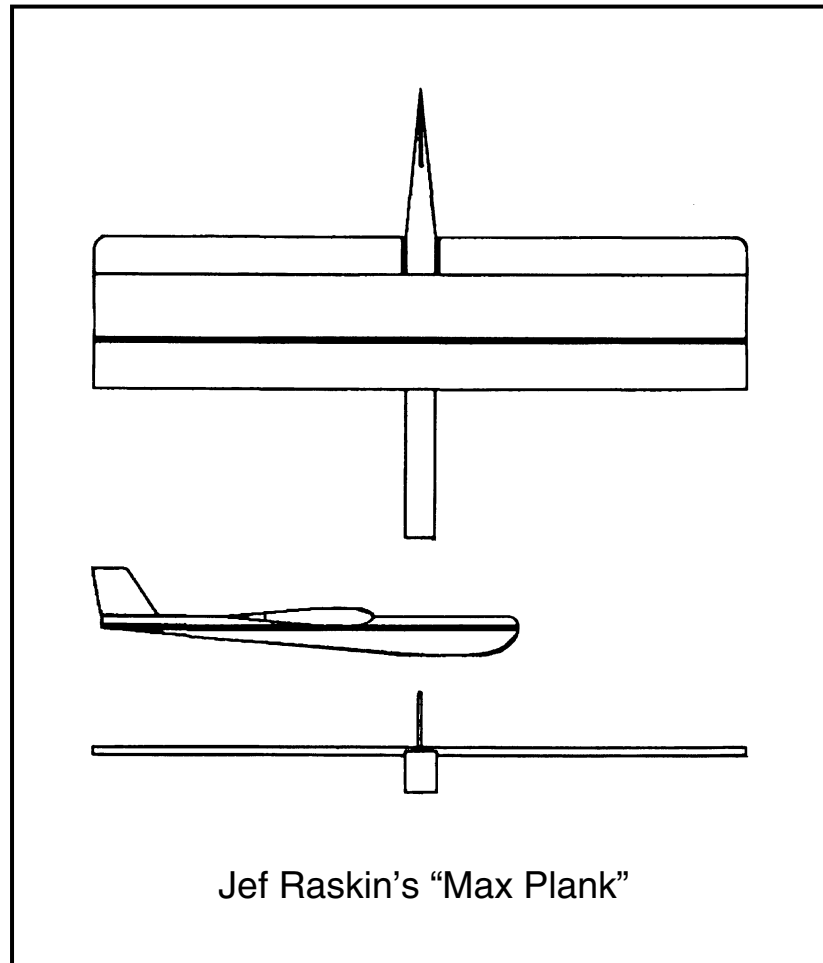
The “Max Plank” is a rugged, inexpensive, easily built 'ship for slope flying. Whether you are a newcomer to the slope or an advanced flyer looking for something a bit different, the “Max Plank” should serve you well.

Anabatic Aircraft, 8 Gypsy Hill Road, Pacifica CA 94044.

Northeast Sailplane Products, 16 Kirby Lane, Williston VT 05495.

WE3008

X	Y
0.000	0.00000
0.001	0.00326
0.002	0.00461
0.003	0.00564
0.004	0.00651
0.006	0.00796
0.008	0.00918
0.010	0.01024
0.012	0.01120
0.015	0.01249
0.020	0.01436
0.025	0.01598
0.030	0.01743
0.035	0.01875
0.040	0.01995
0.050	0.02211
0.060	0.02400
0.070	0.02568
0.080	0.02719
0.090	0.02857
0.100	0.02982
0.120	0.03200
0.140	0.03384
0.160	0.03538
0.180	0.03666
0.200	0.03771
0.220	0.03855
0.260	0.03964
0.300	0.04000
0.350	0.03944
0.400	0.03771
0.450	0.03478
0.500	0.03162
0.550	0.02846
0.600	0.02530
0.650	0.02214
0.700	0.01898
0.750	0.01581
0.850	0.00949
1.000	0.00000



When once you have tasted flight,
you will forever walk the earth
with your eyes turned skyward,
for there you have been, and there
you will always long to return.

— Leonardo da Vinci