JANGADA

The journey is the destination…

CREW HANDBOOK

Hey… we're going sailing!!! Jangada is, after all, a sailboat. Sailing can be slow, easy and relaxing or very fast and exciting. When the wind comes up things can happen quickly and the crew (you) need to be able to respond with a certain degree of speed and efficiency.

Some of this will seem very obvious, some will seem quite confusing and overwhelming. Don't worry – if it was all that difficult Columbus wouldn't have discovered Wyoming and we'd all still be living in igloos.

To this end I've put together a list of procedures and terms that you should be familiar with. No need to memorize anything, just get an idea of the sequence for doing our normal activities.

As with any group situation there are a few things to keep in mind. If you make a mess, clean it up. If you break something, tell the captain (whether you fix it yourself or not). Keep your personal belongings stowed and out of the way. Be courteous and respectful of others on board (late-night noise, long sessions in the head, lounging while others are working, etc.) Common sense goes a long way to making life on board easy and fun.

If you leave the boat for any reason make sure someone knows where you are and when you are planning to return. You can always take one of the small handheld radios with you to let someone know a change of plans.

One very important thing on a boat: if you don't know how to operate something (a winch, the toilet, electronics, anchor windlass, whatever), ASK. If you're not sure what a switch or lever does, DON'T TOUCH IT. Broken parts at sea or in a foreign country are difficult or impossible to repair—same with your body! And please don't force anything: if it doesn't move easily ask the Captain first.

When in doubt, take your time and think things through before you do them. While it may be imperative to do things quickly at times, it's always better to avoid a costly mistake (both to the boat and the crew) by planning first.

You may be called upon to "stand watch", which means that you'll be responsible for the entire control of the boat. Don't worry, you won't be alone, but it is important that you are able to communicate to the captain and other crew if something goes wrong (never

happens….) but more importantly, make sure it doesn't!

So take the time to look over this handbook so you'll know where to look when you need the specific information on some part of the boat. This may seem like a LOT of information (it is….) but after a couple days it will make more sense. Have fun!!!!

WHERE ARE THINGS ON THIS BOAT?

Since there's a lot of storage space on JANGADA, there is stuff everywhere. There are also a few names for places that you might not be familiar with. Here are some starting points:

NAV Station – the small desk with the electronic gear at the end on the dinette table
Electric Breaker Panel – on the back side of the nav station – for both 110v and 12v
Lazarette – the center aft seat in the cockpit; it folds forward to reveal storage
Cockpit Locker – the round hatch in the center of the cockpit
Rope Locker – just forward of the mast; holds 2nd anchor and docking lines
Windlass Locker – smaller hatch just forward of the rope locker
Bow Lockers – one in the very front of each hull
Emergency Tiller Attachment – port engine compartment (tiller located in Lazarette)
Engine Compartment – one in the back of each hull (motor is actually under the floor)
Companionway – the stairs leading down from the salon to either hull

SOME IMPORTANT STUFF AND WHERE IT IS LOCATED

Life jackets, emergency bilge pump & handle, SHOCKLES – in the lazarette
Motors – one in the very back of each hull
Fenders for Docking – in the port bow locker
Docking Lines and other spare lines – in the rope locker
Spinnaker and Storm Tri-sail - in the starboard bow locker
Spare Diesel and Outboard Fuel (gasoline)- in the port bow locker
Spare Anchor and Line – in the rope locker (also in the port engine compartment)
Inflatable Kayak – port engine compartment (paddles in the lazarette)
Propane Tanks (2) – port end of lazarette
Stove Propane Shutoff – under the sink, to the left
Water Tank fill – to the PORT of the mast (don't confuse it with the holding tank!)
Diesel Tank fill– under the helm seat (special key is attached to the inspection door)
Outside Fresh Water Rinse – under the second step of the starboard aft swim steps
Cleaning Supplies – in cockpit locker, under kitchen and bathroom sinks
Vacuum Cleaner – under dinette seat next to fridge compressor
Boat Hook – strapped onto the aft lifelines
Big Fish Net – in aft lazarette
Binoculars – in the leather pouch above the port companionway
Water Hose –one in starboard engine compartment, one in forward rope locker
Shore Power Cable – in port engine compartment (connects aft of center cockpit seat)
Power Inverter (converts 12v battery power to 110v) – under starboard aft bunk
Refrigerator Power Inverter - under starboard aft bunk (occasionally has to be reset)
Ships Batteries (6) – locker above starboard aft cabin bunk
EPIRB – mounted on the wall under the NAV Station
Fire Extinguishers (6) – in each engine compartment, top of starboard companionway, on wall by each forward stateroom, in Emergency Locker
Emergency flares, first aid, spotlights, shackles and hardware, inflatable life jackets, harnesses and tethers, ditch bag – in the cabinet just inside and left of the main door

VHF radio – on the NAV Station panel (automatically tuned to Emergency Channel 16)
Emergency Pump – hoses in back of the lazarette; handle and pump on back of seat
Emergency Tiller – port engine compartment (you can also use the autopilot)

WHAT'S IN THERE?

PORT

BOW STORAGE LOCKER
- Dinghy gas
- Spare fuel jugs
- Fenders

FORWARD CABIN
- Watermaker (under bunk – keep it clear)
- Windshields (clear Lexan® panels that fit in front of bimini for bad weather)
- Large chart book
- Extra sleeping bags, blankets and pillows

AFT CABIN
- Extra snorkeling gear, speargun
- Wetsuits
- Ships library (manuals, guidebooks)
- SSB antenna tuning unit (on the wall)
- Hammocks

STARBOARD

BOW STORAGE LOCKER
- Storm tri-sail and spinnaker
- Whisker pole
- Windsurf gear
- Wakeboard

FORWARD CABIN – Captains Cabin
- Tools and repair parts
- All maintenance and repair manuals
- Official boat documents
- First aid kit
- Locks and cables
- Fishing gear
- Main SSB and 2nd control unit

AFT CABIN
- Main power and frig inverters (under bunk – don't pile stuff against them)
- Windlass and AutoPilot main breakers
- Main power breakers (keep them clear of things)

Solar panel fuses
Batteries (locker above bunk)

THE HEAD

USING THE TOILET

A boat toilet is NOT like home. It is small and clogs easily – not a welcome situation anywhere, especially at sea. Nothing goes into it that hasn't been eaten; toilet paper and tampons go into the trashcan located under the sink. Spare bags are in the trashcan.

To use it, place the small lever to the right of the pump handle into the FILL position and pump a few times to put water in the bowl. Use the toilet. Pump several times with the lever in the FILL position, then put the lever in the CLOSED position to pump it out. You may have to go back and forth with this procedure a few times to pump it clean and dry.

In either lever position you might have to pump a few times to get the pump primed and working. Be patient. If it doesn't pump or starts to be very hard to pump, DON'T FORCE IT. Pump slowly until things move or change the lever position and try that for a few pumps. If it seems to be clogged GET THE CAPTAIN.

The toilet can be finicky to operate but after a couple times you'll get the hang of it. Please keep the head clean – there are various cleaning supplies under the sink (along with the hidden toilet paper spool – don't ask me why) Obviously the trash has to be emptied frequently.

It is VERY important that the lever be left in the CLOSED position when you are finished or the toilet can fill with water and overflow. And you really don't want to sink the boat, do you?

USING THE SHOWER

You're on a boat; therefore you'll be taking a "boat" shower to conserve our fresh water supply (limited!).

First, turn on the "Shower Pump" switch on the electric panel (behind the nav station). This enables you to use the shower floor drain (it needs a pump to empty it since it is actually below the boat water line). Also, make sure the "Fresh Water Pump" is turned on.

To take a boat shower, simply pull the sink spigot out of it's sink position (if the hose doesn't run freely don't yank on it – it is probably caught on something under the sink), turn on the water and have a quick rinse. Turn the water off, soap up, then rinse off. If more than an inch or two of water accumulates on the floor during your shower pump it out using the small black pressure switch on the hull wall near the escape hatch. When you are finished your shower pump the floor dry, wait a couple minutes, then do it again to be sure all water is out.

NOTE: If we are at the dock and plugged into shore power the Water Heater (switch is on the Electric Panel) might be turned on. This makes the water VERY hot (160 degrees!) so be careful.

Better yet is the fresh water shower under the second step of the starboard swim ladder. You can dive in the ocean, soap up, dive back in to rinse, then do a final fresh water

rinse. This REALLY conserves water! [Dr. Bronners soap or yellow Joy works great in salt water.] Again, don't yank on the hose if it doesn't come out easily.

THE GALLEY

USING THE STOVE

The oven and cooktop propane master valves are under the sink to the left. Be sure they are turned on (we usually leave them on all the time). To light a stovetop burner push in one of the black valves on the left, turn it 90 degrees, light the burner with the red handled lighter, and continue holding in the valve for 3-4 seconds. If it doesn't light easily you might be trying to light the wrong burner….DOH!

The propane flames can be very hard to see, especially in the sun. Be careful leaning over the stove when you forget that a burner is lit or you might find yourself on fire….DOH!

To light the oven, turn it on with the black knob on the right and reach inside to the back with the lighter. It should light easily. If not, let it air out to clear the gas before trying again. Again, hold the black knob in for a few seconds after it lights then turn it to the temperature you want. REMEMBER TO TURN OFF THE OVEN WHEN FINISHED USING!

To adjust the flame lower, continue turning the knob; turning it back the other way will cause it to go out.

If the stove or oven won't light, the propane tank might be empty. Call the captain. [We have two tanks so you won't have to worry about running out and eating raw chicken.]

The reason you have to hold in the knobs is that there is a safety solenoid on the stove that senses heat. When there is flame it keeps the gas flowing; when there is no flame, it cools quickly and shuts off the gas automatically.

USING THE REFRIGERATOR

The fridge runs off of either 24 volt power (when at sea) or 220 volts (when plugged into the dock. The power source will switch over automatically when we plug into shore power at the dock. The fridge is cooled using a salt-water pump; when it is running it is common to see (and hear) water coming out of one of the hulls. Don't worry – nothing is leaking. The pump is located under the floor in the starboard forward cabin.

The main power switch (used to turn the fridge on and off) is on the breaker panel located on the backside of the NAV station. Whenever we are at the dock (and plugged into power) the switch is kept ON unless instructed otherwise.

Since it uses LOTS of power, when we are away from shore we only run the fridge when the motors are running (or occasionally when they are not if the batteries are fully charged). [It is important that the fridge be OFF when we are starting the motors]. So obviously you don't want to leave it open while you browse the contents.

Inside are two compartments: fridge on the left and freezer on the right. The lid is VERY heavy, so be careful that it doesn't slam closed. There is a delicate Styrofoam cover on the freezer that needs to be kept in place to keep it cold. Please be careful with it and don't force it back into place if it doesn't go easily.

The more stuff which is crammed into the fridge and freezer, the harder it has to work to keep things cold. Try to keep things loose so that the cold air can circulate easily. Also, there is a small drain plug at the bottom of both the refrigerator and freezer side: be sure these are tight in the holes when the fridge/freezer is in use or all the cold air will leak out and form an ice cap that will cover the entire ocean.

IN THE SALOON

THE NAV STATION

Many of the important controls for JANGADA are located at the NAV station (short for navigation – whoda thunk….). On the back side is the electric panel which contains many of the circuit breakers for electric items on board (lights, fridge, watermaker, 110v outlets, 12v accessory outlets, etc.); these circuit breakers also act as switches. Don't touch any of these unless directed to do so by the captain. Power management on JANGADA is critical for navigation, refrigeration as well as starting the engines.

On the other side is the chart table, chartplotter (laptop computer), sat phone, VHF radio, SSB radio, clock, barometer, wind gauge, auto-pilot remote and several other items. Again, please don't fiddle, adjust, change or mess with these unless directed to do so.

All this being said, if you see something that doesn't look right (the computer going haywire, circuit breakers and lights being left on, etc.) tell the captain. If you point out something important you'll be given an extra ration of rum when you finish swabbing the decks.

THE STEREO SYSTEM

We use an iPod for the music on JANGADA. It has over 8,000 songs on it —something for everyone. There is also a Sirius satellite radio receiver which broadcasts to a small FM receiver. Depending on which music source you are using, plug the gray output plug into either the iPod or the FM receiver. This cord leads to the amp.

The main power switch for the stereo is located on the electric panel (HiFi); this switch turns on the power amp which is located under the port settee. The power gets turned off at the breaker when we're not using it.

There are speakers inside the saloon and out in the cockpit (but you can't adjust the volume between them… yet).

Please be considerate of other people on board by **only** playing loud, thumping rap music and be sure the volume is turned up high enough to wake up Elvis. Ha ha, only kidding; Elvis was on our last cruise but couldn't make yours.

STORAGE AND TRASH

There is food storage under all the settee benches. The vacuum is stored under the bench next to the fridge; do NOT store things on top of the compressor that is also located under this bench. There are extra paper towels, trash bags, storage containers, etc. under here too. Pots and pans are under the sink.

There is a strange little hole with a cover over it just behind and to the right of the sinks: this is the trash bin. You simply attach a trash bag under this hole with the blue loop of bungie cord and voila!—outa sight, outa mind. But beware: keep an eye on how full it is getting BEFORE you keep stuffing things into it: if the bag gets full and comes loose you will be stuffing things into the locker instead. Full garbage bags get stored in the starboard engine room when we're out at sea.

OUTSIDE

USING THE BBQ

The “Q” is located in the blue cover on the aft railing. Take care when removing the cover—it’s tight (don’t get it caught on the propane nozzle at the bottom). Just below the BBQ is the hose from the propane tank with a little blue cover on it. Carefully pull out the hose and remove the cover and elastic and store them inside the big blue cover.

Attach the valve assembly to the nozzle at the bottom of the BBQ – the valve just slips onto the metal tubing. Be sure it snaps on securely. Remove the lid (don’t worry – it’s attached so you can’t drop it in the water) and hang it on the edge of the BBQ by hooking the big loose washer under the lid to the edge of the BBQ. Turn on the valve, light it and replace the lid.

It will just take 3-4 minutes to heat up to cooking temperature. This baby gets REAL HOT real fast; unless you’re searing a side of beef you’ll want to turn it down to half heat. Be aware that the grill surface can come loose if it is spun counter-clockwise.

The BBQ utensils (including a wire brush) are located in the locker under the kitchen sink; reach around to the right – they’re hanging on a hidden hook.

When the BBQ is totally cold you can remove the propane hose (put the little blue bag over it) and store it back inside the hull, and replace the blue cover.

USING THE DINGHY

Of course I had to get the biggest engine possible for my dinghy (named **TONTO**). This makes it somewhat difficult to control at high speed with only one or two people on board, so if you’re driving, TAKE IT EASY! A sharp turn could easily result in tossing you overboard.

Use the small locking lever with the black plastic handle on the left side of the motor to raise and lower the motor. Grab the back of the motor case and yank it up to raise the motor or GENTLY lower it back down.

When approaching the beach, you have to release the lever to lift the motor. Do this when you’re still in 2-3 feet of water so you don’t wreck the prop or suck sand into the intake. Turn the motor off BEFORE you lift it all the way out (or hit the beach!) To kill the motor at any time just push the red button on the throttle handle.

When approaching JANGADA (or any other boat) with the dinghy always land somewhat sideways: the sharp-nosed aluminum hull of **TONTO** will easily damage fiberglass if you run into something.

One more thing: please rinse your feet off BEFORE getting into the dinghy. Sand is the worst enemy of the seam between the tubes and the floor.

1. Connect the fuel hose to the motor
2. Open the vent cap valve on the fuel tank (check the fuel level….)
3. Pump the hose bulb a few times until it's hard
4. Pull out the choke lever
5. Be sure gear is in neutral
6. Be sure the RED KILL switch has the coiled red cord attached
7. Pull the starter cord (don't fall overboard)
8. Give it 20 seconds to warm up at idle speed
9. Be sure all the lines are INSIDE
10. Start VERY slow, especially if you are alone

When tying up **TONTO** to JANGADA, a dock or anywhere else be sure it is SECURELY tied. When leaving **TONTO** anywhere it isn't in your sight, LOCK IT with the big metal cable. Lock one end of the cable to the metal ring on the stern, thread the cable through the slot between the motor shaft and mounting bracket, and then lock the other end to something on JANGADA or shore. And don't lose those keys!!!

If you bring **TONTO** to the beach be sure to drag it WAY UP on the beach before leaving it. **TONTO** has a habit of floating off if left unattended, especially if the tide is rising or the wind is off-shore. If in doubt use the anchor (in the yellow bag in the bow) and bury it far up the beach.

After having **TONTO** sneak up between the hulls of JANGADA at night one too many times (scratching the fiberglass) I've decided to ALWAYS pull him up out of the water on the davits at night. No more leaving him on his painter behind the boat until he learns to behave!

It's a good idea to bring a small 2-way radio with you if you take **TONTO** out for a spin; that way if something happens you can call JANGADA for help. There is a spare one, as well as a VHF radio, in the cooler/seat in **TONTO.** The anchor, locks and cables, and spare parts and tools are also in the cooler. Keep it strapped down tight when you're moving.

To get **TONTO** up on the davits, clip the forward (Port) pulley line to the shackle inside **TONTO** near the bow, and the rear (Starboard) pulley line to the cable equalizing harness clipped to the inside rear of **TONTO**. Since the bow line ratio is only 3:1 (since it is lighter than the stern of **TONTO** where the outboard is) and the stern is 8:1, try to keep **TONTO** level when raising him. There is also a safety hook on the stern lifting cable that gets hooked into the davit.

When the rope markings (black/red/black stripes) are reached, be sure the center of **TONTO**'s rub-rail is seated against the protruding aft rim on JANGADA, then SHOCKLE the bow and stern securely. Finally, clip the small blue strap from the aft stanchion to the big gray rubber handle on **TONTO.**

FILLING THE WATER TANK

JANGADA has a sophisticated water purification system for dock water BEFORE it goes in the tanks so that they can never be contaminated. Our WaterFixer® system uses triple filtration with an initial filter to eliminate any sediment, a secondary filter to screen micro-particles, and a final ultraviolet system to totally eliminate all bacteria and viruses.

The WaterFixer® is mounted inside the rope locker. Open the water filler cap (located just port of the mast) using a winch handle (don't lose the cap!). Hook up the dock hose to the WaterFixer input (the colored hose coming out of the left side) and plug in the 12v power cord into the 12v accessory jack on the right side of the nav station (or in the starboard forward cabin). Lead the output hose over the side (by the edge of the trampoline), turn on the dock water and let it run through the WaterFixer for 30 seconds to be sure all the hoses are clean, then put the output hose into the filler hole on deck.

The WaterFixer will purify about 8 gallons per minute. We have (2) 80 gallon tanks so it could take up to 20 minutes to fill them. The water tank gauges are on the electric panel. When the tanks are full turn off the water, replace the water filler cap, unplug the WaterFixer power and stow the cord and hoses.

Before stowing the water hose be sure to empty all the water out of it.

USING THE WINCHES

Always wrap the line around the winch in a CLOCK-WISE direction. Start at the bottom of the winch and wrap upwards, being careful not to have the line cross.

The number of wraps you take depends on the use. For hoisting the main, jib sheets under tension, etc. you'll want to have 3-4 wraps. For easing a traveler or jib furler, a couple wraps will do.

To lock and wind a winch, lead the line up and onto the metal tailing lead on the top of the winch and into the locking plates. To be sure that the line is secured in the locking plates, give it a good stiff tug or smack it into the groove with the palm of your hand; this is especially important with the large diameter lines.

To release a line SLOWLY pull it out of the plates and unwind it from the winch, keeping slight pressure on it if there is any load from a sail. Then, keeping the palm of your hand against the wraps of line on the winch, slowly release the line pressure as it slips out around the winch.

Always return the winch handles to their cases rather than leave them in the winches where they can fall out and be lost or other lines can get tangled around them.

There are three VERY important things to remember:

1. NEVER totally release a line from a winch; a loose, flogging line can produce serious injuries. Always make sure both jib sheets are around a winch and secured.
2. NEVER leave a SpinLock Cam Cleat in the OPEN position.
3. When releasing a cam ALWAYS have a wrap or two around the nearby winch, keep it snug with your hand, then slowly let it run around the winch as the rope pays out.

HEADING OUT

STARTING THE ENGINES

1. Check engine oil, saildrive oil, belts, coolant, Raycor filters and battery power
2. Close all hull side hatches
3. Be sure swim ladder is up
4. Turn off fridge, watermaker, water heater, radar and other high-draw electric items
5. Put throttles in neutral, pull out and push slightly forward
6. Turn STARBOARD engine key and push start button; loud horn will sound and engine should fire. Throttle up/down to 1,000 RPM
7. Start PORT engine in same manner AFTER letting the STARBOARD engine idle for 2-3 minutes (to allow battery to recover – check the electric panel; you want at least 11.9 volts on the port engine side)
8. Warm engines for 3-5 minutes at 1,000 RPM. Check exhaust to be sure water is coming out of them (water pump is working)

RAISING THE MAIN

1. Head boat into the wind
2. Unzip lazy cradle and loosen the lazy jacks (be sure the sail doesn't crush the bimini)
3. Flake all outhauls (be sure cams are all released)
4. Slightly ease the main sheet and be sure the Shockle is off the boom
5. Release main halyard SpinLock (be sure the lever is all the way up)
6. Raise the main. [Easiest way is for 2 people to pull down together] BE CAREFUL THAT BATTENS DON'T CATCH ON THE LAZY JACKS. IF THEY SNAG, LOWER THE SAIL A BIT AND TRY AGAIN. Also watch that the outhauls don't snag. It's best to have other people watch for these things while 1-2 people are raising the sail.
7. Wrap halyard on winch when mainsail is 3/4 way up; continue raising [easiest way is for one person to yank outward on rope while second person cranks]
8. When main is 3/4 up, pull the main (red) outhaul until you see the black/red/black marking band and set the cam
9. Fully raise the mainsail until the luff is tight
10. Slightly release the topping lift 2-3 inches
11. Raise and cleat lazy cradle (or drop it completely, strap it to the boom and secure the lazy jack lines to the mast).
12. Coil and hang all loose lines

UNFURLING THE JIB

1. Head boat into the wind or slightly off
2. Wrap the lee jib sheet 1-2 times around winch
3. Wrap roller furling line 1-2 times around winch (especially important in high winds)
4. Release roller furler SpinLock and slowly begin feeding out line as the jib fills and the working jib sheet is pulled in
5. Set roller furler SpinLock when jib is all the way out; sheet in jib sheet

WHEN IT GETS REAL WINDY

WHEN TO REEF THE SAILS (based on Apparent Wind)

CLOSE HAULED AND BROAD REACHING

18-24 knots	first reef	1/2 jib
24-30	second reef	1/3 jib
30-34	third reef	1/5 jib
34-40	third reef	piece of jib

WIND BEHIND AND BEAM REACH

15-18 knots	first reef	2/3 jib
18-24	second reef	1/2 jib
25-30	third reef	1/3 jib
30-35	main down	1/6 jib

REEFING THE MAINSAIL

1. Ease the mainsheet slightly so that boom has 2-3 feet of sideways travel
2. Flake main halyard so it doesn't kink or catch on anything
3. Wrap 3 turns of main halyard around winch, crank and release halyard cam
4. Release halyard on winch until sail begins to drop
5. Lower sail until reefing grommet is at starboard (shorter) cringle hook
6. Place hook through grommet and pull the correct outhaul line until the black/red/black marking band is set on it's cam
7. Quickly raise the main to the correct luff tension
8. Set outhaul cam and release winch tension
9. Close main halyard SpinLock and release winch tension
10. Re-tension lazy jacks and cradle to hold the sail

REEFING THE JIB

1. Place furling line around winch and release SpinLock
2. Pull in furling line as jib sheet tension is released. [IMPORTANT: always keep appropriate tension on jib sheet as sail is furled. This keeps the furled jib tight on the forestay as well as prevents a loose jibsheet from flogging.]
3. Continue furling until jib size is appropriate, close the SpinLock and trim the jib

WHEN THE WIND BACKS OFF

SHAKING OUT A REEF TO FULL MAIN

1. Uncoil and flake all outhauls
2. Relax lazy jacks (be sure the cradle is at least 6” above the bimini)
3. Take 3 wraps of main halyard on winch and release halyard SpinLock
4. Lower main a few inches to release cringle hook
5. Release outhaul tension but don’t let it flog; make sure it will run free
6. Raise the main; set SpinLock and release main halyard from winch
7. Tension correct outhaul to the black/red/black marking band and set cam
8. Raise and cleat lazy cradle
9. Coil and hang all loose lines

SHAKING OUT A REEF TO LESSER REEF (more sail up)

1. Uncoil and flake all outhauls
2. Relax lazy jacks (be sure the cradle is at least 6” above the bimini)
3. Wrap halyard on winch, snug it and release cam tension
4. Lower main a few inches to release cringle hook
5. Release outhaul tension but don’t let it flog; make sure it will run free
6. Raise the main to new grommet position and hook cringle hook
7. Tension correct outhaul to black/red/black marking band and set the cam
8. Continue to raise the main until the luff tension is tight; set SpinLock
9. Raise and cleat lazy cradle
10. Coil and hang all loose lines

SETTING AND ADJUSTING THE REEFING OUTHAULS

The outhauls are marked with a black/red/black colored band at the correct cam placement. It is easiest to set the cam BEFORE there is a lot of tension on the line; otherwise you will need to use the small winch to properly tension the outhaul.
If the cam is set too tight when releasing the outhaul tension, you will need to use the winch to release that tension before you can unseat the cam. This is usually the case when shaking out a reef (since the sail will not go up with outhaul tension on a higher reef point on the leech).

SAILING AT NIGHT

If we have a long passage to do we'll undoubtedly be sailing at night. This is pretty much the same as sailing during the day, with one big difference: it's dark.

Generally we'll reef sooner when sailing at night, usually keeping a reef tucked in at least 5 knots sooner than during the day. Reefing or going forward in rough seas at night can be quite a chore, not to mention very exciting and dangerous.

The other big issue is safety. If you go overboard during the day there's a pretty good chance we can get you back on board. At night the chance goes down by about 100% unless you are wearing a life jacket, have your strobe beacon activated, and the seas aren't too crazy. For this reason there are three rules:

1) A life jacket is worn by EVERYONE whenever you are outside
2) Whenever you leave the cockpit you clip your safety harness to something
3) Whenever you have to go forward there is someone watching you

Each lifejacket has a strobe that will automatically activate when it gets wet. If you happen to go overboard without being tethered, pull the inflation tab on the jacket to inflate it. If for any reason it doesn't inflate, there is also a manual inflation tube that you can blow into. The strobe is attached to the life jacket.

We'll divide up the night into 'watches', generally 2-3 hours each depending on the number of people on board. The person on watch will not get bored—there's lots to do and the time goes by quickly. Here is the list of the things that need to get continuously monitored at night:

Weather observations
Wind speed and direction
Boat course and speed
Compass bearing vs. course heading
Autopilot performance (we almost always use the autopilot at night)
360º visual inspection (sky, sails, horizon, sea state, other lights and boats)
Radar (turn on every 30-60 minutes depending on the sailing area)
Batteries (keep above 11.6 volts)
VHF (monitor channel 16)

When someone comes 'off watch' they wake the next person in line and give them a brief rundown of the current state of the above items as well as any interesting observations they might have encountered (alien spaceship visits, schools of fish serving tasty drinks, submarines, etc.).

In bad weather you can stay in the saloon and monitor pretty much everything —that's one of the nice advantages of Jangada. You have a full view of the ocean and all the controls are inside (except the sail controls). But you still need to poke your head outside every fifteen minutes or so to make sure you don't fall asleep.

AT THE END OF THE DAY

LOWERING THE MAIN

1. Head boat into the wind
2. Tension the topping lift so that the boom is at least 6” above the bimini
3. Make sure the lazy cradle is fairly snug and ready to accept the sail
4. Wrap main halyard on its winch to take tension off Spinlock so you can release it
5. Let main drop; take in outhauls as the main drops (helps keep sail in the lazy cradle)
6. When the main is fully down, S/H/O/C/K/L/E the halyard pully down to the reefing hook to keep it down and snug, then pull the halyard tight and shut the SpinLock
7. Wrap outhaul on winch and release cam tension on outhaul
8. Zip the lazy cradle shut; clip forward cradle lines to the pulley with small carabiners
9. Coil and hang all loose lines
10. S/H/O/C/K/L/E any flogging lines to the shrouds.

FURLING THE JIB

1. Head boat into the wind
2. Place furling line around winch and release SpinLock
3. Pull in furling line as jib sheet tension is released. [IMPORTANT: always keep slight tension on jib sheet as sail is furled. This keeps the furled jib tight on the forestay as well as prevents a loose jibsheet from flogging.]
4. Continue furling until jib sheets are wrapped 2-3 times around the furled jib
5. Put slight tension around winches of BOTH jib sheets
6. Close furler SpinLock; store jibsheets in rope bags

MIXING MARGARITAS

1. Locate bottle of Tequila (usually kept under Captain’s pillow)
2. Test contents of bottle
3. Put ice cubes into large glass
4. Test contents again
5. Fill glass to brim with tequila
6. Drink half to make room for other stuff
7. Squeeze a couple limes into glass with our special cool lime-squeezer gadget
8. Add some Controy (fake Mexican Grand Marnier, but who cares)
9. Mix it around a bit
10. Test by drinking the whole thing quickly
11. Repeat

DOCKING

LEAVING THE DOCK

1. Unplug water hose and power cord from dock (DON'T FORGET TO PUT THEM ON THE BOAT! They stow on the forward bulkheads of each engine compartment).
2. Turn off the fridge, water heater, radar and any other high-draw electric items.
3. Start engines and warm up for 5 minutes (see 'STARTING THE ENGINES')
4. Be sure dinghy and dinghy motor are secure
5. Turn on all instruments (breaker panel) and check their operation
6. Be sure the boom is secure
7. Close all side hatches
8. Check wind direction, tide, current and water depth

RETURNING TO THE DOCK

1. Discuss the docking plan with the captain and crew and be sure you know which side you are docking on (but be ready to change quickly if necessary)
2. Check wind direction
3. VHF radio turned on and tuned to channel 16; portable radio at helm
4. Be sure all fishing lines are in
5. Have BOTH motors running
6. Remove fenders (at least three) from port forward locker and tie them to the appropriate side of the boat, hanging from the stanchions at the appropriate height above the water so they protect the boat from the dock, pier, or other hazards
7. Remove three (3) docking lines from the rope locker and position one at each mooring cleat on the appropriate side of the boat
8. Have one extra long throw line ready
9. Have the boat hook out and ready

ANCHORING

ANCHORING IN UNDER 20 FEET OF WATER

Always take in fishing lines before slowing engines!!!

1. Interior windlass switch turned on (under starboard aft bunk)
2. Start STARBOARD engine (must be running to use the windlass)
3. Open windlass locker – turn on windlass switch (starboard red twist key)
4. Remove harness and lay out on trampoline (don't let it fall through)
5. Remove safety hook from anchor chain
6. Make sure all windlass safety pawls are free (small aluminum cams which can be flipped onto the windlass cogs to stop any movement)
7. Take out the remote down/up switch and be sure wire isn't hung up anywhere
8. Position bow over anchoring point and put boat gear in neutral
9. Lower anchor SLOWLY so that chain doesn't jump the gipsey; use the gipsey brake (lever clipped onto back of windlass locker) rather than the motor
10. Put out triple depth chain length as boat drifts slowly back and anchor catches
11. Put out one additional water depth of chain, put engine in reverse for 10 seconds (or until all backward movement stops) to set the anchor
12. Rig harness hook and backup shackle to chain and lower until chain is slack
13. Wait 5 minutes with motor running to ensure that the anchor is set, check boat position relative the land and other boats, and check for current and swing
14. Hook safety hook to anchor chain
15. Turn off forward red windlass switch to prevent accidental operation; close hatch

ANCHORING IN MORE THAN 20 FEET OF WATER

FOLLOW # 1-11 ABOVE then….

12. Just before the end of the chain is reached take a wrap of anchor rope around the windlass capstan one full wrap
13. Put chain hook on chain below gipsey, feed around cleat, hold chain hook rope by hand and slowly lower chain until pressure is on hook
14. When pressure is off the hook (you may have to motor forward a bit), release it and let pressure onto rope; be sure rope is flaked out and not tangled
15. Slowly let out rope by hand to desired length. [BE SURE END OF ROPE IS SECURED!]
16. Put engine in reverse to set anchor; Wait 5 minutes with motor running
17. At 5:1 total scope attach 8mm prussik to anchor rope below the roller
18. Attach harness to side cleats as above
19. Shackle harness to prussik and let out rope until pressure is all on the harness
20. Cleat anchor line to large cleat in the windlass locker and feed it through the slot
21. Turn off forward windlass switch to prevent accidental operation

PULLING THE ANCHOR UP

1. Start STARBOARD engine to give windlass power
2. Open windlass locker and turn on windlass switch
3. Remove safety line from big cleat in windlass locker
4. Take safety hook off anchor chain and be sure all safety pawls are off the windlass cog
5. Bring up chain slowly until the person on the bow can reach the harness hook; remove it from the chain and bring harness on board
6. Continue taking in all the chain as the captain slowly motors towards the anchor (give him directions from the bow as you take in chain).
7. When the anchor clears the water, STOP and tell the captain that the anchor is up, then continue pulling it up SLOWLY, stopping just BEFORE the anchor is tight.
8. VERY IMPORTANT: as the chain piles up in the locker, poke it occasionally with the Manual Winch Handle so it doesn't pile up too high causing it to jump off the gipsey. WARNING: never get your hands or fingers near the gipsey or chain when it is moving!
9. Turn off windlass switch to avoid accidental operation
10. Stow harness in windlass locker, put safety hook onto chain and close hatch
11. Be sure swim ladder is up before getting under way

ADDING A SECOND ANCHOR

There is a second large (45# Bruce plow) in the rope locker. It is rigged with 30' of 3/8" chain and 170' of rope. It can be rigged in several fashions (off the second bow roller, off a bow cleat, off a stern cleat) when necessary. Procedures vary depending on the intended use. It is very heavy and awkward – be careful removing it to the deck or trampoline. There is also an aluminum Fortress anchor as a spare aft anchor (good in rocky areas) in the port engine room. This anchor can be easily deployed from the dinghy.

There is a small white marker bottle and line in the windlass locker. Attach it to the primary anchor to mark it so that you know where to set the second one. It helps.

MANUAL WINDLASS

If the windlass motor fails, the anchor can be raised manually using the windlass (slow and time consuming, but it works).

First take in as much anchor rope and chain as you can by hand. Then use the small handle clipped into the windlass locker by inserting it into the clutch holes and levering it up, using the safety pawls to keep it from going right back down.

Conversely, if you want to manually lower the anchor you can loosen the clutch with the handle (counter-clockwise) until the chain begins to move. Do this very slowly and carefully, being sure the safety pawls are off the windlass cogs.

EMERGENCIES

THINK FIRST, MAKE A PLAN, MOVE CAREFULLY

There are only a few major emergency situations that you need to be aware of on a boat:

1. Someone falling overboard
2. Breakage of a major sail, motor or steering system
3. Fire
4. Serious personal injury
5. Capsizing or getting a hole in the hull

In all these cases it is important that one person be in charge of the situation (either the captain or the crew on watch), that a plan be quickly but thoughtfully crafted, and that everyone know what the plan is and what their part in it is. Then move as FAST as possible while maintaining further safety.

In the case of someone falling overboard, one person should watch the person in the water the entire time while the boat is turned. The Lifesling® and/or the man-overboard flagpole with attached life-ring (attached to the port-side shroud) should be immediately deployed and the MOB button on the GPS be pushed.

In the case of a mast, boom, stay or shroud break, all the rigging should be secured as fast as possible to avoid further damage which might increase the risk to those on board as well as the boat.

In the case of fire, get to the nearest fire extinguisher (there are five) immediately. Find out and memorize where they are on board on your first day. Never use water on a grease or oil fire.

In case of a capsize, stay with the boat. It is by far the safest place. There are safety hatches in either head to provide access both in and out of the hulls. If one hull is holed the other can still provide a safe refuge until help arrives.

In all these cases there are four primary ways to summons outside help if needed:

1. **EPIRB**
2. **VHF RADIO (internal mounted and handheld)**
3. **SSB RADIO**
4. **SAT PHONE**

You should make yourself aware of where these four emergency systems are located (all at the nav station) and their basic use.

EMERGENCY COMMUNICATION

STEPS TO TAKE IN A DIRE EMERGENCY

If you need to contact outside help because there is NO way to solve the problem or there is IMMEDIATE risk to the crew or boat, you should take the following steps:

First, determine your GPS coordinate position. The GPS is located on the side of the radar at the NAV station (there is also one out at the helm). To turn it on, push the RED power button; you'll have to wait a minute or so until the GPS picks up the satellites. [Be sure the ACCESSORY and INSTRUMENTS breakers are activated on the electric panel.] Use the PAGE button to scroll through until you get to the page that has the POSITION. It will read something like N24º43.232' W110º35.803'. This is your GPS POSITION, allowing anyone in the world to exactly locate you. You state this by saying, "I am at 24 degrees, 43 minutes north, 110 degrees, 35 minutes west."

VHF RADIO. Located at the NAV station; range up to 20 miles.

1. To turn on, be sure the VHF breaker is activated (located on the electric panel behind the NAV station), then turn on the knob on the front of the radio.
2. Push the RED button to bring the radio to channel 16 (emergency hailing frequency)
3. To use the microphone, push the gray button on the handset to talk, release it to listen. The volume control on the radio is for listening volume only.
4. State the boat name (JANGADA), your GPS position, and the problem and ask for assistance from anyone hearing your call. [There is a complete Emergency Protocal instruction card on the panel just to the right of the radio.]

SSB RADIO. Located at the NAV station; range: worldwide

1. To turn on, be sure the HAM RADIO breaker is activated (located on the electric panel behind the NAV station). Also flip the breaker for the SSB located on the breaker panel above the desk in the forward starboard cabin; then push the POWER button on the radio.
2. Push the 2128 KHZ button above the volume knob on the radio [this is the emergency broadcast frequency].
3. To use the microphone, push the gray button on the handset to talk, release it to listen. The volume control on the radio is for listening volume only.
4. State the boat name (JANGADA), your GPS position, and the problem and ask for assistance from anyone hearing your call. [There is a complete Emergency Protocal instruction card on the panel just to the right of the radio.]

EPIRB. The yellow device strapped to the wall just below the NAV station; range: worldwide. In the event that the boat is sinking and/or must be abandoned, use this.

1. Do not remove the EPIRB from the wall unless you are abandoning the boat. To activate, flip the black & yellow lever (located on the top of the unit) UP. It will begin broadcasting a worldwide distress signal with the position of the EPIRB that CANNOT be recalled if activated accidentally.
2. If you are abandoning the boat, turn the EPIRB on, unstrap it from the case and take it with you.

ROUTINE INSPECTIONS

ENGINES

1. Check motor and transmission oil
2. Coolant level and belt tension
3. Autopilot oil level
4. RACOR water-separator filter
5. Fire extinguishers (5) charged

EXTERIOR / DECKS

1. Stanchions, lifelines, cleats, davits and bimini attachments tight
2. Anchor, chain and rollers secure and good condition
3. Steering cables tight
4. Standing rigging tight and all safety pins in place
5. Running rigging in good condition
6. Fuel, water, holding tank caps tight
7. Propane tanks (filled and secure)
8. Trampoline webbing tight / rope in good condition
9. Caps on / plugs in all solar panel and speaker outlets
10. SSB antenna secure
11. Dinghy secure

INTERIOR

1. Bilges dry and clean
2. All hatch seals and hinges
3. Water, battery voltage & fuel levels
4. Emergency equipment current
5. Water intake filters clean
6. Pump seals and hose clamps tight
7. Hatch seals and latches

HULL

1. Prop folding function & zinc condition
2. All water intakes and impellers clear
3. Bottom paint

TERMS YOU SHOULD BE FAMILIAR WITH

PARTS

BATTENS – the long stiff rods running horizontally in the sail to give it shape
BIMINI – the white sun shade over the cockpit (not to be confused with BIKINI; those are smaller and colorful)
BOOM – that big pole which sticks out in back of the mast towards the stern [also the noise made when the mast breaks]
BOW – front of the boat (also what you do after a successful tack); also: forward
BULKHEAD – any wall in the hull which runs perpendicular to the length of the boat; they add strength, support and rigidity to the hull (just like the captain)
CAPTAIN – that drunk guy who is passed out in the forward cabin
CLEAT – T-shaped aluminum bracket onto which you secure a line; located on each bow, mid hull and stern, as well as one in the windlass locker and stern tiller locker
CLEW – the back lower end of a sail (also what you need to get…. no wait, that's different….)
CREW - you
DAVITS – thick steel poles off the rear of the boat where the dingy hangs
EPIRB – emergency locator beacon (located under the nav station)
FAIRLEAD – the rollers that direct the jib sheets to the winches on the salon roof
FOOT – the bottom edge of the sail [also a thing found at the end of your leg]
FURLER – the large rope spindle at the base of the jib which winds it up
GPS – Global Positioning System (allows you to pinpoint your exact location)
GIPSEY– the slotted cog wheel into which the anchor chain rolls on the windlass [not to be confused with a sea-going vagabond which is spelled '*insert your name here*']
HALYARD – line which raises and lowers a sail; the mainsail halyard is on the starboard side of the mast
HEAD – bathroom; also, the top of the sail (be sure to know which is which…)
HELM – the steering wheel
JIB – the sail at the front of the boat
KNOT – Nautical Mile (equal to one minute of latitude; approximately 1.1 land miles)
LAZY CRADLE – that big blue bag on the boom which holds the sail when it's down
LAZY JACKS – the lines which hold the lazy cradle; they are raised and lowered on the mast and are cleated there too [also some guy who sleeps too late]
LEECH – the back edge of the sail [someone who stays on board a boat for too long]
LUFF – the front edge of the sail [Hungarian word for love]
MAIN SAIL – the big sail in the middle of the boat; very heavy
MAST – that big pole in the middle of the boat
OUTHAUL – line which puts outward tension on the main sail
PFD – Personal Flotation Device [also Pink Fluffy Draperies – the curtains found on big motor yachts from Monaco or Newport]
PORT – left side of boat (tip: PORT has 4 letters in it; so does LEFT).
SHROUD – those big thick cables which attach the mast to the sides of the boat [also used to wrap Jesus when he died, but those were made of a different material]
SHEET – a rope (actually called a *line* in sailor talk). There is a main sheet and two jib sheets. They are big and strong and heavy and a flogging jib sheet could give you a nasty bruise. [also: large cotton thing on your bed to sleep on]

S/H/O/C/K/L/E – the best thing since….. beer! Invented by the very first JANGADA crew that sailed the boat down to Baja from San Diego, it is a multi-purpose shock-absorbing attachment with hundreds of uses all over a boat. Two sizes, no waiting!
SpinLock™ – the caming levers near all winches except the jib winches
SPINNAKER – a large headsail rigged in front of the jib for downwind sailing
STANCHION – stainless steel upright poles that hold the white lifeline cables along the outside of the hulls [don't lean on them….]
STARBOARD – right side of boat (looking forward)
STERN – back of the boat (what the captain is if you screw up a tack); also: aft
TACK – the forward lower end of the sail; also a term meaning turning the boat into the wind
TAILOR – The little silver metal hook that comes out of the side of the winch at the top; it is used to keep the rope feeding into the top cams on the winch [also: guy who made that cute little sailor suit for Columbus]
TOPPING LIFT – line that goes from the top of the mast to the back of the boom to keep it from falling on top of the Bimini when you take the sail down.
TRAMPOLINE – web netting between the hulls at the bow [used for nautical gymnastics]
TRANSOM – the back end of the boat (sort of like the stern, only different)
TRAVELER – the long aluminum track which runs along the aft of the rear cockpit seat; it is used to adjust the main sail angle [also: people found at airports]
VHF – radio for ship to ship and ship to shore communications [no, you can't call home on it]
WINCH – one of those big shiny spindles all over the decks and mast; they are two-speed meaning that when you crank one direction they take in twice the amount of line as when you crank the other direction. Line always wraps around them clockwise. The more wraps you take the more friction on the winch drum so that the line won't slip.
WINDLASS – the motorized winch which raises and lowers the anchor

SAILING PROCEDURES

BEAM REACH – going across the wind (the wind is directly on one side of the boat)
BEARING OFF – heading away from the wind (also called FALLING OFF, but only when drunk)
CLEANING – full time boat activity
FIXING - see "CLEANING" (also, on a boat you can "*fix*" a drink, often consumed during the 'fixing' process
FLOG – when a sail or line is loose and snapping around in the wind (not to be confused with 'frog' which is a slimy green amphibian)
GOING TO WEATHER – heading up wind (also called heading up)
JIBING – making a downwind turn (making a JIBE)
REACHING – going downwind
REPAIRING – see "CLEANING"
ROUNDING UP – heading into the wind
SHEET IN – to take in a main or jib sheet (make it tighter)
SHEET OUT – to let out a main or jib sheet (make it looser)
TACKING – making a turn into the wind (making a TACK)
WATCH – being responsible for the boat (short for "WATCH OUT!!!!")

CLEANING CHORES AFTER A CRUISE

EXTERIOR. Hose is under the port engine hatch. Connect to water outlet on dock. Washing buckets, mops, brushes, etc. (along with a spare hose) are in the forward rope locker in front of the mast. Use a splash of boat soap with water in a bucket (soap is in with the cleaning supplies under the big circular hatch in the cockpit). BE SURE ALL HATCHES ARE CLOSED TIGHT (INCLUDING SALON DOOR).

Start with a rinse-down halfway up the mast and work your way down. DO NOT use harsh direct water pressure around any hatch or helm instruments. Rinse all salt from under overhangs and coiled lines. Give a quick soapy wash-down using the soft bristle long-yellow-handle blue scrub brushes (in the rope locker); do NOT use harsh scrub brushes, green scrubby pads or abrasive cleansers on the fiberglass or windows.

Try to hose off all salt, including the outside of the hulls, railings, solar panels, transom area and swim steps. Water may pool on top of the bimini; give it a shove from below to empty it.

Rinse thoroughly after wash-down and wipe dry everything (decks, hatches, rails, etc.) with the absorbent sponge/chamois towels (otherwise there will be hard water stains on everything). A quick spray of plastic cleaner on the windows, polished with a SOFT cloth (not paper towel) helps protect them.

INTERIOR. Vacuum cleaner is under the salon starboard settee seat (along with bags, hose and all attachments). 110 volt outlets are above the shelf to the right of the NAV station, and in each head (look around). When we are plugged into shore power they should work. If not, check the AC breakers at the top right of the electric panel.

Take all the loose throw rugs and carpet outside and shake them out (so that the dirt blows downwind….). Wipe all dirty floors or other surfaces with damp sponge or rag.

The entire cleaning process doesn't usually take more than an hour if there are 2-3 people. If necessary we also might polish the stainless (winches, rails, bimini supports, stanchions, etc.) or put a quick coat of wax on the deck or hulls. Total time is perhaps another hour.

THE BOTTOM LINE

As in life, there are always many ways of doing things on a boat. Over the course of many years at sea (well okay, a few weeks) I've learned what works best for me. Keeping the boat neat, clean and organized is paramount to keeping it safe and comfortable; so we do it that way.

When something breaks, it gets fixed right away. When something doesn't work correctly or easily, we'll find a way to improve it. When something doesn't look right, we'll find out why. At sea in 40-knot winds and 20' waves is no time to make changes or discover a major problem—there will always be enough small ones to go around.

If you make a mess, clean it up. Don't leave your dishes in the sink. Keep the heads clean, the lines coiled (so you don't trip over them or they don't snag in an emergency), and the decks free of clutter. But most important, if you see something that can be improved (a part, a procedure, a recipe) let me know!

Hopefully you'll have a blast and want to return. Undoubtedly we might have different ways of doing things from what you're used to; there's only one thing that can be said to explain this:

"That's why we all have our own boat."