

# LEADING EDGE SHAPES

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*Speaks (England), Ron Knight, Editor*

From my experience of sparless lightweights I can say that some wings work better than others. Mark Moran even lent me a wing that did not work at all! Yet as might befit a wing made by a violin repairer, it appeared perfect, just that the LE was a little pointy.

Thus came my celebrated advice to buy ready carved leading edges because I have found that they always work. Now that model shops are getting few and far between, it may be less easy for you to take some shekels along to such an emporium and come out with anything less than a ready to fly plastic RC toy. At the risk of offending many of you, I will describe my system for creating an alternative from medium weight 1/4 square balsa strip.

First you mark the front with a mid height biro line. Then you carve as per the pictures below with a razor plane until you can round off with sand paper. For the usual 4.5 to 5 inch chord, it is absolutely critical that you get a smooth round semi circular entry between 3mm(1/8 in.) and 2mm (3/32in.) diameter. Even if you are building an Oberon with a 3/8sq. LE, still keep the same LE diameter. Don't ask me why but it's the first bit of the wing that is critical in setting up the flow. I have a feeling that we know very little about these things. I haven't seen any birds flying about with thread turbulators or the equivalent. But I have seen gulls with automatic turbulators (small feathers lifting at about 20% chord when near the stall) and I recently saw a picture of great grey albatross that clearly showed that its feathers just behind the LE were arranged in small mounds.

