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There are a few items that make for a good launch. We can break it down into three different areas, which I cover here. The first is the aircraft setup, which includes the launch presets, mixes used during the launch, and the tow hook location. The second is the actual launch up to the zoom segment. This includes pretensioning, the throw and the climb while on the line. The third is the zoom itself, which encompasses the dive to capture the line tension built up during the climb, the pullout and the free climb to convert kinetic energy (speed) into altitude.

For the aircraft set-up that I use for launch, I have full-span camber (ailerons and flaps down equally) of about 20-25 degrees, along with the maximum aileron-rudder mix allowable. Also with this is the maximum safe up-elevator preset that I can get away with, which is dependent on the tow hook position. A more forward tow hook position needs more up-preset than an aft one. The tow hook should be very near the CG, or more accurately, 10-15 degrees forward of the aircraft neutral point for the technically inclined. This is an aggressive set-up which should be used by advanced fliers only (sometimes this is aft of the CG being used!). For newer fliers or those wanting a more docile but lower launch, place the tow hook 10-15 degrees ahead of the CG. The idea is to get the maximum usable Cl (lift) out of the wing during the launch.

To develop the up elevator preset, I do a series of launches, each having a little more up preset until the plane becomes unstable on tow, then back off just a little from this. What I look for is an airplane that goes up the line pulling strongly hands-off. The method used for optimizing the actual launch depends on several variables, wind speed, type of line, and whether there is a retriever hooked up. For all cases a good strong throw is very important. How much line tension you build up before the throw should be dependent on the amount of wind at the time. In general, have more tension for less wind. If there is no wind or a tailwind (Visalia comes to mind ...), throw strongly with as much tension as you feel comfortable with. During the initial climb portion try to keep as much line tension as the model can stand in no-wind situations. Conversely, if you are launching into a good breeze, let the wind do the work and use only a moderate tension during the climb (line on the drum = altitude that you don't get).

As you get to the upper part of the launch, build up as much tension as you feel comfortable with (you and the model both!) in preparation for the zoom. The optimum zoom point will vary with the wind speed. In no-wind situations, the best zoom point is almost over the turnaround, but in moderate to strong winds you want to start your zoom much earlier. In anything over about 12 MPH of headwind, you to start your zoom at about 60 degrees up from the turnaround for best results, which is surprisingly early. The amount of dive should be quite short, and most people dive for too long. Along with this, the dive should be fairly steep as you are trying to get the energy out of the line as quickly as possible (drag is high at high speeds). After this quick dive you want to pull out smartly to quickly convert speed into altitude. The optimum pull-out will be at the Cl for L/D max, which turns out to be a rather abrupt maneuver. The best climb is rather steep, 60 degrees or more.

Give this a try. You will be pleased with the results!