

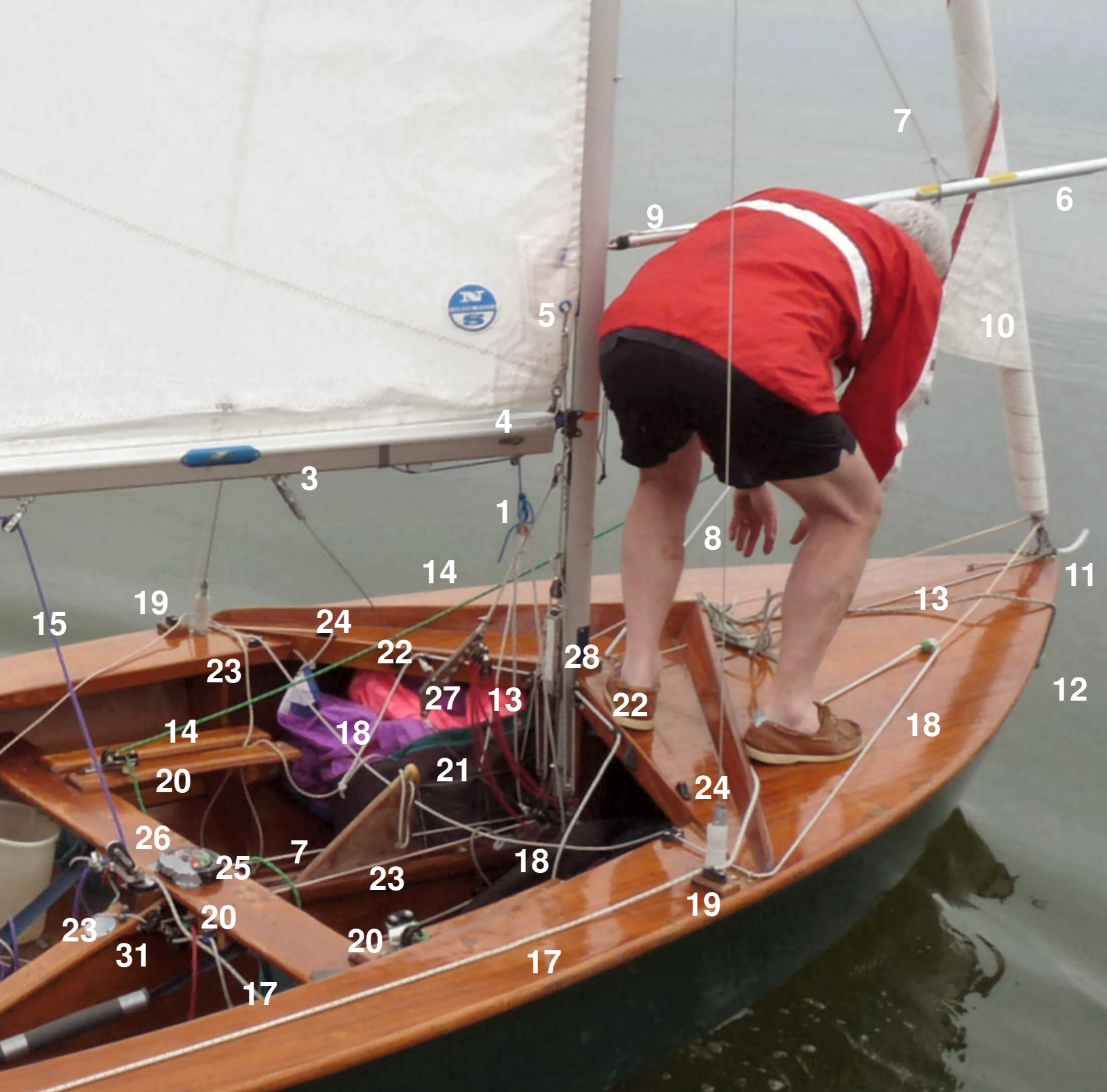
Overview of the gear on Uncle Al's beloved W3854 SHADES a.k.a. Glory Days

In this book, I use **jib** as the generic word for foresail, and distinguish between the smaller "storm" **jib** and the **genoa** only where the distinction is needed.



1. outhaul
2. spi pole "ears" (2)
3. vang/kicker attachment point on boom
4. pole downhaul storage hooks (2)
5. main cunningham hook
6. spinnaker pole
7. pole uphaul
8. pole downhaul

9. pole end fitting trip line
10. furled jib
11. spi sheet catcher
12. bow eye & painter (removed while racing)
13. jib cunningham
14. jib sheet (continuous)
15. mainsheet
16. skipper throttling preventer



17. spinnaker sheet (continuous)

18. balls system barberhauler

19. raised spi sheet cleat

20. fixed jibsheet lead with cleat angled up

21. Hans Gottschling net spinnaker bags (2)

22. main cunningham cleat

23. spinnaker halyard

24. spi halyard storage cleat

25. compass (the late, great Suunto K-16)

26. low-rise mainsheet swivel cleat

27. lever vang/kicker now upgraded to **cascade system**

28. magic box for jib halyard

29. 1964 bailing bucket from W116, my first W

30. rubber universal for extension tiller

31. spi halyard block and cleat

32. non-adjustable bridle



Fanshawe Lake in London, ON
A misty Sunday morning at
the 2013 Pumpkin Regatta

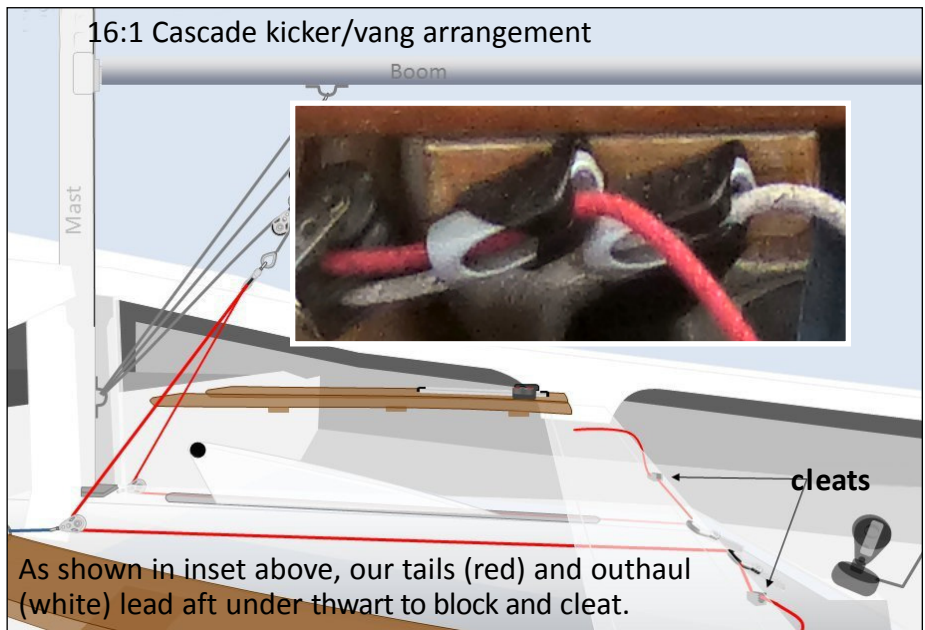
Vital Gear > Top Quality Worth Paying For

Vital #1: Powerful vang/kicker

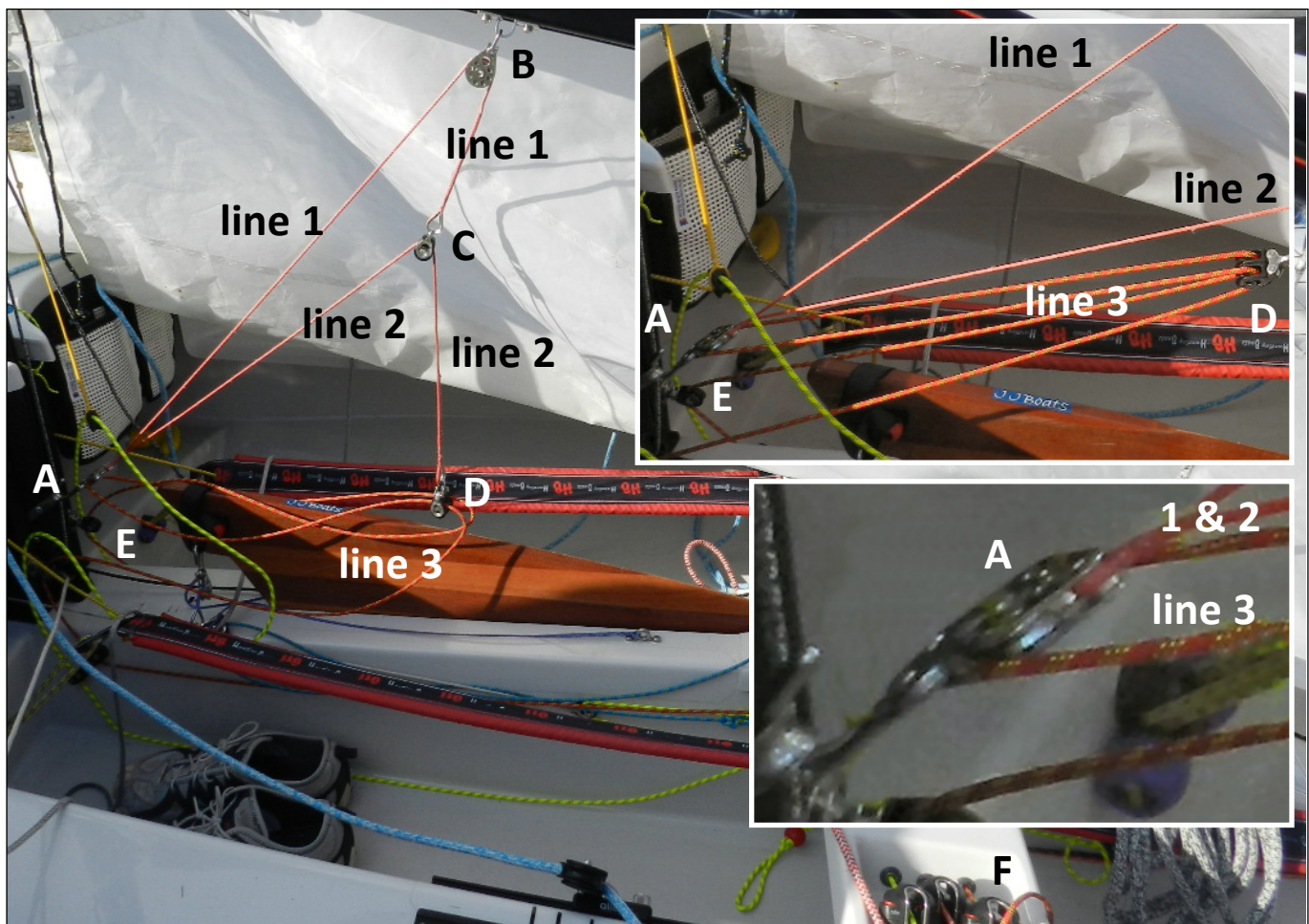
Without a powerful vang that is adjustable from both sides, by helm and crew, you cannot hope to go really well upwind when it blows. A 16:1 mechanical advantage (*r*) is adequate for a boat with a relatively large main like a Wayfarer or Rebel. My own boat still enjoys overkill: the 42:1 lever system (*p.7, #27*)

The Mark IV Cascade Vang:

Becket block A, hooked into kicker strap on the mast (*below*), has lines 1 and 2 dead-ended on its becket. Line 1 runs through block B, then ends with block C. Line 2 runs through C, then ends with double-block D. Line 3 goes through block A. Then each end of 3 goes through one of the two sheaves of D, before going forward



to one of two blocks E at mast foot. From there, each loose end runs aft along the centreboard box to a turning block under the thwart before exiting to a cleat (*F below*) on each side of the boat.





Winter 1978: My improved centreboard brake solves the problem of screws losing their grip. I use bolts (*above*) that go through the original plate and car radiator hose. The bolts then pass loosely through about 1/2" (12 mm) of the centreboard's wood into threaded holes in a fitted piece of 1/8" (3 mil) aluminum for which I made room with the slot shown above. Excess bolt length for increased adjustability is accommodated by extending the two waterproofed holes drilled into the wood about an inch past the slot.

Vital #2: Centreboard, rudder & tiller
Your centreboard, rudder and tiller should be the finest sample of the art that you can make or buy. Anything less tends to lead to frustration every time you sail. More than anything else, these items are the heart of your boat. Top drawer gear here is not just vital for racing but also an essential safety precaution.

Gudgeons, pintles, blade, head, tiller, extension and rubber universal should all be first-class. Flash!! After decades of struggling in vain to keep a snug tiller fit, I have just switched to metal rudder head and tiller to match. Already I am a complete convert. And if your foils are not yet glass-coated, safety demands that they should be.

Vital #3: Jib halyard tension

Unless you race purely for the joy of being out on the water with friends, you must have a way of tightening your jib halyard well beyond what human muscle power can achieve. The jib halyard should control your rig tension - taking over from a fairly loose forestay as soon as the jib is up. Photos and a description of the Wayfarer system of choice follow:

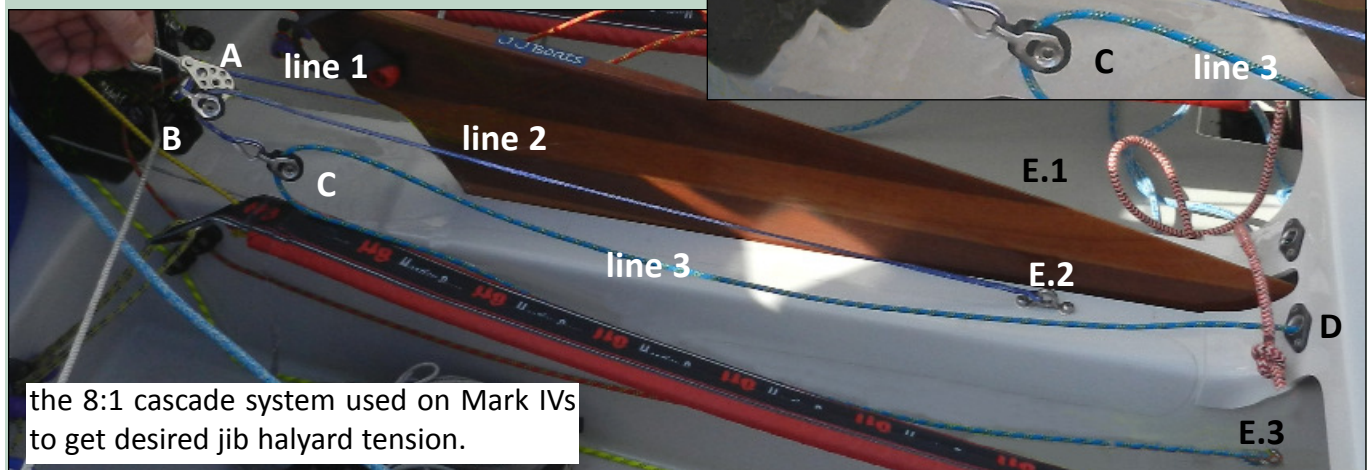
The 8:1 cascade system used to get desired jib halyard tension on the Mark IVs.

Line 1 starts at E.1 (starboard equivalent of eye strap E.2) and runs through block A which will be

hooked into the loop at the bottom end of the wire jib halyard. **Line 1** ends with block B.

Line 2 starts at eye strap E.2 and runs through block B before ending with block C.

Line 3 starts at the eye-strap E.3 and runs through block C before coming aft through the thwart at D. From there the loose end runs to a cam cleat with a becket on the aft face of the centreboard box.



the 8:1 cascade system used on Mark IVs to get desired jib halyard tension.

Vital #4: Main and jib halyard

NEW!! 2021.04.18 Warning from those who know:

Although Spectra and Dyneema ropes have less stretch and more strength than stainless steel wire, they are subject to slow stretching called “creep”. So now I will return to halyards with loaded portions of 7 X 19 stainless steel: 1/8” jib, 3/32” for main. But I may splice a foot or so of Dyneema/Spectra to the “sail end” of each halyard in order to by-pass shackles. Because hollow core dyneema is so easy to splice, I recommend



using a dyneema halyard tail as well. It is easy to do an eye (loop) splice to connect the two loops as shown above. Watch out for loop chafe though.

<https://www.youtube.com/watch?v=M9kImggLWUQ> shows how to eliminate potential slippage by using the brummel lock splice. My main and jib halyards must be fairly precise in length since they go from the sailhead to fixed hooks: on my jib halyard magic box or, in the case of my main halyard, the middle hook of five on my HA23671 halyard rack (left) which lets me use main luffs of slightly different lengths.

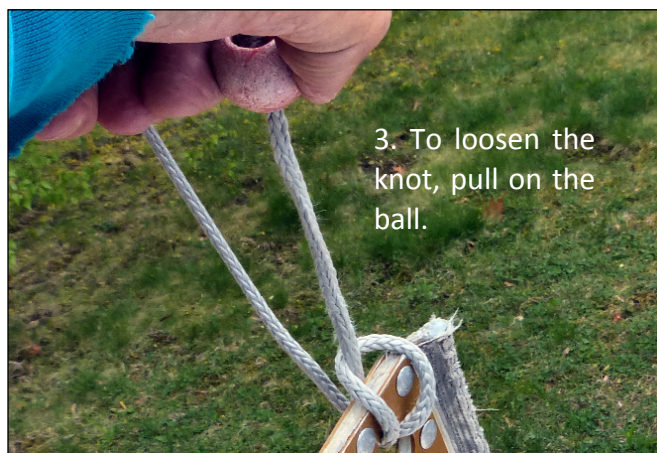
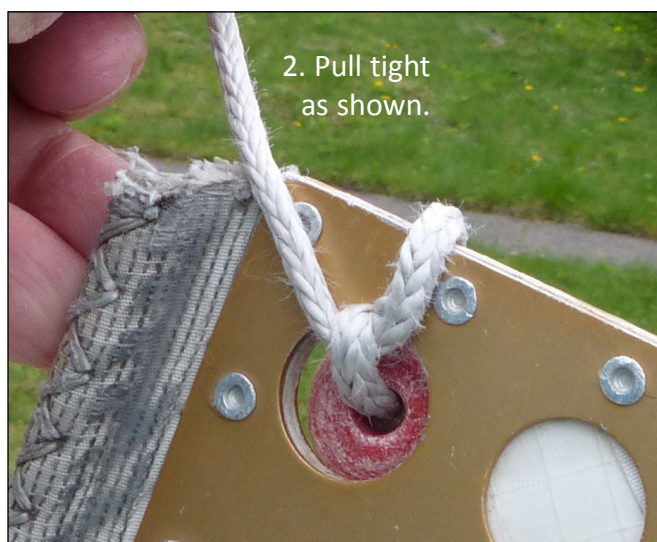
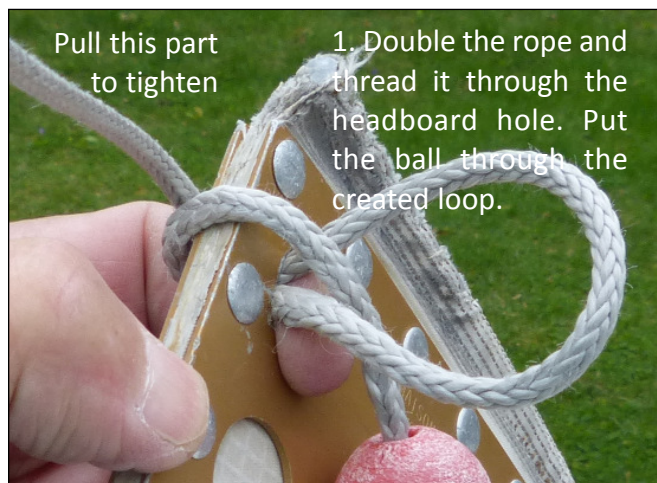


Good news: If you use the “loop and ball” approach shown on the right, it is worth making your jib halyard a few inches too long to build in adjustment options to accommodate longer or shorter luff wires on future foresails.

Flash! For 2021 I will go back to a wire jib luff wire but change from the stiff 1/8” 1 x 19 wire to halyard wire (7 x 19). Much easier to roll your jib before bagging with the more flexible 7 x 19. Fingers crossed!

A blindingly simple solution to lost shackles:

The late Ton Jaspers, a Dutch Wayfarer friend of ours, shared a fine way to do away with loop and shackle at the sailhead end of each halyard and use a ball and stopper knot instead. The halyard is attached as illustrated below.



Miscellaneous mainsail essentials

1. **battens** that fit well and live in the rolled-up sail

2. a **powerful vang/kicker** to bend the mast and de-power main upwind and to limit main twist. On a windy run this is critical. Twist makes gybing harder and dangerous. It can also cause the top of the mast to be pushed to windward which is one source of the "death roll" capsize to windward on a run.

For upwind sailing in wind strengths that require you to ease the main to keep the boat flat to avoid excessive weather helm, a well tensioned vang that keeps your top batten parallel to your boom end makes a huge difference to how well you will be able to point (*right*). We have on numerous occasions arrived at beer stops literally hours before fellow cruisers who were using far too little or no vang/kicker.

3. mainsheet **swivel cleat** set up so low that it takes conscious effort cleat the main (*below*).



Sept. 2002:

Uncle Al and son, Dave, on Lake Ontario in the Around-the-Island Race



4. a **mainsheet thin** enough to run easily through its various blocks is ample and much cheaper(*left*)

5. **outhaul**: main to black boom band in breeze

6. **cunningham** - to bring upwind sail draft back forward to mid-sail by tensioning tension the luff - easily jury-rigged, nothing high-tech needed.

7. Many cruisers see a **reefing system** as an absolute necessity, and I very much respect this. But there are viable and cheaper options. See chapter 4 (p.44).

The spinnaker and its gear

are covered in chapter 6, page 71.

Jib halyard: On W3854, I still have not gotten up the nerve to replace the jib halyard wire which loops over the same old magic box I found for \$10 in the remainder bin at Tom Taylor's 1978 going-out-of-business sale. My magic (muscle) box and halyard rack are mounted on my mast below the gooseneck where the halyards used to exit from the mainsail groove on the Proctor golden oldies. The newer masts are far better rigged with beautifully versatile exit blocks at the mast foot so that nowadays, most people just put their halyard hooks and their tensioning system along the centreboard box as shown in photos on page 10.

Vital #5: functional sheets and cleats

Cleats that work perfectly and **stay angled up (below)** are essential if you want to race well. And the right sheets (main, jib, spi) are equally vital. Most dinghy main and jib sheets that I see are obese: The maximum diameter needed on most dinghies is 6mm (1/4"). "My hands!" do I hear you cry? Well, that is why we have the functional cleats. Sailing schools may say never cleat the main but no - what is better is to always be ready to uncleat fast. Have your hand on your mainsheet and your mind on the job - especially in capsize weather! In most races, I cleat/uncleat the main hundreds of times. Ask your chandler for rope that is hands-friendly with low stretch and high resistance to wear.



Vital #6: jib leads

Chafe-resistant leads (*above*) and quality cleats are vital, but no moveable lead is needed. A fixed lead-and-cleat combination is good enough (*#20 earlier*). Since I last adjusted my jib lead position in 1992, W3854 has won 16 North American championships. I rest my case.

Why is fixed OK? Once the jib is close-hauled, the upper sail comes in far faster than the foot as you sheet in: 150 mm (6") of the upper leech per 25 mm (1") of sheet tightening on a Wayfarer. Thus it is easy to bring your entire luff to a consistent and correct angle to the wind merely by sheeting in until the telltails indicate that the upper and lower sail are both at the same angle to the wind. This works from anywhere on a normally placed jib track.

You can achieve this balance by trimming and re-trimming the jib until upper and lower (to which the helm steers) telltails show luff at the same time. However, a simpler, more fool-proof way to check this is a telltail about 3/4 up the jib leech: sheet in until the telltail is on the verge of getting sucked behind the leech. *Never further!!*

The only benefit of a movable lead would be that the bottom quarter of your jib can be made a bit flatter/fuller by sheeting from further aft or further forward. I have tried this type of adjusting but was unable to detect any performance difference. More details in chapter 5, p. 59.



Vital #7: pin shroud adjusters

Use these adjusters (*above*) to connect shrouds to the hull. Turnbuckles/bottlescrews are dangerous, being prone to sheering off without warning after repeated contact with docks, etc. Or they will work themselves loose and fall apart unless properly secured with wire or duct tape. Shroud plates also make shroud length adjustment simpler. Moving the pin one hole on our boat (*above*) decreases/increases masthead-to-transom rake measurement by 10 cm (4"). With the more high tech two-holer (*inset above*), a diagonal move reduces that change in rake to 5 cm (2"). So, do yourself a favour and lose the turnbuckles. You'll never, ever regret it.



Hermit Island, Aug. 2014:
The Rally fleet returns from
the lobster place, *Holbrook's*.

1 Boat Set-up and Gear

I Sail a Working Man's Dinghy

"This sh*t box won three races!!?" was the critique overheard by my crew, Erik Yeo (*below*), during the 1971 Canadian Wayfarer Nationals at the Kingston YC. As Erik approached, three fairly hot U.S. sailors were checking out our boat which had won the day's three races.



In my early Wayfarer years, I became adept at jury rigging, because I tended to have cheap gear that often broke down. It was not until 72-75 in tippy Fireballs that I discovered the joys control lines that run efficiently to both sides - a necessity on a performance boat like the Fireball.

In 1975, I bought a new Wayfarer, a composite Mark II, built for me by Gene Smyers of Avon Sailboats in Michigan. Inspired by the Fireball rig controls, W4000 became the best-rigged North American Wayfarer of its time. Sadly *Beaver Blues* weighed 50+ lbs over minimum and after three semi-successful seasons, I sold her and went back to wood, W3854 which I bought for \$3000 from Ron Gillespie at the end of the 1977 season.

As Class Coach (1979 >), I tried to simplify things for my students, and I started a more or less non-profit rigging business, installing gear that made good racing easier, especially for weaker crews. Few of my fellow Wayfarers are as wild about racing as I am. This leads me to keep my advice in the KISS (Keep It Simple, Sailor) category, and my rigging recommendations as well. The dinghy sailors I know tend not to be rolling in money, so I still try - where possible - to recommend gear options that avoid needless expense.

If you have the Rolls-Royce of Wayfarers, the Mark IV with all imaginable "bells and whistles", you won't need my A and B lists below. The current (5th) *Wayfarer Book* does a fine job of describing available go-fasts, and my contribution will be to rate their importance to a racer below:

the A list: Crucial: Items worth money and effort to get more quality and less frustration:

1. top flight, strong **centreboard, rudder & tiller**
2. powerful **vang/kicker & jib halyard tension set-up**: cascade system gives these at modest cost
3. reliable **main and jib halyard** - enough said
4. functional **sheets, sheet cleats** plus **durable jib sheet fairleads** and **mainsheet swivel block**
5. if you race with a **spinnaker**, go first-class with all spi rigging; likewise if **furling gear** is in your plans, I recommend the *Aero Luffspar* system
6. use **shroud adjusting plates** not turnbuckles
7. **compass; hiking straps; spinnaker bags**
8. **buoyancy compartments** which at least meet the requirements imposed by the wet test required by Class Rule 34.8
9. a large **bailing bucket** that is firmly tied to the boat



the B list: anything functional will do:

1. **outhaul, main and jib cunninghams, bridle**
2. **jib lead position**: a non-adjustable lead-and-cleat combination is enough (*photo p.7 #20*) - place the lead more or less where an imaginary line from half-luff through the clew would meet the surface on which the lead will be located but is OK to be moved for better crew comfort

Lesser items where top quality is not so crucial

Our jib cunningham is dead-ended through an eye-strap, runs up through the jib-tack grommet, back down through a microblock and aft to its cleat inside the splashboards (*inset*).



cunninghams

Even when racing, we use our **jib cunningham** only to keep the luff from riding too far up the luff wire. I also find that easing the cunningham on runs lets the tack of the jib set better.

Our **main cunningham** is set up for the crew to adjust from either side - see two-page spread pages 6-7. It is for upwind work only. It needs to be let off at or before the windward mark, then re-set near the leeward mark.

outhaul

I have a nice outhaul that is adjustable from both sides but rarely have the time, desire or need to adjust it. A very low priority item for me.

compass

A **compass** is vital for racing on open water. I love the thwart-mounted *Suunto K-16* (p.7 #25) but it is regrettably out of production.

Most of the keen racers whom I know are now using the rather costly *TackTick*, a mast-mounted electronic compass that doubles as their stop watch. It can do even more, but Wayfarer Class Rules permit no use of electronics while racing except for timers, compass and digital cameras. Cell phones are permitted but not the in-race use of their GPS capability.

hiking straps

You need reliable foot-friendly **hiking straps** that are set up not to drop you into the water if your crew stops hiking, i.e. fixed under the thwart.

storage bags

On *SHADES*, we'd be lost without our fabulous Hans Gottschling net **spinnaker bags** (p.7 #21) and their side pockets under both sides of the bow deck. They hold everything from spare clothes to beer - even the spinnaker at times.



The little storage bags (*above*) under the thwart are a very useful idea I picked up in Denmark. Julia made me two and got rid of an old sail bag from the garage in the process.

The bridle has replaced the traveller!

The transom traveller on Wayfarers has mostly been replaced by the bridle. Today's vang can easily give you all the boom down-pull for which the



traveller used to be useful. In terms of the sheer importance of the benefits it brings, the bridle belongs right up there with the items that I just classified as vital a few pages back. But it can be rudimentary and cheap (*below*).

The bridle moves the transom block that was on the traveller much closer to the boom. The more we bring these two blocks together, the easier it becomes to centre the boom for optimum pointing without undue downward pressure on the main leech. But the transom block must not be so

high that it can meet the boom block too easily. Because the mainsheet needs to be able to add leech tension as desired for top pointing. If a bridle is too long the vang **could** be used to get required leech tension, but with the too-long bridle, you can then no longer centre the boom.

The Hartley W (*left*) comes with the ultimate in adjustable bridles. But for me that would just be a potential distraction from more important matters. An inexpensive fixed bridle is enough: low stretch rope with your former traveller block fixed in its middle. Then you fasten the loose ends to the corners of your transom.

Length? Make the rope too long to start with to give yourself room to experiment. But do end up with the bridle "legs" short enough so that it will be nearly impossible to sheet block to block. You point on your main leech and its tension, i.e. the more leech tension you can usefully add, the better your distance made good to windward. To achieve optimum results, Marc and I used a fixed length that would grudgingly go block to block when we were both hiked out (*bottom*). If we were both sitting on the high side without the need to lean out, we had about 25 mm (1") between the blocks, 50 mm (2") if the crew was only sitting on the windward bench.

The wire bridle below chewed too much wood so we have lately switched to two equal-length pieces of 3mm Spectra with eye splices at both ends.

