



Harvest Moon Regatta 2011

Offshore Safety Equipment

By



Jeremy R Hood
HSH Yachts



Nolan Vander Haagen
West Marine



Two sections:

Equipment to:

1. Prevent emergencies
2. Cope with emergencies



Preventing emergencies

- **Ensuring safe navigation**
- **Preventing crew overboard**
- **Avoiding collision**
- **Minimizing medical problems**



Navigation items

- **Charts (not solely electronic)**
 - For the course
 - For alternative destinations
- **Plotting instruments**
- **Compass and knot log**
 - Ensure compass is adjusted and knot log is calibrated
- **Reference books**



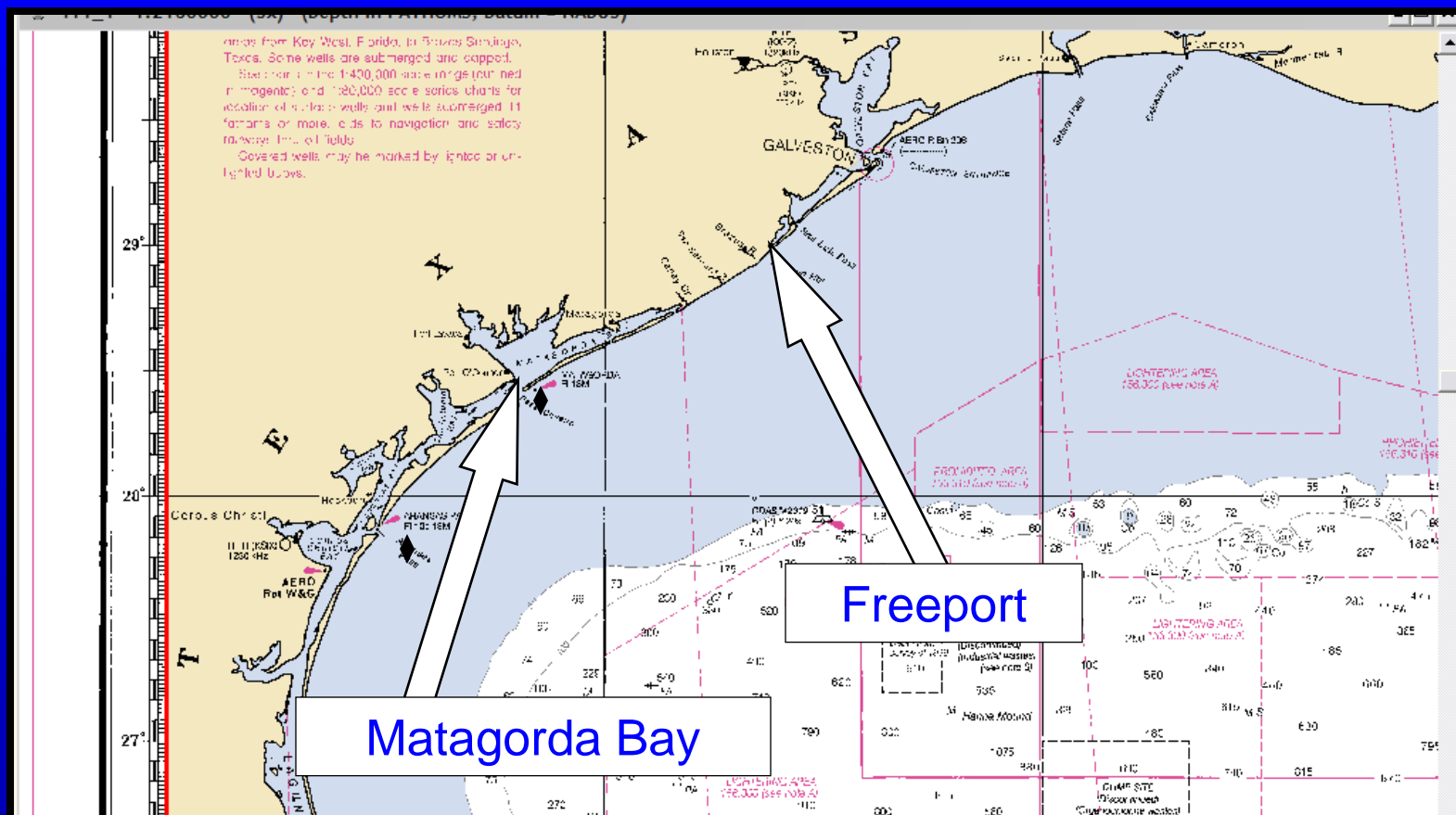
Navigation items

- **Position fixing**
 - **GPS** (main plus back-up hand-held)
 - **Dead Reckoning** (requires knowledge, accurate compass, paper charts and distance knot-log)



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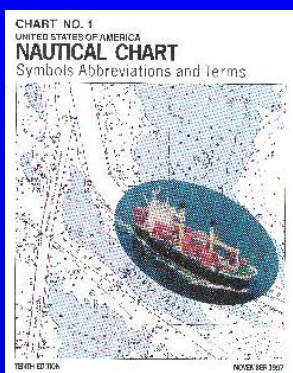
Do you have charts for these entrances?



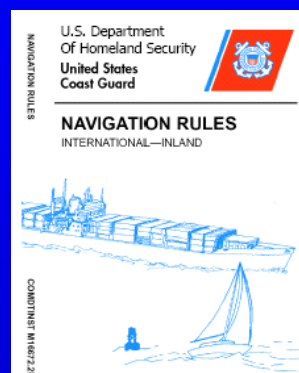


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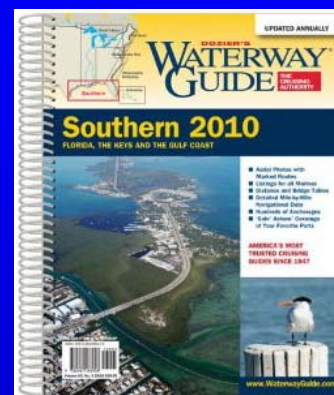
For reference aboard



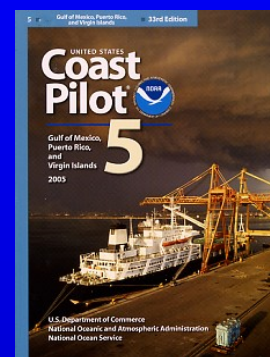
•Chart #1



•USCG
Navigation
Rules



•Waterway
guide



•Coast
Pilot #5



Crew-overboard prevention

- **Jack lines**
- **Harness eyes in cockpit**
- **Lifelines (uncovered stainless wire)**
- **Harnesses and tethers**



Crew-overboard prevention

- ***Jack lines running length of vessel***
 - Required by ORC regulations



Jack lines are secured at bow and stern on each side of the vessel.

They are not required to be made of flat braid but this has the benefits of:

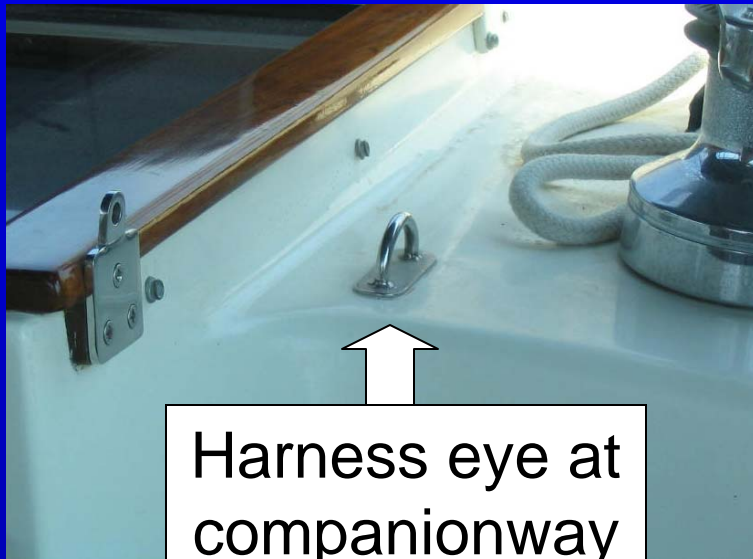
- At night, not being mistaken for a sheet or other running rigging
- Not creating a tripping hazard



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Crew-overboard prevention

- ***Harness eyes in cockpit***
 - Required by ORC regulations



Harness eye at companionway

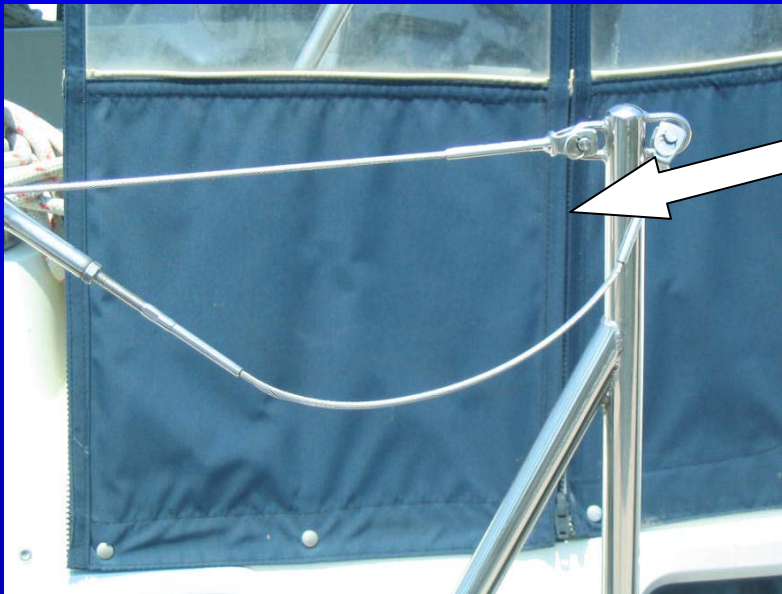


Harness eye at helm



Crew-overboard prevention

- ***Lifelines (uncovered stainless wire)***
 - Recommended but not required for HMR



Uncovered stainless
wire



Crew-overboard prevention

- **Safety harness and tether**
 - Required by ORC regulations



• Basic



• Fully adjustable



• Combined harness & lifevest



• Tethers



Crew-overboard prevention

- **Safety harness and tether**
 - Required by ORC regulations



5.02.1 Each crew member shall have a harness and safety line that complies with ISO 12401 or equivalent with a safety line not more than 2m in length.

Harnesses and safety lines manufactured prior to Jan 2010 shall comply with either ISO 12401 or EN 1095.

Harnesses and safety lines manufactured prior to Jan 2001 are not permitted.

US SAILING prescribes that harnesses and safety lines manufactured prior to Jan 2001 are not recommended in the U.S.



Collision avoidance

- **Keeping a good lookout!**
- **Navigation lights**
- **Radar reflector**
- **Radar**
- **AIS**



Collision avoidance

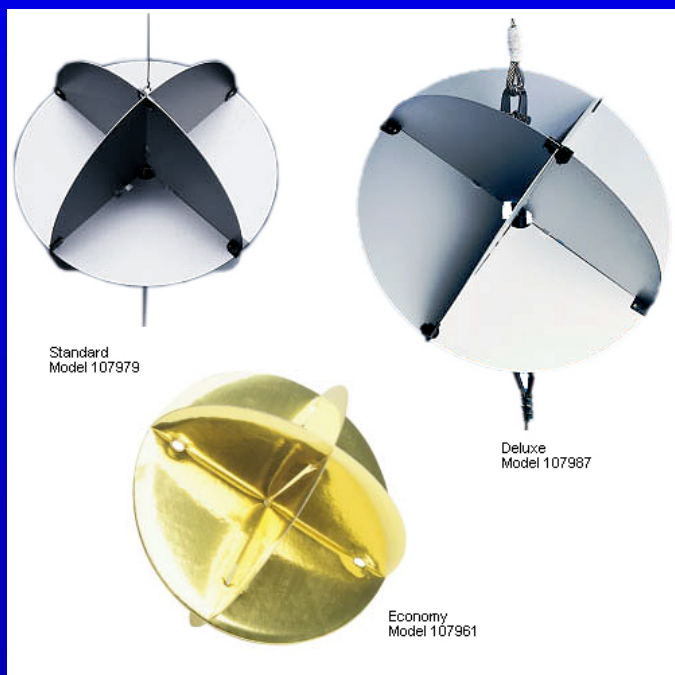
- ***Navigation lights***
 - Reserve navigation lights shall be carried as required by ORC regulations





Collision avoidance

- **Radar reflector**
 - required by ORC regulations



Radar reflectors may be of any type so long as they have an equivalent “echoing area” of 6 square meters (see ORC regs for full details)



Collision avoidance

- **Radar**



Colregs require vessels that have operational radar to use it when conditions require (eg. at night)



Collision avoidance

- **AIS**

- Recommended by ORC regulations



- *Identify ships and know their names and call signs*
- *See CPA (closest point of approach) and TCPA (time to CPA)*
- *See where Tows are on ICW and know their names*
- *With a Class B transponder, let other AIS equipped vessels see you!*



Minimize medical problems:

- **Hypothermia (dangerously cold)**
 - Need foul weather gear and boots



• Waterproof foul-weather gear is essential (even here in TX) to avoid possibility of hypothermia in storm conditions



Minimize medical problems:

- Hand holds (on deck and below)
- Leecloths for berths
- Wear shoes
- Galley safety strop



2. Coping with emergencies

- Recovering an overboard crew
- Coping with medical emergencies
- Dealing with fire
- Avoiding sinking
- Abandoning ship



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Crew-overboard recovery gear

- **Equipment for the vessel:**



- **Throwable device (type IV)**



- **Crew-overboard pole**



- **Floating strobe buoy**



- **Lifesling**



- **Hoisting gear to recover victim**



Crew-overboard recovery gear

- ***And if YOU are overboard....:***



- Flashlight or signalling light



- Signalling mirror



- Personal flotation



- Personal strobe light



- Personal EPIRB



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Medical emergencies



•Medical kit



•Information



•Communications



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Fire fighting



• Extinguishers



• Fire blanket

- *Locate extinguishers close to exits*
- *Ensure forward hatch is not blocked as an exit*
- *Keep one extinguisher accessible in cockpit*



Avoiding sinking: Pumps



•Electric



•Buckets!



•Manual

ORC regulations require:

- at least one permanently installed manual bilge pump operable with all cockpit seats, hatches and companionways shut
- two buckets of stout construction each with at least 2.4 US gallons capacity. Each bucket to have a lanyard



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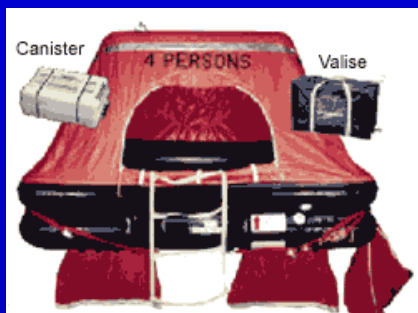
Abandoning ship



•Inflatable



•EPIRB



•Liferaft



•Lifevests

ORC regulations require:

- Lifejackets (USCG Type 1 or as approved by ORC regs)
- Liferafts and EPIRB's are not required for this event



Communications

- **When an emergency cannot be coped with alone you may need assistance**



Radio Communications



1. VHF radio

- Fixed VHF: 25 watts; approx 25 mile range
- Required by ORC regulations



- Hand-held VHF: 5-6 watts; few miles range
- Required by ORC regulations



2. Emergency antenna

- Required by ORC regulations



Radio Communications



3. EPIRB



4. Satellite phone communications



5. Cell phone



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Radio Communications



6. Class B AIS



7. SPOT personal messenger



8. ACR Aqualink



Visual / Aural Communications



1. FLARES



2. Signalling mirror



3. Horns and whistles



More information

- Copies of these notes on our website: www.HSHyachts.com
- We offer classes in navigation and more: see our website: www.HSHyachts.com