

This manual has been compiled to help you to operate your craft with safety and pleasure. It contains details of the craft, the equipment supplied or fitted, its systems, and information on its operation and maintenance. Please read it carefully, and familiarize yourself with the craft before using it.

If this is your first craft, or you are changing to a type of craft you are not familiar with, for your comfort and safety, please ensure that you obtain handling and operating experience before assuming command of the craft. Your dealer or national sailing federation or yacht club will be pleased to advise you of local sea schools, or competent instructors.

**PLEASE KEEP THIS MANUAL IN A SECURE PLACE, AND HAND IT OVER TO THE NEW OWNER WHEN YOU SELL THE CRAFT.**

Boat type: Comet Trio

Designed by: Phil Morrison

Built by: Comet Dinghies, Horsepond Meadow, South Molton, Devon, EX36 4EJ,  
Tel/Fax: 01769 574358

Sail Number:

HIN:

Dimensions:		
Length	15'	4.6m
Beam	6'	1.83m
Draft	8"-3'9"	.2-1.15m
Sail Area Mainsail	100 sq ft	9.28sq m
Sail Area Jib	35 sq ft	3.25sq m
Sail Area Spinnaker	100 sq ft	9.28sq m
Hull Weight	320 lbs	145kg
Mast Length	23'	7m

Design category: D

Maximum number of persons	5	375kg
Maximum additional load		75kg
Maximum recommended total load		450kg

In accordance with EU Recreational Craft Directive this craft has been assigned to –  
Category D – “sheltered waters”: Craft designed for voyages on small lakes, rivers and canals, where conditions up to and including wind force 4 and significant wave heights up to and including 0.5m may be experienced.

## **INTRODUCTION TO THE TRIO**

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This book is intended to introduce you to your Trio, and help you get the best from her. There are hints and tips on sailing the Trio, but it is not intended as a "how to sail" book.

Beginners can learn to sail in a Trio and plenty do at sailing schools, but are advised to learn the basics at a school or from a more experienced friend.

Before taking to the water, the following points should be remembered:-

1

Everyone should wear a buoyancy aid that fits correctly.

2

Choose a sheltered stretch of water, with no strong tides or big waves.

3

Avoid a busy area with lots of boats and moorings, but do not sail if you are the only boat and no-one else is around.

4

Even if the wind is moderate, reef the sail to keep the speed down and the boat upright.

5

Do not overcrowd the Trio. In the early days only have two or three aboard. Any more and things can get a bit fraught until everyone is confident and knows what to do.

## **RIGGING THE TRIO**

---

1

You will find it easiest to raise the mast when the Trio is just on it's trolley, without the jockey wheel fitted and stern to wind.

2

Fit the wind indicator, if you have one, check the mast area in the boat is clear of ropes etc., lift the mast up and insert it into position. It might help to stand the mast in the bottom of the Trio first, then lift into the final position. Let the mast lean forwards in it's mast gate.

3

Untie and unravel the shrouds and forestay. Tie the forestay to the front deck eye with a couple of hitches but this forestay can be quite slack.

4

Put the jockey wheel on and turn the Trio head to wind. The mast should now lean back, making the forestay tight.

5

Fasten the shrouds to the U bolts making sure the spinnaker blocks (if fitted) are in front.

6

Carefully untie the forestay but without letting it go, tie tightly to the deck eye with a triple purchase and several half hitches.

7

Fully wind up the furling drum anticlockwise.

8

Clip the top swivel of the jib furling gear to the forestay and fasten the jib to the top swivel and furling drum.

9

Hoist the jib, hook the loop in the jib halyard onto the Highfield Lever and lower the lever to tighten. Pass the jib sheets inboard of the shrouds and through the jib sheet fairleads from the outside. Put a knot in the end of each jib sheet. Fully furl the jib.

10

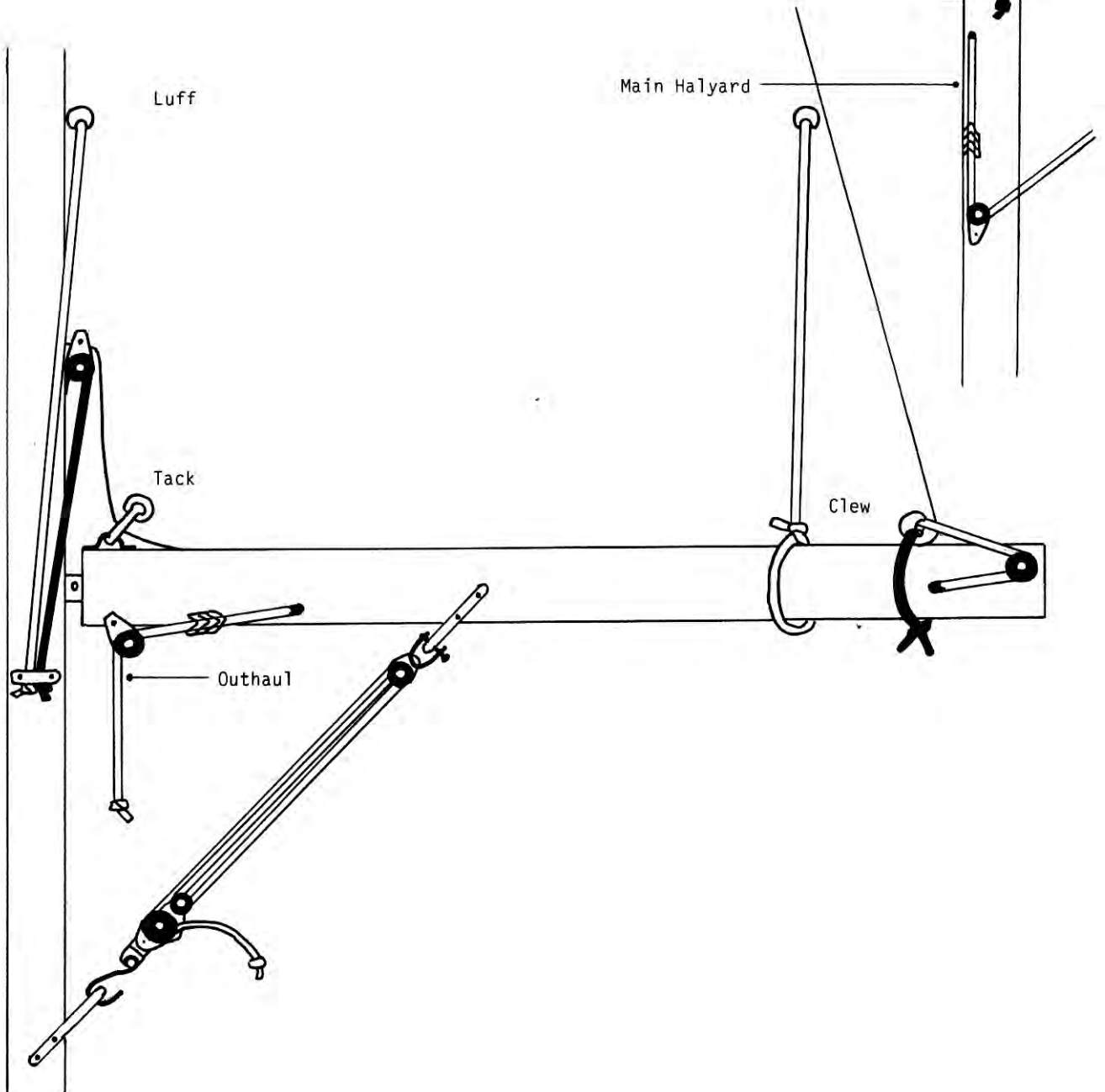
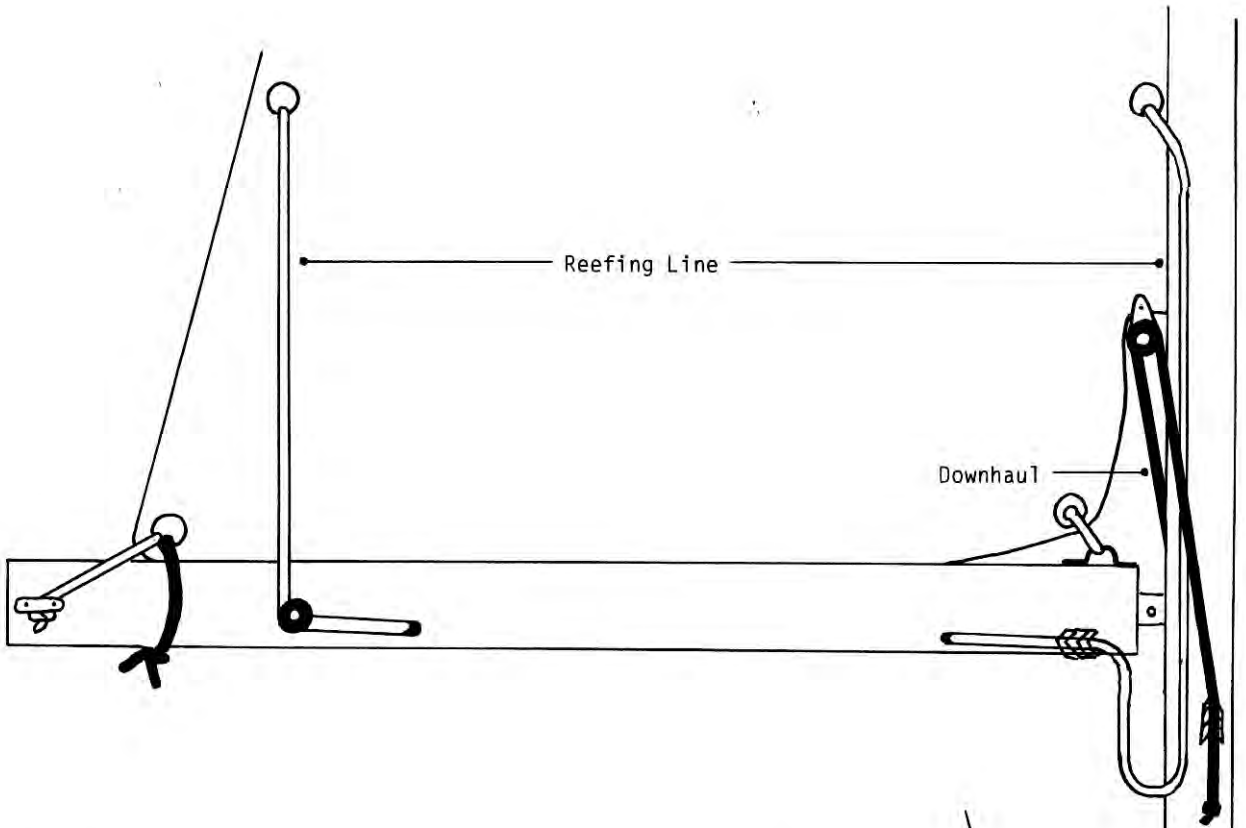
Put the rudder on making sure the retaining clip "clicks" and insert the tiller located by the split pin. Raise the rudder blade with the rudder uphaul rope.

11

Tie each end of the mainsheet horse to the eyes on the transom with two half hitches, making sure the lower mainsheet block is positioned midway and about 6" above the tiller.

12

Move the dinghy to the waters edge and position head to wind.



13

Shackle the mainsail halyard to the mainsail, feed the sail into the luff groove and hoist the sail making sure the reefing line is through the front reefing eyelet on the sail. When the boom is nearly up to the gooseneck put the mainsail halyard into the cleat, put the boom onto the gooseneck and tighten the halyard fully. (If you have a Dynema halyard be careful not to overtighten).

14

Thread the end of the reefing line through the eye on the mast. Thread the downhaul rope through the block on the sail and fasten to the mast cleat. Clip the kicking strap to the mast but do not tighten.

## **LAUNCHING THE TRIO**

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1

Check the bailers are closed, the drain bung is tight, hook the rudder shockcord to the end of the tiller and make sure the mainsheet and tiller are free to operate.

2

Depending on the direction of the wind relative to the shore, the Trio is pushed or pulled into the water. In a strong on-shore wind it may be necessary to pull the dinghy into the water. Alternatively, launch the Trio without the mainsail hoisted, then holding the boat into wind, hoist the sail and unfurl the jib.

3

The crew should hold the boat head to wind by holding the Trio by the windward shroud. The helmsman gets in first and lowers the rudder and centreboard a bit and tightens the kicking strap.

4

Bearing in mind the wind direction and the whereabouts of any other dinghies or boats on moorings, the crew should point the Trio in the desired direction and get aboard.

5

Sail into deeper water and lower the rudder and centreboard.

## LIGHT WIND TRIO SAILING FORCE 1 0-3 KNOTS (3.5 MPH)

A healthy sail area combined with an easily driven hull shape gives the Trio the potential for excellent light wind performance, however as always, there are certain basic rules that will allow you to get the best out of your Trio.

Firstly, I think it is important to have tell-tales on the jib to enable you to really "see" the airflow. These can be black wool threaded through the sail, knotted each side then trimmed to about 6" or the "stick on" type found in chandlers. I put one just in front of the window, one half way up the sail, and a third higher up, all the same distance from the luff or front of the sail.

### Beating

The crew should be sat in on the centre seat with the helmsman sat to windward on the side seat or up on the side deck if the wind strength warrants it. In all cases the helmsman should endeavour to sit as far forward as possible. This digs the boats' bow in, and lifts the transom thus reducing the wetted area of the hull. The boat should be allowed to heel to leeward helping the sails fall into the correct shape. The wetted area of the hull is also reduced.

The boat should be sailed as smoothly as possible especially in really light winds, tiller movements should be as small as possible and tacks should not be as fast as in stronger winds, or hard won boat speed and momentum will be lost.

The crew should be careful not to sheet the jib in too tight, but with no need to use the jammer, be careful you don't lose concentration and let the sheet go loose, changing the sail shape.

The mainsail should be set with no cunningham (downhaul) tension and with only enough halyard tension to make sure the sail is fully hoisted. The outhaul should not be tight but not too loose! If the sail is too full you will not be able to point high and also the airflow can not stay attached to the surface of the sail. The kicking strap should only really have enough tension to prevent the boom lifting. This will allow the sail to twist a little. The boom needs to be pulled towards the centre of the boat, but without a lot of downward pull on the sail.

The boat should be steered so both windward and leeward jib tell-tales are streaming. It never pays to "pinch" the boat in really light winds, it is important to keep the boat moving at all costs.

### Reaching

The centreboard can be raked aft to maintain the balance of the boat and to reduce wetted area. The crew will probably sit to leeward but the helmsman will still sit well forward. Heel the boat to leeward to help the sail set. The crew eases the jib and is usually making constant adjustments keeping both tell-tales streaming.

In light winds the apparent wind direction can change quite a lot requiring changes to both sails if a straight course is maintained.

The relationship of the jib to the mainsail and vice versa is vitally important in all wind strengths. Generally the mainsail should be eased until it just begins to luff then pulled in a fraction. (Luffing is when the wind gets around the front of the sail causing the front area to flap, a jib will luff when the boat is pointed higher to the wind than the sail angle suits).

### Running

Keep the crew weight well forward and raise the centreboard for low drag. It is better and more comfortable for the helm and crew to sit on each side seat rather than share the centre seat. The helm can control the tiller extension more easily and have better visibility, and the crew can hold the boom out to the shroud if required. The jibstick comes in handy for light to medium winds helping to stop the sail from collapsing but this can still happen in really light winds as the boat can occasionally end up going faster than the wind when the wind suddenly drops!

### MEDIUM WINDS FORCE 2-3 4-10 KNOTS (4-12 MPH)

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As light winds increase into medium winds the crew will move to the side seat with the helmsman sat up on the side deck if the wind strength requires it.

On all points of sail, the boat should be kept as upright as possible and particular attention paid to the centreboard position to give just a bit of weather helm to the tiller. (Weather helm is felt as a pull against you on the tiller, if you let go of the tiller the boat will round up to windward. Lee helm is the opposite when the tiller pushes and the boat bears off downwind when the tiller is released).

On a reach the mainsail outhaul might be eased a bit to give more power to the sail. The kicking strap will also need to be tightened to stop the sail twisting too much, but otherwise the same rules about tell-tales and luffing sails apply as with light winds. If you're light or inexperienced, beating to windward might seem hard work in a high Force 3. De-power the mainsail by flattening the sail by pulling on more outhaul and downhaul tension.

### HEAVY WEATHER TRIO SAILING FORCE 4+ 11 KNOTS+ (13 MPH+)

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The Trio has always had what I would call a "racing" sail area, rather than a "cruising" one. Once the wind is up to a good Force 3, if you're light, or a Force 4 if you're heavier then beating to windward in a Trio will be hard work as it would be in any other racing dinghy.

### Beating

First, I'll assume that you are sailing with full sail beating to windward. Both helm and crew should be sat up on the side decks and using the toestraps. The mainsail should be set flat to de-power the sail with plenty of outhaul, kicker and downhaul. If you have adjustable jib fairleads then move them more aft than usual.

Sailing upwind in a breeze requires a bit of teamwork. What I do is to sail and steer the boat using the bottom two jib tell-tales, keep the jib in tight, and steer the boat to windward so the bottom two windward and leeward tell-tales are streaming aft. If you come too close to the wind the windward tell-tales will flutter, and the boat will quickly slow.

When the boat is hit by a gust, keep the jib in tight and ease the mainsheet, the mainsail will luff (wind gets around the back of mast and the sail flaps in that area). The jib will keep you sailing to windward until the gust eases and you can sheet in the mainsail.

It is best to ease the mainsail first as this causes the most heeling and keeping the jib in provides some power to keep the boat going.

### Reaching

On a reach the centreboard will want moving back (handle forward!). The helm and crew also move back to help the boat get on the plane. As the boat accelerates up on to the plane then you need to pull the sails in a bit to keep those tell-tales streaming. Sometimes you can't see the leeward tell-tales so you just have to ease the jib now and then to check that the windward tell-tales are only just streaming.

The golden rule for beginners is that as much wind goes around the back of the sail as round the front. This applies to all points of sail except downwind. So often you see people making hard work for themselves by pulling the sails in too much.

### Running

When running, in theory, the centreboard could be fully up but I would leave some down in heavy wind for stability. Straight downwind, it is still best to get the jib out the opposite side rather than let it flap behind the mainsail.

### Reefed Sailing

If beating with a reefed mainsail but with the jib as well, the centreboard should be left fully down and the boat sailed with a bit of heel, to prevent lee helm (the tiller seems to push you). There won't be the need to ease the mainsheet in most of the gusts. When reaching whilst reefed the centreboard should stay down further than its position for full sail.

If the wind is so strong, to require the jib to be furled upwind, beware of oversheeting the mainsail. Only pull the boom in to a point above the corner of the transom. The Trio is now effectively a singlehander like a Comet or Laser, without the aerodynamic benefits of a jib. Keep the centreboard raked aft a bit more than for full sail. When sailing with just a reefed mainsail keep checking you're not oversheeting by easing the main until it luffs, then pulling it in until it just stops luffing.



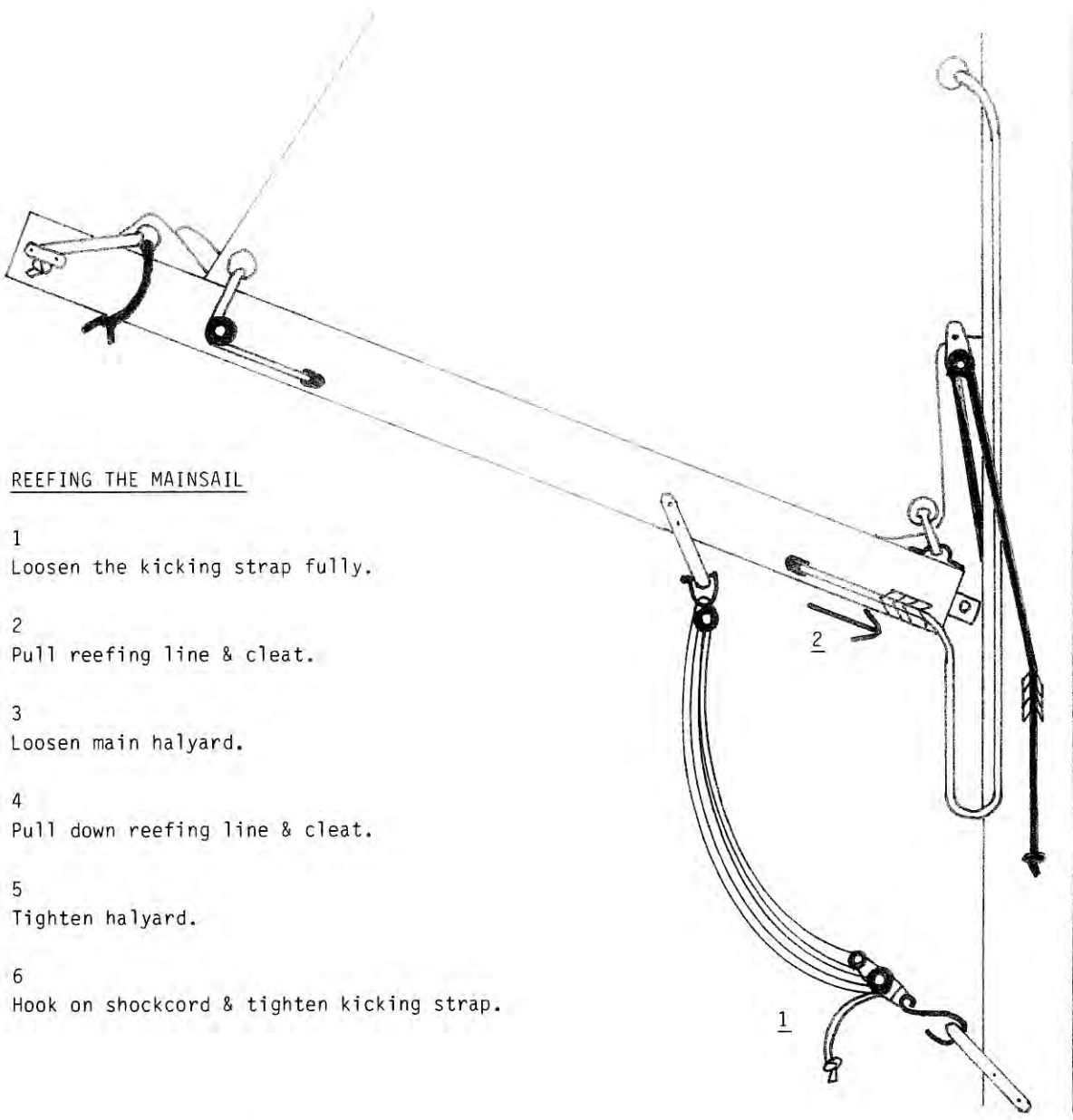
## **REEFING THE TRIO**

It is often sensible to reef the mainsail as well as furl the jib in strong winds. If you are light or inexperienced and don't want to hike right out, you might find yourself sailing a bit faster than if you had full sail and were struggling to keep the boat even upright all the time.

1. To reef the mainsail, head the dinghy in a closehauled position with the wind coming from the starboard or right side. Make sure the centreboard is fully down and let both sails flap. If you need to, furl the jib as well.
2. Loosen the kicking strap right off and pull the reefing line at the front end of the boom and cleat it.
3. Uncleat the mainsail halyard and pull down on the other end of the reefing line until the reefing eye is just above the boom and cleat it in the downhaul cleat on the mast. Tighten the mainsail halyard.
4. Tidy up the foot of the sail by hooking the shockcord under the boom and onto the hook the other side of the sail. Be careful not to trap the mainsheet under the boom on centre mainsheet boats.

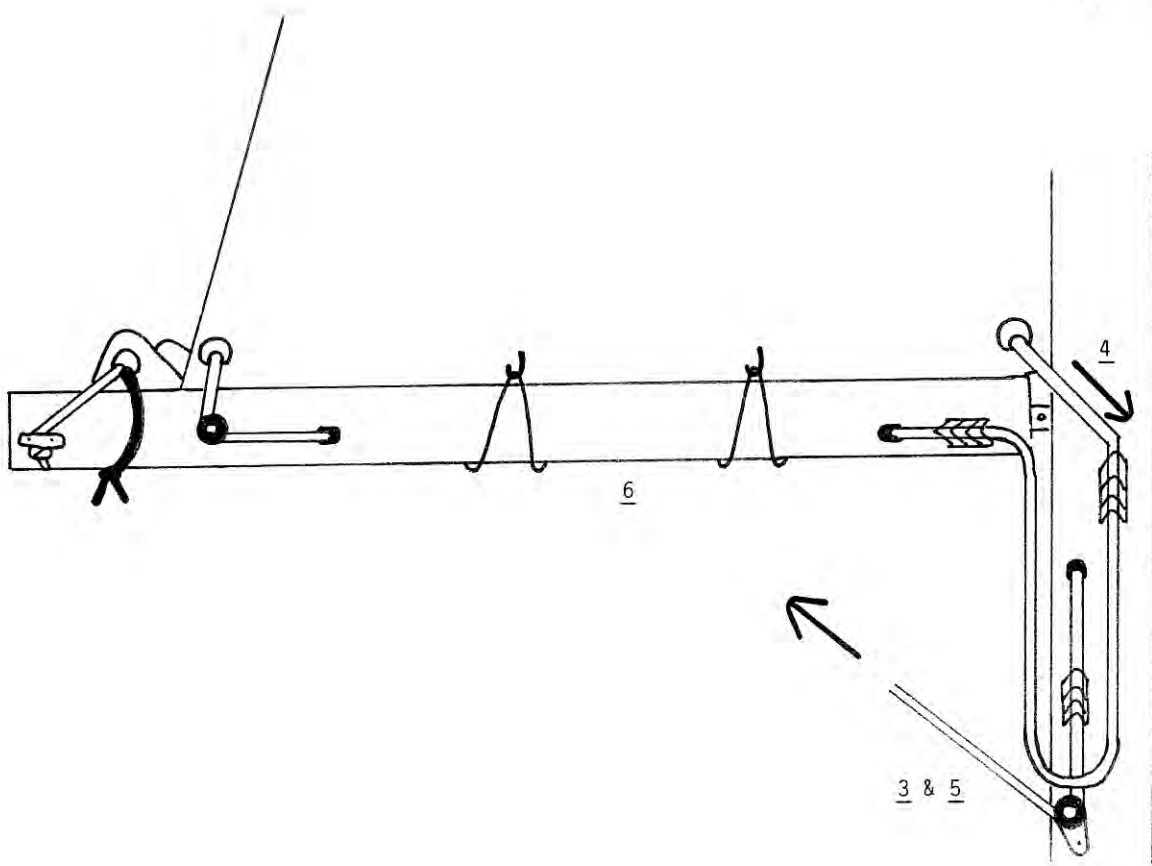
### **Unreefing**

To unreef the mainsail, let the sails flap in a closehauled position. Loosen the kicking strap. Undo the shockcord. Uncleat the reefing line on the mast and raise the sail with the halyard. Uncleat the reefing line on the boom and lower the far end of the boom.



REEFING THE MAINSAIL

- 1  
Loosen the kicking strap fully.
- 2  
Pull reefing line & cleat.
- 3  
Loosen main halyard.
- 4  
Pull down reefing line & cleat.
- 5  
Tighten halyard.
- 6  
Hook on shockcord & tighten kicking strap.



## CAPSIZING THE TRIO

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You should always be prepared for a capsize and you and your crew should know how to handle the situation when it happens.

Ideally it's best to practice this on a hot summer's day and then you're well prepared for when it happens for real.

Usually after a capsize you will find yourselves in the water. Firstly, always remember that if you can't get the boat back up and begin to get tired, you must stay with the boat. Never try and swim for shore however close it looks. A dinghy that stays on it's side for more than a few minutes will inevitably attract attention.

If the spinnaker was set when you capsized it is best to uncleat the halyard and bowsprit outhaul and get in back in the bag. In extreme conditions the jib can also be furled before righting.

The crew should float alongside holding on to the centre seat and wait to be "scooped up". If the helmsman has trouble getting on to the centreboard the crew can make the Trio lie a bit lower in the water by standing or sitting on the cockpit side though there may be more water in the cockpit when it is righted. As the Trio comes up the more agile sailor might be able to get straight back in but usually the crew helps the helm back in after the boat is up.

Check the mainsheet is not caught underneath the rudder and open the bailers if not already open. A scoop bailer or a square bucket can also be useful!

In accordance with EU Recreational Craft Directive the minimum necessary crew mass is 65 kg.

In simple English, we recommend that the weight of the person on the centreboard should be at least 10 stone 3lb to be able to right the Trio from a capsize.

## RIGGING THE ASYMMETRIC SPINNAKER

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1

Before you raise the mast put the halyard through the spinnaker block and tie the ends securely together.

2

Raise the jib but then furl it.

3

Put one end of the spinnaker halyard back through the block next to the mast, then through the cleat, put a knot in it about 12" from the end, put the end through the hole below the cleat and knot the end. (This helps stop the halyard from tying itself in a knot when the sail is up!).

4

Passing the spinnaker halyard outside of the left (port) jibsheet, tie the top of the spinnaker (easily identified as it's the "sharpest" corner) on with a bowline with about a 4" loop. Pull the halyard down tight and put it in the plastic clip just below the shroud.

5

Pull the tack rope coming out the end of the bowsprit, take it past the port side of the forestay and jib and tie it to the remaining corner of the spinnaker.

6

Pass one spinnaker sheet around the forestay, underneath the spinnaker tack rope and put it through the ratchet block in the direction of the arrow on the block. Put a figure of eight knot in the end. Repeat this on the other side.

7

It is often best to check the spinnaker is rigged correctly whilst on dry land. Position the Trio on a beam reach with the wind from the right or starboard side. Standing just aft of the starboard shroud pull the bowsprit outhaul rope until the sail is fully out. Now hoist the sail fully with the halyard. The sail should be rigged correctly but the sheets can easily be swapped around or untwisted if necessary.

8

Drop the sail by uncleating the bowsprit outhaul, uncleating the halyard, gathering the sail down and then pulling the sail and bowsprit in and putting it all in the bag. Put the halyard back into the clip.

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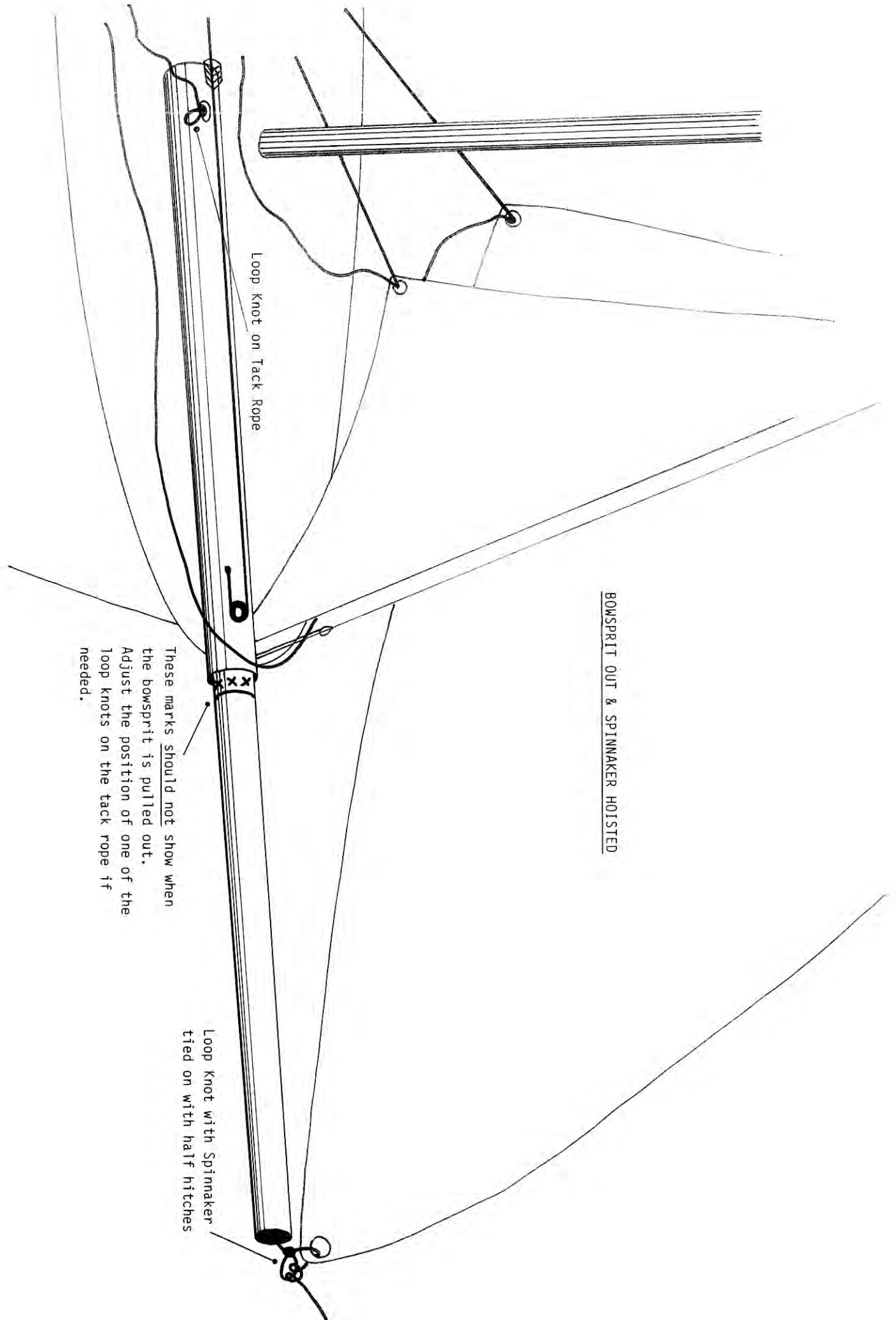
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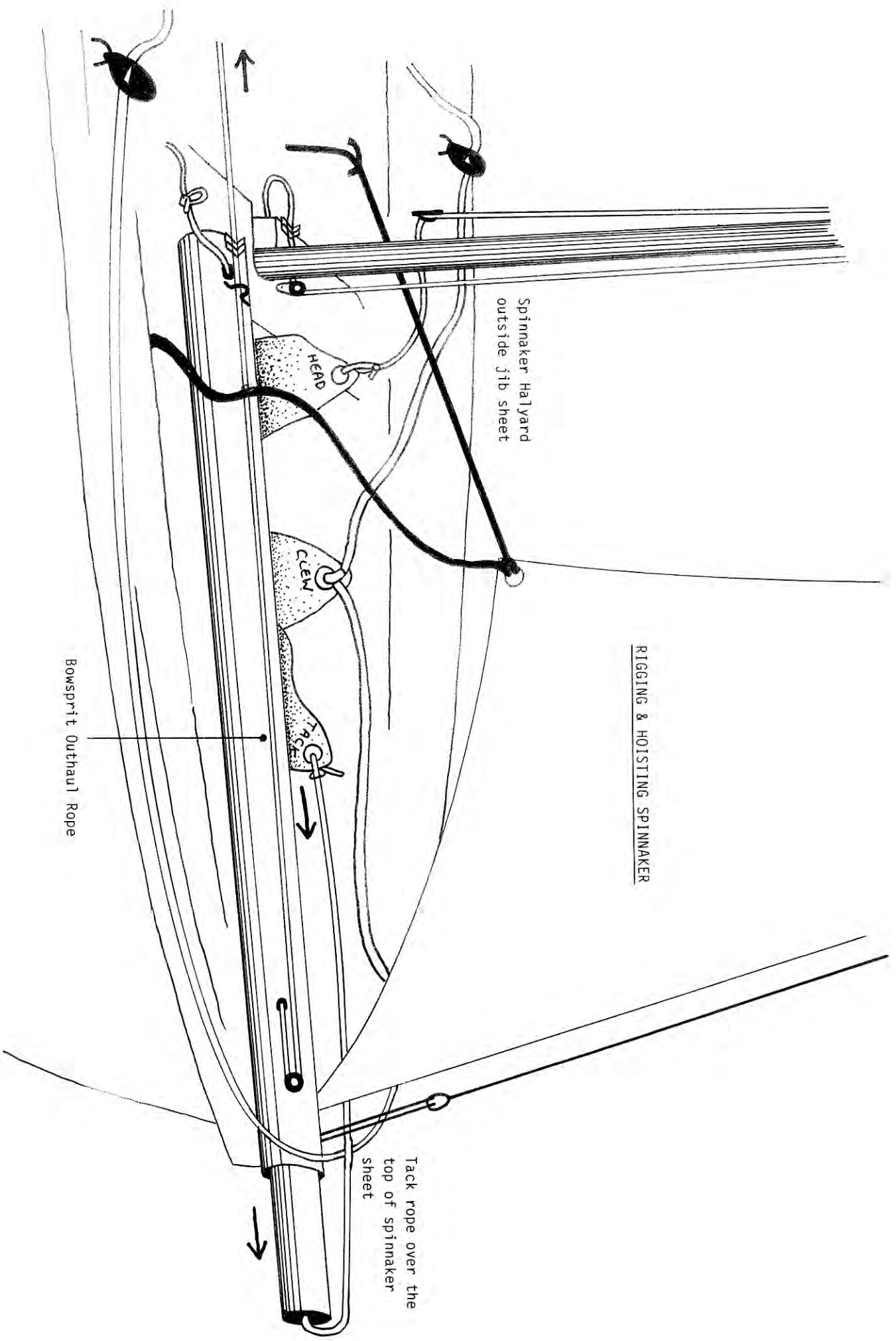
BOWSPRIT OUT & SPINNAKER HOISTED

Loop Knot on Tack Rope

These marks should not show when the bowsprit is pulled out. Adjust the position of one of the loop knots on the tack rope if needed.

Loop Knot with Spinnaker tied on with half hitches

RIGGING & HOISTING SPINNAKER



Spinnaker Halyard  
outside jib sheet

HEAD

CLEW

TACK

Bowsprit Outhaul Rope

Tack rope over the  
top of spinnaker  
sheet

## SAILING WITH THE ASYMMETRIC SPINNAKER

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Although the Trio has an excellent turn of speed with the standard mainsail and jib, the optional asymmetric spinnaker can offer extra performance and excitement as well as giving that bit of extra speed in light winds.

To start with, I should get thoroughly used to the Trio with 2 sails before trying it with 3! The Trio's asymmetric isn't anything like as big or powerful as one of the new breed of racing dinghy but can still be quite demanding and unforgiving at times.

Try the spinnaker in light winds first, get used to hoisting it, dropping it to windward and leeward, tack and gybe with it. See how close to the wind you can carry it when sheeted in tight and also see how close to downwind it will go. Try all this with the jib furled to start with and with just two of you in the boat.

### Hoisting the Spinnaker to Leeward

1

Sail on broad reach with the wind coming from the right hand or starboard side. If the sail is stowed on the left hand or port side then this will be a leeward hoist which is easier than a windward hoist.

2

Pull the bowsprit outhaul rope until the sail is fully out and cleat it.

3

Pull the halyard until the sail is fully up and cleat. \*

4

Pull in the spinnaker sheet just enough to stop the front of the sail luffing.

\*

Pulling the halyard tight will give the spinnaker a tight luff like a jib which can be useful for sailing upwind in light airs but for any off wind reaching the halyard should always be eased a few inches to make the sail fuller and more powerful.

### Hoisting the Spinnaker to Windward

When racing you may find you want to hoist the spinnaker on a particular tack but the spinnaker has been recovered or put in the bag so it is now on the windward side.

1

Pull the bowsprit outhaul as before.

2

While the crew pulls the halyard, the helmsman can help the spinnaker round to the leeward side by pulling the leeward sheet. Do not pull the sheet too tight or it will be difficult to raise the spinnaker all the way.



Sailing along on a broad reach the spinnaker should have increased the boats speed and if the same course was maintained the apparent wind direction will move forward. The boom should be pulled in a bit to match this wind direction.

Often in light winds, the broad reach that a Trio sails with mainsail and jib turns into a close reach when the spinnaker is up! Keep the dinghy on a steady course and constantly adjust the spinnaker to suit the changing apparent wind direction. You will soon notice that there is an optimum course relative to the wind where the Trio seems to come alive and perform best. If you're just out for fun, hang on to that angle and enjoy the ride.

If you're racing and the course set has a directly downwind leg, the fast racing asymmetric dinghies will shoot off on a series of broad reaches with gybes all at a vast rate of knots! These boats cover a much greater distance than a conventional spinnaker dinghy going straight downwind but their extra speed more than makes up for it.

As the Trio has a much smaller asymmetric and is heavier than those hot new dinghies, a slightly different technique must be used. The Trio needs to sail the most direct route to the downwind buoy but is unable to sail straight downwind with an asymmetric set.

If the jib is furled you will find that the spinnaker will continue to pull even when the wind is coming from the "corner" of the transom with the wind nearly from behind. Obviously, you will have to do one gybe but make sure that you arrive at the buoy on the desired tack bearing in mind the next leg and rights of way rules etc.

Although I said the Trio can't go straight downwind, in certain conditions it can! Uncleat the bowsprit outhaul rope and pull the spinnaker tack rope and cleat that. This pulls the bowsprit in but leaves the sail out. Tighten the halyard, but the spinnaker will still be full and baggy. Try sailing goosewinged with the crew sitting up on the gunnel holding the spinnaker out. The boom will be out the other side and the helmsman will be sitting on that side too, the jib is best furled away.

### Centreboard Position

In any breeze the centreboard will need to be kept fully down to balance the dinghy, but in light winds on a broad reach it could be usefully raised a bit. If you haven't got enough centreboard down you will soon know about it with lots of lee helm.

### Tacking and Gybing the Spinnaker

The spinnaker tacks just like a normal jib but make sure you don't get caught head to wind. The spinnaker can be "backed" by keeping it sheeted in as you steer past head to wind. The sail then fills earlier and helps pull the boat round to the new tack. As soon as it's coming round let go of the sheet and pull in on the new one.

Gybing the spinnaker requires more practice and it's best to start with light winds and the jib furled. Sail as "low" or downwind as possible and the boat need only alter course by about 45 degrees. Aim for a landmark or tree etc. on one tack and don't stray from it as you prepare to gybe and then look for a new landmark 45 degrees away for your new course.

Before you turn, pull the mainsheet maybe half in, and as you turn grab the whole mainsheet

## SOME FINAL HINTS AND TIPS

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1

Don't be afraid to reef. The mainsail is quite large to help boost light wind performance and it's particularly good fun to overtake unreefed dinghies!

2

Furl the jib when coming back to shore. It slows the boat down and gives extra visibility when it's important to see what's going on.

3

Trios don't have brakes! A Trio loaded up with the family, a picnic, the dog, outboard motor and all the gear can be quite heavy and take some stopping. Allow plenty of stopping distance even when turning head to wind.

4

Don't oversheet! Why give away speed and heel unnecessarily. Keep easing the sails until they luff.

5

Adjust that centreboard especially when sailing without the spinnaker. Although the Trio is happy to sail with the centreboard down all the time, you will find the Trio lighter on the helm and more ready to plane.

6

Above all have fun, but be prepared to learn from your experiences. One of the joys of sailing is that no two days are ever the same and there is always something to learn.