

Designer's Notes: Improvements of the Weasel-TREK

by Michael Richter. May 6, 2016



From a distance, the new Weasel-TREK RC slope glider may look very similar to the previous EVO version. It was important for us to maintain the EVO's overall wing and tail layout to maintain the classic flight character so many pilots have enjoyed over the years, but that's where the similarities stop...

- The Weasel-TREK is the easiest of the Weasel family to setup and fly. The glider assembles in minutes without glue, and balances and trims out in a very predictable manner for a flying wing. The TREK borrows the same magnet canopy system as the Alula-TREK, which provides quick access to the receiver and battery. The factory-installed ABS skid plate does not require hand trimming or attachment like the previous Weasel-EVO.
- The previous version of the Weasel (EVO) used balsa control surfaces. These were inconsistent in weight and time consuming to install. The Weasel-TREK now features one-piece molded outer wing panels with foam elevons. Not only does this reduce the weight of the model, but it makes the wing panels very consistent and quick to assemble.
- The weight of the Weasel-TREK was further reduced by increasing the nose length and utilizing lightweight molded foam control surfaces. The weight reduction serves to enhance the buoyant and "skatey" flight character of the weasel design.
- Higher precision molded parts with a smoother, denser skin enhance performance and durability.
- A new, optimized airfoil with slightly less camber is used for better inverted flight and a neutral trim position. We have also increased the size of the control surfaces slightly for a more aggressive roll response and better handling.
- One of our goals with the Weasel-TREK design was to achieve neutral airfoil trim. This was something we wanted to get right, because it makes the new Weasel easier to setup (*simply align the elevons at the roof!*). Most flying wing models use an established airfoil, and this often results in a less than ideal trim setting. At Dream-Flight, we design and tailor the airfoils around each model and their particular flight envelopes. This is even more critical with flying wing models; everything from trailing edge thickness to the amount of reflex will more noticeably affect a flying wing's habits and flight performance.



Michael carving a turn. Central California secret spot.

- Improvements to the airframe have been made as well. Stronger magnets and an improved locking wing joint system offer the airframe with a more secure hold. *The Weasel-TREK is a pure slope glider, so we do recommend adding tape for security and to seal the wing joints.*
- In flight, I personally feel the new Weasel-TREK is smoother and transitions better from different flight attitudes. I prefer it's enhanced roll response, which is quicker and more axial than the EVO, allowing it to carve more intuitively from wingtip to wingtip than previous versions of the Weasel. The speed range is also very nice!