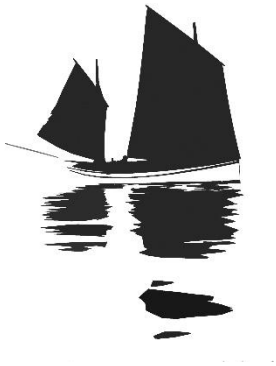
THE ST.IVES JUMBO ASSOCIATION



THE GEN ON JUMBO SAILING

Aim

To identify the challenges of sailing a jumbo and those when sailing from St. Ives.
To examine role of the crew when maneuvering.

Safety

Lifejackets or buoyancy aids must be worn for insurance reasons.
Calling for help St.Ives NCI: 01736 799398; VHF ch 12, 16.
Falmouth Coastguard: 01326 317575, 999 and VHF ch 16.

Remember, nothing happens in the bay without somebody seeing it from the shore.
Stay in the boat – no swimming for help.

If swamped and in danger of sinking
Both Jumbos are fitted with a bespoke buoyancy system which is deployed by sharply tugging the 'starter' handle (secured by red insulating tape) located amidships under the helms thwart. Crews should congregate amidships to avoid the inflating tubes. The tubes will keep the boat and 6 crew afloat with about 6" of freeboard. Huddle together and await assistance- *do not swim for help!*

Man overboard – one person keeps an eye on victim
Unless running before the wind, the boat is sailed *onto a reach*, then crash tacked without dipping or exchanging the sheets which are simply eased right away and held down to leeward on completing the crash tack. Then returning *slowly* on a reach playing the sheets as required, to stop alongside and to windward of the casualty. If running the boat is put on the wind to make up ground until the target is well abaft of the beam before crash tacking as above.

- Use oar and heaving line if necessary . Pick up to leeward.
- Pass a rope or strop around casualty under the arms and make it fast, attaching a line onto the lifting ring on the strop or lifejacket. (The jacket must be secured by crutch and chest straps). Secure the line to the boat.
- Lower the forelug and stow it out of the way.
- *If the casualty is injured, unconscious or overweight, IMMEDIATELY call the Falmouth coastguard* requesting ILB assistance on channel 16 saying Mayday (3 times) and giving your position. The ILB will recover the MOB within 15 mins.
- Otherwise, tie the traveller down with a strong end of rope, to the fore thwart. Make sure the burton is made up on the windward side.
- Unhook the fore halyard tackle and hook it to a strop made fast to the casualty's lifejacket ring or the bowline round the casualty and hoist him aboard. This is easily done by two crew on the halyard (one tailing) pulling from the *windward side.* This will help reduce heeling which would cause the casualty to swing away from the boats side.

- Therefore when hoisting, the casualty must be held in to the boats side with the tail of the bowline. The legs are swung inboard and the casualty is eased into a sitting position on the gunwhale and then inboard.

- Ask the casualty about water inhalation and assess for hypothermia.
- If necessary, call the ILB.
- If the casualty is capable, assist them to climb aboard on a boarding ladder hung overside by the mizzen mast/halyard or shroud. In this position he can help himself aboard by holding the rigging and his feet will not slip under the boat to any extent.

St. Ives Bay Challenges

Gusts

Occur commonly in North Westerly winds and when strong wind blows off the land.
Gusts occur following a cold front accompanied by broken cumulus clouds.
In these conditions there is a lot of interchange between warm surface air rising – causing the cumulus – and blasts of colder air coming down between the clouds from the fast moving higher air. These gusts hit like a fist and the squalls can be seen spreading out radially as they hit the water.

Gusts occur as the wind blows around features on the land, blasting down valleys like the Stennack or over the lower part of the town from Porthmeor. Gusts tend to come down beach valleys like Porthminster and Carbis Bay and the wind fans out into the bay. Stronger wind from the land can be expected as one opens up Lelant beach as the dunes are lower and offer less air drag than hills buildings or trees.

More wind offshore

This may seem obvious, but it is of course why so many lilo riders and novice windsurfers get into trouble and have to be rescued. What can seem a pleasant breeze in the harbour can rapidly become fresher on rounding the pier, the Island or simply heading out from the shelter of the land.
Anticipate trouble. Look at the bay before going out and get an inshore forecast.
If in doubt, reef. It's much easier to do this in the harbour! You have lost nothing if it is quiet outside. Shaking them out is easy.

The clockwise current

We can usually get out of the harbour for two and a half hours on either side of high water. However, this depends upon the position of the Cock Bank. Recently this has been reduced to more like 2 hours.
Off the Island the current runs ENE on the flood until approx 1.5 hrs after HW and then WSW on the ebb.
During this whole time the current runs around the bay clockwise. On the flood it is a big eddy and on the ebb the water simply runs around the bay before joining the west going flow outside. Within the harbour the tide continually streams out past the end of Smeatons pier and outside runs strongest (with a N'ly set) off the end of the remains of the breakwater (which extends from the end of the New Pier and is marked with a green buoy). ***Avoid this area in light or potentially failing wind.*** In such conditions you may easily be carried out past the Head, especially at Springs when the current can be quite strong – up to one and a half knots.

Always keep an eye on passing pot buoys to check the current strength and to check your leeway. Use transits between a buoy and the land behind to assess where the current is setting you.

Tidal effects on wave height and wind strength.
When the current and wind are in opposition, the effect can be dramatic. Even with a knot or so of tide against wind, the boat will feel as if the wind has increased by a Beaufort force, and the wind waves will become shorter and steeper.
The current seems to have less effect on a ground sea; these get steeper and shorter on entering shallow water.
The converse effect can be seen when wind and current run in the same direction; the wind feels lighter and the sea smoothes out.
Junction lines occur between bodies of water moving differently. These appear on the water with choppier water on one side corresponding to the interaction of wind and current.
Sometimes one can easily see from a high point how the current is running and where it is strongest.

Ground sea
Sailing in a big swell is fun. Upwind you notice that there is more wind on the crests of the waves and less in the troughs. Downwind the boat will surf/surge as each wave passes under her. Holding a course can be difficult as the rudder lifts out of the water. (Sit aft!)
You may have to bear off to sail down the waves more to prevent broaching (turning up along the wave as you slide down it). This poses some risk of capsizing.

A lee shore is a risk to any boat, but must be treated by respect by an engineless sailing boat that makes leeway and is slow to tack!
If you are drifting down to a lee shore, don't hesitate to anchor as soon as possible, deploying all the anchor rope. You'll then have time to work out your options.

When beating out of the harbour, continue tacking between the pierheads keeping the harbour entrance to leeward until you are well clear and have found the true wind. Don't be tempted to sail on past Smeaton's pierhead as soon as you can clear it - You may find the wind outside heading you and, coupled with the N. going tide, suddenly the outside of the quay itself becomes your lee shore.

Surf *is very dangerous for open boats, and the size of it cannot be assessed from to seaward.*
Do not attempt to land on any surf beach!!
Even the harbour beach in the lee of the island should be carefully approached even if the waves are as small as 6 inches.
The risks in surf are of loss of control, broaching and capsizing. There is then danger to life by drowning, of being trapped under the boat, More common is trauma caused by the heavy boat riding over peoples' bodies or limbs on the surges.
Remember, if you are jumping out of a boat to pull her up, do not get in front of the boat or she may suddenly surge over you.
The first man to jump out must hold the boats stern. Others then can hold the sides. Once touching she must be quickly run up until the waves cease to move.

Give yourself time to get home!

The mooring dries out 2 -2 ½ hrs after HW. If returning late, heeling the boat over will reduce her draft by a couple of inches.

Be careful when sailing away from the harbour downwind or down tide as it will take longer to get home. On lovely summer evenings the wind tends to die away! If you have to, get rowing in good time rather than missing the mooring and giving yourself or somebody else a job of mooring her up seven hours later!

BOAT SKILLS AND RIG HANDLING

Checking the boat and hoisting sail

Lifejackets on, check radio. Check the anchor with warp attached is fastened to mast and ready to go. Pump ship and scrub off gull droppings.

Grease the rowlock and oar leather. Check thole pins.

Take the scully oar from the punt. The punt's painter can be tied to the bow mooring near to the joining rope.

Hang the rudder, slipping the rudder gudgeon onto the long pintle on the boat first.

Step the mizzen boom, securing it with the toggle before securing the toggle itself with the mousing line. Ensure that the spliced eye of the inboard end of the sheet is around the boom forward of the cleat. The other end should be made up on the cleat until it is tied to the clew of the mizzen.

Hoisting Mizzen.

Tie the sheet to clew with a bowline. Shackle the tack down to the eyebolt in the thwart by the mast. Remove the eyesplice securing the traveler and slip the yard strop thimble over the traveler hook. Tie the mousing line.

Hoist with somebody keeping a little tension on the luff so the yard does not thrash around. The halyard must be tight enough to prevent creases from throat to clew when sailing. Finally tighten the sheet so that the boat weathercocks in the wind.

Hoisting Forelug

Decide which tack to set off on. Move forelug on its yard to leeward of the mast on your chosen tack.

Remove the eyesplice securing the traveler and, *without letting go of the traveler,* slip the thimble of the yard sling over the traveler hook and secure the mousing line.

Check the orientation of the tack shackle and slip it onto the 'scudhook' (the hook at the stemhead)) and secure the mousing line.

Attach the appropriate sheet (short loop through the clew cringle – long backsplice through the projecting short loop). Ensure that the Burton and the halyard are hooked on the windward side eyebolts. Tighten up the Burton.

Bowman sits ready to apply luff tension as you hoist, (controlling the movement of the yard and flogging sail), Halyard man hoists and bowman helps with final tightening. Never coil up the falls of the halyard and burton. They are much less likely to get tangled if left on the sole as they are.

When there's a headwind.

If there is room around the mooring it may be best to cast off the stern mooring and let the boat lie head to wind. If the boat is on a crowded mooring, row or scull her to a mooring in open water. If there's room, It may be advantageous to set the forelug aback for the first board allowing for a quicker first tack which hopefully will allow you to clear the pierhead**.** *NB. previous comment concerning leeshore.*

When the wind is free.

If you're in a position to run out of the harbour and facing that way on the moorings with room ahead, then the headrope may be cast off first. Retaining the headrope til the last minute gives the option of providing a directional pull if space ahead is restricted. The mizzen is hoisted and sheeted home and when all is ready the forelug is hoisted whilst the sternline is slipped and mizzen sheet eased.

Getting under way

Mizzen is eased. Bowman unties bow mooring and pulls on it, passing back down the windward side as the boat bears off.
Forelug can be backed by the mast if necessary to help this process. Sheets trimmed and away.

Trimming sails without a flag.

Wind direction can be detected by flags on potbuoys, smoke, by watching the wind ripples on the water, by feeling the wind on your face and hearing it roaring in your ears. Ashore, the weathervane on the church and RNLI and other flags
Of course, it can best be seen by its affect on your sails.
Except when running, the sail trim that will give most drive and least heeling moment is found by easing the sail out until the front edge lifts (blows in) and then pull in until the sail is just full again.
When running the sail is let out until the yard is at right angles to the boat (If she starts rolling, pull it in a bit).
On a dead run the main and mizzen can be carried on opposite sides – 'Goosewinged'.
This is greatly helped by booming one or both sails out. Oar, boathook or any other pole can be used. A little light line lashing on the end of the poles will make this easier.

Beating.

When beating, the sails are pulled in reasonably tight (not flat as a board or the boat will go sideways!)
The helmsman concentrates on keeping the speed on while sailing as close to the wind as possible. This is achieved this by every half minute or so, luffing slowly until the front of the sail starts to tremble or break, and then bearing off to return the sail to fullness.

As a lad I was often told by the old fishermen, to **'Keep her full and by'**, advice that is very relevant to jumbo sailing. Go slowly and you will go sideways as the boats keel is shallow.
When *moving well*, th*e* forelug can be sheeted in until the sail's foot is in line with the gunwale with the mizzen tight in. The sails work together well like this and you should have slight weather helm. In light airs the sails are eased slightly and the boat heeled to keep the sails in shape.

Gust management.

In squally weather, an unexpected gust could potentially lead to a swamping if the sheet is not eased sufficiently and in good time. Therefore, the rule is ***never make fast the foresheet!*** Instead

take a turn around the heel of the cleat and hold it in your hand. If more friction is required or short-handed it can be jammed in the fore end of the cleat so that it can be easily released at a moment's notice.
A gust will cause the boat to heel much more when making little headway ie. when tacking.
When a gust hits the boat, point up a little, until the sails luff blows in (lifts) making distance to windward and easing the boat at the same time.
You must however bear away again at the slightest loss of boat-speed.
In sharp gusts the sheet must be eased a little, 2-6 inches or so, and then, straight away, (as the helmsman luffs) pulled in again so you have something to ease in the next gust.
Pumping the sheet in and out in the gusts needs strength and rapid reflexes!

The effect and importance of the mizzen
The mizzen sail is vital to the balance and handling of a dipping lugger.
If the mizzen is tightened the boat will turn up into the wind and if it is eased it will bear away.
This is used to promote balance and self-steering and to relieve unpleasant weather or lee helm.
When tacking the mizzen is tightened to help the boat luff up to head to wind, but, once through the eye of the wind the sail must be eased to allow the boat to fall away to a close-hauled course.
If eased totally the boat will bear away slowly onto a run! Thus the control of the mizzen when tacking is the job of the helmsman.
If the mizzen is not eased when head to wind the boat will not bear away and will get into 'irons', stopping and then gathering sternway.
This requires reverse movement of the helm and easing of the mizzen to correct it.
Everybody gets into irons sometimes. Practice steering backwards!

In smooth conditions, the jumbo will tack without using the tiller which is fun to try. Get her going 'full and by' then simultaneously ease away the fore sheet and sheet home the mizzen. Stand by to back the forelug at the first opportunity. This can be done more effectively when the peak is lowered and held out to leeward before it is dipped around the mast.

Boat trim
The Jumbo is designed to carry weight. Being clinker built she is a light and buoyant boat.
She is capable of sailing safely with five people aboard, but however many crew you have, they must be aware of the trim of the boat. It is very tempting when tacking or gybing for all hands to rush forward to help. This results in the boat being down by the head with the rudder out of the water; almost uncontrollable. *She will not then turn and will go straight on!*

At all times crew members must be aware of the effect of moving their weight around the boat.
Crew should occupy the middle of the boat.
In most weather they should be on the windward side to counter the heeling effect of the sails.
In very light weather the sails will hold a better shape if the boat is heeled to leeward.
Keeping the boat upright when beating will minimize leeway.
The boat will tack better if the crew *keep out of the bows* as much as possible and *heel her to leeward* until she goes through the wind.

Tacking

The boat must be sailing close hauled at full speed before attempting to tack.
Keep the crew weight aft as much as possible and look for a smoother patch in the waves.
Put the helm down gently to start with and do not cross the gunwale with the tiller.
As you start to tack get some of the crew to heel the boat a little to leeward so that the asymmetric immersed hull will assist the turn.
Keep the mizzen sheet hard in until the boat is through the wind.
At the cry of ready about the boat is luffed.
Once the boats bow is through the wind, ease the mizzen sheet and, with the windage of the dipping sail, the bow will blow off.
Thereafter, during the tack, the helm keeps the boat on a close reaching course by suitable adjustment of the mizzen sheet and helm.

The Dipping.

Every crew will evolve their own way of Dip tacking.
The best way of learning is by going out with an experienced crew!
Simultaneously, the Forelug halliard is eased and the sheet is detached.
The leech is pulled down, the 'peak' of the yard is grasped and it is passed around the mast and lowered onto the thwart in front of the mast.
The clew of the sail and the belly of it are pushed through between mast and yard.
The slack halliard (the weight of sail and yard are supported by the thwart) is transferred behind the mast to the new windward side and hooked on. This clears the way for the bunt of the sail to be passed aft.
The new sheet is attached.
The Burton has to be transferred to the new windward side, hooked on and tightened.
The yard head (peak) is eased round the mast and held while the halyard is tightened and the yard is guided safely aloft.
The halyard is tightly 'sweated up'.
Sails fill, sheets are trimmed and the tack is completed.

NB.

- The halyard man should not go forward of the mast thwart as his weight would sink the bows and slow or stop the boat turning.
- If the boat gets stuck head to wind, back the sail on the OLD windward side to blow the bow round.
- Remember to have the mizzen tight until the boat goes past 'head to wind' and then ease well off until the boat is on a close-hauled course on the new tack.
- Do not hoist the forelug until the boat is back on a close-hauled heading on the new tack.

Every crew must find their own way of achieving a tack!!

When tacking in a big swell, look for a relatively smooth patch. If you have a large crew the weight in the boat will enable you to turn in quite steep seas. If you are lightly crewed, keep the boat sailing fast on the face of the wave and do not attempt to luff until you are over the crest.
Turn hard on the back of the wave, trying to get past head to wind before climbing the back of the next wave.

Keep the crew weight back to allow the bow to lift and keep the rudder in the water. Heel the boat a little to leeward so that the hull shape helps to steer her round.
Don't try too often before helping the boat to tack with the oar or 'wearing ship' – gybing round!

Once you have got the bow through the wind, the waves will push her round to a reaching position on the new tack, so a short frantic bit of rowing can save you a lot of ground to leeward!
If you are anywhere near a lee shore in a lumpy sea, consider wearing round after one failed attempt at tacking!

In light weather the Burton can be permanently made up to a rope strop around the centre of the second thwart. This saves time in the tack and is helpful when shorthanded.

(When racing, considerable judgment will be needed to allow for leeway when deciding when to tack to lay or round a windward mark!)

Gybing – Dipping
This is generally easier than tacking as the sail is full when it is lowered and therefore easier to pass around the front of the mast. However, care must be taken not to lose the clew over the side. The mizzen does give some wind shadow however, and the apparent wind is decreased when sailing downwind.
The most important safety consideration in heavy weather, is to ensure that the Burton is on and tightened up on the new side before the sail is rehoisted as it acts as a backstay, preventing the mast from bending and breaking.
The procedure. Helm bears away onto a run, both sails well eased. "Stand by to gybe" is the word. Otherwise the process is the same as for tacking but extra care is required to control the sail and yard.
Throughout the gybe the helm may either keep the boat running before the wind or may round up onto a beam reach if required.

Reefing
Generally speaking, when reefing, the Luff reef cringle is attached to the tack attachment point, the leech reef cringle is attached to the sheet and the bunt of spare sail is tidied up by rolling it and tying it up with the reef points. On the mizzen the above is exactly what happens. The main is more difficult because of the need to dip.
The sheet block is attached to the clew reef cringle and the sail is rolled and tied up with the points as above but a different solution has to be found for the luff.
This is because, when the yard head is on the mast thwart when tacking, the reef cringles are well above the stem hook.
Therefore, we employ a tack rope. The fore end of which is shackled to the luff cringle. The bow binding of the block (which is captive on the tack rope) is moused to the skudhook on the stemhead. The hauling end of the tack rope runs aft through a hole in the hanging knee on the port side of the second thwart and is made fast by belaying to the thole pin.
Upon tacking this line is simply cast off. The correct amount of slack for a single reef is controlled with a knot that comes to bear on the aft face of the hanging knee.
Just before the sail is hoisted on its new tack, the tack rope is hauled in and made off once more to the thole pin.

Working the tack rope is consequently a swift operation and may be done by the SM.
NB. If a double reef is required then the knot will need to be retied approx 24" further aft.
When not in use it is unshackled from the luff cringle and the block is taken off the skudhook. The slack is then taken in so that the shackle and block bear against the foreface of the hanging knee snug against the planking so that it is clear of the eyebolt for the burton purchase.

In extreme weather the mizzen sail can be hoisted in place of the main and a storm mizzen hoisted (leg o' mutton). This works well generally, but it represents a big reduction from the double reef. The jumbo is underpowered and may be stopped when beating into steep seas in these conditions.

Setting Forelug 'Standing'
The Jumbo mizzen is set standing, being tacked down level with the mast. Set like this only a small portion of sail extends in front of the mast so that the sail shape is hardly distorted when sailing aback.

The fore lug can be set standing but because of its shape it cannot be effectively sheeted unless set lower on the mast. This is achieved by tacking the first reef cringle down to the eyebolt on the thwart for the traveller safety line.

The halyard is made fast on the same side as the yard and the Burton on the other side, each on their normal pins. The spare sheet block is removed from the bronze pin where the mizzen burton is belayed. One sheet is unshackled from the gunwhale and attached to the becket of this block. The hauling part of the sheet is passed through the block and its strop is looped over the aft end of the same belaying pin. Upon tacking, the strop together with the whole sheet purchase, is transferred to the other side of the boat.
The sheet may be made fast to itself or to any strong point with a slippery hitch.
With this set up, the yard will not swing out well off the wind but it provides a way of sailing when shorthanded, and of tacking without dipping.

Use the oar. Don't be proud – be practical!
We can't afford to damage our boats or those of other harbour users. Don't be too ambitious! If you get stuck in stays in the harbour entrance due to a flukey gust, GET OUT THE OAR! If you are fetching across the harbour going for your mooring, don't try to squeeze past to weather of a moored boat unless you have the oar ready to use if it turns out that you can't make it!
Similarly, if you are going for the mooring but are falling below it, don't worry about luffing to the mooring; when you luff, help her with the oar rather than miss the buoy and drift into other moored boats!
If you are near the shore and you are stuck in stays, stroke her round; the old boys would approve!

Anchoring
An anchor is your final line of safety and is a seamanlike thing to use.
If you are in trouble near the shore drop the fore lug and chuck it out. It will give you time to work out your next move.
The more rope you let out, the better the anchor will hold. Minimum is three times the depth of

chain or five times the depth of rope. If there is any sea running use seven times the depth. Keep an eye in a transit (two things in line) abeam of you; If they are moving apart you are dragging. If you cannot let any more rope out you will have to do something else unless you can see the lifeboat!

Boat trim

The Jumbo is designed to carry weight. Being clinker built she is a light and buoyant boat. She is capable of sailing safely with five people aboard, but however many crew you have, they must be aware of the trim of the boat. It is very tempting when tacking or gybeing for all hands to rush forward to help. This results in the boat being down by the head with the rudder out of the water; almost uncontrollable.

At all times crew members must be aware of the effect of moving their weight around the boat. Crew should occupy the middle of the boat. In most weather they should be on the windward side to counter the heeling effect of the sails.

In very light weather the sails will hold a better shape if the boat is heeled to leeward.

Keeping the boat upright when beating will minimize leeway.

Losing the travellers up the masts or losing a sheet at sea

This can cause serious problems which can be avoided by:

- making sure the sling is thoroughly moused to the travellers before leaving the mooring.
- never trying to lift the peak onto the thwart when dipping the forelug **without** using the halyard.
- Always having the spliced line ready to replace the sling when removing the sails from the mast.
- tying a figure 8 knot in the end of the sheets.
- having tacked, overhauling the lazy sheet so that it's easy to identify the correct part to pull when sheeting in on the next tack.

Fishing from the Jumbo.

Mackerel fishing with feathers is easy from the Jumbo. You need to be where the fish are, which is most dependably outside or just inside the head. The boat needs to be going slowly, at about the speed used by commercial fishermen though fish will be caught if they are there when stationary. So, try drifting along with the forelug down on a beam reach under mizzen power, or if you need more speed, with the forelug half hoisted with the lower end of the yard tucked under the quaith (breasthook). The number of hooks you use depends on your experience. I use 12, the commercial boys – up to 80!

It's always nice to get a feed and fish are pretty dependably to be had off St. Ives.

I have not tried setting pots but it would be quite possible to set a few in good weather inside the bay. Near the shore inshore fishermen would drop their forelug and manoever with oar and mizzen; quite safe!

Drift fishing for herring and pilchard was what these boats were principally used for. The harbourmaster of Clovelly does some of this with his 15 ft picarooner. The Jumbo would be much more practical for this but you need the nets, lights, etc.

Trolling for Bass could be a profitable line. Mousehole and Newlyn men get a premium price for Bass caught on lines. Line caught bass under sail – worth a fortune.
Fishing is what these boats were built for ….

Phil Slater June 2010;
Amended by Jonny N. June 2011 and Jan 2024
Amended by Phil and Jonny. June 2025