

DF95 Sail Tuning

By John Bert

I have been asked many times for help setting sails for current wind conditions at the lake. My intension here is to help sailors get their rigs tuned to make their boat a little more competitive. I consider this to be a Basic Tuning Guide. It is designed for those who are new to the DragonFlite 95.

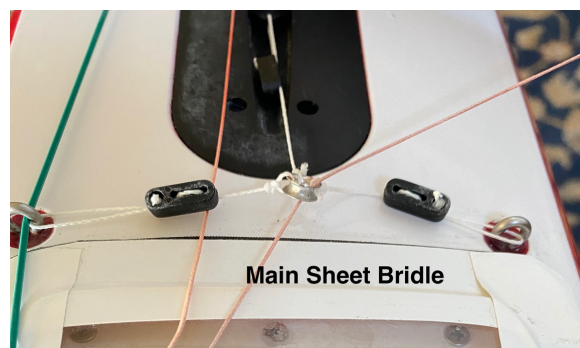
To begin look at the tuning chart. This has been out for a few years and is a great tool for tuning criteria. For those who have gone through each step with your measuring tool I commend you on your efforts. Except for the Bow to Crane measurement, I will mostly be "Eyeballing" the dimensions. Besides when you are at the lake who has the time and patience for all the measuring?

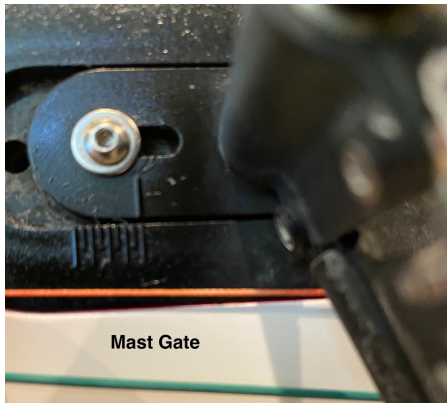
1st June 2020 DF95 TUNING GUIDE Phil Burgess - 0413 200 608 philb@psk.com.au		MAST		HEADSAIL			MAINSAIL			
		Bow Bumper-hull joint to front crane hole (mm)	Gate Position (0 at front)	Foot Depth (mm)	Boom Angle - boom to mast centre (mm)	Twist - mid leech to mast (mm)	Foot Depth (mm)	Cun'ham - downhaul pressure	Boom Angle - boom to centre line (mm)	Twist - middle batten to backstay (mm)
A	Base	1135	5	25	55	70	30	None	35	60
	Light Winds & Flat Water	1131	4	28	45	50	30	None	40	45
	Small Waves	1136	6	25	35	50	25	None	15	45
	Big Waves	1133	7	30	50	75	40	None	33	65
B	Base	980	5	30	40	45	30	Slight	20	55
	Small Waves	980	6	30	38	32	30	Slight	20	45
	Big Waves	970	4	28	50	60	30	Slight	23	70
C	Base	855	8	15	60	65	35	Firm	20	45
	Small Waves	850	8	15	40	25	20	Firm	15	45
	Big Waves	845	8	30	50	50	35	Firm	25	50
D	Base	790	8	15	60	65	35	Firm	20	45
	Small Waves	793	8	15	60	70	30	Firm	20	45

Reference the "A Rig" with the measurement Bumper Hull Joint to Front Crane Hole – 1135 mm (44.7"). Notice the range on the chart is 1131-1136. Most of the experienced sailors are using 1135. Once this is set it is not necessary to change it, you should check on occasion to be sure the measurement is correct.

Backstay Adjustment - Backstay tension should change depending on the wind speed. The lighter the wind the lighter backstay tension. Your objective is to only use enough backstay tension to prevent your headstay from whipping in stronger winds. Your backstay is too loose if your jib head stay starts whipping in a puff. **Set your backstay tension for the wind before proceeding. Each time you adjust your backstay tension you will be changing the settings for sheet position and sail twist.**

Main Sheet Bridle – Check your bridle. **It must be set to allow your boom to swing the same distance to port and starboard.** Once it is set, only make changes to keep that distance the same.

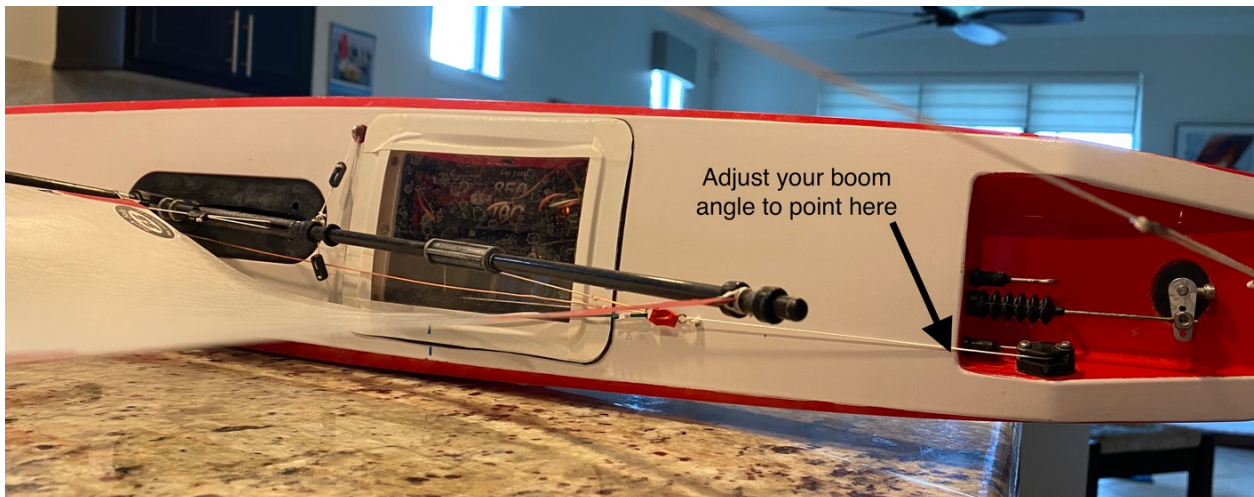




Mast Gate – this requires a small allen wrench. Your mast setting should be almost fully back 7 or 8. (Mine is all the way back - 8). For the A rig, set it and forget it.

Foot Depth – Use a couple of fingers between the main boom and the sail. Slide the rubber washers at the end of the boom to get the setting right. Do the same for the jib with slightly less distance (a finger and a half).

Boom Angle to Mast Center – I use an eyeball measurement. Bring your sheets all the way in and adjust the main boom so it is aimed at the corner of the cockpit. The boom should be aimed at the same location on the opposite tack. If it is not you need to make a Main Sheet Bridle adjustment. ***It must be the same.***



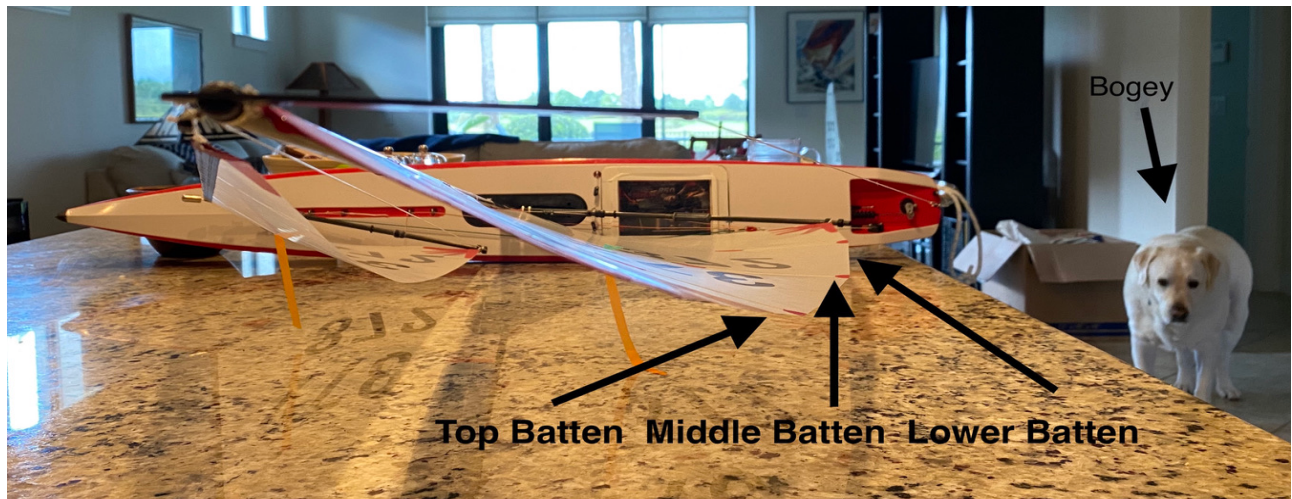
Mainsail Twist – This is about the leach (trailing edge of the sail). This normally will take a couple of adjustments using the thumb wheels on the compression strut. Twist the lock towards the mast to unlock. Twisting the aft thumb wheel towards the mast will give the main more twist, and less twist the other direction. The less twist the flatter the sail. With the boat on its side **adjust the thumb wheel so the middle batten is parallel with the ground**. The top batten will be pointing down, the bottom batten will be pointing slightly up. It looks like a lot of twist, but this is what you want. **As you adjust twist, be sure the boom remains pointed to the corner of the cockpit. It will change as you adjust your compression strut.**



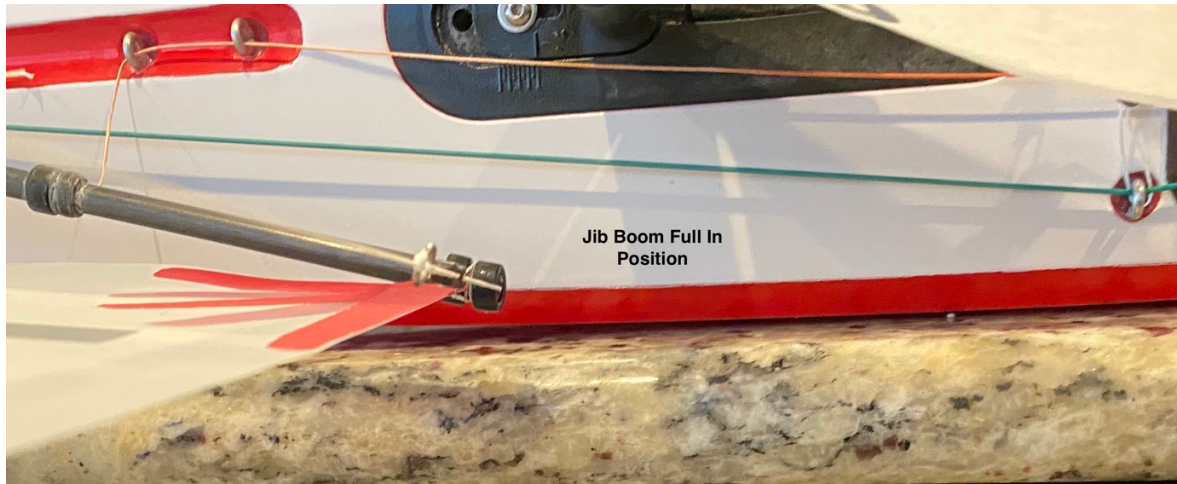
With the boom adjusted to the corner of the cockpit and your battens in the three different positions, your main is set. Twist the lock away from the mast to lock your compression strut.

Downhaul - The bowsie in the same location as your compression strut is the downhaul for your main. In light air this should be slack. With stronger winds only

slight tension.



Jib Boom Adjustment - With the sheets full in, adjust the jib sheet so the end of the boom is over the first angle of the deck.



Jib Twist - Now adjust the jib topping lift so the sail twist is matching the sail twist in the main. Making the topping lift shorter will increase sail twist, longer will flatten the sail. Each adjustment will slightly change the sheet position and making large adjustments on the topping lift will change the tension on the back stay.



Matching the jib sail twist to the main is a bit challenging. Best viewed by sheeting your sails all the way in, holding your boat by the keel and viewing the sails from behind. By moving the boat slowly back and forth your sails will fill and you can see the curve from both sails. The more you do it the more comfortable you will be with interpreting the sail twist. See the picture above with Bogey and you can compare jib twist with the main from an above view.

After your boat is tuned for the given wind conditions it should naturally seek a close hulled course on the windward leg. Now with small corrections it is your job to keep it up-to-speed.

Tuning your boat is an acquired art, and if you are in the race to be competitive, it is an art that you need to acquire. Working through these steps at first takes time, but it gets easier. After setting once - bow bumper to crane hole, mainsheet bridle and mast gate you should not need further adjustment. Your everyday adjustments will be backstay, sheet adjustment and sail twist.

Good luck my friends. See you at the lake.