

# Boat Safety and Operating Manual

## Introduction

**The attached Boat Manual is an example of a document that is recommended to be a part of the safety and management plan for all boats that sail in unprotected waters. The document was prepared in 2001 in response to tighter standards that were introduced to the sport through the findings associated with a number of accidents and the introduction of the AYF Sea Safety and Survival course.**

**Recent developments are also likely to increase the need for these documents, perhaps in a more simplified form, to become a part of club racing and it is likely that all yachts will require a document that covers some or all of the safety and management issues involved in the sport.**

**The attached document is an actual boat plan that has been converted to a generic document for illustrative purposes only. It cannot be directly applied to another boat without being rewritten for the actual vessel, crew, activity level and safety category envisaged .**

**The document is in Microsoft Word format so that it can be modified to meet the requirements of users. If you have any problems in using it or any further questions about it please email the club and they will pass them on to me for a reply. The document has been added to the SYC website in response to requests from participants in the SYC TL4 (Yachtmaster Course) who wish to use it as a format for their own boats.**

**John Chatham  
SYC TL4 (Yachtmaster) Course**

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## Introduction

History of the boat and other general information about its design or construction

Following the 1998 Sydney to Hobart Yacht race that resulted in loss of life and serious damage to many boats, the AYF has introduced the Sea Safety and Survival Course.

A minimum number of crew must have passed the theory course and it is recommended that crew in Category 2 Ocean events also attend the wet module.

Boat Name has developed a Safety Policy that is included in this Safety and Operation Manual. It is recognised that the skipper and crew are all responsible for the welfare of each other and this duty will be taken very seriously and will be reflected in the way that the vessel is setup, prepared, crewed and sailed.

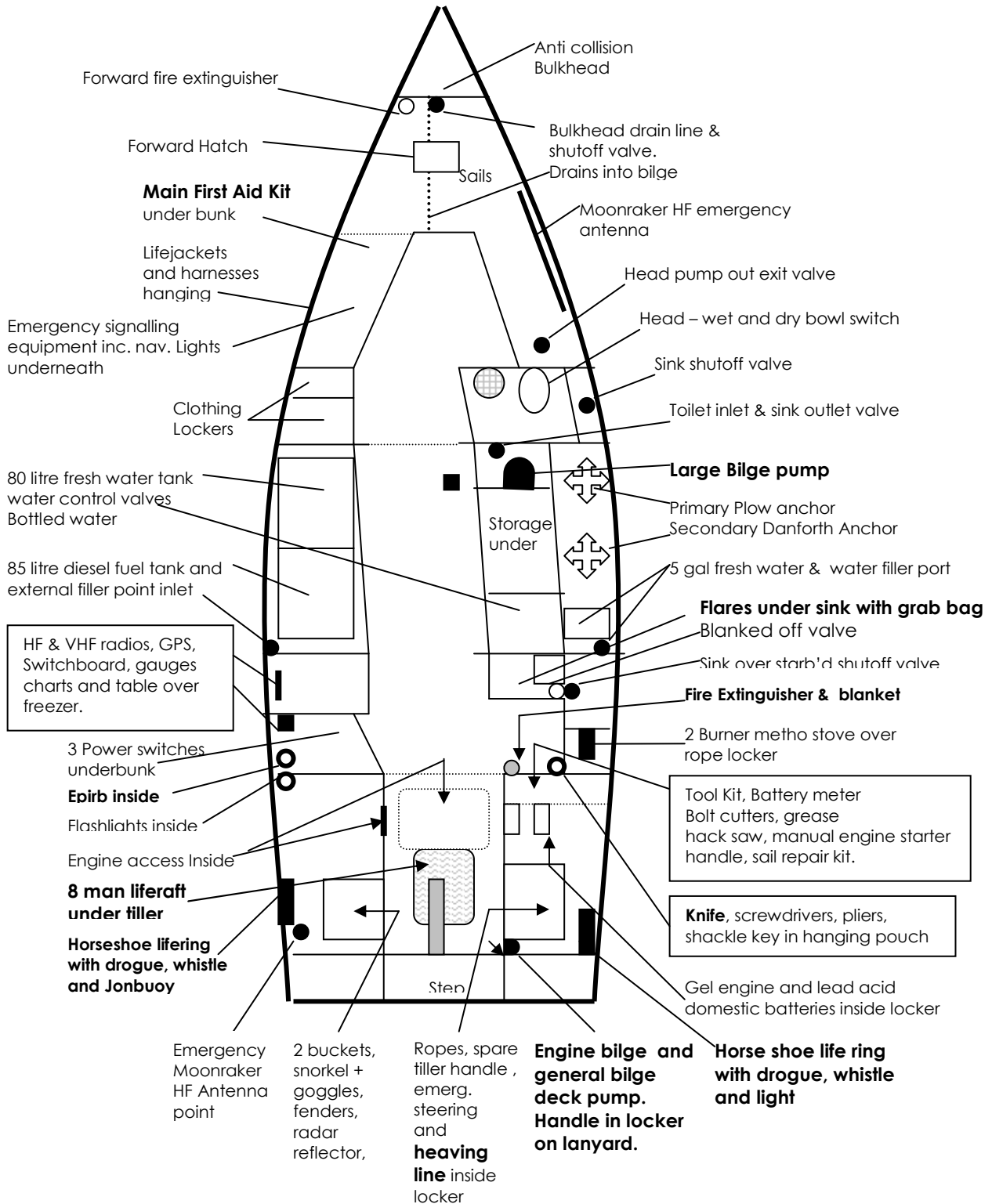
It is recognised that sailing is a potentially dangerous sport and the safety of the crew and the integrity of the vessel are of primary importance.

This plan takes into account the syllabus and recommendations of the AYF Sea Safety and Survival Course 2001-2002 and it is presented in sections broadly as developed by the Ocean Racing Club of Victoria.

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# Section 1 Yacht Preparation

## 1. Storage of Equipment – Boat location Diagram



## 2. General information on equipment carried

The vessel is fitted to Category 2 AYF Safety standards. Key safety equipment includes an 8 man Seasava RFD life raft, an RFD inflatable Jon buoy, dual sets of navigation lights with a separate emergency set, a KODAN HF transceiver with a Moon Raker backup antenna. A mast head VHF antenna has been fitted recently.

Two ICOM hand held VHF radios are carried, one of which is rated as waterproof using the submersible J7 standard. A 121.5/243 MHZ Epirb is also fitted.

A third reef is fitted to the mainsail which reduces the area to the same size as the trisail. The storm jib is fitted with luff ties and the sheets are sewn on.

An 18hp Volvo Penta diesel engine pushes the vessel along at 5.5 knots at around 2000rpm.

## 3. Lifebuoys, Jonbuoy, lights, dye markers

Two horseshoe lifebuoys are located on each side of the pushpit with the starboard side connected to the self starting light and a sea drogue and the port side connected to the Jonbuoy and a sea drogue. Both are fitted with whistles.

A mast head tricolour navigation light is accompanied by an all round mast head light. Bow and stern backup navigation lights are also fitted and a set of spare lights operated from torch batteries can be attached if needed.

All crew must carry their own packet of dye marker as required by AYF safety regulations.

## 4. PFD's: Type, number, attachments, use.

Seven Burke Matrix zip front PFD 1 jackets fitted with crotch straps are included. Two of these are XL whilst the rest are M-L size. All are designed for adults weighing more than 60 kg. Whistles and lights are attached to each.

## 5. Heaving line

A lightweight yellow poly heaving line with a rubber ring is stored on a hook in the starboard locker with access from the cockpit.

## 6. Harnesses, tethers, jackstays and strong points.

6 Burke harnesses and one Levitator harness with crotch straps attached are stored with the PFD's on separate hangers. 7 by 2 metre tethers and 3 by 1 metre tethers are carried.

All crew are also encouraged to purchase their own inflatable PFD 1 with harness included.

10 mm Spectra jacklines are fitted to strong points fore and aft on each side. Two sewn webbing lines connect these jacklines one of which can be accessed from inside the cabin through the companion way.

3 Strong points are fitted in the cockpit and another is fitted inside the cabin at the companion way so that crew can clip on before exiting.

## 7. Flares carried, miniflares

Four Rockets                                      Out of sight signal: 15 km range in daylight and 45km at night

Two red hand                                      Night time within sight: 15km in daylight

Two orange hand                                      Day time within site

Two white hand                                      Warning signal

It is recommended that all crew carry a pack of miniflares with them at all times.

The flare container is located under the sink with the grab bag for easy access.

## 8. Medical kit

The main medical kit includes a full range of dressings and medications and has a stock and use list attached to the exterior lid. A stock record is inside the kit and this must be filled in when anything is consumed from the kit. The vessel usually carries two Level 11 first aiders who have extra training in medications.

In the Appendix to this manual is a copy of the Accident Report form that must be completed after any injury is sustained by anyone whilst sailing on the boat. Copies of these forms are stored in a plastic folder in the main first aid kit.

A second first aid kit contains some basic items such as bandaids and weak analgesics and this is stored in the mesh bag over the sink.

#### 9. **Boat Epirb**

The epirb is a 121.5/243 Mhz unit and must be placed in the water when activated in order to have a ground plane. Tie the epirb very securely onto the boat or raft before deploying it. A test button is also located on top of the epirb.

In the event that rescue may be a long time in coming it is wise to activate the epirb at set intervals to preserve power.

#### 10. **Flashlights**

Four waterproof flashlights are kept in the the winch handle locker over the quarterberth. Three of these are dolphins one of which is kept in the cockpit at night in the event of an emergency. The fourth torch is a rotating head on-off torch and another of these is stored in the emergency signalling box located next to the main medical kit under the lifejackets (see next item).

11. **Emergency Signalling Box** is located under the life jackets and includes a gas operated fog horn (need to assemble), a V sheet, "N" and "C" flags, emergency navigation lights and another torch.

12. **Tools and bolt cutters** are located in the Tools locker under the shelf on the starboard side between the steps and the stove. Spare parts for the engine such as a pump impeller, the manual start handle for the engine (fits onto the front pulley on the engine accessed by removing the steps and the cover panel), spare fan belts (3), spare winch gears, a tomahawk for breaching the hull.

13. **Instrumentation** is visible near the control panel. Water and fuel tank guages are operated from the main control panel. The instruments switch provides power to the GPS unit (which also has internal battery backup), and the secondary switches for the three cockpit instruments (wind, log and depth) located over the quarter berth. A switch on this panel also controls the light in the backup hand compass when in its holder above the quarter berth.

14. **Liferaft**. This is a Seasava 8 man RFD liferaft and it is located in the cockpit. The retaining strap and attachment line are anchored on the starboard side near the engine throttle handle.

15. **Grab bag**. Located under the sink with the Flare container. It contains spare flares, a handheld GPS, spare medications, a waterproof hand held VHF radio, emergency personal gear, a second V sheet with a signalling mirror, a dolphin torch, a knife, a cup and cyalume sticks.

16. **Fire Extinguishers** (2 powder type) & fire blanket are carried on the boat. One extinguisher and the fire blanket are located next to the stove above the tools locker. The second extinguisher is located in the forepeak.

17. **Marine Radios** and hand held radios. A Codan HF radio VLV 9478, with manual tuning, is located next to the control panel. Two hand held radios with battery charger plug leads are carried. An Icom waterproof unit is stored in the grab bag and a second Icom water resistant unit is located in the locker under the HF radio. The boat has recently been fitted with a VHF mast antenna and internal Icom VHF radio.

The HF radio uses a backstay antenna that feeds through a connector block under the port lifebuoy which unscrews to fit a Moonraker emergency antenna that is stored in the forepeak on the starboard side.

18. **Stove and cooking fuel.** The two burner stove operates on metho which is stored in the circular tank behind the burners. **Do not attempt to refill the tank when the stove is on or is still hot as it is likely that some spillage will occur and a fire will result.** A small funnel is attached to the stove to refill the tank. **Do not run the burners on high as the metho in the tank may get hot.**
19. **Storage of all items.** Refer to the storage diagram attached to this plan and located on the boat.
20. **Sails** are stored in the forepeak (apart from the mainsail) and include the following:
- |             |                       |                           |   |
|-------------|-----------------------|---------------------------|---|
| Mainsail    | Cruising laminate     | Reefing range is below    |   |
| #1 Headsail | Mylar / Kevlar 2001   | 0-18 knots apparent wind  | Do not crease                             |
| #2 Headsail | Cruising laminate     | 18-27 knots apparent wind | Sheet between the shrouds unless reaching |
| #3 Headsail | Dacron                | 27 knots to 40+           | Sheet between the shrouds unless reaching |
| Storm Jib   | Dacron with luff ties | 40 plus knots             | Sheets attached                           |
| Trisail     | Dacron                | 50 knots plus.            | Sheets attached                           |
| First reef  |                       | 30 knots                  |   |
| Second reef |                       | 38 knots                  |   |
| Third reef  |                       | 45 knots                  | Equal area to trisale.                    |
21. **Engine**, fuel carried and range. The engine is a diesel Volvo Penta 18 HP with a sail drive unit attached. Access to the water filter and water inlet control valve is through the trap door from the quarter berth. The 87 litre capacity is consumed at 2 to 3 litres per hour at about 5 knots depending on wave conditions. This should at least provide a range of 145 miles and over 200 miles in flat water. Actual passage tests have confirmed these figures in flat water.
22. **Water** carried and amount per crew. The main water tank contains up to approximately 90 litres and delivers to the electric pump that supplies the sinks on demand. **Turn the water system off at the control panel after use as it places a drain on the batteries.** A second plastic container stored under the starboard bunks contains another 20 litres and a number of 1.5 litre bottles of drinking water are stored under the centre bunk in front of the sink console. The isolating valve for the main water tank is located with the 1.5l bottles of water.
23. **Emergency Steering** has been tested and redesigned and is located in the port cockpit locker. Refer to Appendix for a description of the system to be used.
24. **Navigation and deck lights.** A “mast” head tricolour navigation and all round white “anchor” light are controlled from the switch board. A second set mounted on the pulpit and pushpit are controlled as “navigation” and “stern” lights. An independent emergency set can be mounted and these operate from torch batteries – these are stored in the emergency signalling box.
25. **Anchors.** The primary anchor is a Plow type and should be used for primary anchoring purposes. It is fitted with 10m of heavy duty chain and 50 m of rope. The secondary Danforth anchor is fitted with 2m of chain and 40m of rope.
26. **Toilet**, use and urine disposal. The toilet water supply and sink outlet valve are combined and located under the forward end of the centre bunk. The exit valve is located under the starboard bunk in the forepeak. **Both valves must be turned off after use.** The head has a wet and dry pump out switch. Treat it gently —you will hear it click! **All urine must be excreted into pee bottles and thrown over the side. Nobody may stand up to pee over the side of the boat.**
27. **Towing.** The vessel is fitted with very strong bollards fore and aft and a substantial bow fitting. If a towing bridle is used a shackle pin must be put through the tow rope, not the bridle. Tow ropes must be protected from chafing.



28. **Batteries.** A sealed gel battery is used for the engine and a lead acid battery is used for the domestic. The battery condition meter is located in the Tools locker. Both batteries may be connected together by turning all three power switches on. The engine battery can be isolated. **When charging the batteries all three switches must be turned on.**
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## Section 2 Crew Preparation and Boat Management

1. **The Safety Policy** – Who is responsible?

*Everyone who sails on the boat has a responsibility for the safety of other crew members and the vessel. Care should be taken to ensure that everyone can enjoy the event and return to port safely. This care extends to all crew members who must ensure that they conduct themselves in a safe and responsible way at all times, that they wear the designated safety gear, train themselves in the requirements for Sea Safety and Survival, and know the layout, safety rules and operation of the boat.*

**Our aim is to take all reasonably practicable measures to control risks against injury**

2. **Hazard Identification** and control strategies:

### **MOB procedure**

The procedure used was developed by Teki Dalton and published in Australian Sailing.

(It should not be necessary if we stay harnessed to the boat)

Train beforehand

**Crew #1.** Switch on and throw a waterproof torch after the MOB. Watch continuously where the MOB fell or the light. Raise the alarm.

**Crew #2.** Throw the lifebuoy nearest to hand.

All hands at stations. **Crew #4** to relay from navigator to helm.

Nearest person on or off watch hits the MOB button on the GPS

Navigator notes the lat. and long. on the chart. Uses expanded scale on pre prepared chart.

Do not start the engine. Do not jump into the water.

**Helm.** Follow the Quickstop method by tacking with a backed headsail or gybing as soon as possible, providing conditions make it safe to do so. Ensure that the boat is under control at all times. Granny turn if it is not safe to gybe.

**Crew #2.** Clear all ropes and organise others to prepare for a pickup. Start the engine and leave in **neutral**.

**Crew #1.** Watch for miniflares.

**Best helmsperson to take over the helm.**

**Navigator to set up a search pattern** (concentric, triangular etc..) **and to relay bearing to steer. Don't worry about Variation corrections but allow for set and drift.** Plot the course on the expanded scale.

Approach MOB to windward and to leeward and throw the heaving line and if necessary the second lifebuoy. Pull in the line and secure the MOB so that they are not going to drift off and they are in a safe situation. The best method to retrieve the MOB on Boat Name is through the transom, however in a sea this can be dangerous and it is best to bring them aboard at the beam on a halyard or to lift them up on a halyard and move them to the transom so that they can step aboard without danger of being trapped under the transom.

Keep horizontal in case of hypothermia. First Aider to attend.

### **Fire Procedure**

The boat carries Dry Powder extinguishers that are suitable for use on most types of fire. The fire can also be extinguished by using a fire blanket to starve it of oxygen. Cooling the fire is

also effective although water must not be used on electrical, oil, petrol or diesel fires. Water is effective against metho fires.

Dry powder extinguishers also give off carbon dioxide which will collect in the lower reaches of the vessel and could affect breathing. Ventilation is essential.

Remove people from danger and always point the extinguisher at the base of the fire.

### **Abandon ship procedure and Muster list**

In the event that it is necessary to abandon ship the skipper will be responsible for the instruction. The safest place to be is often the boat until it is obvious that it must be abandoned and we should not attempt to abandon the boat to take refuge in a liferaft whilst it is still afloat and in no immediate danger of sinking.

Precautions should be taken to ensure a quick departure if the conditions or the damage to the boat warrant this action.

#### **Muster list:**

Head sail trimmer #1:	Deploy the epirb if not already done so. Secure well and transfer tie to liferaft when departing.
Mainsheet Hand and #2 Helm:	Deploy the liferaft and secure to the boat. In some sea conditions it is best not to deploy the raft too early in case it is ripped free from the boat.
Navigator:	Place the hand held radios and a dolphin torch in the grab bag. Issue a mayday call.
Skipper:	Ensure all crew are accounted for and have checked their safety gear. Have the grab bag close at hand.
Headsail trimmer #2	Have the flare container close at hand.

In the event that the boat is rolled, immediately carry out a roll call.

### **Safety harness policy**

**IT IS THE POLICY OF THIS VESSEL THAT SAFETY HARNESSSES WILL BE WORN AND CONNECTED AFTER DARK AND AT ALL TIMES WHEN THE WIND STRENGTH EXCEEDS 15 KNOTS OF TRUE WIND (TO WINDWARD THIS IS COINCIDENT WITH CHANGING TO A #2 HEADSAIL).**

### **Training policy**

All crew should attend the AYF Sea Safety and Survival Course. On boat training will be conducted and these sessions are mandatory.

### 3. **Crew Clothing**

A three layer clothing system is recommended with thermals, a middle layer and wet weather gear on top. A PFD 1 inflatable vest with integrated harness is also strongly recommended. Hanging room is provided for all gear which must be stored when not in use.

### 4. **Crew capabilities**, experience and medical status

A minimum number of experienced crew are required and in general only one person without ocean sailing experience will sail on the boat at any one time. The fitness and medical status of crew members will be taken into account.

### 5. **Crew briefing**

Crew positions: Each crew member will have a nominal crew position.

Safety briefing: To be carried out as specified on the crew briefing sheet.  
To be carried out at the change over of each watch and to include dangers, items to monitor, wind, weather and sea conditions, last rig check, bilge water levels.

Voyage plan: To be completed on the day of the start prior to leaving port.

- Weather* to start: In the event that conditions do not look suitable for a boat of the size and capability of Boat Name then a crew meeting shall be held prior to the start to discuss the matter and to decide whether to start.
- Watch Check list: A watch check list shall be followed and shall include:  
Navigation details, wind strength, sails carried, barometer movements, bilge water level and keelbolts, battery charge, hatch leaks and rigging checks.  
Refer to Appendices.
- Sea conditions: Average wave heights may be up to 80% higher than forecast and wind strengths may be up to 40% higher. In storm force and above (48 knots plus) it is necessary to steer the boat into the waves at an angle ( 60 degrees may be best) and to keep the speed under control. Waves breaking over the boat may wash safety gear away so secure these items.  
Reduce sail area early.  
Don't break the boat or the crew.  
Remove all extra gear such as spinnaker sheets and secure poles and any other deck gear.  
Organise inside the boat with small sails to the top. No cooking. Have buckets ready for sea sick crew.
- Emergency drills: These will be carried out before the race for all crew. To include reefing of sails, setting of storm sails, MOB, Emergency steering, safety policy.
- Port Phillip Heads: All crew must be on deck, wearing safety harnesses and be clipped on at night and in #2 Sail conditions.
- Emergency Steering: Refer to Appendices for set up and operating details.
5. **First aid officers:** At least two. Refer to the crew briefing sheet.
6. **Radio Operators:** At least two. Refer to the crew briefing sheet.
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### Section 3 Emergencies

#### 1. **Broaching, pooping:**

Due to the circulation of water in opposing directions in the trough versus the top of the waves a boat may broach. In the trough the water moves towards the boat turning the bow further if the boat starts to turn side on. Keep the boat at right angles to the wave and maintain speed.

A boat is pooped if a wave breaks over it. Reduce speed (50% of the wave?) and avoid a pitchpole by streaming warps, a drogue or even the anchor tied into a bundle.

#### 2. **Loss of mast:**

Do not start the engine, watch leader to control deck operations and key people to their positions. Run out the drogue or anchor, check if the hull has been breached, remove the stays (bolt cutters?) and halyards. Fit the Moonraker antenna and test the radio, clean up the loose ropes and wire. Start the engine and consider a jury rig.

#### 3. **Man overboard:** procedures and search patterns

Refer to Section 2 for the detailed procedure.

#### 4. **Fire**

Refer to Section 2 for a detailed discussion.

#### 5. **HF/VHF Radio calls**

Refer to the prompt card near the radio station.

#### 6. **Aground**

Make a Mayday call, crew to put on lifejackets, deploy epirb, calculate the tide effect and heel the boat, deploy the liferaft, take the grab bag and the flare container.

#### 7. **Capsize**

Immediately carry out a head count, assess injuries, assess the state of the rig and if the hull is breached, assess the situation and plan to recover – ability to make port, liferaft, epirb, radio, flares, communications life threatening dangers.

#### 8. **Medical assistance**

Refer to Level 11 First Aiders. Administer drugs under radiomed advice. Take care of preknown conditions and limitations.

#### 9. **Loss of steering**

Refer to Appendix for details.

#### 10. **Towing**

The fore and aft bollards are strong and can be use for towing. A large D shackle is carried in the tool kit to make up a towing bridle. **Always put the towing rope through the shackle pin – not the bridle through the pin as it will work it loose.**

#### 11. **Flooding**

Buckets are most efficient. There are also 3 bilge pumps on board. Block off the hole if any using whatever fits,. A small sail tied over the exterior of the hull may be useful.

#### 12. **Providing assistance**

There is a duty to render assistance unless it is unnecessary, unreasonable to do so or we are unable. It is not reasonable to risk injury to our crew or to our boat.

#### 13. **Abandon ship**

The call to abandon ship is given by the skipper or in his absence by the next most senior person. We will step up into the liferaft. Refer to section two for the Muster List.

#### 14. **Boarding the liferaft**

Attach your harness tether to the painter, pull yourself along it and make an unassisted entry or an assisted entry if crew are already on board. Take extra water containers and the pee bottles.

#### 15. **In the water and raft** – survival strategies

Hypothermia – maintain warmth by using the HELP position and staying close together. Use the HUDDLE. Keep the head covered.

Raft features – Limit water consumption (only 0.5 litre per person) and collect rain water if possible.

Be careful when unpacking the gear bags as they could be lost – tie them on.

Remain harnessed to the raft. Bail out the raft. Right the raft by standing on the gas bottle with feet apart and heaving backwards to leeward of the wind. Remain face up. Be prepared to swim free of ropes and ladders by pushing toward your feet. The door way is on the opposite side to the gas bottle.

Search and rescue – Watch and listen. Do not waste flares, battery power in torches, radios or epirbs. Use the epirb for short regular intervals to save power.

Communication – use flares ( 4 hand, 2 rocket), mirror, torches, VHF radio, flags or hand signals.

Assist the rescuers – Watch for green signal flares from the helicopter, do not attach the winch line to the boat or raft, allow the wire to touch the water to discharge static electricity. Note the use of a hypothermic sling which keeps the body horizontal.

In a helicopter

Rescue sling

Surface vessels.-.signal if a drogue is streaming from the raft.

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**Appendices attached**

## Appendices

Boat Name	First Aid Kit Stock Record	October 22 <sup>nd</sup> 2001			
Use	Item	Stock	Used	Left	Expiry date
<b>General</b>	Manual – St. John Amb.	1	0	1	N/A
	First Aiders Level 11 Plus	2			
<b>Mild Pain</b>	Paracetamol 500mg	50			
<b>Mod. Pain</b>	Panadeine 500mg	50			
<b>Strong Pain</b>	*Panadeine Forte	20			
<b>Very severe pain</b>	*Oxycodone 5mg (Endone)	20			
<b>Cardiac</b>	Soluble Aspirin	20			
<b>Wounds</b>	Disposable gloves	20			
<b>Wounds &amp; limbs</b>	Crepe Bandages 75 *1.5m	3			
	Ditto Crepe Bandages 100*1.5 m	1			
	Ditto Triangular bandages	5			
	Ditto Band-aids	20			
	Ditto Adhesive tape 50*2.5m	1			
	Ditto Cotton wool pieces	10			
	Ditto Non Stick dressing (Unitulle)	4			
	Ditto Betadine 15ml.	1			
<b>Eyes</b>	Saline 250ml.	1			
	*Antibiotic (Genoptic)	1			
	Sterile eye patches	2			
<b>Antibiotic</b>	*Doxycycline 100mg (Doryx)	1			
<b>Burns</b>	Fixomull dressing 5cm	1			
<b>Sunscreen</b>	>15 SPF 50g	Many			
<b>Diarrhoea</b>	Imodium pkt 12	1			
<b>Dehydration</b>	Gastrolyte pkt 10 *4.9g sachets	1			
<b>Seasickness</b>	*Stemetil suppositories	10			
<b>Instruments</b>	Stainless steel scissors	1			
	Clinical thermometer	1			
	Stainless Forceps	3			
	Safety pins	10+			
<b>Other</b>	Barley sugar	Pkt			
(Not prescribed)	Measuring cup	1			
	Sleek Tape	1			
	Micropore tape	1			
	Tongue depressors	2			
	Lubricating gel	3			
	Shaver	1			
	Eyewash cup	1			
	Butesin Picrate	1			
	Paxyl Antibiotic 75g cream	1			
	Betadine swabs	5			
	Stainless sterile blade	1			
	Wound pads	3			
	Gauze swabs	4			
	Med. Wound dressing	1			
	Butterfly crossovers	Many			

## Crew Briefing Sheet

### Crew Medical Conditions

Crew name	Condition	Instruction
All	Any	Level 11 First aid. Self medication of drugs unless necessary to preserve life and on radiomed advice only.

### First Aid Officers

Name	Level	Certificate
	Level 11 plus Medications	
	Level 11 plus Medications	

### Radio Operators

Name	Licence #

### Race Details

Race:		
Start:		
SYC		
Finish:		
Return:		
Race cost		
Crew		

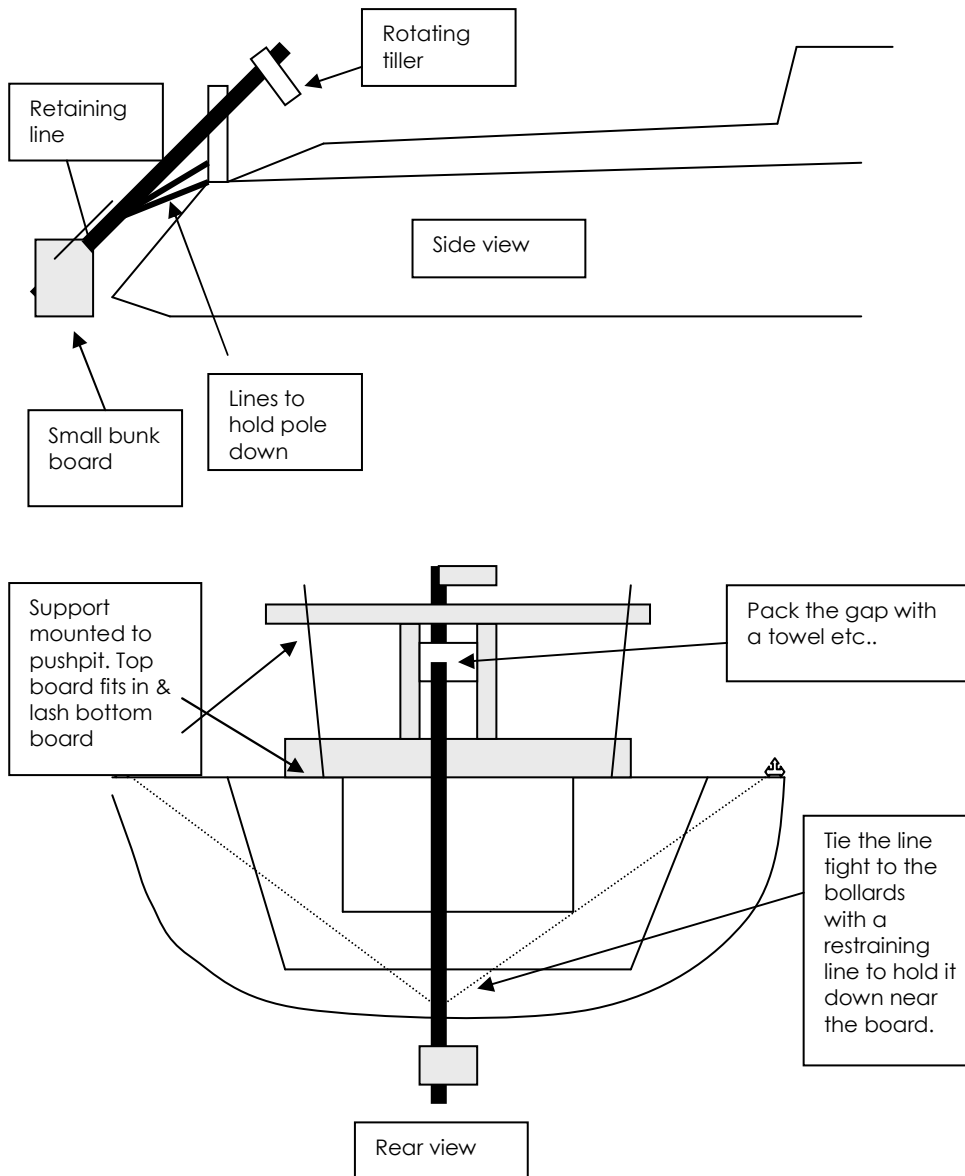






### Emergency Steering

1. Install the mounting for the spinnaker pole across the transom opening between the pushpit.
2. Bolt the bunk board to the pole with "U" bolts. Make them tight.
3. Tie a line around the pole with a rolling hitch 25 cm above the bunk board and tie a restraining line to the beak at the bottom end to stop it riding up.
4. Tie the line very tight to the rear bollards to keep the pole in the water and as vertical as possible without it hitting the boat.
5. Wrap a towel around the pole in the guide to pack the space.
6. Lash a piece at right angles to the pole at the top end to make turning the pole easier.
7. Turn the pole to steer.
8. Test the system to ensure that it works.
9. Keep speed above 4 knots.



### Towing

1. Tie tow rope to short piece of chain stored in Tool locker.
2. Wrap chain to protect bow fitting and tie a warp to the bollard or use a bridle.

