

## Thermal Stuff: Launching

By Robin Robinson

On a contest day, get up a little extra early and arrive at the flying site with plenty of time to spare. I usually try to park the car and unload a full hour before the scheduled pilot's meeting. Unloading first is desirable, as doing so will reassure you that no important item has been left at home. If something is missing, there will be time to correct the problem with the least negative impact on the day's fun. After assembling the hopefuls, take care of the business at the official impound desk. That is, signing up, paying fees and getting a general idea of what is happening. It's a good time to help with field set-up, if needed, and visit with the other fliers.

Well before the pilot's meeting is called, and after checking with the contest director, clip the frequency control pin to your transmitter. Now, in this way, launch and trim each plane that will be flown during the day. Then, turn the transmitters off and take them to the impound area for safe keeping until called to fly.

After the pilot's meeting, round 1 will start and each flier will proceed according the rules stated at that meeting.

In order to maintain a close focus on the subject being covered here, I will not get into the details involved in obtaining a timer or the timers function during the round to be flown. That important job will be covered in a later article.

**THE LAUNCH:** As the flier in front of you comes off the towline is a good time to turn your transmitter on. Watch carefully! If he is having any difficulty with control, turn it off quickly. If not, then turn your plane on. Check control surfaces for normal position and direction. Hook up to the tow and then look purposely from the tow hook, down the line toward the turn around pulley, along the retriever line through the ground hoop and over to the tow line/retriever line attachment. Do this every time you step up to the plate!

I once tried to launch my plane through the retriever line hoop. It didn't work.

After communicating with the timer, retriever operator, and checking the sky above, we are ready to fly!

It is a good feeling. You already know where your destination is. The subject of another, later, article] Now tension the line and throw the plane firmly straight down the line with the fuselage and wings horizontal to the ground with your foot planted on the gas [winch power] pedal. Remember, the tail is quickly approaching the back of your head about this time. Devise a scheme to keep the obvious collision from happening. I usually rock my body and head forward while keeping my arm and elbow a little straighter than I would if I were throwing a baseball. Imagine throwing a javelin with a milk bucket attached to the trailing end. As soon as your throwing hand is free, get it into position on the transmitter. The first flight path correction, if needed, is usually left or right rudder. Be ready to hold any required correction fully until you see a response in the glider. Then, ease into a flight straight up the

line using the rudder control only. Two or three seconds have gone by since the plane left your hand and now you must consider pulsing the winch power pedal in order to control the speed of the launch.

LAUNCH SPEED FACTORS: Wind speed; Wind direction; Glider strength; Flaps or no flaps; High launch or low; and more. Keep in mind that the towline is only so long. Sometimes, a higher launch can be gained by conserving the line length as the glider climbs. Sometimes, a higher launch can be gained by using full power all the way up and finishing in a zoom launch; all depends on the strategy of the pilot. [See how diplomatic I am!]

FINISHING: I like to fly up the line until I get to horizontal flight attitude. One thing that is uncertain and has almost always changed since the last contest location is the distance from the winch to the turning pulley. I just let the launch path curve show me when to end the launch. It is just like climbing a hill. You are at maximum towed height when the plane reaches a horizontal position. Now, you can try a little 'Zoom'. Apply pedal for about a second or two then, let up on the power. The plane is now flying well over the normal trimmed glide speed. It may be, or not, still attached to the towline. If still attached, just use a little more down elevator [you used a little down elevator at the start of the zoom to save the wings]. The plane should now fly off the line. Convert the extra speed to more altitude by using rudder to head toward your 'destination' and the elevator to climb at an angle of about 30 degrees. Go to a horizontal glide attitude just before the plane slows to glide speed. Now, step away from the launch area as soon as you can.

I'll only say one thing in review. The elevator is not normally used during the launch until the zoom is initiated. The pilot may, however, use a launch preset that results in elevator, aileron, and/or flap surfaces at a position that differs from their normal glide position.