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~ Trick the Wind ~  
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## TrickTail, Tohuwabohu, & Utopia Parts - Specifications & Tuning Tips

Martin Shob's Jam Kites have been under a constant state of improvement since their introduction(s) and have had several different frames and fittings. The list below, (except where noted) is for the latest models.

### TrickTail Parts & Framing:

Part:	TrickTail Standard*	TrickTail UltraLight	TrickTail Vented
<b>Upper Leading Edge Spar</b>	<i>Dynamic 12</i> 32.5"	<i>Dynamic 12</i> 32.5"	<i>Dynamic 6mm</i> Pultruded 32.5"
<b>Lower Leading Edge Spar</b>	<i>Dynamic T-13</i> (tapered) 32.5"	<i>Dynamic T-8</i> (tapered) 32.5"	<i>Dynamic 6mm</i> Pultruded 32.5"
<b>Upper Spreader</b>	<i>Dynamic 12</i>	NONE	<i>Dynamic 6mm</i> Pultruded 32.5"
<b>Lower Spreaders</b>	<i>Dynamic 12</i> 32.5"	<i>Dynamic T-8</i> (tapered) 32.5"	<i>Dynamic 15</i> 32.5"
<b>Spine</b>	<i>Dynamic 15</i> 32.5"	<i>Dynamic T-12</i> (tapered) 32.5"	<i>Dynamic 15</i> 32.5"
<b>Stand offs</b>	See Standoff Section	See Standoff Section	See Standoff Section
<b>Upper Leading Edge Fitting</b>	<i>Dynamic 12 to Dynamic 12</i>	NONE	6mm to 6mm
<b>Lower Leading Edge Fitting</b>	<i>Dynamic T-13 to Dynamic 12</i>	T-8 to T-8	6mm to <i>Dynamic 15</i>
<b>Trick Tailspar</b>	4mm x 38cm FG	3mm x 38cm FG	4mm x 38cm FG
<b>Sail-Standoff Clip</b>	.080"	.080"	.110"
<b>Bridle Line</b>	Use Laser Pro HP 170# for direct replacement or Q-Power line 200# for minimal wear	Use Laser Pro HP 100# for direct replacement or Q-Power line 200# for minimal wear	Use Laser Pro HP 170# for direct replacement or Q-Power line 200# for minimal wear

\*Most current model, earlier versions were SkyShark 3P with optional 5P spine

### Tohuwabohu Parts & Framing:

Part:	Spar: In. / cm	Length:	Notes:
<b>Upper Leading Edge Spar</b>	.1960"		
<b>Lower Leading Edge Spar</b>	.1960"		
<b>Upper Spreader</b>	.1960"		
<b>Lower Spreaders</b>	.2300"		
<b>Spine</b>	4mm Fiberglass		
<b>Telescopic Stand Off Extensions</b>	.1960" Pultruded Carbon		
<b>Sail-Stand Off Clips (.080")</b>			

## Utopia Parts & Framing:

Part:	Spar:	Length:	Notes:
Upper Leading Edge Spar	Dynamic T-10	40 inches	
Lower Leading Edge Spar	Carbon Tube with Fiberglass core		
TailSail Spreader			
Lower Spreaders	Dynamic T-8 (First Year Models) Dynamic T-10 (Later Models)	28 inches	Center T Ferrule can use .2400" TW
MainSail Spine	3mm Fiberglass		
TailSail Spine	3mm Fiberglass		
TrickTail Spar	3mm Fiberglass		
Introductory Standoffs (longest)			
"Hi Performance" Standoffs (Mid length)			
Light Wind Standoffs (shortest)			
Sail-Stand Off Clip (.080")			
TailSail Spreader-Sail Clip (.010")			

## Standard TrickTail Specifications:

<b>Wingspan:</b>	2.34 m / 7 feet 7.5 inches
<b>Height:</b>	1.22 m / 4 feet
<b>Sail:</b>	36.5 g/m <sup>2</sup> (.5 oz) Toray Ventex Polyester
<b>Bridle:</b>	4 point slip, Spectra cored Dacron 100#
<b>Weight:</b>	255 gm / 9 oz
<b>Wind Range:</b>	5-28 kph / 3-18 mph

## Standoffs for the Standard TrickTail

**Newest** models with clip on sail fittings

Tubular extensions: 5mm / .1960" pultruded carbon, lengths as noted below

Inside:	Outside:	Application:
19cm / 7.5 inches	13.0cm / 5.1 inches	Light wind setting
19cm / 7.5 inches	14.0cm / 5.5 inches	Standard setting
19cm / 7.5 inches	14.5cm / 5.74 inches*	Precision (mid wind)
19cm / 7.5 inches	15.0cm / 5.9 inches*	Precision (high wind)

\* These are optional tuning recommendations and are not supplied with the kite.

## Standoffs for the Standard TrickTail

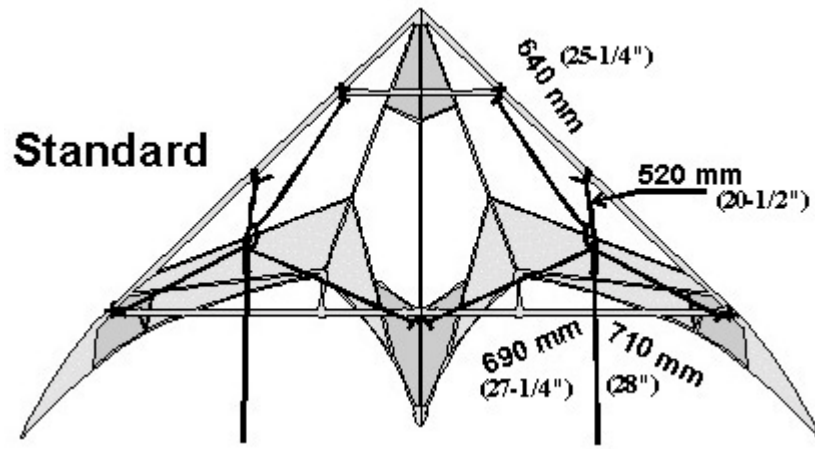
Early models prior to clip on sail fittings

Tubular extensions (5mm/.1960" pultruded carbon, lengths as noted below)

Inside	Outside	Application
20.5cm / 8.1 inches	13.0cm / 5.1 inches (Black)	Light wind setting
20.5cm / 8.1 inches	14.0cm / 5.5 inches (Red)	Standard setting
20.5cm / 8.1 inches	14.5cm / 5.74 inches*	Precision (mid wind)
20.5cm / 8.1 inches	15.0cm / 5.9 inches*	Precision (high wind)

\* These are optional tuning recommendations and are not supplied with the kite.

Standard TrickTail Bridle Settings:



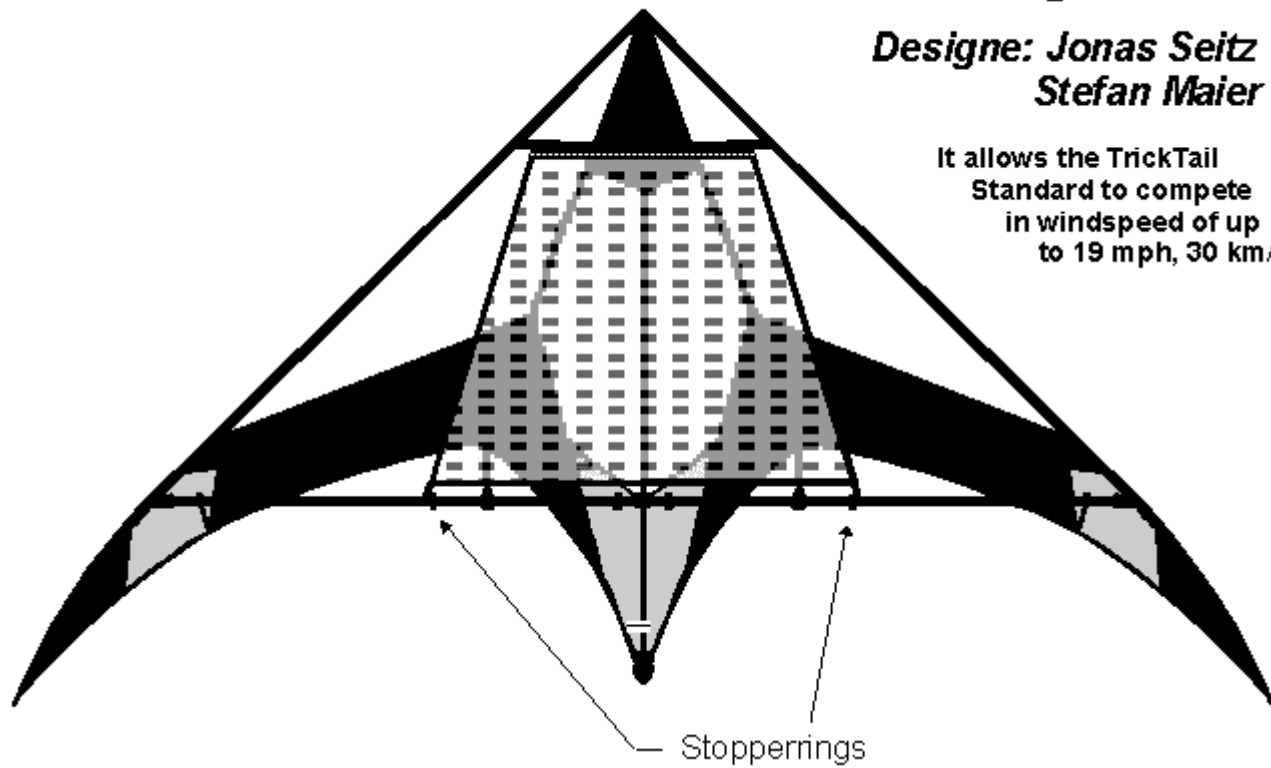
Note: Inch measurements are to the nearest 1/4"

Brake Sail for the Standard TrickTail:

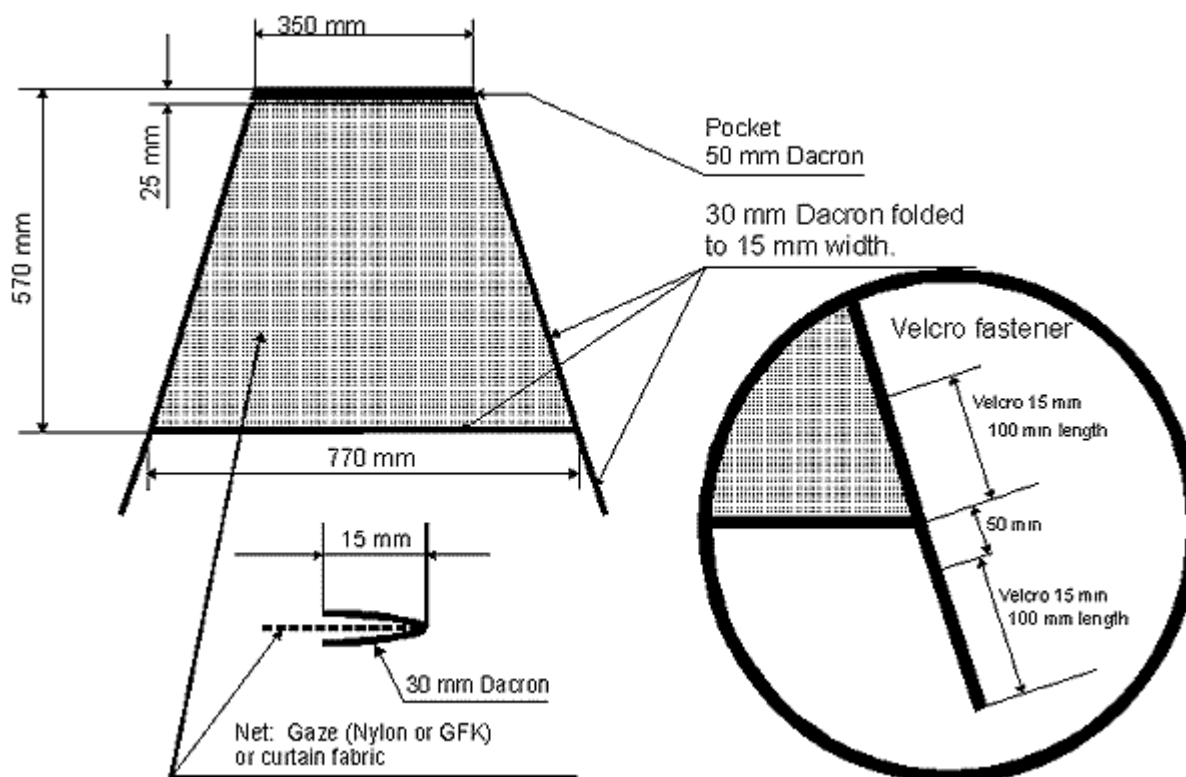
**Braking Sail**

Design: Jonas Seitz  
Stefan Maier

It allows the TrickTail Standard to compete in windspeed of up to 19 mph, 30 km/h.



Construction Details:



## UltraLight TrickTail Specifications:

Wingspan:	2.34 m / 7 feet 7.5 inches
Height:	1.22 m / 4 feet
Sail:	36.5 g/m <sup>2</sup> (.5 oz) Toray Ventex Polyester
Bridle:	4 point slip, Spectra cored Dacron 100#
Weight:	176g / 6.2oz
Wind Range:	0-12 kph / 0-7 mph

## Standoffs for the UltraLight TrickTail:

2mm /.080" carbon (lengths as noted below) with 6cm / 2.4" x 5.5mm carbon sleeves.

Note: UltraLight does not use sleeves on outer standoffs.

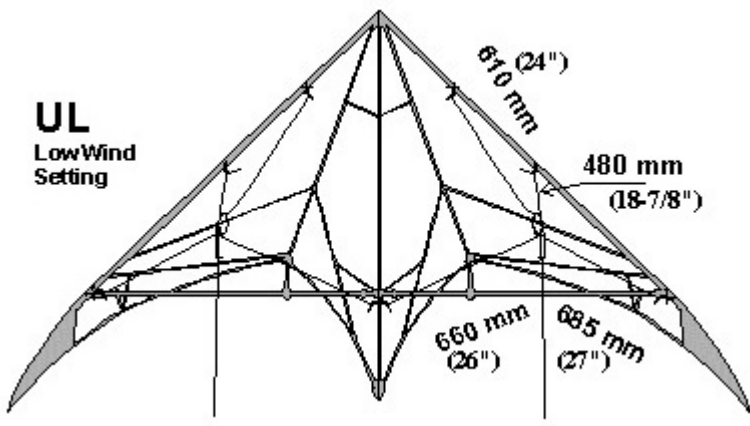
Inside:	Outside:	Application:
20.3cm / 8.0 inches	15.6cm / 6.1 inches	Standard low wind setting
20.3cm / 8.0 inches	16.4cm / 6.5 inches	Mid-wind setting
21.5cm / 8.5 inches*	13.5cm / 5.25 inches*	0-wind setting
22.5cm / 8.9 inches*	15.0cm / 5.9 inches*	Team setting with Team bridle

\* These are optional tuning recommendations and are not supplied with the kite.

## UltraLight Bridle Settings:

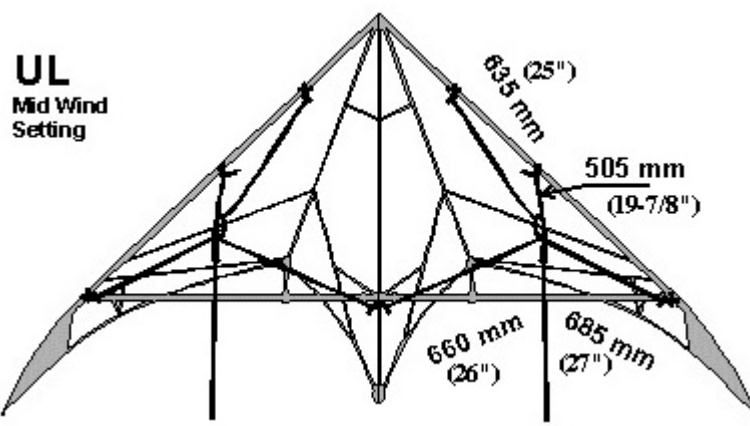
(Note: all inch measurements are to the nearest 1/4")

**UL**  
LowWind Setting



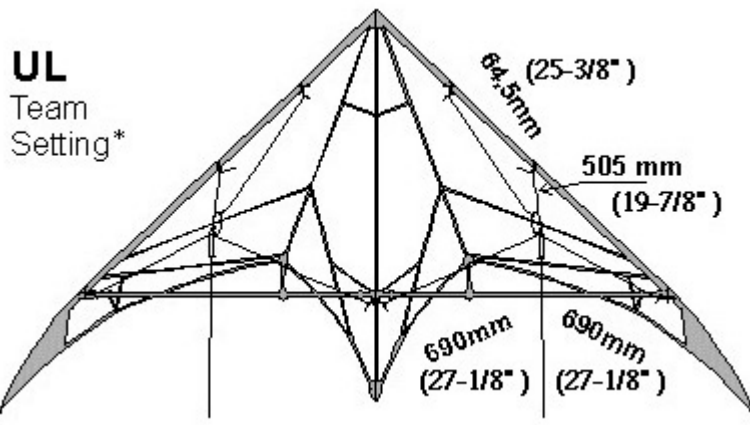
The above settings are for 0-4 MPH winds Aprox.

**UL**  
Mid Wind Setting



The above settings are for 4-7 MPH winds Aprox.

**UL**  
Team Setting\*



This bridle is to be used with the special Team stand offs listed above

## Vented TrickTail Specifications:

<b>Wingspan:</b>	2.34 m / 7 feet 7.5 inches
<b>Height:</b>	1.22 m / 4 feet
<b>Sail:</b>	.75 oz nylon / nylon mesh
<b>Bridle:</b>	4 point slip, Spectra cored Dacron 100#
<b>Weight:</b>	358 gm / 12.6 oz
<b>Wind Range:</b>	15-56 kph / 9-30 mph

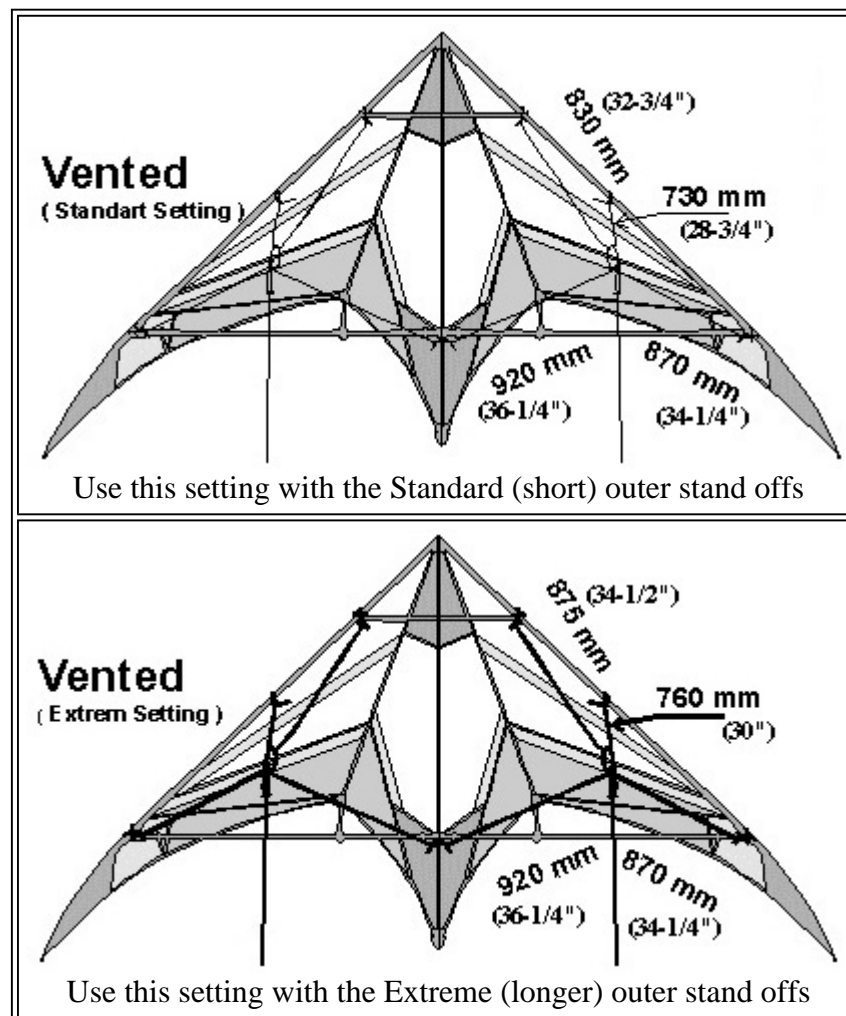
## Standoffs for the Vented TrickTail:

Tubular extensions 5mm/.1960" pultruded carbon,  
(lengths as noted below)

Inside:	Outside:	Application:
19.3cm / 7.6 inches	14.6cm / 5.75 inches	Standard setting
19.3cm / 7.6 inches	15.6cm / 6.1 inches	High wind extreme setting

## Vented TrickTail Bridle Settings:

Note: Inch measurements are to the nearest 1/4"



## Stand offs for the Tohuwabohu

Tubular telescopic extensions (all 4) 5.5mm / .2300" x 5cm / 2" pultruded carbon. Solid carbon rod stand offs are .080" (lengths as noted below)

Inside:	Outside:	Application:
14cm	10cm	Standard setting
14cm	11cm*	Optional High wind setting

\* These are optional tuning recommendations and are not supplied with the kite.

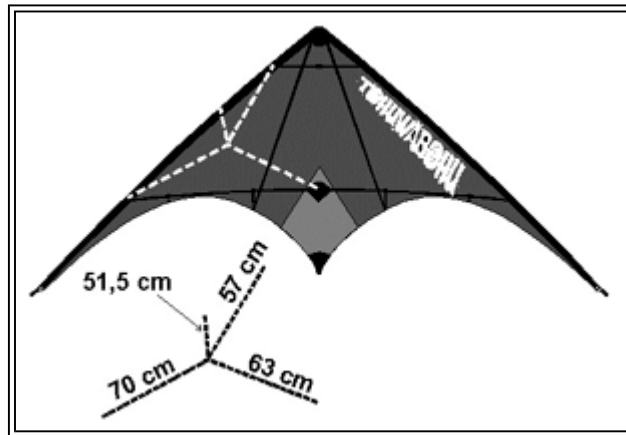
# Tohuwabohu

Specifications:

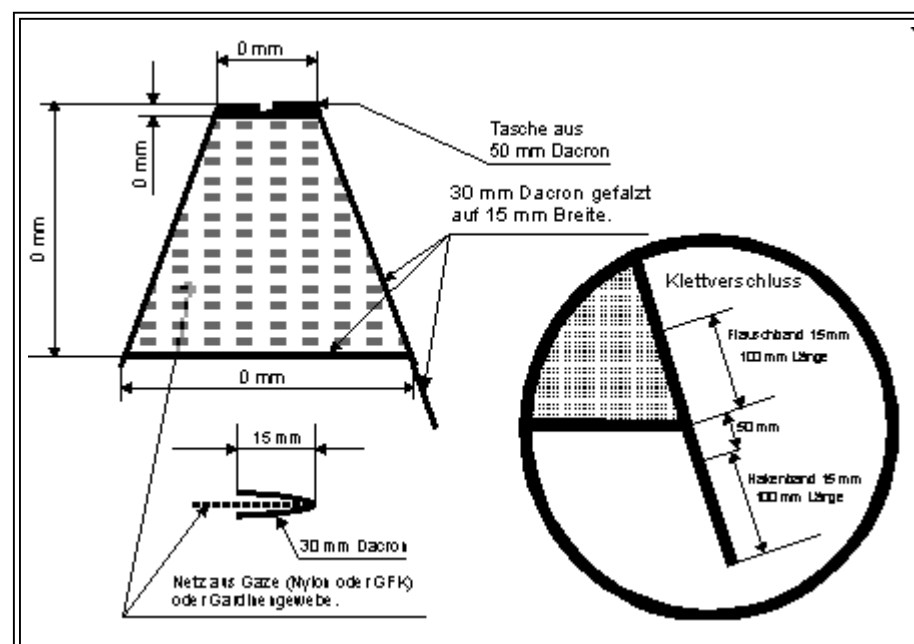
<b>Wingspan:</b>	1.82 m / 72"
<b>Height:</b>	34"
<b>Sail:</b>	.75 oz nylon
<b>Bridle:</b>	4 point slip, Kevlar cored Dacron 100#
<b>Weight:</b>	242 gm / 8.3 oz
<b>Wind Range:</b>	3-25 mph

## Tohuwabohu Bridle Settings

Note: Inch measurements are to the nearest 1/4"



## Tohuwabohu Brake Sail Plans:



## Competition Tuning System

for the TrickTail Standard, UltraLite and Tohuwabohu

The diagram shows three stages of the tuning process. 1. A spacer is being clipped onto the leading edge spar. 2. A second spacer is added, and the lower stopper ring is moved down. 3. The final setup with two spacers installed and the stopper ring repositioned.

This System allows the pilot to vary the speed and precision of the kite by moving a pair of spacers above or below the lower spreader - leading edge fittings. This changes the effective stand off lengths, the kites aspect ratio and the bridles position.

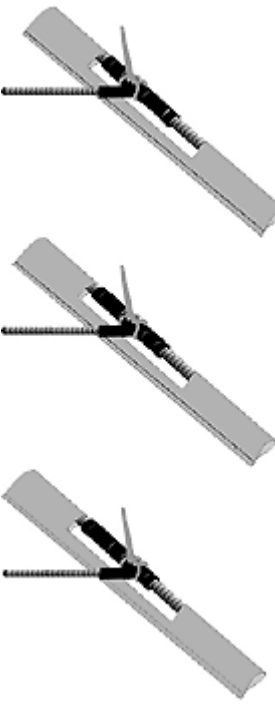
The spacers are made from air compressor hose or any fairly thin - rigid plastic tubing such as polyethylene. The internal diameter should be from 6-8mm.

Cut 4 spacers from the tubing. (2) 15mm long and (2) 30mm long. Split lengthwise so they can be clipped over the leading edge spars.

First, remove the lower stopper ring.

Clip the spacers to the leading edge below the lower spreader-leading edge fittings, then reglue the stopper ring below the spacers.





**Standard position**  
 (both spacers below LE fitting)  
 gives the best performance in the lower wind range.

**First tuning position**  
 (15mm above LE fitting, 30mm below)  
 kite flies slower and is more precise.  
 Bridle adjustment is unnecessary.

**Best Standoffs Standard: 14cm**  
 UltraLight: 15.6cm  
 (This is Martin's preferred setting for the TrickTail Standard and UltraLight)  
 Tohuwabohu: 10 or 11cm

**Second tuning position**  
 (30mm above LE fitting, 15mm below)  
 For the Standard and UltraLight TrickTails this is only to be used in the upper wind range. Makes the kite fly very slow but reduces the size of the window. Flat spins get "kind of sticky" and need more control by the pilot.  
 The bridle should be set harder, make upper bridle lines longer in 1cm steps.

**Best Standoffs-- Standard: 14cm UltraLight: 15.6cm Tohuwabohu: 10 or 11cm**

**Third tuning position**  
 (both spacers above LE fitting)  
 This makes no sense to the TrickTail Standard or UltraLight but gives the Tohuwabohu an almost TrickTail feeling, Special for the first contact with the Toh-Jam, this position makes it more forgiving.

**IMPORTANT: in this setting make a shorter upper spreader 30 cm long.** Best Standoffs for the Tohuwabohu: 11cm except for the very lightest winds.

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