

DIETER PAFF'S PN11

In the June issue of RC Soaring Digest we described Dieter Paff's PN 9f model and promised to provide information on some of Dieter's other models in the future. Well, the future is now, and the model is Dieter's PN 11!

The PN 11 is unorthodox, even as tailless designs go. This planform is the result of mixing the simplicity of a constant chord plank with a swept wing. The result is reminiscent of NASA's scissor-wing X plane and some SST designs. Several small free flight gliders were constructed and tested in order to produce a viable configuration.

The PN 11 spans two meters and is perfectly at home on the slope. Control is through elevons; both move in unison for elevator, and in opposite directions for aileron. The elevon on the forward wing is very close to the CG and does not affect pitch. When both elevons are moved downward, the PN 11 dives straight ahead, as drag is equivalent for both wings. The left elevon's lack of pitch authority does show up when aileron function is called upon, however. The 'ship tends to climb slightly during right turns and drop its nose during left turns. Still, the PN 11 flies easily, and control idiosyncracies are minimal.

The single fin is mounted on the tip of the trailing wing, where it is very effective at keeping the 'ship on track. The fin's total drag apparently approximates the induced drag of the bare wing tip.

Wing construction is of the "sandwich" type. Total flying weight is under 1 Kg at 960 gm, yeilding a wing loading of 25 gm/dm^2 , just 8 oz/ft^2 . The wing section, designed by Dieter, is 10% thick. Despite this, the PN 11 can be very fast.

Picture this scenario... Two PN 11s, a right handed and left handed version, flying in formation above your favorite slope... Wow!

