














































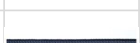


















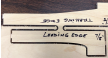







Hardware				
QTY	ITEM	PHOTO	INSTALLATION	UOM
1	Perko 2" Horn Oarlock (drilled w/ lanyard hole)		used at both stations [1]	pr
12	Heading twine, Gold		tying off oarlocks [2]	ft
2	Perko Top Mount sockets Br (#10 screws)		two rowing stations [3]	pr
8	SB wood #10x1" OH slot		oar lock sockets [4]	ea
1	Bow eye 3/8 x 6" Brz		trailer strap	ea
1	Davey bow chock handed lipped 4"		bow fairleads [5]	pr
1	Drain plug garboard (#8 fastener)		drain plug [6]	ea
3	SB wood screw #8 x 5/8 FH slot		drain plug [7]	ea
1	Elastomeric marine sealant 3oz tube wht		bedding compound for hardware [8]	ea
24	Brz half-oval 5/8" predrilled and c-sunk		req. before turn over, see break down in notes [9]	ft
1	SB wood #6 x 1/2 OH slot		half oval screws	box
1	Br strap eye 5/16" pair (#8 fastener)		Lashing gear	pr
4	Brass wood screw FH slot 8 x 3/4"		for small Brz strap eyes	ea
6	SB wood #8x1" OH slot		bow chocks	ea
2	S2 2-hole vertical gudgeon		rudder mounted [10]	ea
2	S2 3-hole transom pintle		transom mounted [11]	ea
1	SS rudder retaining clip		rudder	ea
10	Brz Mach Screw #10-24 x 2" FH		rudder gudgeons and pintles [12]	ea
10	Brz hex nut #10-24		rudder gudgeons and pintles	ea
4	Brz flat washer #10		rudder gudgeons	ea
6	Fender Washer Brz #10" x 1"		transom pintles	ea
1	5" Nylon cleat 3/8" max, #10x2" screw		halyard cleat on starboard side of mast	ea
1	6" Nylon cleat 3/8" max, #12x2.5" screw		mainsheet cleat on aft bulkhead	ea
2	SS #12 x 2.5" FH wood screw (phil)		screws for mainsheet cleat	ea
1	Ronstan Ser. 30 cheek RF35151		tack/downhaul mounted to CB case [13]	ea

1	Harken 16mm fairlead (req. 1/4" PH)		halyard, bolted to mast head	ea
2	22mm single BB block for 1/4" line		halyard, lashed to yard; tack line, lashed to stem	ea
1	Lg Cam cleat (6-14mm line), req. #8 fastener		tack/downhaul mounted to CB case [14]	ea
1	38mm SS eye strap (fits Lg C-cleat, use PH screw)		Mounts to top of C-cleat [15]	ea
1	WHD 61114 fixed eye block w/ becket (rec. 1/4" line)		downhaul/tack along CB case [16]	ea
2	tapping screw S/S OH phil #10x2"		5" nylon cleat (halyard) [17]	ea
2	tapping screw S/S FH sqdr #8x 2"		cam cleat/cheek block to CB trunk [18]	ea
2	1/4 x 3.5" PH SS mach screws		Bolt down fairlead at masthead	ea
2	S/S 1/4" lock nut		Cheek block at masthead	ea
2	S/S 1/4" fender washer 1"		Cheek block at masthead	ea
2	1/8" Brass flat stock 1", cut and predrilled		mast partner/gate [19]	pr
5	1/4 x 2.5" RH brass machine screw		mast partner/gate [20]	ea
5	Brz hex nut 1/4"			ea
5	Brz flat washer 1/4"			ea
1	1/4" x 2" QR pin 316 SS		gate quick release [21]	ea
2	Nylon flat washer, 1/4"		pivot bolts on gate	ea
1	Brass tubing, 5/16" OD, 1/4" ID, precut		bushing for pivot bolt on gate [22]	ea
36	5/16" Novabraid XLE performer - polyester Dbl braid		low stretch halyard	ft
20	1/4" Novabraid XLE performer - polyester Dbl braid		Tack or downhaul purchase	ft
10	1/4" Classic 3-strand Polyester Line		Rudder hoisting line	ft
46	3/16" Classic 3-strand Polyester Line		Sail lashing on yard, reef points, Protection and small lashings	ft
7	3/8" Shockcord black tracer		CB shockcord	ft
6	5/16" Shockcord, black (8mm)		rudder hold down cord	ft
1	G10 Rod, 5/8" Diameter - precut		centerboard pin - 1.5" long [23]	ea
0.5	Brz solid rod 1/2", 1' length		stem head	length
1	Elastomeric marine sealant 3oz tube wht		bedding hardware	ea

14	1/4" bolts for jig w/ nuts and washers		fasteners to hold bulkheads to chipboard	ea
Rigging for Lug/yawl				
1	Ilur mizzen partner Brass			ea
1	3" Nylon cleat 5/16" max, #8x1.5" screw		snotter cleat on sprit boom [24]	ea
2	SS #8 x 1-1/2" OH wood screw (slot)		snotter cleat on sprit boom	ea
1	38mm single composite block		mainsheet block on traveller [25]	ea
1	57mm Single ratchet block w/ becket		mainsheet on clew of sail [26]	ea
1	WHD 61114 fixed eye block w/ becket (rec. 1/4" line)		snotter block lashed to mast [27]	ea
30	3/16" Classic 3-strand Polyester Line		mizzen corner lashings and luff lacing [28]	ft
30	1/4" Classic 3-strand Polyester Line		mizzen sheet and snotter	ft
36	3/8" Novabraid XLE - EZ Feel - polyester dbl braid		mainsheet	ft
1	Sm Cam cleat (3-6mm), req. #8 fastener		mizzen sheet [29]	ea
1	Rope wire lead for sm. c-cleat (use FH screw)		cam cleat for mizzen sheet	ea
2	S/S #8x1.75" mach screw FH slot		mizzen sheet cleat	ea
2	SS #8 lock nut		mizzen sheet cleat	ea
2	#8 SS oversized washer 0.75" OD		mizzen sheet cleat	ea
0.5	Br strap eye 5/16" pair (#8 fastener)		mizzen sail tack line mounted on seat [30]	pr
2	Brass wood screw FH slot 8 x 3/4"		screws for small Brz strap eye	ea
2	Hardwood thumb cleat for spars		for spits	ea
1	Templates for shaping foils		template for shaping 18mm ply rudder/CB	ea
Balance Lug				
45	3/8" Classic 3-strand Polyester Line		mainsheet	ft
4	40mm Carbo Air® Single Block, Fixed		mainsheet blocks	ea
1	40mm Harken ratchet block		mainsheet lead on CB trunk	ea

1	Orbit block stand up base		to attach ratchet block	ea
Sloop version				
			jib fairleads (sloop)	
1	WHD 61113 fixed 5/16" eye block (rec. 1/4" line)		downhaul, lashed to mast	
Upgrades				
1	Brz mast traveller, 90mm mast diam, leathered			ea

- [1] An 1/8" hole has been drilled for tying off the lanyard. A figure 8 knot is all you need. The bottom nub of the shaft also has a hole for tying off but this is not as user friendly. We cut these right off our oarlocks!
- [2] Oarlock lanyard should be tied off to the boat, usually a strap eye fastened to somewhere around the seats.
- [3] It is very important to properly drill for these screws. For a #10 Brz screw going into hardwood gunwales, the predrill size should be 1/8" min with the very top of the hole drilled to 3/16" for shank.
- [4] Use a predrill bit of 7/64" and a touch of wax so the screw winds in. A shallow 5/32" hole may be needed for the shank.
- [5] Be aware that these chocks are handed, so be sure the port one is on the port side, and starboard one is on starboard. They mount directly to gunwale.
- [6] The drain plug installed at the lowest point in the boat, through the bottom. Usually, on the bottom, under middle seat. Fasten with 3- #8 screws and the sealant tape to create the seal.
- [7] Also wrap a bit of sealant tape around the threads to waterproof the screw.
- [8] A sticky, waterproof tape that creates a great seal for hardware.
- [9] Bow to CB trunk 1 piece @ 69"
CB trunk to transom 1 pc @ 71"
(Above cuts = just under
12')
Along CB trunk 2 pcs @ 44" = 3'8"
which can be 1/2" half oval
- Optional
Bilge keels 2 @ 42 1/2" = 3'6 1/2"
- [10] Use small washers
- [11] Use fender washers.
Note, the one with the shorter pintle goes on top.
- [12] Use blue thread lock and peen over ends of screws
- [13] Bolt to very top of mast on aft side.
A flat area can be planed into the mast to receive block.
- [14] Fastened to aft edge of trunk into end post with #8 x 2" screws.
- [15] Keeps downhaul line next to cleat
- [16] For CB trunk downhaul, see plans: the downhaul comes aft and ties to becket.
- [17] It is very important to get good thread engagement with the Spruce for these screws. Use a 7/64" bit and dry fit. It is recommended to bed the screw thread with epoxy.
- [18] Use a 7/64" drill bit for pilot hole. If screws is tight to wind in, use wax on threads.
- [19] These straps are bolted to the partner/tanktop with 1/4" round head (RH) machine screws.
- [20] It is important that the holes for these bolts through the partner are drilled dead square to the partner/tanktop otherwise it will be difficult to thread the bolts all the way through without reaming out the

holes.

[21] Use a lanyard to tie pin off to boat

[22] Installs through the hinged side of partner gate to reinforce hole and make the hinge smoother

[23] Pin is glued into centerboard and coated with graphite epoxy

[24] Place cleat not too far aft of snotters so that it can be reached when sailing

[25] Traveller lines go through strap on block, orient sheave fore/aft

[26] Ratchet mechanism can be turned off for light air sailing.

Mainsheet ties to becket w/ a bowline then passes through sheave on fixed block (on traveler) then goes back up to clew, passes through ratchet sheave, then down to helmsman.

[27] Lash to mast with a cow hitch and 3/16" line

[28] RSS sails come with lacing. This 3-strand is a bit classier and stouter. Either will do the job.

[29] Fastened to aft seat top with machine screws

[30] Used to lash the tack of the mizzen sail down to deck