

Making the Inland Cat Go

By Jack Stiefel, revised 8/13/08

A primary concern of the competitive sailor is boat speed. Much has been spoken and written about this elusive subject. This brief summary of my experiences with Inland Cat #152 and the Lake George Fleet is intended to spare the beginning or struggling sailor some of the trial and error that frequently leads to unnecessary frustration. Keep in mind that these are only one person's conclusions, arrived at in a boat with a very stiff mast with diamond spreader and a 1994 Boston/Doyle sail. Additionally, my total crew weight is usually about 260 pounds.

My boat is equipped with a boomvang with 4-to-1 advantage, a wind indicator, hiking straps, a tiller extension, an easily adjusted outhaul line, and a cunningham (in estimated order of importance). During the sailing season Inland Cat #152 is always available for inspection if you want to get rigging ideas. "Go fast" equipment can be added as your energy and bank account allow, but a boomvang is a device you shouldn't do without for safety purposes. A mast adjustment as close to vertical fore and aft as well as side to side seems to work best for me. I prefer the shroud/forestay tensioning to be taut, not tight.

A clean hull is imperative, especially in light wind. Softscrub does a good job of cleaning a hull. If the hull surface is rough or weathered, it can be sanded with 400 or 600 grit wet-and-dry sandpaper. Once the surface is clean and smooth, I recommend applying boat polish with Teflon; Starbright brand is available through marine supply catalogs and usually at Clear Lake Marina. An annual application of boat polish with Teflon provides a fast surface that stays clean longer.

A real drag on boat speed is the presence of weeds hanging onto the centerboard or rudder. Although this doesn't happen often, it can really slow you down. Especially on a beat when the centerboard is vertical, if you experience a decrease in boat speed relative to other boats, you may have a nasty collection of weeds. Raising the centerboard halfway or more for a brief period and then again lowering it will clear the board of weeds.

A few words about rope: select it carefully because it makes a difference.

- For comfort as well as maximum performance, I recommend having two sheets. For light air, a 3/16" line is helpful for sensitive and rapid trimming of the sail. For moderate and heavy air, a 5/16" or 3/8" sheet is best. I recommend rope with a soft feel for the sheet. Regatta Braid by New England Ropes or Mattbraid by Marlow* work well.
- For the outhaul and cunningham, 3/16" line works well. For the centerboard and boomvang, 1/4" line is ideal.
- Different color lines are helpful for the boomvang, outhaul, cunningham, and centerboard. Colored line eases communication with your crew about which line you want adjusted. Sta-set Braid by New England Ropes or Marlowbraid by Marlow are good solid lines.
- When replacing your halyard, be sure to get a 1/4" low stretch rope like Marlowbraid by Marlow or Sta-set X Yacht Braid by New England Ropes.
- Needed lengths are:

halyard	52 ft.	cunningham	16 ft.
centerboard	16 ft.	outhaul	12 ft.
boomvang (4:1)	14 ft.	sheet	38 ft.

*Marlow brand of cordage is available at APS, 1-800-729-9767, APSLTD.com

New England brand of cordage is available at West Marine, 1-800-262-8464, westmarine.com
The major adjustments to lines that need to be made before and while racing will be quicker and more reliable if you mark your settings. Specifically, the centerboard line should be marked at regular intervals (mine is in fifths). Small diameter yarn of various colors sewn into the line works well. “Permanent” markers can be used, but they tend to bleed and fade quickly. Be sure you check the centerboard under water before marking the “full down” position. Mark the line or make a knot in it indicating the point at which the board is vertical, not forward of vertical. Marking your outhaul line with yarn will help also. A grease pencil, permanent marker, or tape is useful for marking the mast and boom for downhaul and outhaul adjustments. Yarn sewn into the sheet gives a quick reference for where to tie a figure-eight knot to allow the boom to play out just to the shroud (on a run) and no farther.

Now that your boat is ready, your attention can turn to sailing and adjusting your boat’s lines. Boat preparation is certainly critical to success, but unless you know your boat, how it feels, what it’s capable of, and how to get it to respond to all sorts of conditions, you won’t get the most speed from your Inland Cat. To do that, you have to sail, sail, and sail some more—in all sorts of conditions. Don’t shy away from heavy winds or hot, light air days when the power boat chop makes going slow. If you sail only in “comfortable” conditions, you’ll race well only in those conditions. The more you learn, the more fun sailing is, especially competitive sailing.

The importance of a good crew for maximizing boat speed can’t be overemphasized. Big gains can be made when your crew moves smoothly, is sensitive to boat balance, and is observant of wind shifts, areas of better wind on the lake, and approaching puffs and waves. A skipper whose crew has warned of approaching waves can frequently steer through them obliquely rather than head on and thus minimize loss of boat speed. A good crew also provides useful information by reporting the location of other boats. With an observant and communicative crew, the skipper is free to concentrate on steering and sail trim. The effective skipper spends 95% of his/her time watching the wind indicator and sails. Only with a good crew is this possible. An effort to cultivate such a partner will be time well spent.

The finer elements of steering and sail trim is a subject best left to other writings and for you to develop through experience. On the following page, however, I have laid out some suggestions for sail trim and boat balance that should set you on the path to building good boat speed. But little is of more importance in this area than actual time on the water. Try to line up a “buddy sail” with a successful sailor and do some parallel sailing to compare boat speed. Or crew for an “Old Salt” during a practice sail or a race and carefully observe steering and sail trim techniques.

Before you explore the “go fast” chart on the next page, be aware that going fast is not always in your best interest when employing good tactics in a sailboat race. It is also important for you to know how to SLOW your boat. When sailing upwind, you can slow down by easing your sail so that it luffs. Steering closer to the wind will also make the sail luff and slow you down. But when you sail downwind, on a broad reach or a run, easing the sail will NOT slow you down. Then you must either pull the sail in to decrease the surface exposed to the wind or steer a series of S’s to increase the distance sailed.

Now, let’s take a look at some of those “go fast” adjustments and settings:

	CLOSE-HAULED	REACHING	RUNNING
LIGHT WIND 4-7 mph	downhaul eased cunningham slack outhaul eased boomvang eased centerboard full 5/5 sheet eased slightly; boom off corner rudder up or ½ down heel: 10°-15° to leeward	downhaul eased cunningham slack outhaul eased boomvang tight centerboard 1/5* sheet eased; sail on verge of luffing rudder up or ½ down heel: flat to 10° to leeward	downhaul eased cunningham slack outhaul eased boomvang tight centerboard 1/5* sheet eased; boom to shroud rudder up or ½ down heel: flat to 10° to leeward
MODERATE WIND 8-12 mph	downhaul taut cunningham taut outhaul taut boomvang eased centerboard full 5/5 sheet close-hauled; boom at corner** rudder down heel: flat	downhaul taut cunningham slack outhaul eased boomvang tight centerboard 1/5* sheet eased; sail on verge of luffing rudder down heel: flat***	downhaul taut cunningham slack outhaul eased boomvang tight centerboard 1/5* sheet eased; boom to shroud rudder down heel: flat***
HEAVY WIND 13 mph & up	downhaul tight cunningham tight outhaul tight boomvang eased centerboard full 5/5 sheet close-hauled; boom at corner** rudder down heel: flat as possible; hike hard just prior to puffs	downhaul tight cunningham slack outhaul eased boomvang tight centerboard 1/5* sheet eased; sail on verge of luffing rudder down heel: flat***	downhaul tight cunningham slack outhaul eased boomvang tight centerboard 2/5* sheet eased; boom to shroud (except to slow down or depower, pull sheet in) rudder down heel: flat***

* unless more is needed for maneuverability or to sail higher; 2/5 is recommended for most jibes.

** when overpowered, slack sheet slightly so more of the sail luffs, and then sheet in when wind lightens.

*** heel slightly to windward to prevent unwanted weather helm.

Definitions:

slack no tension

eased very slight tension; with reference to downhaul and outhaul, sail should show slight wrinkles at luff and foot

taut moderate tension; with reference to downhaul and outhaul, sail should show no or very slight wrinkles at luff and foot

tight significant tension; with reference to downhaul and outhaul, sail should be stretched and show no wrinkles