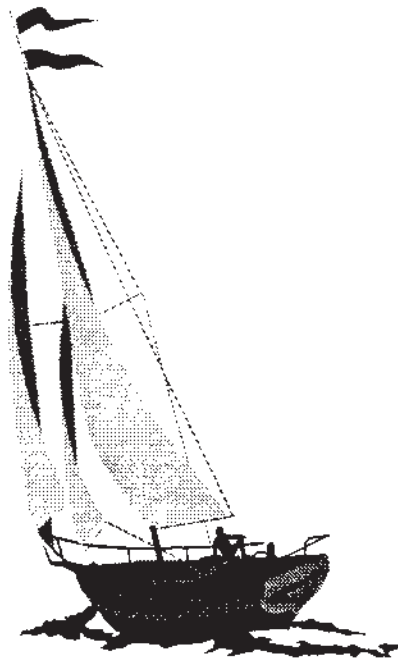


GREYHAWK

CREW MANUAL



GREYHAWK

CREW POSITIONS AND RESPONSIBILITIES

1). **BOWMAN:** Is on the foredeck for all sail changes. Is responsible for hooking up and packing all fore sails other than staysails and bloopers, although he/she is in charge of this operation as well. He is responsible for spinnaker jibes going properly and should be prepared to go aloft if needed. This is a skilled position on the boat.

Pre-start: Responsible for the layout of all spinnaker gear, guys and sheets and he is responsible for insuring that the halyards are in proper order and that all sails are stored and packed properly for use during the race. He will have the assistance of the MASTMAN , GRINDER and TRIMMERS during this time.

Start: As the foremost crew, the BOWMAN is responsible for being the lookout during starting maneuvers and keeping the HELMSMAN informed of the movement of all other boats, especially those to leeward. During this time he may take up station in the pulpit.

Jib Changes: He/she is responsible for the proper orientation of the sail and the proper connection of the head to the halyard and the tack. During jib raises and take-downs, he is in charge of the luff and flaking the sail as it comes down, and in securing the halyards so that they will be reusable and so they don't get twisted.

Spinnaker Sets & Take-downs: During spinnaker sets he/she is in charge of hooking up the sail to the sheets, guy and halyard (see Four Sheet System and Two Sheet System under the TRIMMERS section below), and having the pole set and ready to go (with help from the MASTMAN) making sure that all halyards are on the leeward side of the pole. If the jib is on the same side as the side which the spinnaker is to be set on, both ends of the pole (the mast end and the guy end) can be set to their proper height (ask SAILMASTER). If the jib is on the side which the pole is to be set on it becomes a special problem and a bit of a hassle. In this case the bow end of the pole must be kept on the deck and inserted under (that's UNDER .. not THROUGH!!) the foot of the jib. The mast end is attached but should not be raised more than a few feet as the jib will have to come over the pole on the tack or jibe. The topping lift is attached but slack must be kept in it or it will prevent the jib from coming over. (We usually keep it attached but kept close to the mast by means of a shock cord and the reaching strut fittings) The most difficult part is to connect the guy through the jaws of the guy end of the pole, around the headstay and attached to the tack of the sail. (Make sure the pole is turned right with the topping lift coming out of the top - normally no one pays attention to this because when tension is put on the topping lift it will automatically turn. This is not the case with this situation. If the guy goes through the pole end the wrong way it will become knotted and the sail will have to be taken down and reset.) As soon as the sail is changed to the new side, the MASTMAN raises the mast end of the pole and the PITTMAN (assisted by the BOWMAN if needed) raises the guy end. In some cases this can happen as the mark is being rounded.

During raises he/she is responsible for feeding the spinnaker out of the turtle. During the take-down he/she is responsible for the crew collecting the spinnaker and for the feeding of it into the cabin. This is done by first retrieving the slack from the lazy guy on the leeward side. When the halyard is blown and the sail collapsed, this becomes the vehicle for pulling the sail in (starting with the attached clue) and rapidly feeding it into the open hatch. He/she is then responsible for straightening the halyards and sheets and preparing for the next spinnaker set. With the MASTMAN he removes and stows the pole. On close reaches (pole forward) he should install the reaching strut.

Jibes: Before the jibe he/she is responsible for insuring that all halyards are not twisted and are taken forward to the pulpit so that after the jibe they will be on the leeward side of the pole. During the jibe he/she is responsible for the change of the pole from the old guy to the new lazy guy or the old sheet depending on whether lazy guys are being used. To do this, he/she should be positioned in the bow with his/her back to the forestay. He/she should make sure that the pole is of sufficient height on the mast (the MASTMAN should handle this) to allow the bow end to dip below the forestay before the jibe begins. (there is a red mark on the mast at the proper height). He should also insure that the lazy sheet (four-sheet system) has been flipped over the end of the pole before the jibe (the lazy TRIMMER should have handled this). After the pole has been CUT/released (by the MASTMAN) from the old sheet, he/she pulls it to them using the pole foreguy and attaches it to the new guy. As soon as the pole docks in place he should yell "MADE" to the stern so that the pole may be raised.

After the jibe and before the staysails are raised, the jib should be moved around the foreguy to the leeward side of the boat, the sheets tied together and run over the pole and the head and tack re-attached so it can be raised on the new tack at the next mark or on the same tack if a wind shift occur making the spinnaker not usable. Check with Tactician and/or Navigator.

Beats: During the beats his/her position is on the rail. Should be the foremost person on the rail and should insure that the entire weight of the crew is kept aft. May act as windward lookout and should be talking with the crew about the next sail maneuver. During the beat she is on constant look-out for puffs, holes, and wind changes. This is done by looking for approaching ripples on the water, boats ahead reacting to puffs, glassiness in the water, boats with different headings to weather, and by observing the clouds. This information should constantly be fed to the HELMSMAN and SAILMASTER. If the BOWMAN's attention is diverted elsewhere, he/she is responsible for handing off the lookout duties to another trained crewman.

As the weather mark is approached, he is the primary look-out for the mark. The nature of the mark, any identification, and its estimated position should be given to her by the NAVIGATOR. Once Located, the mark spotting is handed off to one of the trimmers.

Tacks: Is responsible for the old sheet, making sure it runs free, pulling the clew up to in front of the mast and giving to the MASTMAN who runs it to the leeward block. During this time he/she continues to feed the old sheet around the babystay/mast to the new side.

Runs and Reaches: Keeps on rail, may be enlisted to help with spinnaker, blooper or staysail depending on the skill of the rest of the crew. Again, serves as primary look-out for puffs, lulls (holes) and the next mark

GREYHAWK CREW POSITIONS AND RESPONSIBILITIES

2). **MASTMAN:** Is stationed at the mast during all sailing maneuvers. Expedites the raising of halyards, adjusts the main outhaul, helps with pole-sets and jibes and is responsible for hooking up and flying staysails. Semi-skilled position working under BOWMAN.

Pre-start: Assists Bowman in hooking up all spinnaker gear. Installs Barber haulers for jib sheets.

Start: Is responsible for helping the BOWMAN tacking the jib as well as assisting in hooking up the pole before the start.

Jib Changes: Responsible for hooking short sheet to new jib before raising. If the sail change is done on a tack, He should use the leeward jib sheet rather than the short sheet. She should make sure (from SAILMASTER) that the fairlead is in the proper position for the new jib. During the raise he/she hauls the jib halyard at the mast (is tailed in the companion way by the PITTMAN). Should wear gloves for this maneuver as stainless halyards can be ruff on hands. After jib is up (PITMAN and GRINDER make final adjustments in halyard tension) assists BOWMAN in flaking and packing old jib and stowing it below. If the short sheet was used, the LAZY TRIMMER replaces it with the regular sheet. However, if the change came on a tack, the MASTMAN will need to assist the LAZY TRIMMER by bringing the sheet around the mast so she can attach it to the clue.

Spinnaker Sets and Take-downs: Before the set he is responsible for making sure that the new guy is in the foreblock (two line system) and that the sheet is not (unless told differently by the SAILMASTER). He/she is also responsible for easing the main outhaul and determining whether blooper or staysail will be used on the spinnaker leg (ask SAILMASTER and NAVIGATOR) and having it standing by (the tack can be attached and the sheet run if this does not interfere with spinnaker preparations). During this maneuver she is buddies with the BOWMAN and they should both check each other's work, making sure the lines to the spinnaker are attached correctly and that no fouls will incur. He next assists the BOWMAN in rigging the pole. After the BOWMAN attaches the topping lift (and the foreguy if it is not already attached), the pole is raised to the level of the mast pole fitting. This is a three man process with the BOWMAN on the guy end of the pole, the MASTMAN on the mast end and the PITTMAN controlling the slack in the topping lift. If the jib is on the side of the boat that the pole is going up on, it poses special problems... see BOWMAN above.

During the set she hauls the spinnaker halyard which is tailed by the PITTMAN. After the set he/she assists in gathering in the jib and immediately (transfers the halyard to blooper or staysail. As soon as the halyard is transferred and the sail is secure (sheet run etc.) she raises the sail with the jib halyard, again tailed by the PITTMAN. If the blooper is being flown, he is responsible for flying the halyard end or recruiting a replacement.

Before the take-down or jibe he she is responsible for lowering and stowing the staysail and blooper and transferring the halyards to the BOWMAN. Before the take down only,

he is responsible for taking in the main outhaul for the proper tension for the beat (ask SAILMASTER).

Takedowns: During the take-down he is responsible for helping gather in the spinnaker (it is brought straight down onto the deck), getting it below and assisting the Bowman with the pole. Unless there is need for help from the LAZY TRIMMER, the MASTMAN should start with the sheet and make his way forward until she can control the foot of the sail, the clew of the sail and the leech.

Preferred Method: Send the GRINDER or MASTMAN below and collect the spinnaker through the front hatch. The hatch is opened all the way back and the lazy guy is fed to the man in the hole. As the spinnaker is blown, the sheet is released and the man in the hole gathers it into the boat.

Jibes: Before the jibe the MASTMAN is responsible for making sure the new guy is in the forward fairlead (two guy system). This is done in cooperation with the spinnaker TRIMMER since it involves easing the sheet as it is installed into the fairlead so as not to disrupt the spinnaker. If the reach is too tight for the guy to be brought through the fairlead (or the wind too heavy) it should be brought as far forward as possible or (better and a must for heavy airs) a lazy guy run and the four sheet system used. If a four sheet system is already being used, this is not necessary as the guys always stay in the forward fairleads. The MASTMAN is also responsible for raising the pole on the mast so that the end may be dipped under the forestay (this position should be marked on the pole traveler). After doing this it is very important that BOTH ends of the pole traveler are securely cleated. Otherwise the pole can fall and get stuck at the bottom of the traveler. If this happens the jibe cannot be completed.

If using a four sheet system the MASTMAN should make sure that the lazy sheet has been flipped over the pole end. Otherwise the pole will catch in the sheet during the jibe and will not be allowed to swing to the other side.

During the jibe the MASTMAN is forward of the mast where she can reach the pole release. As the HELMSMAN steers downwind, the pole is squared back by the LAZY TRIMMER (to 45 ° and slack is taken out of the lazy sheet (Four sheet system) on the command "Cut" the MASTMAN trips the pole away from the guy. It is allowed to drop by the PITTMAN and the BOWMAN pulls it across for attachment to the new guy. Immediately after cutting the pole, the mastman moves to a position to hoist the topping lift at the "MADE" signal. During this time the spinnaker is being flown by both sheets and the helmsman maintains a downwind course until the BOWMAN gives the "Made" signal. At the "made" signal, the Mastman hoists the outboard end of the pole to its appropriate position on the new tack (ask Sailmaster) with the aid of the Bowman at the outboard end and the Pitman taining the topping lift. After the jibe the MASTMAN should remove the new sheet from the forward guy fairlead (two sheet system), assist the MASTMAN in moving the jib to the leeward side, and re-rig and raise the staysails/blooper on the new side.

Beats: During the first part of the beat the MASTMAN helps secure the staysails and blooper. This should be done as quickly as possible after which she takes up station on the rail. Here he assists the navigator in sightings and tracking other boats. In particular, she is charged with knowing what the wind is doing all over the course. This can be determined by looking at the pointing angle and speed of other boats. This information should be relayed to the TACTICIAN.

Tacks: During the tack the MASTMAN is responsible for helping the new sheet around the mast. Prior to the tack, all slack should be taken out of the sheet. As the genoa comes around the MASTMAN holds the new sheet feeding it around the babystay. As the clue of the sail gets to her, she grabs the sheet at the clue and runs the whole thing back to the jib fairlead on the new side. This allows the cockpit team to get the jib trimmed very quickly. However, care should be taken in not going so fast that slack becomes available between the sail and the winch. This is one of the main causes of an "over ride" which results in the line becoming knotted around the winch and not going in or out. The speed which the jib should be brought back should correspond to the speed with which it is being tailed. After the GRINDER takes over trimming in the jib, the MASTMAN quickly returns to the high side rail.

Runs and Reaches: Here again her place is on the rail although in these cases the weight of the entire crew should be moved further aft. From this position he should run the sheet of the staysail so around one of the unused cabin top winches to him so that she may fly the staysail while in a position on the rail to see the staysail luff woolies. Thus, two jobs are performed: staysail flying and crew weight distribution. May trade off on this job with the GRINDER. Also needs to "flip" the laxy guy up over the end of the plse to prepare it for the next jibe if needed.

GREYHAWK CREW POSITIONS AND RESPONSIBILITIES

3) **PITTMAN (Hot Box):** The PITTMAN is stationed in the companion way and is responsible for tailing into the cabin and flaking all halyards and reefing lines etc, as well as adjusting them for the proper tension. This includes all halyards, topping lifts, Cunningham, reefing dines, and baby stay adjuster. She/he may use the MASTMAN to facilitate the rapid raising of sails and the GRINDER to operate the winches or to handle other lines which need simultaneous attention. This job is usually combined with that of the NAVIGATOR so that responsibilities other than during sail changes are kept to a minimum. This is a skilled position. (NAVIGATOR is highly-skilled!)

PRE-START: Before the start the PITTMAN's main duties are that of NAVIGATOR. However, a quick check should be made to insure that all lines are in order, the Cunningham is hooked in the main, the baby stay is adjusted appropriately for the first leg and that all is in order for starting maneuvers (raising the spinnaker, for instance, if it is a downwind start).

START: During the start the PITTMAN's position is on the rail and his duties are that of NAVIGATOR unless a sail change is required

JIB CHANGES: Working with the BOWMAN, the PITTMAN eases the new halyard, keeping loose tension on it so that it does not become fouled in a spreader, while it is attached to the new sail and the sail head is fed into the luff groove. On raising, the halyard should be tailed from the companion way directly into the sole of the cabin. A minimal number of wraps (two at most) should be put on the winch at first to eliminate the possibility of an over-ride as the MASTMAN and the PITTMAN both haul the halyard together. At the top, the final adjustment may require the assistance of the GRINDER who operates the winch for final adjustment. At this time wraps may be added. As the new jib is being adjusted, the halyard for the old jib should be released and fed to the BOWMAN and MASTMAN for flaking and stowage. The PITTMAN coordinates this with GRINDER to insure that both jobs are handled expeditiously.

Spinnaker Sets and Take-downs: Before the set the PITTMAN works with the MASTMAN and BOWMAN to set up the pole and adjust the topping lift. It is much easier to get the pole up if the PITTMAN takes the weight off of the BOWMAN and EASTMAN. He/she is also responsible for insuring that the GRINDER lets off the babystay and that the MASTMAN has positioned the sheet and guy in their proper blocks for the set. The initial position of the pole should be set at the direction from the SAILMASTER but in general it should be kept low if the wind is up or the reach is to be tight. This helps to control the spinnaker and it is much easier to raise the pole when the boat is on the reach if it is too low than it is to lower the pole if it is too high and the spinnaker can't be controlled on the reach (this can be hairy and loud!!). If the jib is on the same side as the pole is to be set on, it poses special problems.. See BOWMAN above.

During the set, the PITTMAN is responsible for coordinating the efforts of herself, the MASTMAN and the GRINDER to: first - get the spinnaker up and flying; second and as simultaneous with the first as possible - get the jib down (make sure there's someone on the foredeck to collect it or you'll dump it in the water!); third - get the staysail or blooper (or both) up and flying as soon as the halyard is changed from the jib.

Spinnaker Takedowns: When preparing for the take-down the PITTMAN with help from the GRINDER first prepares for the next leg (assumed to be a beat). The Main outhaul is put on (by the MASTMAN) and then the cunningham is tensioned, the babystay tensioned, and finally the backstay set. After the take-down and when the boat is beating, the boom vang should be adjusted (ask SAILMASTER).

Next, the PITTMAN assists in lowering the staysail or blooper by easing the halyard as the MASTMAN takes in the sail. This sail is left on deck until after the take-down at which time it is flaked and stored below. (The blooper can usually be packed in its turtle as it is lowered if time permits—done by the BOWMAN).

The last job before the take-down is to raise the jib. This should be done at the last minute as it will usually kill the spinnaker. The PITTMAN and MASTMAN haul the halyard with the GRINDER standing by with the crank. As soon as the sail is up (approaching the halyard marked position), the GRINDER has her turns on the winch, and the winch handle inserted, this job is turned over to the GRINDER who adjusts the tension and cleats the halyard.

In the meantime the PITTMAN blows off the spinnaker halyard after ascertaining that the BOWMAN, MASTMAN and LAZY TRIMMER have control of the foot so the sail may be gathered in once the top is blown off. (LAZY TRIMMER is required only for heavy air—ask SAILMASTER). This may require lowering the sail end of the pole so that the BOWMAN can reach it. The sail is “blown off” by uncleating the halyard and rapidly pulling the line off the winch and letting it run free. The spinnaker looses air up top, collapses and looses its strength so that it may be hauled in from the foot. As this happens it will of course also fall. If the haul-in is rapidly enough this will be of no consequence since it can be hauled in as rapidly as it drifts down. However, this is not always the case. Once the halyard is blown, it runs free for about twenty feet. Then as the spinnaker has collapsed and starts to drift down, it slows and should then be controlled by the PITTMAN who can lower it as it is taken in, keeping it out of the water. The sail should be brought straight down on deck. Once down the halyard is disconnected and the PITTMAN goes below to receive the sail. It is placed in the cabin (out of the bilge), the sheets and guys are disconnected and joined and the PITTMAN turns her attention to NAVIGATING directed at the new course.

Perferred Method: Send the MASTMAN below and collect the spinnaker through the front hatch. The hatch is opened all the way back and the lazy guy is fed to the man in the hole. As the spinnaker is blown, the sheet is released and the man in th hole gathers it into the boat.

Jibe: Before the jibe the PITTMAN is responsible for making sure the Preventer has been disconnected from the rail and attached to itself on the boom. The line should be tied back into itself so that slack does not hang down which can foul on the cleats or winches on the cabin top. This is usually performed by the GRINDER assisting the PITTMAN. He should also check that the BOWMAN has taken the halyards forward, that the MASTMAN has raised the pole and has the new guy in the forward fairlead and that the LAZY TRIMMER has flipped the lazy sheet over the pole end. The next preparation is to ascertain the what the new course will be with the NAVIGATOR and TACTICIAN (Usually she will be the NAVIGATOR.) and make sure the whole crew knows what sails will be carried on the next tack. During the jibe the PITTMAN and the GRINDER lower the pole making sure during the dip to keep tension on the halyard so

that the weight of the pole does not fall on the BOWMAN. As soon as the BOWMAN yells "Made" the pole should be raised to the appropriate height for the new course. This will probably need adjusting after things get settled and the SAILMASTER is optimizing speed. After the jibe the PITTMAN goes to the rail making sure the GRINDER replaces the Main Preventer on the rail or resumes navigating.

Beats: The PITTMAN should be on the rail when not navigating.

Tacks: The PITTMAN has no responsibilities during tacking but as NAVIGATOR he will be checking on the new heading, bearings to mark, and if the calculated leeway is correct.

Runs and Reaches: As on the beats she should be on the rail or navigating.

GREYHAWK CREW POSITIONS AND RESPONSIBILITIES

4). **GRINDER:** The grinder makes up the fourth position of the foredeck crew, although she works in the cockpit as well. Mainly does simple jobs and winch handling under direction from the PITTMAN or one of the TRIMMERS. If more than one GRINDER is along (crew of nine) the jobs will be split between foredeck and cockpit. Can participate in flying staysails and bloopers. This is the least skilled position in the crew but a great place to learn. It is also possible to combine this job with that of TACTICIAN, although some of the chores like packing the spinnaker would have to be delegated to someone else.

Pre-start: Assists the TRIMMERS and the BOWMAN laying out all jib and spinnaker gear.

Start: Along with the two TRIMMERS becomes the third crew handling the jib sheets during tacks. See section on tacking below.

Jib Changes: On jib changes the GRINDER works with the PITTMAN and MASTMAN to raise and adjust the halyard tension in the new jib. The GRINDER should stand by with the winch handle as the jib is raised by hand. As soon as it is up (or the haulers are out of gas) he puts two more wraps on the winch and finishes the raise. The proper tension should be judged by the SAILMASTER but can usually be gotten pretty close by judging marks on the halyard. As soon as the tension is adjusted the GRINDER takes the halyard end from the PITTMAN and cleats it. She then assists in flaking and stowing the old sail. This should be done keeping as much crew weight off of the bow as possible.

Spinnaker Sets & Take-downs: Before the set the GRINDER assists the MASTMAN in bringing up the sails to be used on the next course. He may assist the MASTMAN in running the sheets for the staysail and/or blooper. Before the pole is attached she/he eases tension on the babystay and then stands by the topping lift winch with the handle ready to grind if required. (It usually is... the pole end is heavy.)

During the set he/she stands by the halyard winch in case the spinnaker fills before it is raised to its maximum height. If this happens the grinder takes two more wraps and winches the sail up. When the sail is up, either by hand or winch, the GRINDER takes over the end for cleating relieving the PITTMAN to release the jib halyard. (or just releases it himself.) If the GRINDER is trained, time can be saved by having the PITTMAN and the GRINDER divide up the halyards one raising the spinnaker while the other is lowering the jib.

After the set she first attaches the mainsail preventer, she then helps the MASTMAN raise the staysail or blooper. If the sheet has not been run he should do that while the MASTMAN helps gather in the jib and attaches the halyard. The sheet block should be located on the rail at the proper position so that the top and bottom woolies fly together (see SAILMASTER). If the blooper is being used that sheet should be run to the block located on the leeward stern pulpit.

After setting and adjusting the staysail the GRINDER's place is on the rail where she may assist the MASTMAN in flying staysail or blooper.

Takedowns: Before the take-down the GRINDER assists the PITTMAN and MASTMAN in readying for the beat—(outhaul, Cunningham, babystay, backstay and main reef, if required (ask SAILMASTER). She then assists the MASTMAN in taking the staysail or blooper after which he disconnects the Main Preventer from the rail and attaches it to itself on the boom. The line should be tied back into itself so that slack does not hang down which can foul on the cleats or winches on the cabin top. He then assists in the raising of the jib - stands by with winch, puts two additional wraps on winch, inserts handle makes tension adjustments and cleats halyard. By the time this is done, the spinnaker should be on the way down. The GRINDER moves to the cockpit crew where she helps the TRIMMER grind in the jib sheet winch as the boat is brought up onto the wind.

Jibes: Before the jibe the GRINDER first helps take in the staysail or blooper if required. This is only necessary in heavy airs as one person can do it in most cases.

Next, he removes the mainsail preventer as described above. This is very important ... if not done, the mainsail cannot be jibed and will back-wind and the boat won't turn.

During the jibe she stands by with a winch or just an extra pair of hands to assist the TRIMMERS in changing sheets and guys. After the "made" signal from the BOWMAN the pole needs raising and the new guy trimmed. The GRINDER may assist with either or both of these.

After the boat has headed up to its new course and the sails are adjusted, the mainsail preventer is replaced on the rail. The staysail blooper is then set on the new side. The GRINDER's responsibility is to run the sheet.

Beats: He sits on the rail facing out. Can help with the spotting puffs and looking out for other boats and marks. May be called on for sightings and for such chores as packing spinnaker, getting sails from below, etc. If another boat is close and a possible collision situation is occurring, she should track the bearing of the boat constantly to determine if they are ahead or astern. This is done with the hand-held compass. In heavy airs she may need to help the TRIMMER with jib adjustments. She is also at the disposal of the NAVIGATOR to take sightings, search for buoys (take star fixes?) etc.

Tacks: During tacks the GRINDER becomes part of the cockpit crew. After every tack the lazy sheet is made ready for the next tack except for the insertion of the winch handle and engaging the winch in the highest gear. The grinder stands on the out side of the winch on the high side (the side the sail is being changed to). On the command "Hard to Lee" the boat turns and as the jib starts to back-wind it is released by the TRIMMER at which time he/she becomes the LAZY TRIMMER. The jib clue is run around the mast by the BOWMAN and the MASTMAN. As this begins the TRIMMER will be able to tail the sheet with no assistance - the faster the better and less grinding there will be to do. As the sail starts to fill the GRINDER starts grinding in high gear, again as fast as she can. As the winch gets hard to turn, the GRINDER reverses direction which changes gears, speeds grinding and slows the sail coming in due to the new gear ratio. Again, as the winch becomes hard to turn the GRINDER reverses and the winch speed lowers again, this time to 8 to one. By this time it is hoped that the sail is almost all the way in. If not it will be a tiresome grind... its a long way in low gear! After the sail is in the GRINDER turns the crank over to the TRIMMER and resumes his place on the high side.

Runs and Reaches: Here again her place is on the rail although in these cases the weight of the entire crew should be moved further aft. On spinnaker Runs he should be ready to adjust the Spinnaker Foreguy easing it and keeping it taught when the guy is trimmed and trimming it as the guy is eased. Again, she may assist the NAVIGATOR by taking sightings or tracking other boats. May also alternate with the MASTMAN flying the staysail or fly the sheet end of the blooper.

GREYHAWK CREW POSITIONS AND RESPONSIBILITIES

TRIMMERS: There are two TRIMMERS one on port (called the PORT TRIMMER) and one on starboard (called the STARBOARD TRIMMER). The main job of both these individuals is to trim the headsail (jib or spinnaker) when the sheet is on their side. Since the job is identical on either side we refer to the TRIMMER who is active (sail on her side) as the ACTIVE TRIMMER or just TRIMMER. We refer to the "off duty" TRIMMER as the LAZY TRIMMER. This nomenclature is historic and does not mean to imply that the LAZY TRIMMER is inactive. He plays a major role even when not "flying" a headsail. The jobs will be described in reference to these roles with the understanding that they refer to different positions on different tacks.

This is a skilled position and requires a high degree of concentration, especially when flying the spinnaker.

Pre-start: Before the start the TRIMMERS work as a team with the foredeck crew to lay out the jib sheets, the barber haulers, the short sheet, the spinnaker blocks, the barber-hauler blocks, and the winch handles. In addition, they are responsible for setting up the safety equipment - horse-shoe buoys and personal gear. After the race they also have the responsibility to do-up and store the lines and hardware and clean the cockpit. Each Spinnaker sheet and guy should be run through the blocks to the bow and the rest made up in a hank and hung from the stern pulpit or "flaked" in the sheet bags. This keeps them out of the way and ready to use when it comes time to raise the spinnaker.

Start: During the start both TRIMMERS are involved with tacking and jibing for starting maneuvers (see below). If the start is a downwind course involving flying the spinnaker, the guy and sheet should be made ready on the secondary winches.

Jib Changes: All preparation is handled by the foredeck crew. The TRIMMER should continue flying the jib and the LAZY TRIMMER should continue his duties on the rail. As soon as the new sail is up, the TRIMMER should switch to flying it with the short sheet on the secondary winch. The LAZY TRIMMER should attach the regular sheet to the jib and take up tension with the main winch. She then turns this sheet over to the TRIMMER and disconnects the short sheet and stows it. The barber hauler is then re-attached. After this she returns to the rail. The TRIMMER continues to fly the jib through the whole maneuver with no interruption and also continues to serve as leeward lookout (see below).

If the jib change has been done on a tack, no short sheet is needed. The LAZY TRIMMER tails in the sheet on the new sail and becomes the TRIMMER continuing to fly the sail. The previous TRIMMER becomes the LAZY TRIMMER. He disconnects the windward sheet from the old sail so the Mast man can pass it around the mast to him for attachment to the new sail on the leeward side. The last step for the LAZY TRIMMER is to re-attach and adjust the barber hauler.

Spinnaker Sets and Take-downs: Preparation for the set is performed by the LAZY TRIMMER in the cockpit. First, a decision must be made by the SAILMASTER as to whether to use the two line or four line system. This is usually done on the basis of wind speed or anticipated wind speed. (Normally before the start and normally the four

sheet system. On Greyhawk, the two sheet system is only used for light airs) Next the side which the spinnaker is to be raised on must be determined by the NAVIGATOR.

Four Sheet System: This system gives maximum control to the crew during jibes. The sail is flown downwind by both sheets while pole is changed from one slack guy to the other. Thus it is not necessary for the BOWMAN to have to try to put the pole on a guy that is being jerked around by a 1300 sq ft sail. The BOWMAN hooks up the sheets to the sail and the guys through the shackle eyes of the sheets. This allows the lazy guy to be disconnected and re-connected if the wind is light enough so that the line weighs the sail down. If this has been done it must be re-connected before the jibe.

Before the Mark: Assuming all this has been done, the LAZY TRIMMER takes the guy on the to be windward side, and the sheet on the to be leeward side. After the BOWMAN has hooked up the sail, both of these lines are made fast by taking the guy to the secondary winch on the windward side and the sheet to the primary winch on the leeward side. The sheet is wrapped once around the leeward winch and the taken across the cockpit to the windward winch. This is so it can be flown from the windward side. The spinnaker rides higher than the jib so a leeward lookout can be kept from the windward side and the extra sail area up front from the spinnaker makes it desirable for every one to be as far out on the rail as they can get and to keep back to keep the bow from digging in.

After the sheet and guy are set, slack should be taken out of the lines. If a lazy sheet and guy is being used, they should be dressed to the deck so that they do not fall in the water when the sail is raised. They may both need to be released from the rail if slack is required to hook up the spinnaker...especially if the jib is on the side which the pole is going up on.

If this is the case it will involve a tack or a jib before the sail is set. The LAZY TRIMMER should be prepared well ahead of time so that all is ready and he can give his attention to the tack when the time comes.

Two Sheet System: For lighter airs it is often much less to use only two sheets. These should have pole stops on them. (used for the guys in the four sheet system) Both lines are fed through the stern blocks and the one which is to be the guy is cheeked through the fore block. Both of these lines are checked on the secondary winches. The sheet receives a single turn and is then fed across the cockpit and forward to the main winch on the windward side, thus allowing it to be flown from windward.

As the spinnaker is being raised, the LAZY TRIMMER controls the guy and the TRIMMER controls the sheet. To fill the spinnaker, the LAZY TRIMMER should pump the guy as the TRIMMER pumps the sheet. Care should be taken to not pull the pole back to far. It should be kept forward of its normal flying position (ask SAILMASTER) so as to blanket it as little as possible with the jib. Unless the course is a run (in which case the whole spinnaker can be pulled to weather of the jib with the guy) the pole should be kept forward almost to the forestay until the jib is down. The TRIMMER flies the sheet the same way as when the jib is down. The biggest danger here is that, if the spinnaker doesn't fill, the TRIMMER straps in the sheet which pulls the sail closer to the jib and not only blankets itself but also acts as a brake. The TRIMMER wants to let as much slack in the sheet as the sail will take and still fly. This is determined by watching the windward edge (luff) of the sail. When this edge starts to curl in the sheet should cease being eased. A quick tug will pull the luff out taught.

After the jib is down the pole angle and the pole height should be set for the new course. This is dependent on apparent wind direction and speed ask the SAILMASTER. When the pole is set, tension should be taken in the foreguy (PITTMAN) to keep it in position. If the wind is heavy, tension should always be kept on this line. Otherwise the spinnaker can go out of control, pulling the pole straight up and causing a broach. Remember, in heavy airs keep the spinnaker low. This depowers it by keeping it close to the mainsail and it also reduces its heeling moment.

Takedowns: Before striking the spinnaker, the LAZY TRIMMER assists in the raising of the jib by attaching and adjusting the sheet. Then the spinnaker is brought around behind the jib by easing the guy (LAZY TRIMMER) and grinding the sheet in. When the sail is in this position it is acting as a brake so this time should be kept as short as possible. The purpose of this maneuver is to allow the foredeck crew to grab the foot so the TRIMMERS should pay attention and make sure they are ready before they begin. As soon as they have control of the bottom of the sail the PITTMAN blows the halyard and the TRIMMERS begin flying the jib. This is not necessary if the spinnaker is being lowered into the front hatch as it is pulled in by the lazy guy.

If the boat is approaching a downwind mark, this may mean letting the jib out for the remainder of the run and trimming in as the mark is rounded. As the boat is coming up onto the wind the backstay should be set and the running back tensioned. Normally it is the GRINDER who performs these jobs before the take-down. Since the runners should be set after the backstay, this results in a conflict of jobs for the GRINDER since her responsibility is to help sheet in the jib. In these situations the LAZY TRIMMER takes over the runners and back stay. (The other adjustments can be set before the take-down .. see GRINDER above.)

After the boat is stable on the new course the TRIMMER flies the jib and the LAZY TRIMMER stows the spinnaker lines.

Jibes:

Four Sheet System: Before the jibe the guy should be moved from the windward winch and extra turns taken on the leeward winch (ask for help) and the Running Back should be released. The lazy sheet is then fed to the windward winch. The lazy guy is fed to the leeward secondary winch. As the jibe progresses, the helmsman first bears away until she's dead downwind. As she does this the LAZY TRIMMER cranks in the guy pulling the pole back until it is at a 45 Degree from the Angle Bow, always keeping it perpendicular to the wind as the boat turns (For this to happen the GRINDER must ease out the fore guy). The TRIMMER continues to fly the spinnaker with the sheet, easing it out as the boat turns. When this maneuver is complete the entire spinnaker will be on the windward side so that no possibility of a headstay wrap can occur during the jibe.

The LAZY TRIMMER cleats the guy and TAKES THE LAZY SHEET AND FLIPS IT OVER THE END OF THE POLE so that the pole may fall away from the guy when release. This is very important. Failure to do this will cause the pole-end to get tangled in the sheet after it is released and the jibe cannot be completed. The TRIMMER, the MASTMAN, the BOWMAN, the PITTMAN, and the HELMSMAN should all check this maneuver to make sure it is performed.

After the sheet is over the pole, the LAZY TRIMMER takes up slack on it on the windward secondary winch. The boat is now ready to complete the jibe. (Every one

should make sure the main sail preventer has been removed from the rail and stowed and the pole has been raised on the mast... see above.) The HELMSMAN gives the "CUT" command but does not turn yet. Immediately the MASTMAN trips the pole from the guy, the BOWMAN pulls it to him with the foreguy, and the PITTMAN dips it with the topping lift. The spinnaker is now being flown entirely by the sheets on the main winches by the TRIMMER. Usually they will just have to hang tight for a second while the pole is attached. During this time the "JIBE HO" command is given and the boat is turned to the new tack. If this is done from an angle of approximately 150 degrees apparent to 150 degrees apparent on the new tack, the spinnaker stays directly in front of the boat and little adjustment need be made by the TRIMMER on the Sheets flying the spinnaker. The sail simply stays in front of the boat while the main is jibbed. However if a wave yaws the boat they may have to adjust the sail to keep it filled. This is a matter of teamwork and knowing where the wind is coming from. The idea is to keep the two clues of the sail at the same height they were being flown at and perpendicular to the wind direction.

As soon as the "Made" signal is given, the LAZY TRIMMER takes up slack in the new guy on the secondary winch. As this is made taut, the old sheet is released and becomes the lazy sheet. The new sheet may now be brought across the new windward winch. The main is jibed by the MAINMAN/SAILMASTER and the boat is ready to harden up to the new course. As this happens, the pole is eased forward (keep tension on the foreguy) and the spinnaker sheet is trimmed in. The boat is now on the new course and the LAZY TRIMMER has become the TRIMMER and vice-versa.

Two Sheet System: This jibe is done exactly the same way with the following exceptions.

As the boat heads downwind, the old sheet must be checked in the fore block.

Both sheets are flown from the secondary winches, still allowing the new sheet to be brought to the windward main winch.

No one has to worry about flipping the lazy sheet over the pole.

It is much harder for the BOWMAN to attach the pole to the new guy because it is taut with the sail (unless its allowed to collapse... watch out it will wrap around the headstay!).

After the "Made" signal the new sheet must be removed from the fore block before the boat can harden up very far (This may not be a problem .. ask the NAVIGATOR about the new course.)

After the jibe the LAZY TRIMMER should quickly straighten the lines and resume his place on the rail adjusting the guy etc.

Beats: AT the beginning of the beat the LAZY TRIMMER should (under direction of the SAILMASTER) adjust the backstay, the runner, the jib fairlead position and the barberhauler on the jib clue. Backstay and runner adjustment is dependent on the wind speed and how flat the SAILMASTER wants the main and jib to be. Jib fairlead position is dependent on the same thing. In general, the stronger the wind the more backstay tension (this straightens the headstay -flattening the jib - and bends the mast - flattening the main. Moving the jib fairlead back gives the jib a sharper entry allowing the boat to point higher and have less heel in heavy winds. Tightening the runner

strightens the mast putting more tension on the head stay but increasing the draft of the main.

During the Beats, the LAZY TRIMMER IS on the rail assisting the SAILMASTER with "go-fast" adjustments. These include: Babystay and backstay tension, cunningham tension, reefs if need be, boom vang tension if need be, and halyard tension if need be. He may also assist the TRIMMER and SAILMASTER by reading the sails from a different angle. The SAILMASTER may delegate the job of watching the speedo or trim indicator to her, particularly if the SAILMASTER is also the TACTICIAN and needs to check boats.

The TRIMMER sits on the low side (as far to windward as he can get) and flies the jib by watching the tell-tails, the draft stripes, and the width of the slot at the upper spreaders (ask SAILMASTER). From this position she also has an excellent view of the boats to leeward and should be on the lookout and report all of them to the TACTICIAN .. particularly those who are possibly on a collision course!

Tacks: Before the tack or, preferably, right after the last tack, the LAZY TRIMMER should prepare the windward sheet by taking all the slack out of it and putting four wraps on the windward main winch. As soon as the HELMSMAN gives the "ready about" command the TRIMMER removes his winch handle, stowing it in a pocket and the lazy TRIMMER or GRINDER inserts a winch handle in the windward winch. The LAZY TRIMMER releases the windward runner after the "Ready About" command

As the tack begins the HELMSMAN may bear off slightly in moderate and light airs to gain some speed. If this happens it should be communicated so the TRIMMER may ease the sheet slightly. He should also take off as many wraps as possible (being careful not to let the sheet slip) and still hold the sheet. As the "hard to lee" command is given, the HELMSMAN turns the boat. As soon as the jib starts to luff, the TRIMMER blows the sheet off the winch. She should also make sure that the sheet runs free through the shivs and that no knots or tangles stop the sheet from being pulled around the mast. If this happens it will be a heavy duty crank for the GRINDER because the sail will fill before it is pulled into position and will have to be winched in.

After the tack is complete the TRIMMER takes slack out of the now windward sheet and wraps it on the main winch ready for the next tack. He then tightens the new runner to set the draft in the mainsail under the direction of the SAILMASTER. She is now the new LAZY TRIMMER.

The TRIMMER must tail in the sheet as soon and as rapidly as possible as soon as it is released. It should come smoothly as both the MASTMAN and BOWMAN are helping it around. The biggest danger is that the if TRIMMER does not keep the sheet taught enough it will override on the winch and become knotted. As the sail comes around it will be in stages (although they should run together continuously). First, the sheet is being brought in by hand. Second the GRINDER is turning the winch as fast as possible in high gear and the TRIMMER must work hard to keep up. Then as the GRINDER reduces gears the sheet will come in slower with each reduction. At this time the trimmer should start paying attention to the sail's leach. The SAILMASTER will be calling out the boat speed as it comes onto the new tack and starts to accelerate. This may take several minutes so the jib is brought in gradually for the last foot of leach position. (leech distance from the upper spreader) At first the boat will close reach. As it picks up speed, it will begin to foot on the wind and finally will come back to a pointing

position as full speed is regained. All this must be coordinated with the MAINMAN (SAILMASTER in most cases), the HELMSMAN, and the new TRIMMER. After the boat is on the wind the TRIMMER stays on the low side and continues to fly the sail as described above.

One thing that can severely effect boat speed to weather is the leech of either the jib or main. In heavy airs these tend to flutter and the leech cord must be tightened or they will effect speed. In light airs the leech cord must be loosened or the leech will be cupped to weather. The TRIMMER is responsible for constintly keeping an eye on both leeches.

Runs and Reaches: On runs and reaches the TRIMMER flies the headsail. If the headsail is a jib, it is flown like it is on the beat with two exceptions. First, because the boat is off the wind, the jib will not be pulled in as far. This is determined by the inside and outside jib tail-tails. Because it is looser, the jib fairlead position will not be set in the right place but will be too far astern. It should be positioned by the LAZY TRIMMER so that the tail-tails on the top and bottom of the sail fly the same way and break at the same point as the boat turns. It may take some help from the HELMSMAN to get this set appropriately. It will probably also need to be positioned more out board as well. This is done with the barber hauler. Determining the position takes a trained eye (ask SAILMASTER) but can be described as that point at which the leach of the jib is parallel with the curve of the main so that the slot is a consistent width all along the edge of the sail.

Second: When on a beat the HELMSMAN steers the boat reacting to changes in wind direction. The TRIMMERS job is really to react to changes in wind speed. When on a reach, the HELMSMAN steers the boat towards the mark and it is the job of the TRIMMER to react to changes in wind direction. He must therefore keep a sharp lookout on the tail tails and constantly trim in or out to keep them all flying. Only large changes in wind angle or boat direction will result in the fairlead needing to be readjusted but the trimmer should keep an eye out for this and inform the LAZY TRIMMER.

When flying the spinnaker, the TRIMMER sits on the high side (see above) where he can see the leading edge (luff) of the sail. The sheet should be on the main winch and it should be in high gear so that quick adjustments can be made in the sail. Another quick method of trimming the sail in is to pull back on that portion of the sheet crossing the cockpit between the two winches and then tailing the slack out from the high side winch. This is very quick and gives adequate mechanical advantage in most cases. The idea is to let the sheet off as far as possible and work it on the edge just on the verge of collapse but not allowing it to. In higher winds the spinnaker is less stable and should not be flown this close because it becomes very easy to collapse and is a real bear to get flying again. However, attention and working the spinnaker hard in moderate airs can make as much difference as a third of a knot over just holding it in a stable position.

After the LAZY TRIMMER has completed his chores she comes to the high side where she is in charge of adjusting the guy (if the spinnaker is up.) This should only be done after informing the TRIMMER and the SAILMASTER as this results in adjustments which need to be made in the sheet and foreguy. In general the LAZY TRIMMER should keep the pole perpendicular to the apparent wind direction.

Any time the wind is abaft the beam the LAZY TRIMMER has another important job and that is to keep constantly keep track of the boats directly behind - particularly those to weather. It is very easy for one of these to blanket the main and spinnaker. If this is allowed to happen a whole parade of boats can march by to weather while we wallow in their lees.

GREYHAWK CREW POSITIONS AND RESPONSIBILITIES

MAINMAN/SAILMASTER: This position should be occupied by the most knowledgeable person on the boat if another skilled helmsman is available. She is responsible for making the boat go fast and, in the role of MAINMAN, flying the main.

Although the main requires frequent trimming, it does not take the total concentration of the jib and spinnaker. This gives the MAINMAN time to look at other things such as: the speed of the boat, the speed and direction of the wind, the trim of the other sails, the heel of the boat, the fore and aft position of the boat, the trim indicator and the wind instruments .. always looking to be the first to detect any kind of shift.

In addition, the SAILMASTER should keep with him (or better yet know) the polar plots of the boat and the Apparent/True wind conversion tables (although the latter could be handled by the NAVIGATOR under agreement.) This allows the SAILMASTER to set a target speed for each new sailing condition encountered and to predict what the wind speed and direction will be on the next course. The target for each change in wind or course is announced to the crew and everyone works towards developing this speed. This method develops skill at the various positions faster than any other, allowing small degrees of experimentation to be converted into experience rapidly. For instance: if flying the jib a little looser can help, it can be tried and its effect on reaching the target quickly noted.

The SAILMASTER must have the concentration and discipline to constantly know her target and to always be checking the variables which effect it. Whether crew position, sail position, or having the right sail up ... anything that effects the speed and the attaining of the target .. is the responsibility of the SAILMASTER. However, the target is a crew target and the entire crew should constantly be aware of the boats state and constantly feeding the SAILMASTER information and suggestions (This is a team effort and everyone should be a backseat driver. However the information should be considered as suggestions. The SAILMASTER makes all decisions on any changes.)

Pre-start: Before the race the MAINMAN should work on maximizing boat speed for the present conditions. He should also determine the boats acceleration time to build to full speed. This is needed for the start and for tacking efficiently. As SAILMASTER she should meet with the NAVIGATOR and TACTICIAN (also the SKIPPER inf not one of the three) and discuss the strategy for the race. This should include a discussion of the course, expected wind changes, currents, sail corridors, and what competition to observe.

Start: During the start, the SAILMASTER is responsible for

responding to the tacticians need to speed and slow the boat as he maneuvers for the start.

Jib Changes: During jib changes, the SAILMASTER is responsible for keeping the boat speed up as much as possible. This includes both keeping the boat on an even keel and the sails working. It is easy to over trim without noticing during one of these fire drills. It is also easy to get too many people on the bow causing it to dig in. Careful watch of boat speed and quick analysis of what's happening can give the crew warning in enough time so that they may react before momentum is lost.

Spinnaker Sets and Take-downs: The SAILMASTER's job here is identical to jib changes except that there is more that can go wrong. The SAILMASTER should keep careful watch over the foredeck maneuvers to make sure no errors occur. Putting the spinnaker up sideways is real embarrassing.

Special attention should be given to the jib as the spinnaker goes up and before it goes down. As it goes up the jib must be eased from the beating position or it will choke the spinnaker. If it is eased too much, it will blanket it and it won't fill. When raising the jib prior to striking the spinnaker, it should be presheeted to a position that would be appropriate for the jib if it were being flown on that course, then sheeted in slightly to give the spinnaker more air.

Besides paying attention to all this the main should continue to be flown as it is on the reaches and beats.

Jibes: During the jibe the SAILMASTER is responsible for jibing the Main. (The TACTICIAN/HELMSMAN is responsible for controlling the jibe.) The main should be jibed after the "made" signal, as the new guy is being trimmed (the pole brought back). Until this time, the spinnaker is being flown on the windward side of the boat and jibing the main would blanket it. He is also responsible for checking that the main preventer is off and that the new sheet has been flipped over the pole end so that the pole may be released from the guy.

The best way to jibe the main, if the winds aren't too heavy, is to grab all the sheet lines (eight to one block and tackle) in a bunch and to pull the main across with one jerk. As the sail flops to the new leeward side, it should be caught by hanging onto the lines. As the shock is taken up by the sheet, the sail can be lowered to leeward without a big crash. If the air is too heavy to pull the main across at once, it must be sheeted in and then rapidly let out to leeward before it causes the boat to round up.

Beats: Flying the main on the beats is straightforward after the initial position is found for the optimum speed upwind. This is done by adjusting the depth of the sail and the leech. As stated above, the more wind present the higher gear that can be run in. This means flattening the sail: more mast bend, more outhaul, and more cunningham tension. (The mast is bent with the backstay and the runner is tensioned.)

Once the shape of the sail is set, its position and twist are determined by the leech. (There are tell-tails there for this purpose.) The boom should be on the center line of the boat and a combination of traveler position and sheet tension should put enough tension on the leech so that the upper batten is twisted appropriately to the boom. From this position small adjustments in leech position and degree of flattening can be made to optimize speed.

If the wind is heavy and heel cannot be controlled by flattening the sail (GREYHAWK only allows a small degree of this), the sail can be flown with more twist in the upper region. To do this the traveler and the mainsheet are eased slightly to allow the upper batten to bend out to leeward. If heel is not reduced enough still, the boom can be moved off center. Further reductions of heel must be made by reefing or changing headsails.

If the wind is puffy, the sail should be set for optimal speed for the times between the puffs. Special control and attention should be made towards detecting when the next puff is going to occur. As the puff arrives, the HELMSMAN heads up slightly and the

MAINMAN lowers the traveler to catch the puff. This turns the initial shock into forward speed rather than heeling force, giving the boat an extra "kick". If it is allowed to heel, the side digs in and the boat is slowed. The degree to which the traveler is lowered depends on the wind. Care must be taken to not lower it too much so as to cause it to luff. This will also slow the boat and the puff will be missed.

After the initial shock, the sail should be quickly trimmed in as by that time the HELMSMAN will have reacted and the boat will be closer to the wind, producing less heel.

Tacks: Tacks are a critical part of racing and the ability to make quick efficient tacks are a big weapon in the tacticians arsenal. Speed will always be lost on a tack, the game is to lose less than the other guy. It is helpful to have a stopwatch and to time the tacks ("Come about" to regaining target speed).

When the boat starts its tack, the SAILMASTER should carefully note the speed. As the boat comes through the wind the traveler should be released and brought in from the other side as the MAINMAN comes across. However it should not be brought in all the way and the sheet should be eased slightly as the boat will turn slightly past closehauled in order to gain acceleration. Easing the sheet slightly allows a little twist which lowers the heeling moment and acts as a kicker just as it did above during a puff.

Again careful attention should be paid to the speed. As it starts to rise the HELMSMAN should bring the boat up onto the wind and the main should be re-sheeted to its beating position.

Runs and Reaches: Flying the main on runs and reaches is much harder than on the beats because you don't have the reference of centering the boom. Typically (ie non-heavy air) the shape of the sail is set to maximum draft with the center of draft pulled slightly forward. Thus the outhaul, babystay, backstay and cunningham are let off.

The SAILMASTER should pay careful attention to the crew weight. If the spinnaker is being flown, it has a large heeling force and it also tips the boat forward because it is so far out in front. This causes the bow to dig in which slows the boat and makes it want to round up to weather (weather helm). The SAILMASTER must compensate for this by getting the crew weight aft and to weather.

Flying the main, particularly on a close reach, must be done in close communication with the spinnaker TRIMMER and the HELMSMAN. Anticipating puffs is critical. If a puff is not caught quickly it can quickly cause the boat to broach. In puffy conditions the vang should be eased so that the boom can raise up and not drag in the water during a puff. This will also put twist in the main and decrease the heeling moment. As the puff is encountered three things should happen simultaneously. The main should be eased, the spinnaker should be eased and the HELMSMAN should turn the boat downwind. If the puff is not caught in time, ie the boat heels to the point that the weather helm makes it difficult to steer (usually you can tell this because the HELMSMAN will be in a blind panic!), enough heel must be taken off the boat so that it is steerable and the HELMSMAN can get it downwind. The first attempt should be to dump the main while easing the spinnaker. If this doesn't work (the boat doesn't turn downwind) eventually the spinnaker will have to be dumped to. This is **ALWAYS** preferable to the boat rounding up. If its done early it will only take a second to get the

boat back downwind and the time lost will be that of dumping the sail plus the loss of speed in regaining control of the spinnaker.

GREYHAWK CREW POSITIONS AND RESPONSIBILITIES

HELMSMAN/TACTICIAN: This job does not involve a lot of mechanics. Steering is an art that can only be learned through practice. However, the inclosed two articles by Tom Widden (tactician on Stars and Stripes) describe it better than I can. Basically, when going upwind, you want to work the boat to weather by making small scallops up wind. This must be done in small amounts, determined by feel, so that the boat does not loose momentum. This results in better upwind performance than just "sailing by the tell-tails". It takes total concentration so we assign the TRIMMER, the GRINDER, as well as the BOWMAN to be lookouts on windward legs so the helmsman can make tactical decisions without having to look around.

Sailing downwind is the opposite. The boat must be worked downwind in the puffs and upwind in the lulls. Other boats determine the course steered because of the possibility of being blanketed.

Steering a light boat or dinghy allows the HELMSMAN to get the feel of the result of steering much easier than on a large boat because the feedback is quicker and the results of alterations are immediate and have higher impact than on a large boat. However, the results of mistakes are just as important on a large boat... the effect just might not be felt for several minutes.

Being a good TACTICIAN means knowing the rules and how to use them tactically against opponents. These decisions must often be made in real time with little notice. The inclosed article will help plus class room time will be devoted to this.