



The Expected Wave-Off
by Richard Carlson SSF Chairman

The February morning was bright and clear, just as the forecast had predicted. It was a perfect day to go out to the glider school and knock some rust off and beat those Chicago winter blues.

With the forecast for temperatures in the low 40's and no snow on the grass runway, a group of us made arrangements to meet Saturday morning for some winter flying. Nobody expected thermals, and we were not disappointed flying only sled rides in our trusty Blanik L-13. We all pitched in to ready the glider for flight, doing the pre-flight inspection and securing the rear seat belts as everyone was going solo to get current. Today our Green Citabria would be doing the towing duties. It was pre-heated, started and test flown, all systems go.

My turn finally arrived and I eagerly climbed into the front seat, buckled up, ran the flow, and conducted the checklist. The lack of an electrical system meant no radio or audio vario, just basic analog gauges for Airspeed, Altitude, and Vario - Check. Belts on and adjusted, rear seat belts fastened to avoid any fouling of the controls - Check. No ballast installed and none required - Check. Flaps and Dive brakes closed and handles in the lock detent, stick and rudder pedals free travel in all directions, trim set for take-off - Check. Towplane in position, no knots in the rope, proper towing attached and verified - Check. Canopy close and locked, vents open to keep it from fogging over - Check. Slight wind from the SouthWest - Check. Re-verify Dive Brakes closed and locked - Check. Runway 36 clear of obstructions, alternate landing areas in case of a low altitude rope break identified - Check.

The frozen ground was hard and the take-off roll a bit bumpy but short as the cold air gave the engine full power and the low density altitude gave the wings lots of air to work with. Things started to go wrong on the climb out. We crossed over the departure end of the runway with a positive climb rate at what I considered a normal altitude. The towplane made a right climbing turn to cross-wind around the time I expected. While on cross-wind I noticed the flaps on the towplane cycle down/up several times. I immediately began to wonder what was wrong with the towplane.

Another climbing right turn put us on a downwind leg. I checked the instruments - Airspeed 60 kts, vario 2-3 kts up, Altitude 500 ft. This seemed similar to what I expected as all of my flying so far had been in the summer months. Again the towplane flaps cycled down/up, down/up a couple of times. I knew something was wrong with the towplane and I should consider releasing so the towpilot could figure things out without me hanging on behind him, however he had not given the standard signal of rocking the towplane wings.

Approaching the arrival end of 36 the wave-off came and I released immediately. I was now about 1000 ft AGL and opposite the end of the runway on a downwind leg. Decision time.

Knowing how effective the dive brakes on the Blanik L-13 are I decided that my best option was to go full dive brakes to descend to a normal flight path for that runway. The Blanik L-13 has terminal velocity dive brakes with a maximum descent rate of 12,000 fpm. I would have no problem throwing away this extra altitude and making a normal landing without having to make





360s or perform S-turns. Knowing the capabilities of this glider was one key reason this flight did not go bad.

I raised my left hand and used my muscle memory to grab the blue dive brake handle and begin the descent. My hand closed on nothing! Let me say that again. Without looking I reached out for the blue dive brake handle and didn't find it. I now looked inside and saw the gray handle on the sidewall. My left hand closed on this handle and I lifted it out of its detent. At that point my muscle memory said, my arm is in the wrong position! Putting the gray handle back in its detent I pulled my hand back and stared at the sidewall. There was only 1 handle, colored gray in my field of view. Where was the blue dive brake handle? Turning my head left I found the blue handle snug against the back stop. The dive brakes were already fully deployed!

I was now able to put all of the pieces together. There was nothing wrong with the towplane. During my bumpy take-off roll, the dive brake handle and come out of the lock detent and sucked open during the initial portion of the tow. The towpilot had been trying to signal me that my dive brakes were open, but I didn't pick up the clue. I also didn't recognize how unusual the low summer time climb rate was. The lack of radios, common at that time, meant visual signals were the only option. The SSA had not standardized on the rudder waggle signal for this purpose so the towpilot made one up. I was not aware of this and thus did not respond to the signal.

The towplane's good performance in the cold air and the towpilot's decision to put me in a position to make a successful landing even if I never recognized that the dive brakes were open were significant factors in the positive outcome of this event. Being higher or further away may have lead me to execute some turns, with the possibility of not getting back. Knowing the capability of the glider was also a factor. Doing one or more 360s in an attempt to descend to the 'normal' pattern altitude would again have placed me in a position where making a successful landing would have been more difficult.

Finally the muscle memory that told me not to pull the gray flap handle in an attempt to control height really saved me that day. There are numerous stories of pilots making this mistake and flying the length of the runway pulling hard on the flap handle wondering why the Blanik L-13 isn't responding as expected. I was not one of those pilots. I knew how my arm and hand 'felt' when I grabbed each handle. That is muscle memory.

It probably took between 10 and 15 seconds to recognize what was happening and finally get my left hand on the blue dive brake handle. Off tow with full dive brakes and 60 kts of airspeed cost me around 300 ft of altitude. I don't really know because I was not looking at the instruments. My complete attention was on solving the problem of the missing blue dive brake handle. 'Finding' that handle allowed me to refocus my attention on making a normal landing.

I could only apologize to the towpilot after he landed and I learned I needed to revise my take-off procedure to better monitor the blue dive brake / spoiler handle on every take-off. Lesson learned, we continued our sled ride flights and had a nice pizza dinner after everything was put away at the end of the day.

