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U.S. Department of  
Homeland Security  
**United States  
Coast Guard  
Auxiliary**



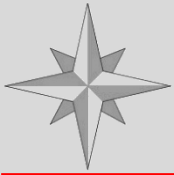
# Night Surface Operations GUIDE

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# Welcome

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- Why do we need night ops training?
  - “I’ve driven boats all my life”
  - “I operate at night all the time”
  - “I’ve never had an accident”
- No one has had an accident...  
.....until they do.

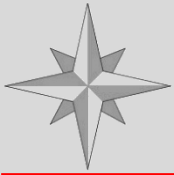


# Night Operations

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- “Night Operations” is defined as any surface mission aboard an AUXFAC that occurs between dusk and dawn, or in conditions of limited visibility requiring the use of navigation lights (fog, rain, less than  $\frac{1}{4}$  mile visibility and/or other factors).
- See Inland and International Rule # 19 (Navigation Rules) for details.



# Night Operations

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- ½ of the world is always in darkness
- While we train in the light, a SAR call may come at night
- Some ATON patrols must be done at night
- BCM-08-02-AUX requires a night underway navigation and piloting exercise
- **NOTE:** May be waived by the Director in accordance with Section 1.B.4. If waived, candidate must discuss night navigation and piloting. Same for COX-09-04-AUX



# NIGHT OPERATIONS

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- Holiday boat parades are conducted after dark
  - Hard to distinguish Navigation Lights from holiday lights







# NIGHT OPERATIONS

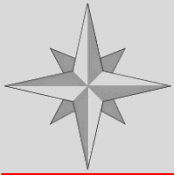
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- Fireworks Safety Patrols are very dangerous
  - Everyone is looking up, not out
  - Things (some hot things) are falling from the sky

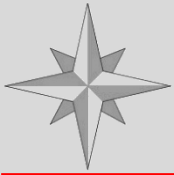






# General Rules

- Conduct a thorough mission briefing –:
  - Discuss specific mission goals
  - Discuss how reduced visibility will affect navigation & avoiding hazards that may be encountered.
- Adapt to night vision and conserve it
  - No white lights
  - Extra caution moving on weather decks
  - Keep one eye closed if white light must be used
- Change interior lights to red or blue
  - Use caution reading charts in red light - Magenta marks disappear



# General Rules

- Slow down, remember NAV RULE 6
- “Every vessel shall at all times proceed at a safe speed so that she can take proper and effective action to avoid a collision and be stopped within a distance appropriate to the prevailing circumstances and conditions”.
- To determine that safe speed, the Nav Rules list these factors:
- Visibility, traffic density, maneuverability of the vessel (stop, turn distances), background light & “scatter” that may impact vision, draft & water depth, sea state & weather.



# Night Operations

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- If ever in doubt of the vessels' position

***STOP!***

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# Night Operations

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Regain your situational awareness by:

- Bringing the vessel to a full stop.
- Deploying the anchor if necessary.
- Do not continue patrol until your exact position and circumstances have been determined.



# Night Operations

- How current are your electronic charts?
- How current are your paper charts?
- Currently corrected paper charts are always the best, the “Gold Standard”.
- Electronic charts are known to have errors.
- Trust...but verify.



# Night Operations



## USS Guardian (MCM-5)

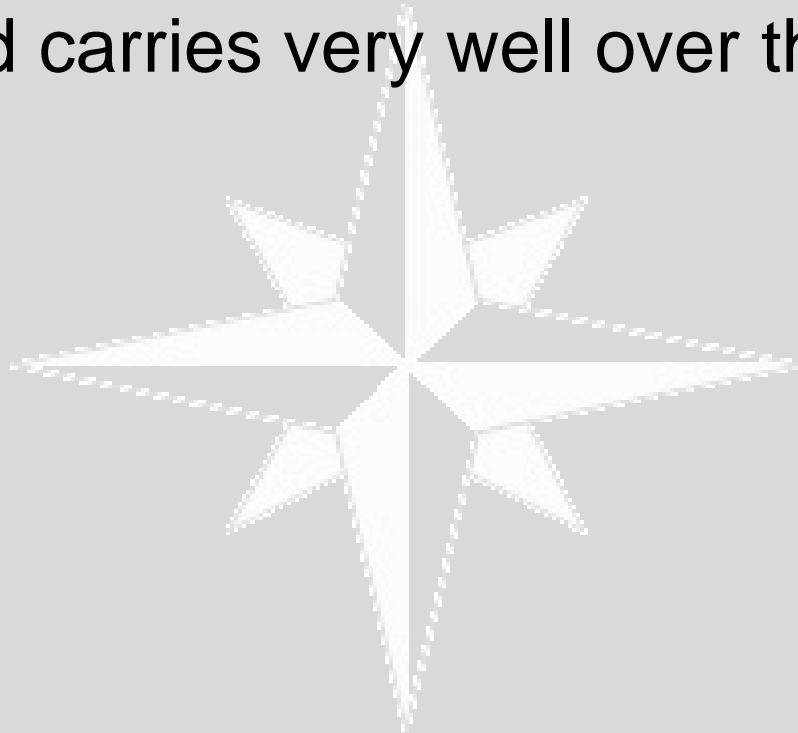
In January 2013, the USS Guardian ran hard aground on a Philippine Coral Reef. They were using electronic charts that showed the reef 7 miles away. Their paper charts showed the reef correctly. The ship was a total loss and was cut up in place.



# Night Operations

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- Use your hearing
  - Sound carries very well over the water





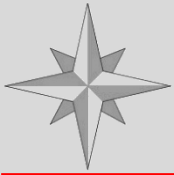




# Night Operations

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- Maintain a proper watch and extra lookouts.
- Consider attaching Chem-Lights to tow lines so you can actually see the line and stand a proper tow watch.



# Night Operations

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- Alertness levels may drop off at night.
- More frequent helm and lookout changes may be required to maintain an alert crew.
- The most difficult period to maintain alertness and awareness is between 2100-0700 hours.



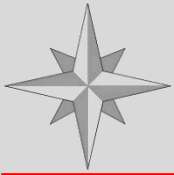
# Night Vision

- You should have 20/20 (or corrected to 20/20) to see obstacles, navigation lights and aids to navigation.
- It takes healthy people up to 60 minutes in darkness to adapt to night vision.



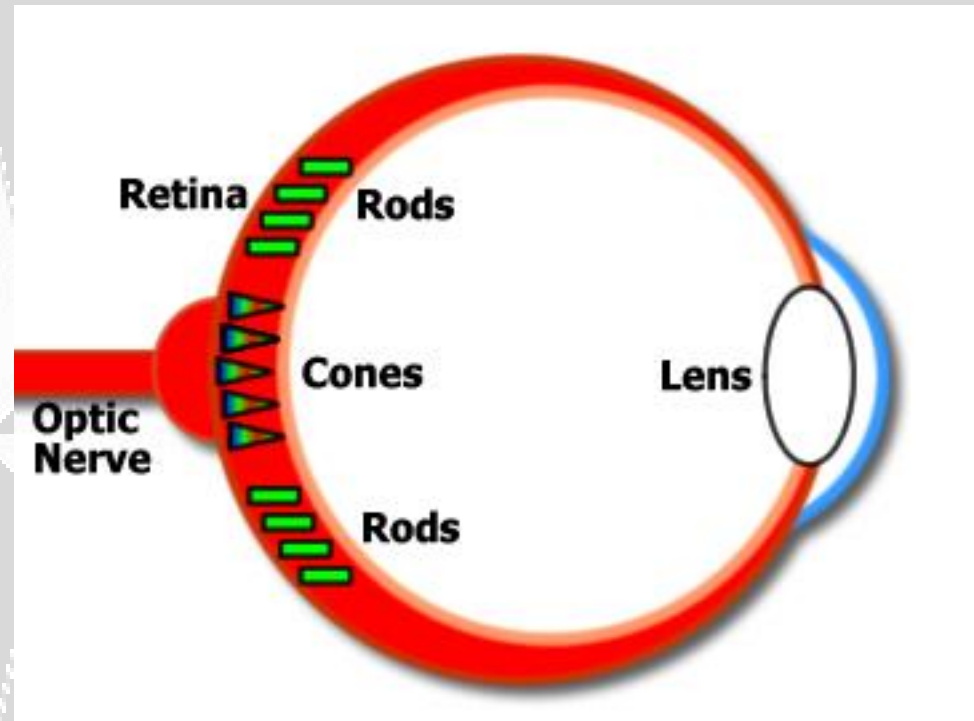
# Night Vision

- Individuals who smoke and/or drink have decreased visual acuity.
- Alcohol has the following effects
  - Blurred or double vision
  - Slow pupil reaction
  - Decreased peripheral vision
  - Altered contrast sensitivity



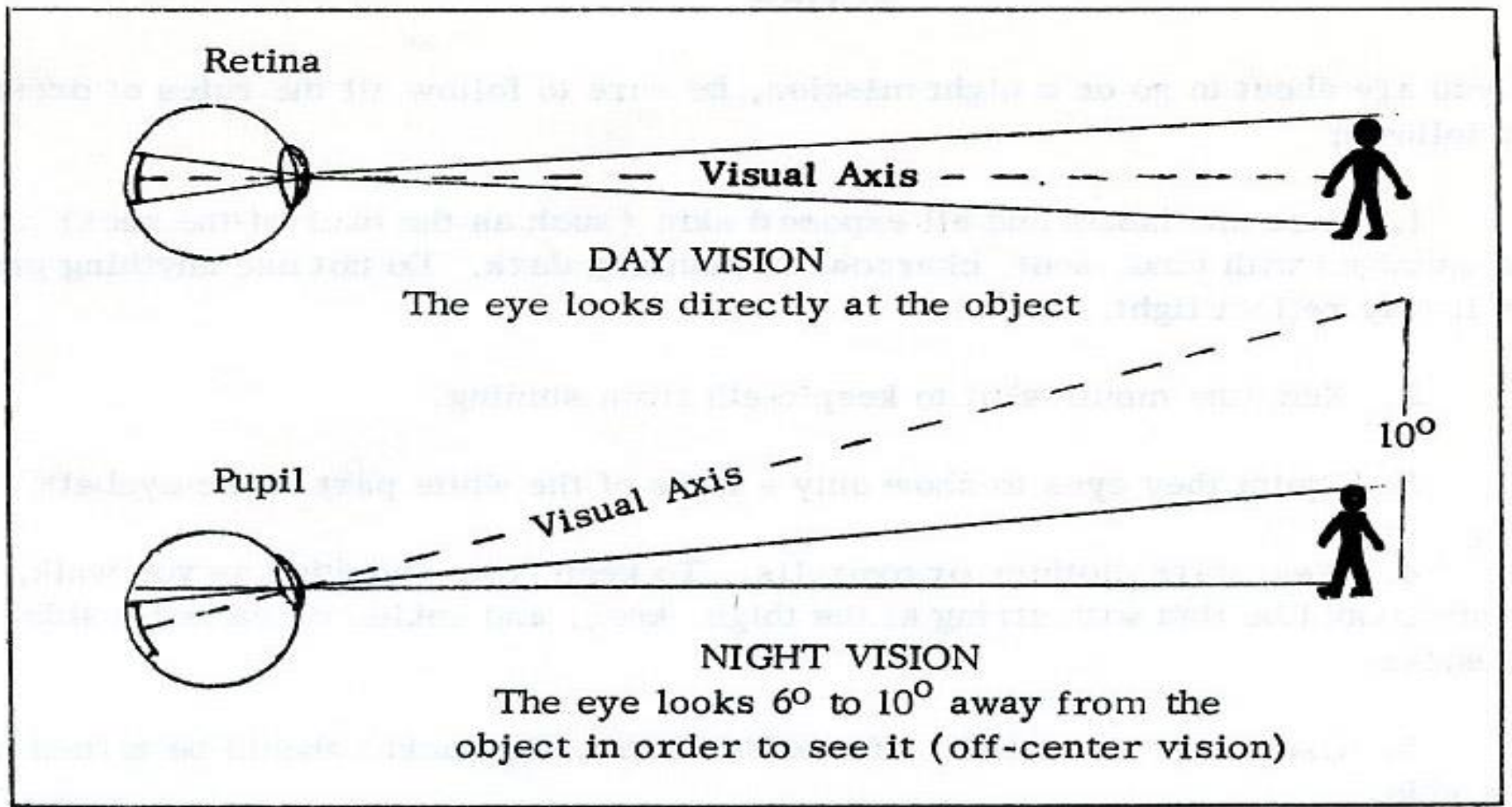
# Night Vision

In light dimmer than moonlight a person has to depend upon the rods in the eye to see. The center of your vision will be a blind spot.





# Night Vision





# Night Operations Equipment

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- The OIA will decide what limitations will be placed on night & limited visibility operations & what equipment is necessary.

## GPS-RADAR

- As a general rule, any facility that might operate at night or in conditions of limited visibility **should be equipped with GPS and RADAR**, and the *operator must be able to competently use that equipment safely.*



# Night Operations Equipment

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- NAVRULE 7 states;
  - *“Proper use shall be made of radar equipment if fitted and operational”.*
- If you have it you must use it (all hours, not just at night) and be competent in it’s use.
- Make sure your watch standers know how to read the screen.



# Night Operations Equipment

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## Tow Lights

•The tow light configuration described in Rule 24 of the Navigation Rules regarding night towing operations is a good idea but is not required for AUXFACS.

*(i) Where from any sufficient cause it is impracticable for a vessel not normally engaged in towing operations to display the lights prescribed in paragraph (a) or (c) of this Rule, such vessel shall not be required to exhibit those lights when engaged in towing another vessel in distress or otherwise in need of assistance. **All possible measures shall be taken to indicate the nature of the relationship between the towing vessel and the vessel being towed as authorized by Rule 36, in particular by illuminating the towline.***



# Night Operations

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- The Coxswain should assign one crew member to constantly monitor the Radar screen in addition to the helmsman.
- This crew person must be competent with Radar, keep a watchful eye on the screen and communicate conditions clearly with the Coxswain and helmsman.
- Speeds should be limited to no more than 10 knots.



# NIGHT LOOKOUTS





# Summary

- The 7 elements of TCT are especially important during night operations.
- Be guided by and communicate with your OIA and appointed officers when night operations are planned.
- Ensure you have a fit crew, with extra members, and a skilled GPS and RADAR operator on board.
- Maintain situational awareness and be adaptable to changing conditions.



# End of Session

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