



## CO32 TECHNICAL PAPER

# SETTING UP YOUR SPINNAKER GEAR

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## SPINNAKER POLE AND GEAR SYSTEMS

### Double Pole Gybing

In the 1970's when the CO32 was first racing, double pole gybing was the vogue, but with more modern thinking, modern equipment and the desire for simpler rigging alternative systems evolved. The modern way is to "KISS" - Keep it simple sailor!

The trend to keep weight to a minimum, particularly at the ends of the boat has resulted in the use of a single pole gybing system.

### Dip Pole Gybing

A CO32 is not really large enough to warrant dip pole gybing. Keeping the Foredeck out of the bow when hoisting or dropping the kite is a major benefit anyway. It also saves the Foredeck from being dunked through the waves quite so often.

### Single Pole End for End Gybing

The benefits of this system of gybing the spinnaker are best listed as follows:

1. The system is simple with less to go wrong (KISS).
2. The ability to perform a crash gybe with minimum preparation.
3. The spinnaker pole is always attached to the mast and, in the parked position, it lies centrally flush with the foredeck, the pole mast track having been extended down the mast to deck level.
4. During a gybe, the pole does not require to be dipped or lowered as it just swings from the pole topping lift on its 'double ended' strop.
5. As the spinnaker is dropped, apart from gathering in the sail, there really is not much clearing up to do having dropped the pole onto the deck other than clipping the guys, sheets and halyard together and clipping them on the rail.
6. The spinnaker is hoisted from the first stanchion position, which keeps the Foredeck off the bow and does not slow the boat so much.
7. Apart from the weight reduction of not carrying a second pole, the side deck are less cluttered and makes sitting out for the crew more comfortable.

## MODIFICATION TO SUIT SINGLE POLE END FOR END GYBING

The following is a list of deck gear modifications to the standard two pole layout. The quality of the new fittings is particularly important as any gear failure will reduce the benefit of this spinnaker pole method:-

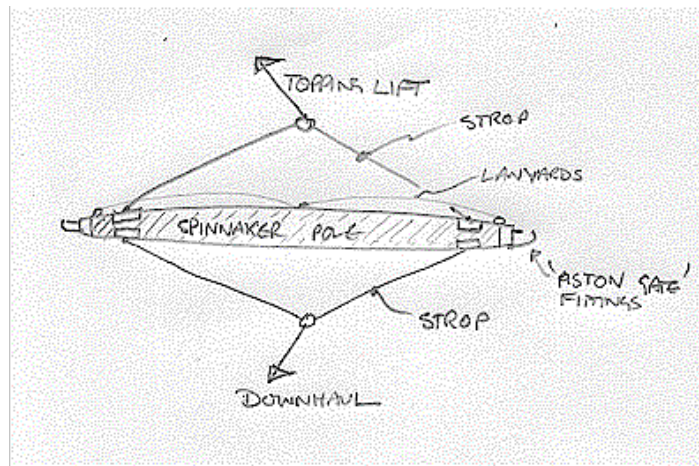
### The Pole

It is quite probable that one of the existing poles can be modified but beware that you do not shorten the overall length of the spinnaker boom much below the maximum length allowed by the Class Rules.

Both end fittings of the pole should be the type with a trigger release in the hook cup such that, when the new guy is snapped into the cup, it automatically fires the shoot bolt closed. It also is the type of fitting that has a trip line which pulls the bolt open and the fitting is held open on the trigger for the guy to be slipped in.

It may be necessary for a sleeve to be turned so that the end fitting can be fitted into the pole end if there is a difference in diameters. Take particular care that sufficient rivets or self tapping screws are used to fix the end fitting to the sleeve and the tube end as end fittings have a habit of coming loose. Also keep a regular check on the end fitting shoot bolt that it is firmly screwed to the internal trigger mechanism and that the shoot bolt is adequately lubricated with silicon or teflon grease.

The topping lift strop and the foreguy strop should be attached to the pole ends. These strops are usually made up of stainless steel wire with a rings midway for attachment to the topping lift and the foreguy. Dynema rope strops are a better option than wire as it is less of a hazard to the Foredeck's feet when the pole is parked on the foredeck.



## Pole End Fitting Release Cords

The method of fitting the pole end tripping lanyards to trip the shoot bolt are important and the exact method used varies on the Foredeck's preference. A point to note, is that one does not want to release both ends of the pole at the same time and therefore the lanyard wants to be joined to both trip releases but secured at mid pole to prevent accidental tripping of the wrong pole end.

When gybing the Foredeck should be standing at the mast, trip the old guy, with the new guy in his/her other hand clipping it into the new pole end and swinging the pole suspended on the topping lift out and the free pole end is then connected to the mast. It is important that no tension should be applied to the new guy until the Foredeck calls out that the pole is made to the mast.

## Mast Spinnaker Pole End Track

The track on the front edge of the mast wants to be renewed with a track that extends down to the deck.

The mast pole end track fitting wants to be a trolley with a large eye, the old swivelling jawed fittings are not very efficient. This fitting requires to take a heavy compression loading, so take care to buy one that can be raised under heavy compression loads.

The mast track trolley is adjusted vertically by means of an endless strop with a turning block at the top of the mast track and another at the bottom of the track. The strop ends are fixed to the mast track trolley and the pole inboard height is fixed by locking the strop into upward and downward facing crab jammers fixed to the mast.

## Spinnaker Halyard

The spinnaker halyard requires an auxiliary crab jammer fixed just below the exit from the mast about 1700 mm above the deck level. This enables the Foredeck to jamb the halyard if the Pitman has not pulled in all the slack through the deck clutch aft on the cabin top.

## Spinnaker Pole Topping Lift

The original position for the pole topping lift/s exiting the mast was at the base of the mast just above the deck level on the back edge of the mast. This method relies on the Pitman releasing the topping lift at a kite drop so that the Foredeck can park the pole. Ideally the spinnaker pole topping lift wants to exit the mast at about 2.2 m to 2.5 m above deck level, run it through a crab jammer fixed to the side of the mast at eye level, down to a turning block at the base of the mast and back aft to clutch on the coach roof.

With this arrangement prior to a kite drop the spinnaker topping lift is then temporarily held by the mast jammer and released off the clutch aft. At the drop, the Foredeck is able to drop the inboard and outboard ends of the pole, without the assistance of those aft, who usually forget his problems at such times.

The only other refinement is to have a short bungy lanyard with a plastic clip on it to clip onto the topping lift to hold it back tight to the mast so it does not foul the genoa when tacking.

## Spinnaker Pole Foreguy

The foreguy wants to be double ended so that the tail ends can be led aft down either side of the cabin roof and led through a captive crab jammers with a hoop to keep the rope in place fixed as far aft on the cabin roof as possible. The foreguy between the middle of the foredeck and the pole strop ring wants to be a two part rope with a block on the strop ring and two single blocks (not a twin block) on the centre eye in the fore deck. The Guy Trimmer wants to be able to adjust the foreguy tension with one hand without having to cleat the guy tail or having to move his position or rely on somebody else.