Heading Offshore

Skills for open-water travel

TrawlerFest®
BOAT SHOW – EDUCATIONAL EXPERIENCE – RENDEZVOUS

PassageMaker Magazine 2024
Stuart, FL – Tuesday February 27th
Presented by Jeff Merrill, CPYB

Get ready before you take off!

- Nothing quite so satisfying as completing a trip
- Preparation and planning
  Safety, food, sleep…
- What do you do out at sea?

What's it really like?

- WARNING – Impossible to simulate the motion, or the feelings, but this presentation should be helpful to all trawlers owners whether or not you have ventured out of sight of land or not.
- I am a yacht broker! 30+ years of working with clients including dozens of offshore trips training owners out at sea have provided the basis for this information

Some questions…

- How many of you have been aboard out of sight of land?
- How many of you have been underway through the night?
- Anyone have experience with modern navigation electronics?
- How many have your own boat?
- Anyone have a Captains license?

About this presentation…

*Get familiar with your boat before you leave the dock.

*Your best strategy and my strongest recommendation – learn it all!

*What to be aware of underway

*My boating background

HANDOUTS EMBEDDED

This PowerPoint (PDF) and all handouts are available for your own private use. I will post on www.JMYS.com two weeks after class.

Please fill out your contact details on my mailing list form and I will email you a reminder

You (the Owner) need training

- US Power Squadron = America's Boating Club
- Boating classes – online, classroom
  - Anchoring
  - Docking
- Seamanship
- Weather
- Navigation
- Rules of the road

You (the Owner) need skills

- Charter? Crew with friends?
- Familiarity with machinery and operations
- Boat handling
- Hiring a Captain to train with you
- Education…online, local colleges, professional schools – any suggestions from the class?
- Boaters University - online

Expert Instruction From The Brands You Trust.

Offshore Cruising: Preparing Craft & Crew

Preparation is key to successful cruising. Regardless of the size, make or model of your boat, understanding its critical systems and having a plan is crucial to keep your craft performing efficiently and safely. Join yacht broker, boatbuilder and TrawlerFest instructor Jeff Merrill in this exclusive online course designed to help you prepare yourself, your boat and your crew to get the most out of your offshore boating adventures.

Boaters University

Two excellent schools

Chapman's School of Seamanship
Stuart, Florida
772.283.8130 | www.chapman.org/

Training Resources Maritime Institute
San Diego, California
(619) 263-1638 | www.trlmi.com

YouTube videos

INSURANCE (for those shopping)

Getting coverage to be an owner operator has become more difficult.

Looking into insurance coverage NOW is just as important as figuring out the trawler you want to buy.

test

Your boat must be ready too!

- Learn RPM variations, speed and fuel burn (Develop a **Performance Card Handout***)
- Understand operation of every system
- Acquire the right tools, spare parts, etc.
- Routine maintenance: filters, fluids, impellers, etc.

JMYS Trawler Performance Table | Speed/Burn/Range data collection template Note: Fins centered, gen off, hull clean.

Location_____. Wind _____ Seas _____ Current/Tide _____ Full load: _____ gal fuel, _____ gal water

1. Test one heading: _____

RPM	Speed (SOG)	Coolant Temp	Oil pressure	% load	Gallons per hour	Range	Comments
1000							
1100							
1200							
1300							
1400							
1500							
1600							
1700							
1800							
1900							
2000							
2100							
2200							
2300							
WOT							

2. Test two heading:_____ (180 degree reciprocal)

RPM	Speed (SOG)	Coolant Temp	Oil pressure	% load	Gallons per hour	Range	Comments
1000							
1100							
1200							
1300							
1400							
1500							
1600							
1700							
1800							
1900							
2000							
2100							
2200							
2300							
WOT							

Note: Averages, GPH, % load and range estimated after data collected

Tools

Keep the right tool near the service item

Spare Parts and Service Manuals

(When you get a spare replace the existing item and keep the item that was in service as a spare)

Organize your manuals

- Keep them in organized bins
- Go online to get electronic PDF versions
- Keep a list of vendors with contact information – phone and email
- Manuals can help you stock spare parts and learn service intervals

Vessel Vanguard

You will be happier if you are organized

Do you like to create spreadsheets?

Vessel Vanguard offers a systematic maintenance system that is fantastic and worth considering. (Boating Insider Video)

Learning more about your boat

- USCG Auxiliary inspection?
- Through hulls and bilges
- Clean fuel. Fuel Valves, Tanks and Hoses
- How to "Stop" – anchor and windlass
- Make sure you AND your trawler are ready to go BEFORE you take off…

Pre-departure preparation

- Book smarts AND practical experience
- Navigation & Communications equipment
- Checklists, maintenance procedures, routines
- Join Vessel Assist, Sea Tow, Tow Boat US
- You need to be mentally and physically ready, preparation provides peace of mind

Electrical Panel – understand each breaker

Owner Hands-on Knowledge

Hand Out*

For insurance coverage you need to be familiar with the items on the attached hand out, please review…

JMYS Owner Operator Hands on Knowledge

As the captain of your own yacht, you are responsible for the safety and well-being of all aboard. You should also realize the requirement for some basic Hands-On skills to keep your vessel operational. Most insurance underwriters require some essential skills for owners to be comfortable with. This is a simple summary of some important aspects you should be acquainted with:

Ships papers and documentation

USCG Document, Dinghy registration, personal papers for all crew members, etc.

Rules of the road

USCG navigation rules, buoys, lights, crossing situations (overtaking and bow to bow), etc.

Weather

How to use NOAA forecasts and other resources to anticipate conditions during your trip.

Navigation

Understanding of all navigation and communication equipment. How they are powered, how they are adjusted, set up for day mode and night mode, interactions between radar/plotter/autopilot, etc.

Safety

First aid, USCG requirements (flares, fire extinguishers, life jackets, etc.) life raft, EPIRB, abandon ship Ditch bag, etc. Fire suppression gear.

Diesel engines

Fuel management, supply and return valves. Racor filters. Belts and Impellers. Coolant. Through hulls and strainers. Oil filters, fuel filters.

Know before you Go…

- Simulate a "Day in the Life"
- Spend time aboard at the dock (24 hours)
- Anchor out overnight (pick a local spot)
- Learn where everything is and how it works, sounds, and how to service it
- Hire a captain to gain their insights
- The best thing you can do is use your boat locally, before you take off on a big trip

USCG Requirements - example

- ***Handout** - USCG Nordhavn 50
  Good practice to identify all of the safety gear you have on board and note the location. This is a helpful quick reference document to have laminated and keep in your pilothouse.

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US Coast Guard Requirements
EXAMPLE: Nordhavn 5017 Northern Ranger II

Minimum Coast Guard Safety requirements (and locations)

6 Ea. Type II life jackets - dock box on boat deck
1 Ea. Bernard Oil Discharge placard – ER door on inside
1 Ea. Bernard Waste Discharge placard – under galley sink locker door
1 Ea. Safety blaster – pilothouse – starboard locker door under dash
1 Ea. Chrome bell– pilothouse inside (starboard side)
1 Ea. Jim Buoy Life ring – (cockpit)
1 Ea. Flare kit– pilothouse wet hanging locker
5 Ea. Fire extinguishers – (three required)

a) Saloon aft locker by door
b) Saloon stairs to pilothouse (outboard).
c) Pilothouse – forward stair locker – starboard
d) Master head - forward
e) Engine room – just inside forward door to port
f) Boat Deck – inside dinghy

Lifejackets – comfortable – wear them, don't forget kids and pets

SOSpenders - inflatable life vest, comfortable, attach with tether to jack lines for on deck moving about

Personal Locator Beacons

Weather Factors before you depart… Go/No Go parameters

*Sea state - Swell – 6’ and smaller
*Period between Swells – 8 seconds or longer
*Winds – below Gale force (40 knots)
*Barometer – dropping usually signifies stormy weather

Weather Websites

www.noaa.gov – National Weather service
www.buoyweather.com – Sea State
www.sailflow.com - Wind speed and direction
www.intellicast.com – Weather
www.stormsurf.com - Weather

Remember, there are nice days out there too…
Your loved ones can track your AIS on

www.marinetraffic.com

www.vesseltraffic.com

Weather Forecasts Underway:

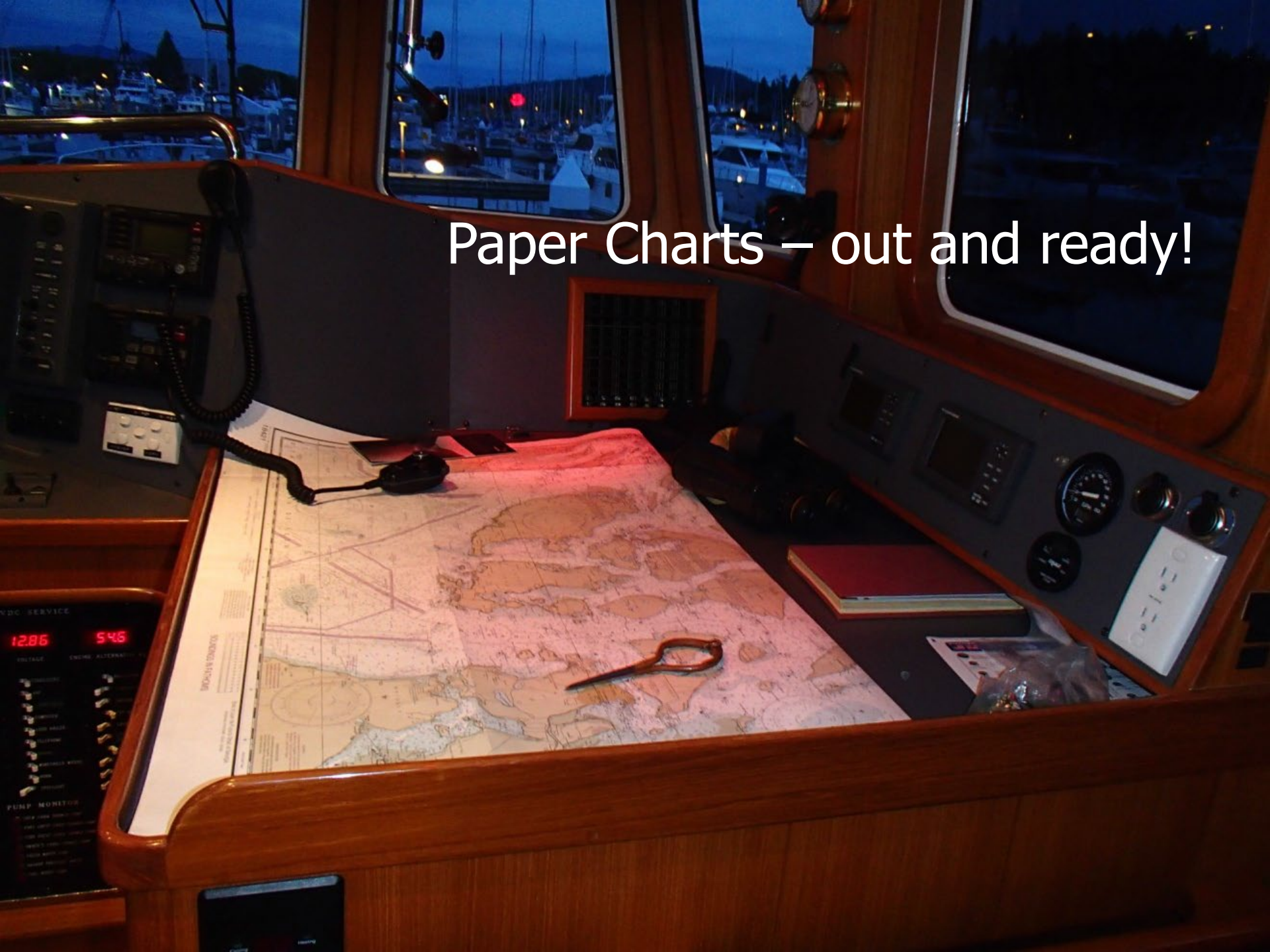
*IridiumGo (with Predict Wind offshore app)
*Satellite Radio – XM/Sirius forecast service
*VHF – channel 3 and 4
*Professional Weather Routers – Chris Parker
*Internet, if you have it aboard (Starlink!)

Rough Weather Suggestions

- Anticipate and prepare, sometimes you have to go through it…it won't last forever
- Make sandwiches in advance
- Secure all moving parts
- Change course and/or reduce speed to make the ride more comfortable
- Head back the way you came?

Basic Navigation – Paper Charts

- Know how to read a paper chart
- Continually cross reference with electronic charts
- Tools – Dividers and Parallels
- Depth – safe waters, shoals, etc.
- Shipping Lanes
- Obstructions, wrecks
- Buoys and aids to navigation
- Organize charts in the order you will use them


Paper Charts – out and ready!

Pilothouse Tools

- Binoculars "long eyes"
- Night vision (FLIR), hand held monocular
- Barometer
- Clock – local and GMT
- Calculator

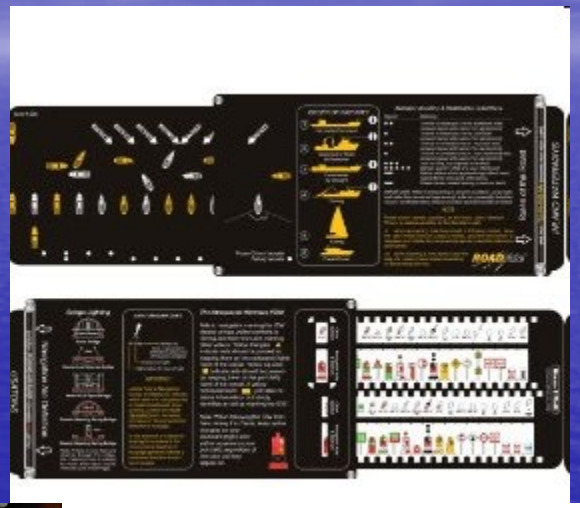
Pilothouse Tools

- Closed Circuit TV
- Spot light – built in, hand held
- Chart Guide
- Hand held compass

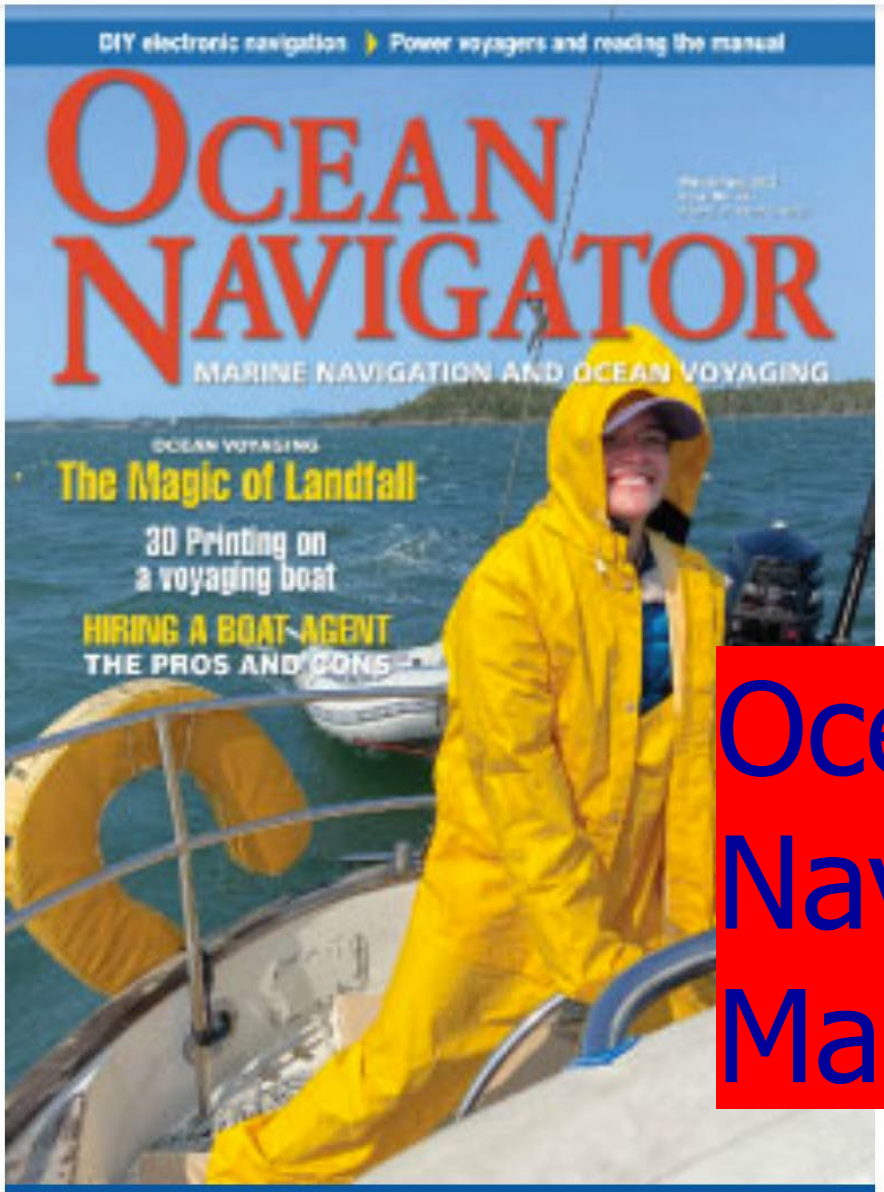
Pilothouse Tools

- Binoculars "long eyes"
- Night vision (FLIR), hand held monocular
- Closed Circuit TV
- Spot light – built in, hand held
- Flash light, red lens
- Good pencil & sharpener
- Barometer
- Clock – local and GMT
- Calculator
- Chart Guide
- Hand held compass
- Back up navigation on laptop
- Nav lights "slide rule"

Navigation Tools

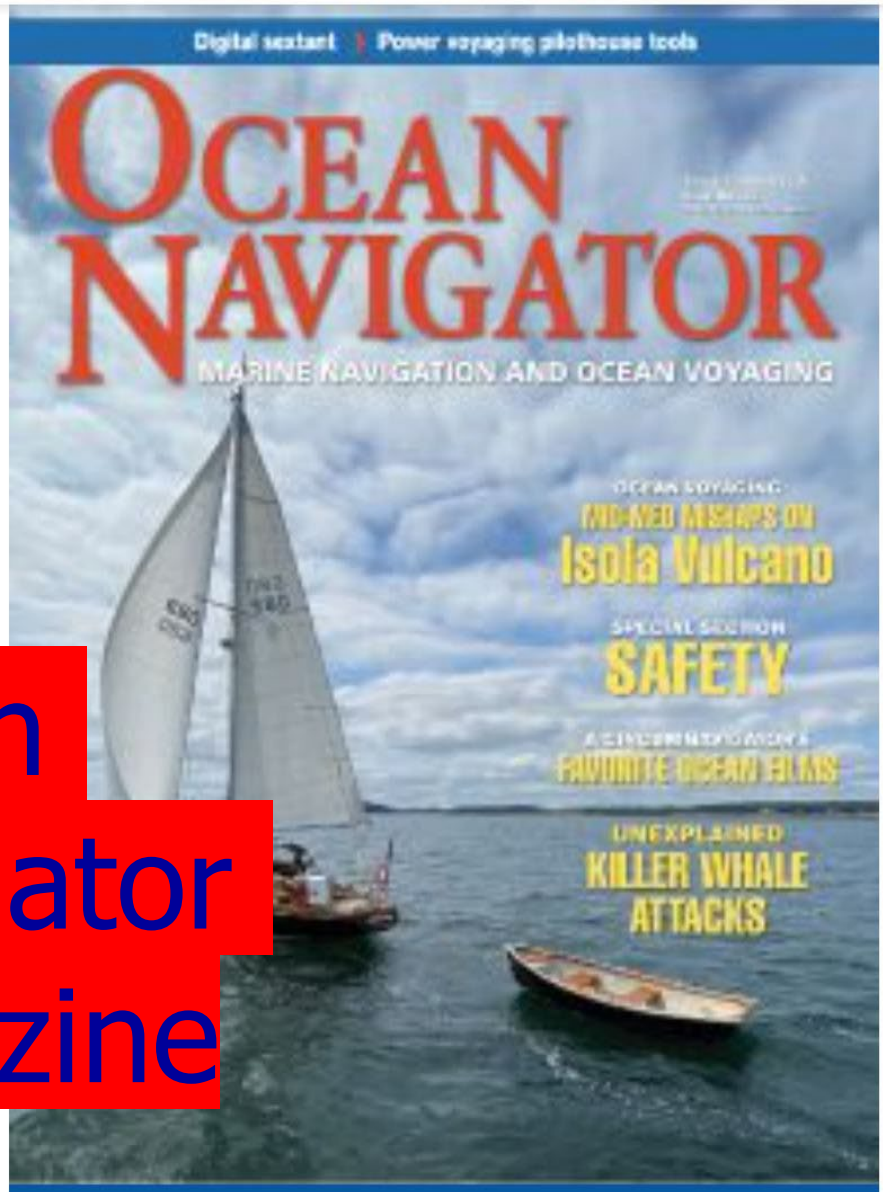


Ocean Navigator Magazine



Read The Factory Manual

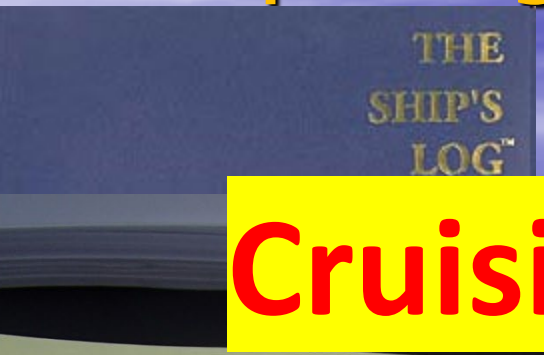
Mar/Apr 2021



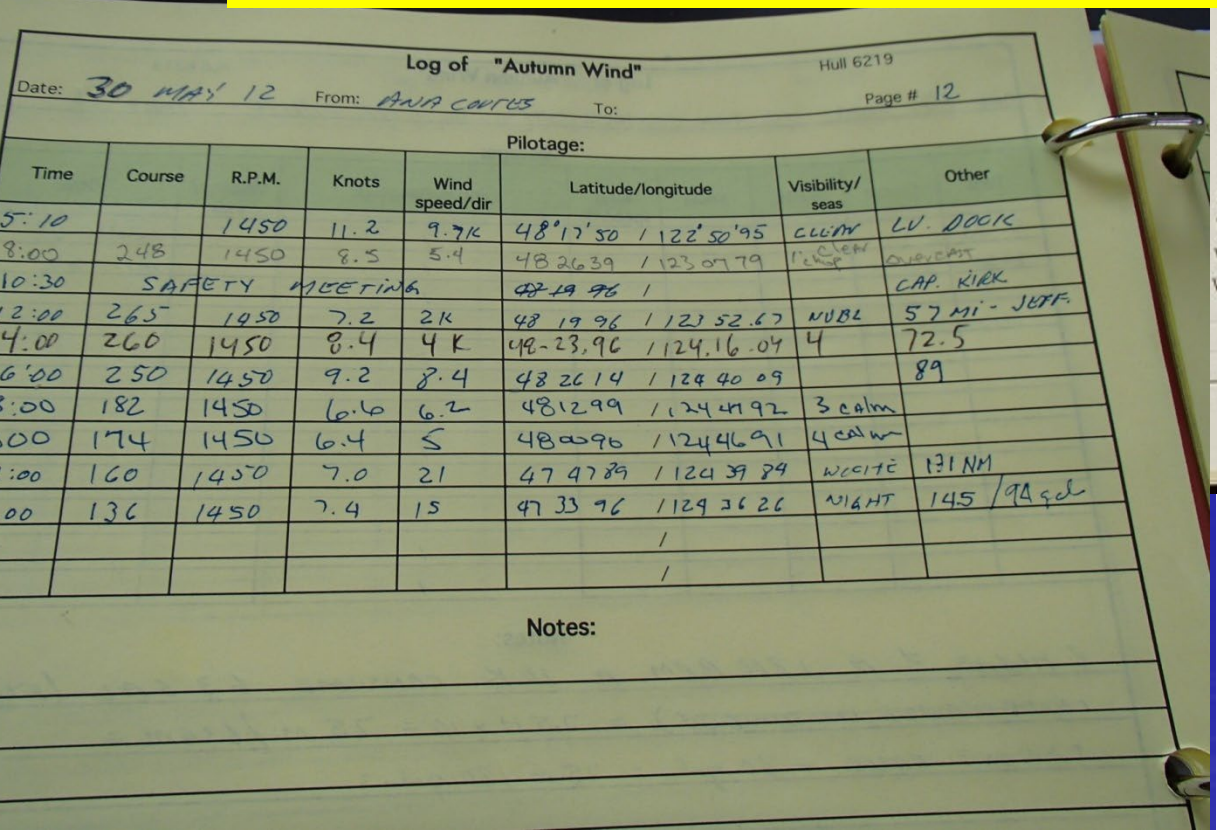
Prized Pilothouse Possessions

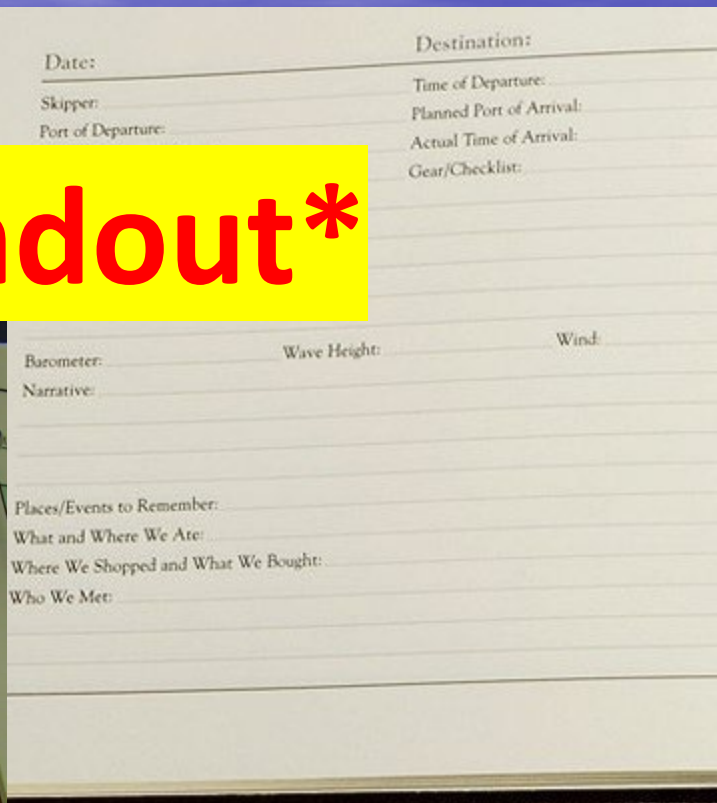
Jan/Feb 2021

Ships Log – buy or make your own



Cruising Log Handout*





CRUISING LOG BOOK DAILY REPORT

Date: _____

Starting location: _____ Dock Departure time: _____

Destination: _____ Destination arrival ETA time: _____

Departure Engine hours: _____ Sunrise: _____ | Sunset: _____

People on board: _____

_____

Float plan person called: _____ | ___ Departure ___ Arrival

Weather forecast: _____ Actual weather: _____

Barometer: _____ Wind speed and direction: _____

Sea conditions: _____ Wave height/chop/swell: _____

Underway comments: Sights, events, places _____

_____

Call ahead phone/VHF marina: _____ Spoke to: _____

Ships Log (Where are you?)

- Record your position, departure and arrival plus machinery hours of operation
- Hourly - on the hour - recordings
- Typical details – Lat/Lon, speed, RPM, heading, miles offshore, distance to waypoint, wind and sea conditions

Crossing Situations – Part One

- Identify Targets in advance
  Head On and Overtaking
- Hail on VHF 16 to discuss passing
- Passing Port to Port traditional

Crossing Situations – Part Two

- Make your intentions clear – **EXAGGERATE** your heading
- Understand the rules for **"Give Way"** (You alter) vs. **Stand On"** (Maintain course and speed)
- Slow or change course to avoid a collision. **Pass Behind!** Crossing in front is scary…


Try to keep one mile apart
(The operator of the other boat may not know the rules)

Navigation Electronics Instruments to know

- **Autopilot** modes: Auto, Standby and Nav
- **Depth** Sounder

Navigation Electronics Instruments to know

- **Radar** – Targets, Rings, Distance, CPA
- **AIS** – ship tracking

Navigation Electronics Instruments to know

- **VHF** – 16, how to talk and switch channels
- How to communicate

Navigation Electronics Instruments to know

- **Chart Plotter** – Waypoints, Routes
- Chart and Radar overlay

Navigation Electronics Instruments to know

- **Autopilot** modes: Auto, Standby and Nav
- **Radar** – Targets, Rings, Distance, CPA
- **VHF** – 16, how to talk and switch channels
- **Chart Plotter** – Waypoints, Routes
- **GPS** – Latitude/Longitude
- **Depth** Sounder
- **AIS** – ship tracking

- Features:
- Chart and Radar overlay
- How to Dim
- How to Mute (Alarms)
- Waypoints / Route

VHF (Very High Frequency)

Primary source for ship to ship communications.

VHF Communications

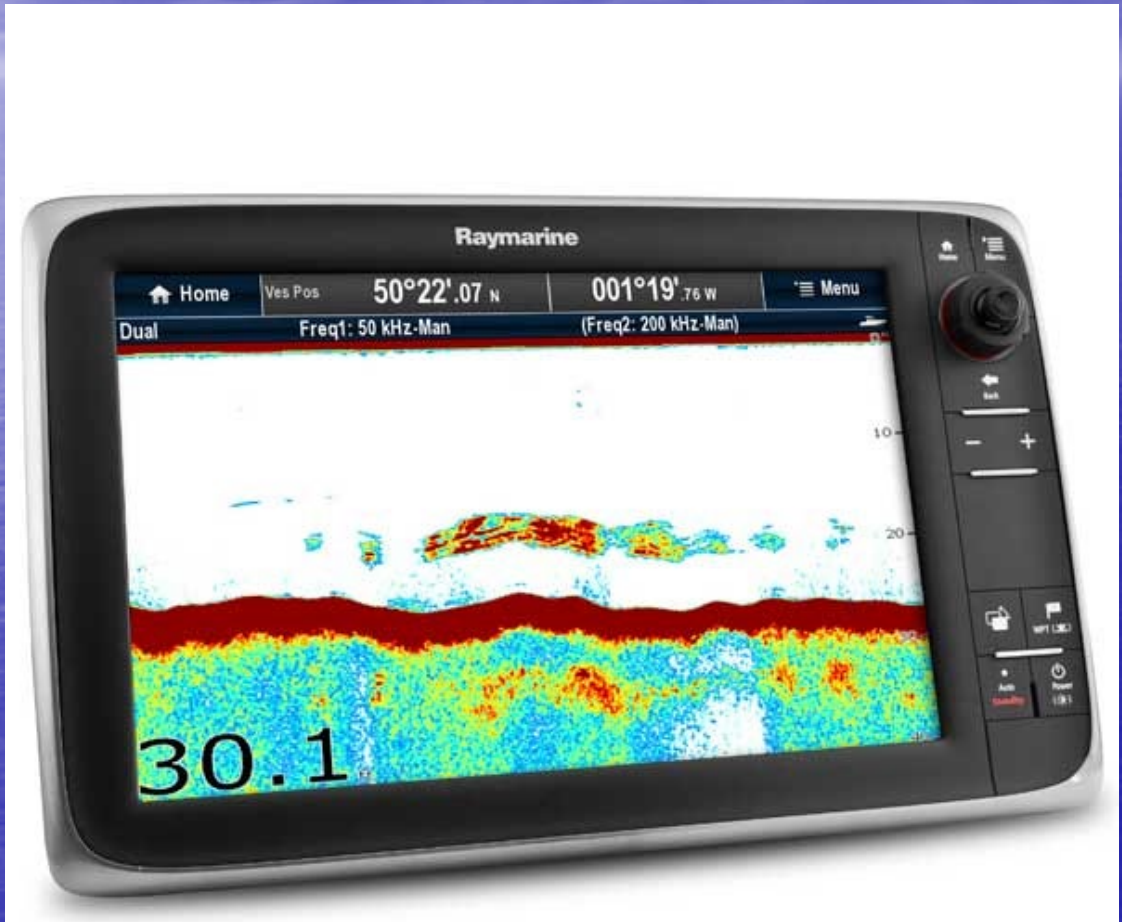
- VHF radio – Ship to Ship (line of sight)
- Hi vs. Lo settings (close range or far away)
- Weather channel on VHF (Channel 3 or 4)
- Radio check (Channel 27)
- Channel 22A "Twenty Two Alpha" – USCG communications to a boat
- Working channels –switch to 68, 69, 71, 72, 78
- MOB – Latitude/Longitude distress signal
- Fog horn, Hailer

VHF – calling for Help

- This is like 9-1-1. Captain should make the call
- "Mayday Mayday Mayday" (Broadcast if you are in imminent danger and need immediate assistance)
- The USCG will ask… "Your coordinates?"
  "How many souls are aboard?"
  "Describe your boat colors"
- All crew will be asked to put on life jackets

Depth Sounder

Fish Finder shows bottom contours



Depth

- If you don't have water under the keel…
- What does your boat draw?
- Set transducer to measure from keel
- Someday you will run aground (Tow Boat US/ Vessel Assist). Back off, wait for tides

GPS – Global Positioning System

Knowing your Latitude and Longitude is a key navigational development, surely much easier and more accurate than a sextant – revolutionary development – has allowed cruising to become more mainstream

AIS (Automatic Identification System)

- Integrates a VHF transceiver with GPS coordinates and navigation sensors to "exchange" information between ships
- Details like ships name, length, speed, heading, destination – and time to closest possible approach
- Very helpful, don't forget Radar blips that are also targets without AIS

AIS target (Variable range, 6 - 12 miles average.)

AIS details


Name EVER ELITE
COG/SOG 290.0 °T/16.8 kt
CPA/TCPA 2.372 nm/-1m58s
Range/Bearing 2.400 nm/208.7 °T


Hdg 266.1
Object Detail
Name EVER ELITE
MMSI 235554000
COG 290.0 °T
SOG 16.8 kt
ROT +0.0 °/m
CPA 2.383 nm
TCPA -1m41s
Range 2.403 nm
Bearing 209.3 °T
Destination KAOHSIUNG
Ais Status Normal
Call Sign VSJG7
Beam 42.0 m
Length 299 m
Position 48°19.9430' N; 124°05.9380' W
NavStatus Under way using engine

RADAR

- "Charts are legend, GPS is theory, Radar is TRUTH!" Author unknown
- Radar rings help with distance (Zoom in and Zoom out frequently)
- Targets – ARPA – Auto Radar Plotting Aids

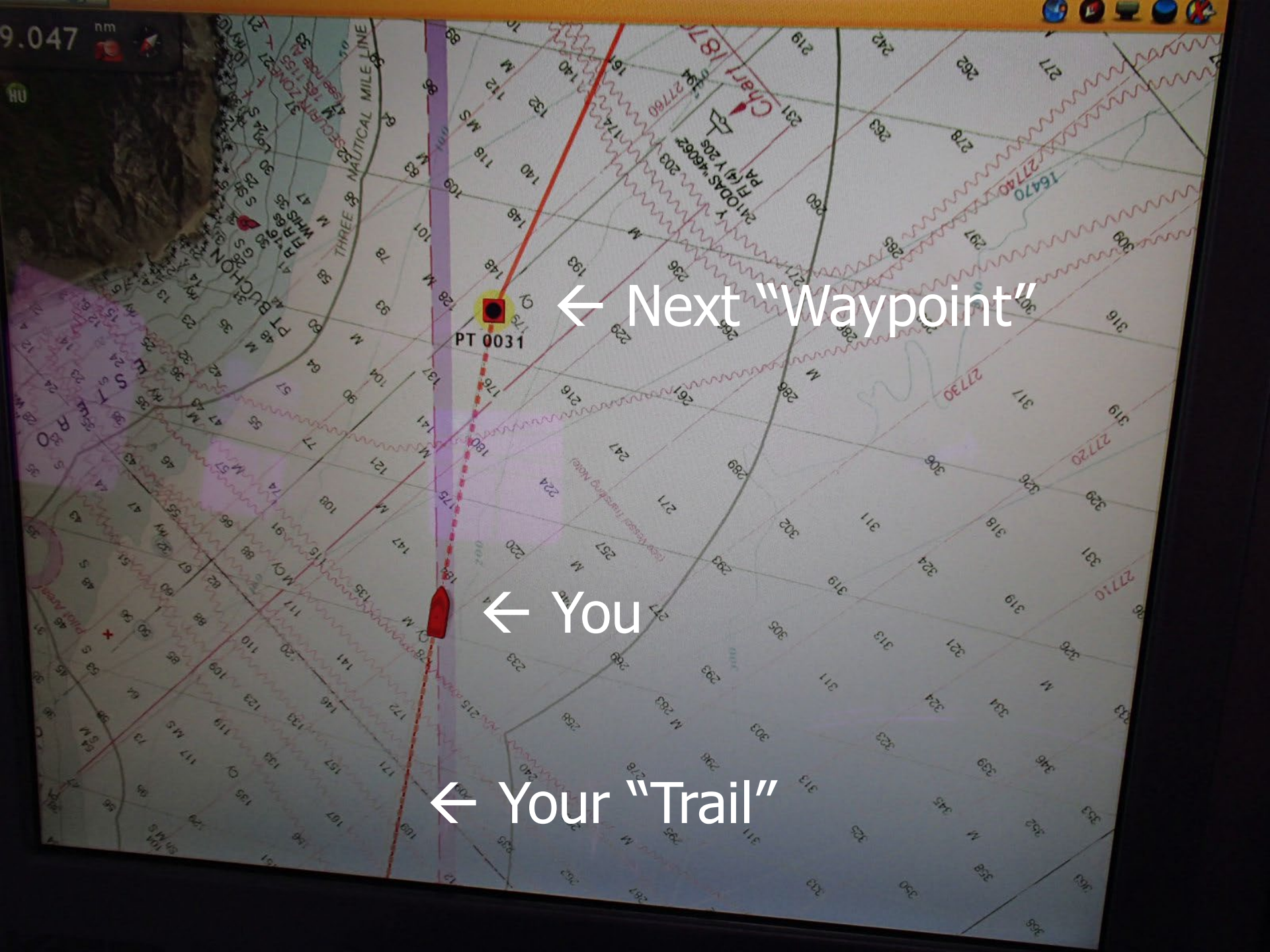

Distance Rings – calculate distances
3
nm
Hdg 168.9 °T
12
nm
42° 52.3081' N
168.9 °T
HU
RM
188.3 COG
10.7 SOG
334 DPT ft
449.9 TRIP nm
555.8 ODO nm
11.91 WPT nm
184.8 CTS

Plotting: (Paper and Electronic Charts)

- Hourly pencil Lat/Lon on Paper Chart
- Paper Charts are a reliable back up if you lose electronic navigation plotting
- Electronic charts are not fool proof…

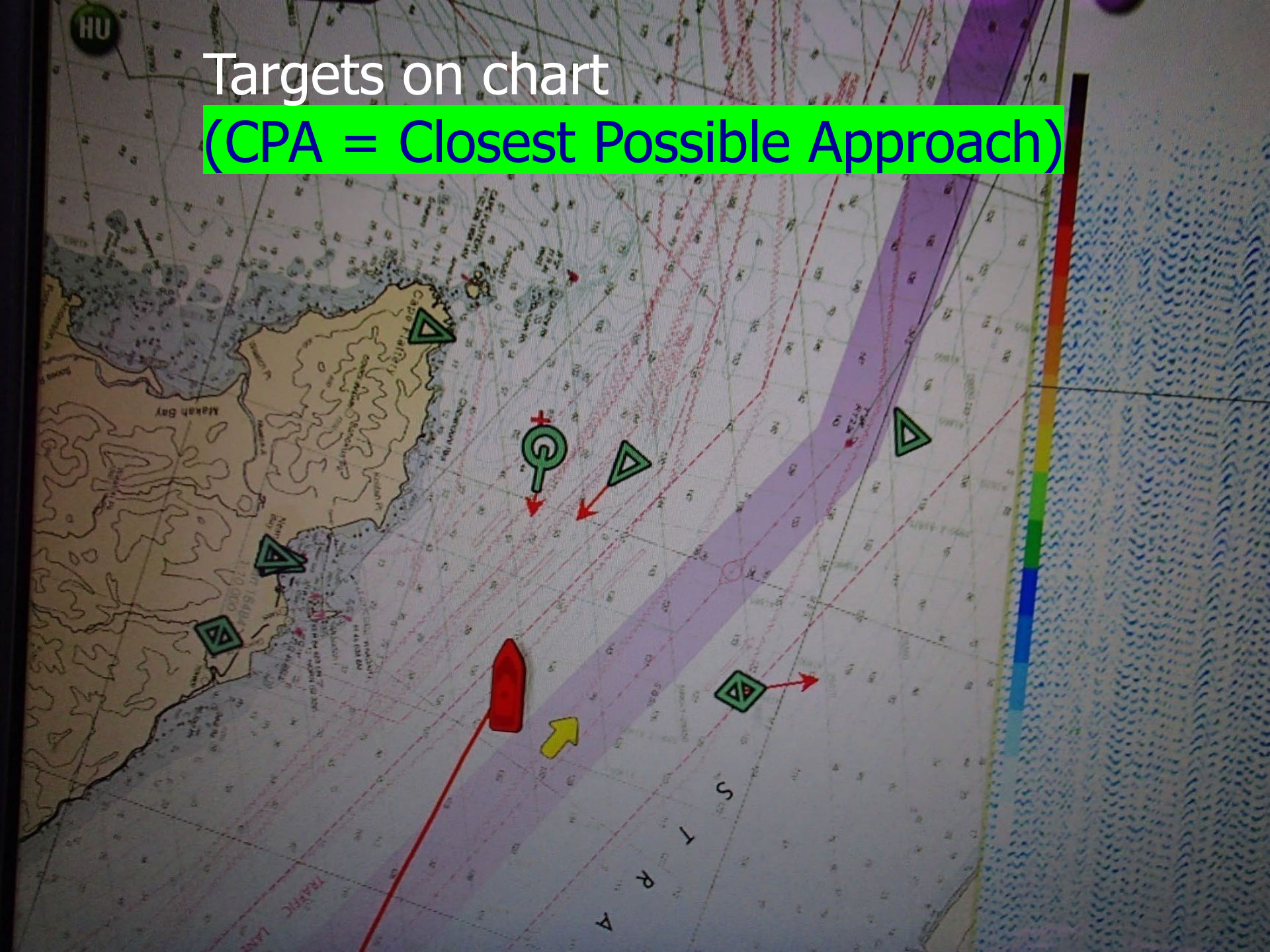
Chart Plotting – Electronic Chart features

- Set up Waypoints (GPS coordinates)
- Create a Route (connect Waypoints)
- Can save Routes, also pre-program trips
- Move Cursor and "Go-to" it on Chart
- Connect Autopilot to Navigate the Route
- Leave a "bread crumb" trail
- Can overlay Chart and Radar
- Center Boat on Screen


← Next "Waypoint"
PT 0031
← You
← Your "Trail"

"Bread Crumb Trail"

- This is a very useful feature
- Shows where you have been – good if you need to retreat
- Keep tides/depths in mind when using same trail
- Helps orientation, especially at night
- Also works with anchoring alerts


Targets on chart
(CPA = Closest Possible Approach)

Autopilot


SIMRAD
Aw 329
340.7
Gyro1
02
SIMRAD AP50
STBY
AUTO
NAV SETUP
WORK
INFO
DODGE
TURN


N
GPS1
COG 274°
BPW 272 T
SOG 2.4kt
WP
SIMRAD
XTE
0.02NM
DST
32.2NM
0.02NM
340.7
Gyro1
SIMRAD AP50
STBY
AUTO
NAV SETUP
WORK
INFO
DODGE
TURN


PORT
STBD
40
RUDDER
40
20
20
0
SIMRAD


5 10 20 40
0
5 10 20 40
AUTO
NAV
WORK
FU
STBY
THRUST

Autopilot settings

- "Hands Free" much easier than steering
- "A" Autopilot –Digital compass course
- "N" Navigate – Route to next Waypoint
- "S" Standby – Hand steer

What's Up? Electronic Navigation

- Radar and Chart can be Course Up, Heading Up or North Up
- If your boat is heading North, it's easy
- When heading South, it's confusing
- Know how to change the screen orientation so that it is logical to you


Plotter and Radar – Heading Up

LET'S TAKE A BREAK

Navigation Priorities Class Drill

- There are 15 primary navigation items on this list.
- Rank them in your priority order 1 – 15
- This is subjective
- Once you are done – hand in and we will review.

Heading Offshore

Skills for open-water travel

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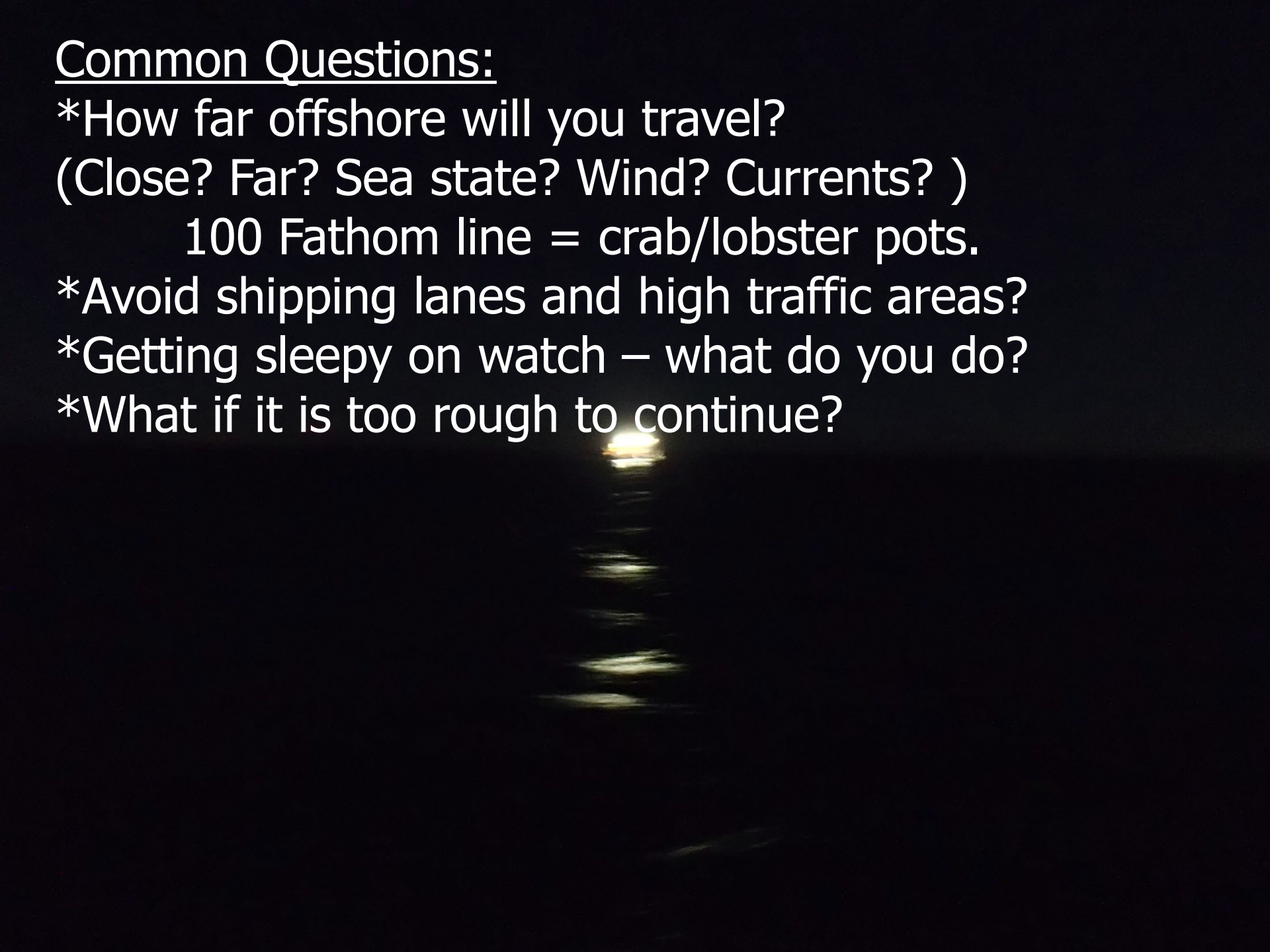
What is the most dangerous thing on a boat?


There's a saying in the cruising community:
!
"All cruising plans should be etched in the sand ... at low tide."

Pre-Departure Check List

- **Handout* - Start Up**
- Rain-X or Aquapel on windows
- Fresh Impellers, Belts, Filters
- Clean Fuel and confirm Valves correct
- Clean out Intake Strainers
- Test run all equipment at the dock

START UP CHECK LIST FOR NORDHAVN 5017 Northern Ranger II
CREW ORIENTATION
Discuss life jackets location, safety and first aid
Discuss trash plan and toilet operation
Discuss Captain in charge, and what docking assistance if any would be helpful, with respect to lines, fenders, etc.
Float plan - travel intentions told to other parties
Confirm all hatches, windows and doors secure
Confirm all interior belongings and equipment are secure
ENGINE ROOM
Wipe Belt area clean
Clean drip pad
Check engine room for loose tools or parts
Check bilge for excess oil or water
Check intake through hulls and strainers for all raw water requirements
Clean out bilge pump strainer
Check fuel valves to make sure the appropriate fuel valves are positioned correctly for the trip planned (understand "to" and "from" fuel directions). Suggest draw from one tank and return only to supply tank.
Check fuel quantity in main tank sight glasses - port and starboard
Supply tank bottom - water or sediment drained off?
Check engine oil - starboard side dip stick
Check engine coolant - expansion tank lid
Check alternator belts
Check transmission oil level - port side aft (make sure you have oil, proper test after warmed up and in neutral)
Check throttle and gear connections - pinned properly on engine?
Check Racor filters, select correctly valved, gauges, drain off sediment or water
Check wing engine oil, coolant, transmission, stuffing box, fuel valves and belt
Check generator oil, coolant, breakers and fuel valves all gens and belt



Common Questions:

*How far offshore will you travel?

(Close? Far? Sea state? Wind? Currents?)

100 Fathom line = crab/lobster pots.

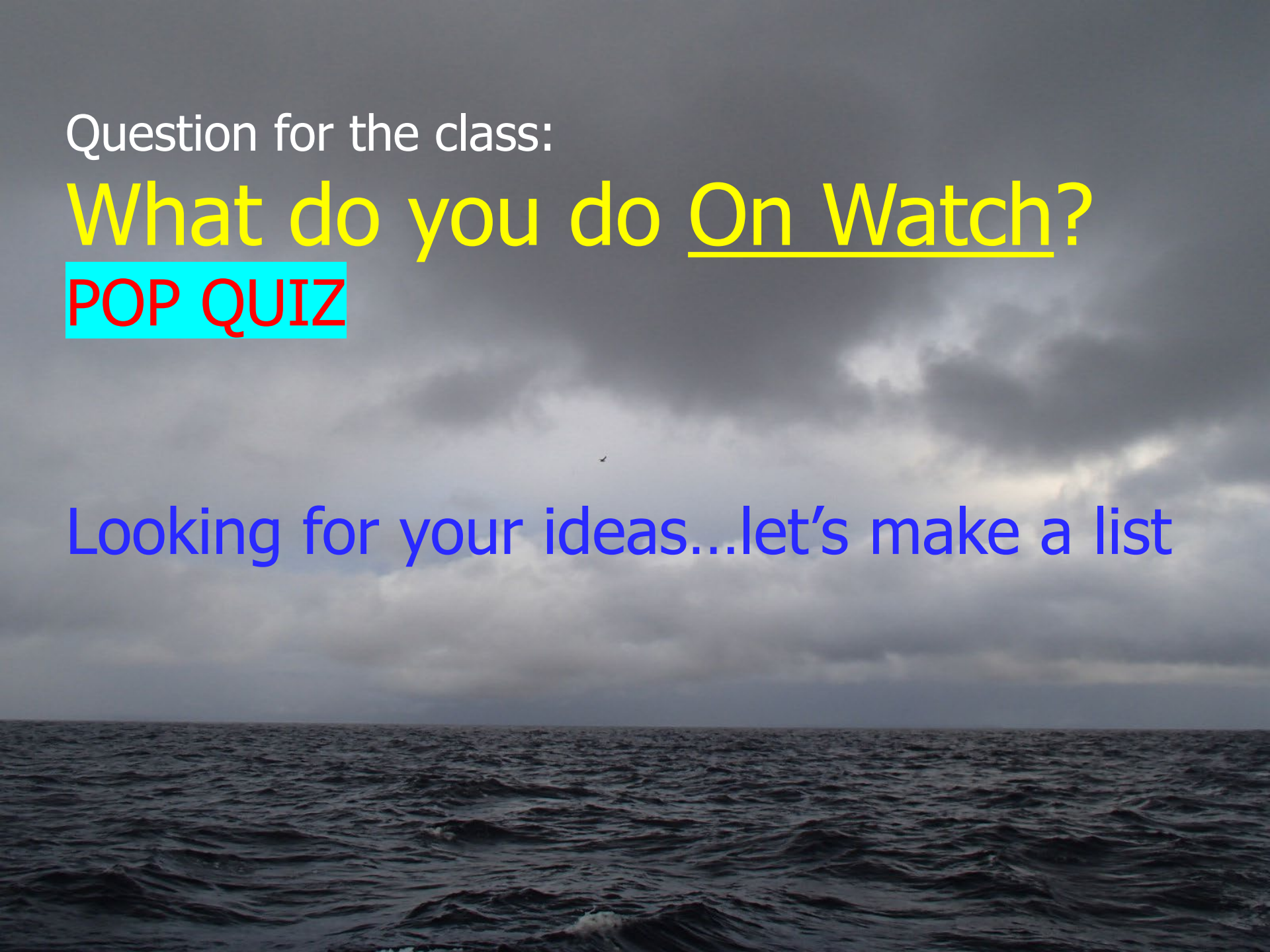
*Avoid shipping lanes and high traffic areas?

*Getting sleepy on watch – what do you do?

*What if it is too rough to continue?

Watch Standing Essentials

- Keep water under the keel
  Don't hit anything!
- Compass Heading: Correct direction?
- Navigation: Position and intended course
- Radar: Awareness of targets, boats and land


Question for the class:
What do you do On Watch?
POP QUIZ
Looking for your ideas…let's make a list

The Captain is in charge!

Whether it is you as the Owner or someone you hire, only *ONE* person can be in command

The Captain makes the call on WEATHER, NAVIGATION and ROUTING

The Captain plans the route

Handout* Ready for Sea

*Review boat safety and overview of plan with crew
*Departure time – Daylight, Tides
*Distance to travel, speed average (Arrival ETA?)
*Anticipated Sea and Weather conditions
*File a Float Plan let people know your itinerary
*Keep looking back, you may need to retreat…

READY FOR SEA PRE-DEPARTURE CHECK LIST FOR _____				
	Manual	Spares	Sign off	Comments
SHORE BASE - Paperwork preparation				
Float plan - travel intentions told to other parties - fill out form | SPOT or InReach				
Check VHF radio - radio check, local NOAA weather forecast				
Paper charts and chart kits to cover intended cruising grounds				
Electronic nav charts to cover intended cruising grounds				
Back up plan contingency - alternative ports of arrival				
All necessary flags - US, Q, countries to visit - provision to fly				
Passports, visas | US contact - embassy phone number				
Customs procedures and paperwork required				
Fuel bunkering - agent for fuel (refill after arrival)				
Weather router - subscription, phone contact				
Marina reservation and local hospital at arrival port				
Ships papers in order and in an accessible location				
HULL				
Haul out to inspect underbody and insure all ready - cutlass bearing, props, zincs, bottom paint				
All through hulls fully operational and emergency bungs affixed to each location in case of failure?				
Hull puncture kit? Sea anchor and or Drogue ready?				
Rudder turning freely? Stabilizers clear? Thrusters clear? Shafts and props clear?				
CAPACITIES				
Fuel tanks filled?Diesel fuel - tanks clean, fuel clean, transfer and polish. New Racors and spares				
Water tanks filled?				
Propane tanks filled?				
Dinghy gasoline fuel tank full?				
EQUIPMENT INSPECTIONS				
Steering - pressurized, good fluid, spare hydrauilc fluid, emergency tiller				
Windlass and ground tackle. Anchors secure, snubbers?				
Active Fin Stabilizers - hose chafe, reservoir level, actuator seals, kelp cutters				
Windlass and ground tackle				
Thrusters - header tank oil levels, hoses, cables, blades clean				
Main engine /transmission. Recent oil change (needed on trip?). Coolant? Mounts? Shaft seal?				
Generator(s)| Inverter(s) | Chargers | Alternators				
Engine 2 | Wing engine /transmission/ stuffing box				
Inverter(s) | Chargers | Alternators | Batteries charged				
Air conditioning | Watermaker				
Fire suppression | Bilge pumps - strainers, hoses, through hulls, pumps				

What do you record in the log?

Underway Log Handout*

Heading, course – following the route?
Latitude and Longitude position
Trip Log – fill out details
Speed of your boat – RPM, Knots
Fuel burn/consumption
Weather – Wind: speed/direction,
Sea state: – wave height and period
Barometer
Traffic, obstacles on the water, concerns
Battery levels – voltage good?

UNDERWAY TRIP LOG FOR Nordhavn 55 _____			DATE:		DESTINATION:	
	Time:	Time:	Time:	Time:	Time:	Time:
Watch stander						
Latitude						
Longitude						
Trip log - distance						
Distance from shore						
Course/Heading						
Next Waypoint						
AIS/Radar Targets w/in 6 miles						
All nav com working?						
Running lights on?						
Depth						
Wind speed						
Wind direction						
Sea state -(wave ht/period)						
Water temperature						
Engine RPM						
Speed in knots (SOG)						
Fuel burn gal/hr						
Engine coolant temp						
Engine oil pressure - PSI						
Top Aux engine gauge						
Murphy Gauge						
VHF on 16?						
CCTV camera run through						
Comments:						

While On Watch:

Monitor engine gauges – engine oil pressure, coolant temp, etc.

Monitor all electrical – battery voltage, amperage consumption

Radar: Targets - speed and heading
CPA "Closest Possible Approach" (time to intersect?)

Plotter: Waypoint – Are you on course?

Heading – Hand steer or Auto/Nav?

Listen to VHF radio, Update the Ship's Log

15 minutes

Use an egg timer or other reminder to look outside of the boat.

Visually, with naked eye and binoculars, look outside by dividing your surroundings in zones. Search for traffic and objects

15 minutes is the time a fast moving ship can appear out of no where…

Changing Watch

Watch Schedule* hand out

- Identify all Ships Traffic (coming and going)
- Confirm Course, Route and next Waypoint
- Any observations? Record in the log
- Make sure new Skipper knows history and is ready before handing over the helm

JMYS 3 person watch schedule

Time of Watch	Watch Name		Name
0000 – 0300	Mid – Watch	A	
0300 – 0600	Morning Watch	B	
0600 – 0900	Breakfast Watch	C	
0900 – 1200	Forenoon Watch	A	
1200 – 1500	Early Afternoon Watch	B	
1500 – 1800	Mid Afternoon Watch	C	
1800 – 2100	Evening Watch	A	
2100 – 2400	Night Watch	B	

Oncoming watch standers should report to the wheelhouse 15 minutes prior to scheduled start for a briefing from the current watch stander who should identify course, next way points, settings and targets. Prior to standing watch, a thorough engine room inspection should be conducted (use head, bring up snack, drink, etc., before reporting). Arrive at your watch alert and ready to take over. Turn over your watch once you are certain that the crew member following is ready to go. It should be clear at all times who is at the helm and on watch. It is a good practice to scan the horizon every 15 minutes – an egg timer set at 15 minutes is a helpful tool.

Zoom in on Plotter Course and slowly Scroll to the next Waypoint – confirm you have a clear route with no obstructions

Radar – all clear?

Verify your gauges and settings – engine temp, oil pressure, battery voltage, etc.

Check VHF – on channel 16? Weather?

Primary Watch Standing Duties

*Avoid collisions, "Look Out" for objects in the water

*Keep a "Weather Eye" for changing conditions

*Monitor VHF 16

*If any trouble – change RPM – will get everyone's attention

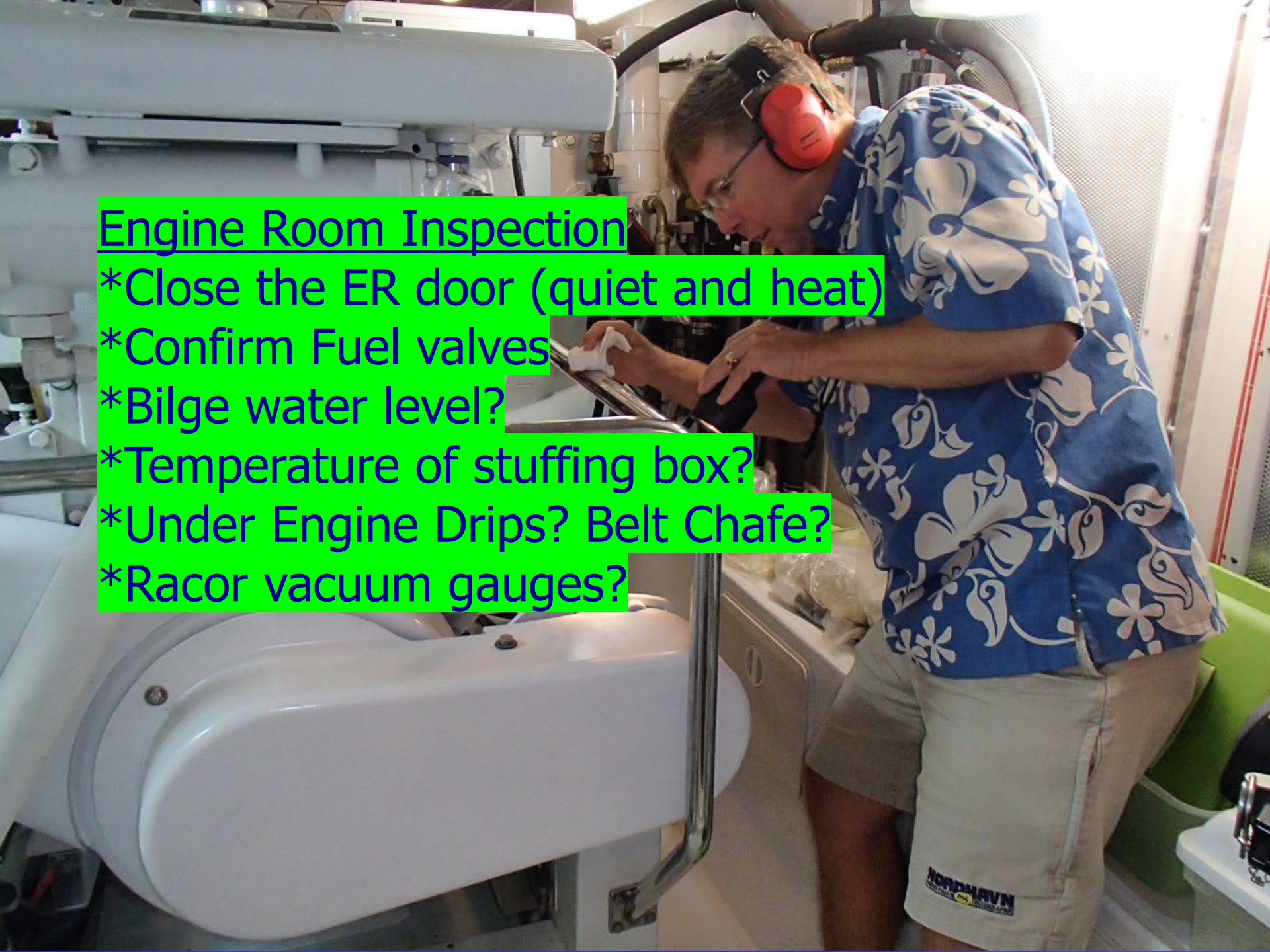

POP QUIZ * let's make a list!
What do you do during an Engine room check?
Looking for your ideas...

Engine Room Checks

***Handout: Hourly Temperature Watch List**

- Protection:
  - Ears?
  - Eyes?
  - Knees?
- Does everything look right? Do you see any chafing or drips?
- Does everything smell right?

		ENGINE ROOM TEMPERATURE WATCH AND INSPECTION LIST FOR NORDHAVN 4748 Ghost Rider										
		Date/Time of Day	:	:	:	:	:	:	:	:	:	:
		Target	Temp	Temp	Temp	Temp	Temp	Temp	Temp	Temp	Temp	Temp
		ENGINE ROOM - FWD										
1	V	Starboard Active fin locker										
2	T	Forward bulkhead										
3	V	Supply tank gallons, valves										
4	V	Alternator belts - chafe?										
5	#	Stabilizer pressure gauge										
6	V	High water bilge chamber										
		ENGINE ROOM - PORT										
7	V	Port Active fin locker										
8	V T	Hydraulic tank level and temp										
9	V	Main engine Racor vacuum										
10	V	Fuel return manifold valves										
11	T	Thermostat										
12	T	Oil cooler										
13	T	Alternator - Engine start										
14	V	Engine mounts - port forward										
15	T	Fuel pump										
16	T	Exhaust manifold										
17	T	Starter										
18	V	Engine mounts - port aft										
		ENGINE ROOM - STBD										
19	T	Coolant tank										
20	T	Keel cooler out										
21	T	Keel cooler in										
22	V	Engine mounts - stbd forward										
23	T	Alternator - House bank										
24	T	Hydraulic pump										
25	V	Under engine drips										
26	T	Oil filter temp										


Engine Room Inspection
*Close the ER door (quiet and heat)
*Confirm Fuel valves
*Bilge water level?
*Temperature of stuffing box?
*Under Engine Drips? Belt Chafe?
*Racor vacuum gauges?

Ear Muffs – noise canceling

Essential for the engine room – at least two pair

Infrared Temperature Gun

Equipment to observe? Hold gun close, shoot same spot

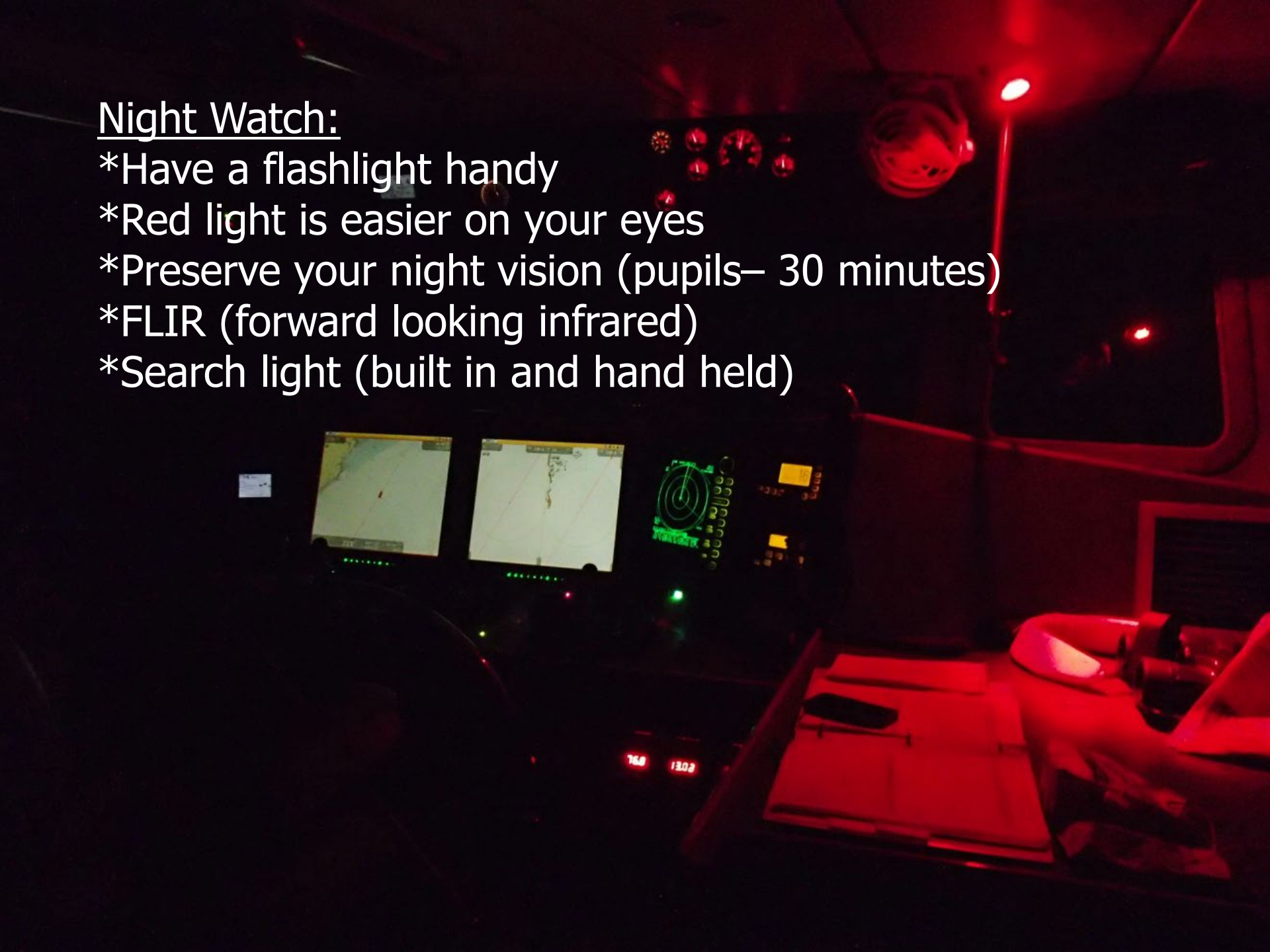
“Night Ops” running after dark

*Running lights – make sure they are all on
*Interior lights: courtesy red, overhead red
*Pilothouse command – dim and mute electronics
*Wake the Captain if there is a concern

*Stay awake, be extra vigilant – use VHF to communicate with other ships

Ready for night? (Red lights)

Don’t forget spare bulbs for your Navigation running lights! (Better to upgrade to LED)



Night Watch:

*Have a flashlight handy

*Red light is easier on your eyes

*Preserve your night vision (pupils– 30 minutes)

*FLIR (forward looking infrared)

*Search light (built in and hand held)


Night mode – dimmed down, red film, blue tape…

*Hourly Watch handout

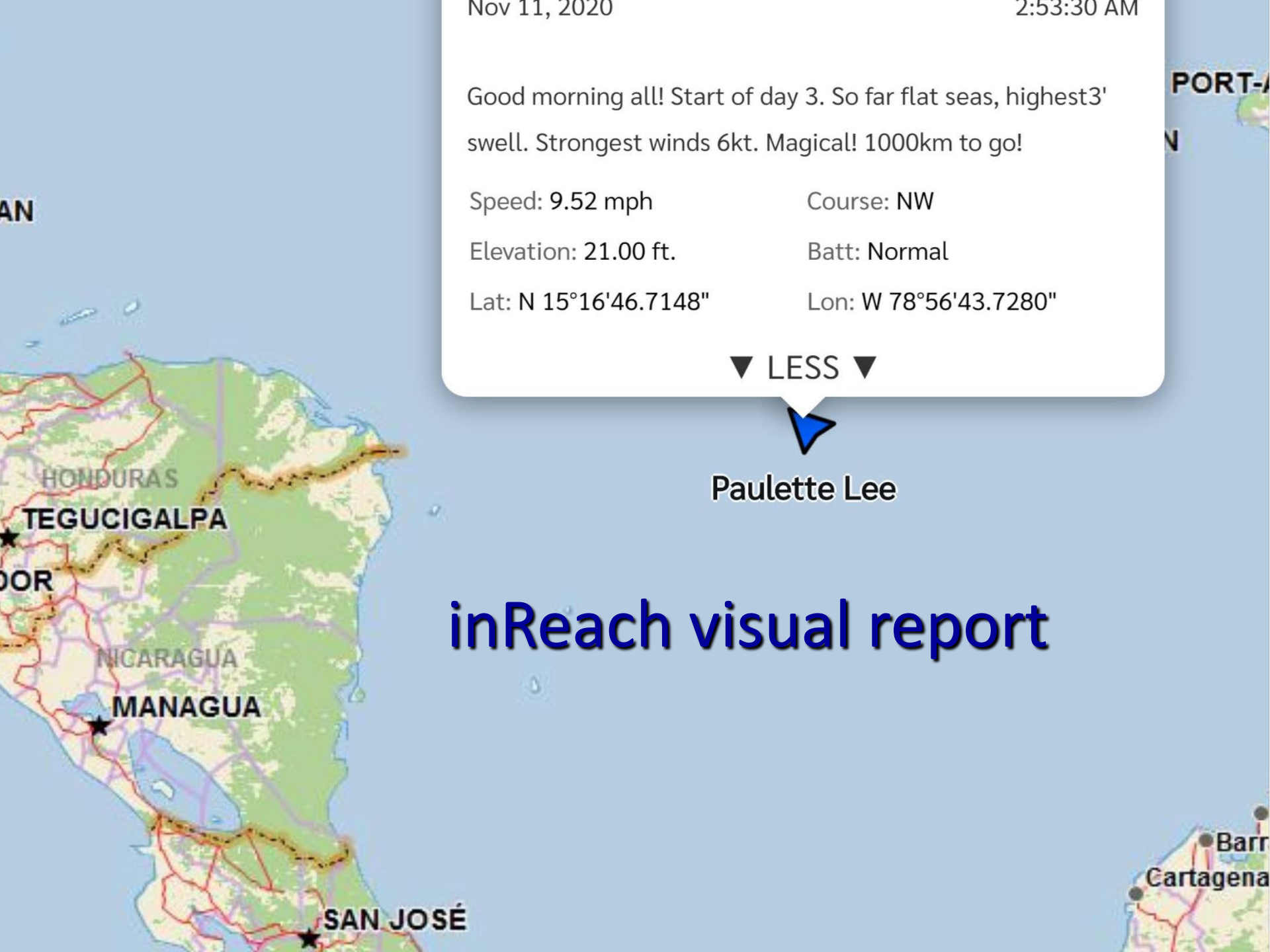
*Top of the hour

*Why each hour?

JMYS HOURLY WATCH UNDERWAY CHECK LIST
ENGINE ROOM
Be careful - no loose clothing or jewlery, metal items will be hot, take your time
Wear ear muffs and gloves. Take a rag, flashlight and temp gun with you
Note temperature on thermometer - "shoot" temps on key locations and fill in ER Temp Watch Log
Does the ER smell normal?
Check engine room for loose tools or parts
Check bilge for excess oil or water
Check bilge pump strainer for debris
Go aft centerline to check stuffing box, is it dripping, is it cool or hot?
Check throttle (port) and gear (aft) connections - pinned properly on engine?
Check stabilizer panel - working smoothly?
Engine room blowers on? Air circulation
Fuel valves positioned correctly?
Check fuel quantity in main tank sight glasses - then close valves
Check the Racor sight vacuum gauge and look at Racor bowls
Check transfer and return manifolds - are they valved correctly?
Confirm battery select switches are correctly positioned "Normally ON"
Look for belt chafe powder, leaks, lift up floor boards, drips, smoke...
LAZARETTE
Check all steering gear for firm fasteners and no leaks
Inverter panel correct
Close door between ER and Laz
WHEEL HOUSE
Main engine rpms, oil pressure and coolant temperature
Check battery voltage
Alternator output?
Check all displays for proper values

Garmin inReach

*Two Way Texting
*Subscription you can turn on/off.


Nov 11, 2020
2:53:30 AM
Good morning all! Start of day 3. So far flat seas, highest3' swell. Strongest winds 6kt. Magical! 1000km to go!
Speed: 9.52 mph
Course: NW
Elevation: 21.00 ft.
Batt: Normal
Lat: N 15°16'46.7148"
Lon: W 78°56'43.7280"
▼ LESS ▼
Paulette Lee
inReach visual report
HONDURAS
TEGUCIGALPA
NICARAGUA
MANAGUA
SAN JOSÉ
Cartagena

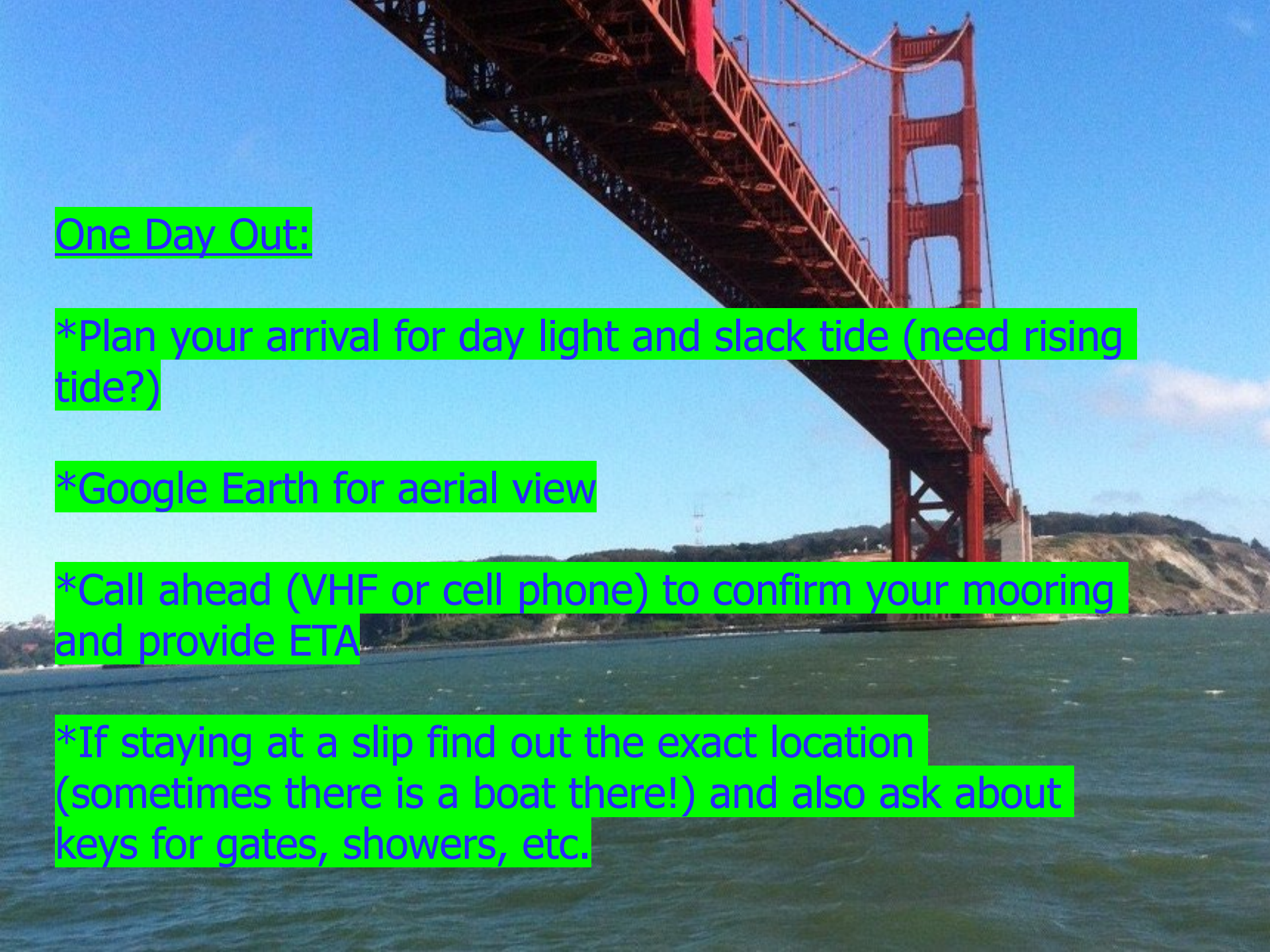
Iridium Go – very popular

Text, talk, email and download weather max plan $140/Mo.

Antenna box – connects to satellite – Wi-Fi signal to apps on phone.

Worth investigating


Are we there yet?



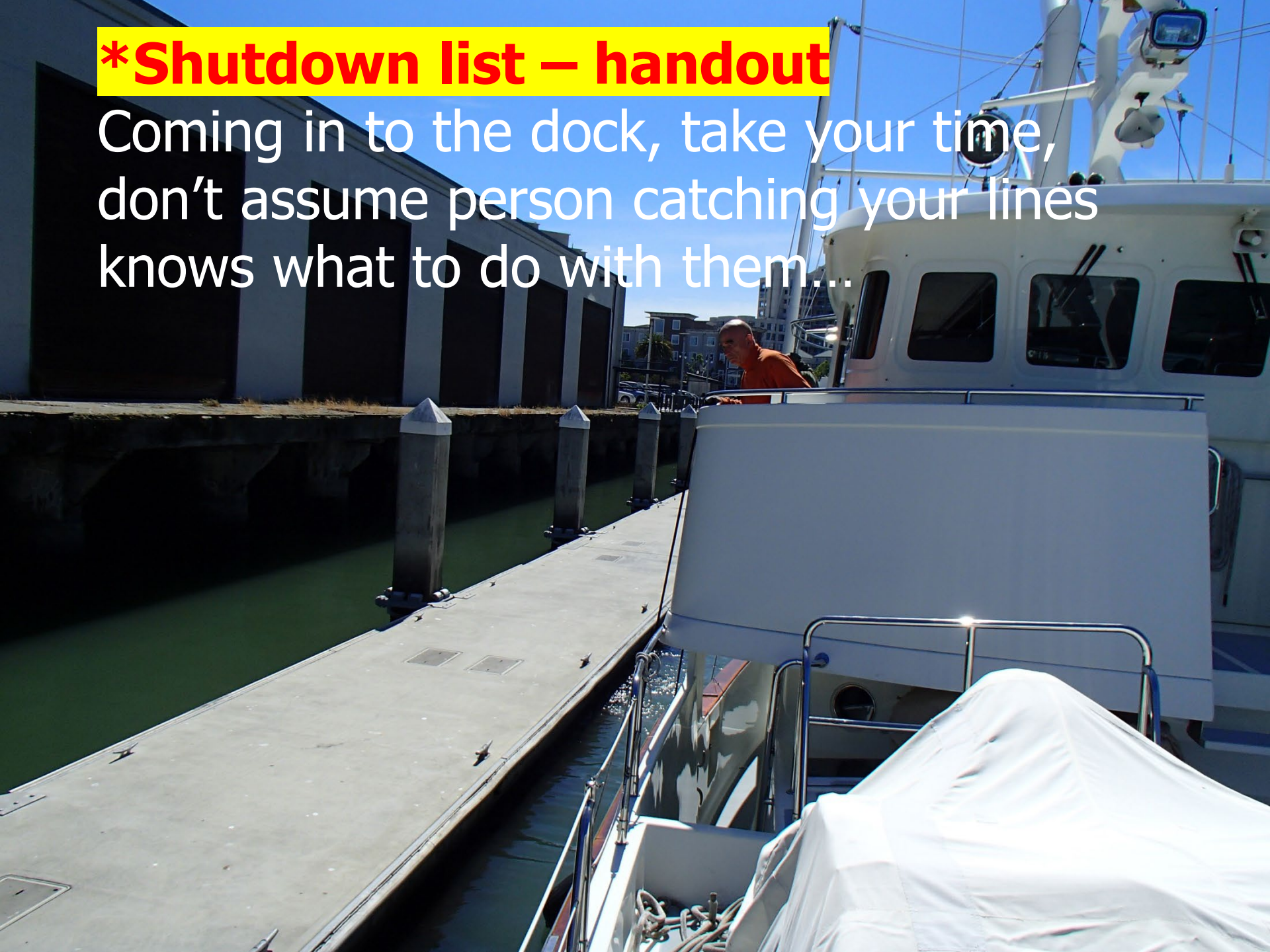
One Day Out:

*Plan your arrival for day light and slack tide (need rising tide?)

*Google Earth for aerial view

*Call ahead (VHF or cell phone) to confirm your mooring and provide ETA

*If staying at a slip find out the exact location (sometimes there is a boat there!) and also ask about keys for gates, showers, etc.

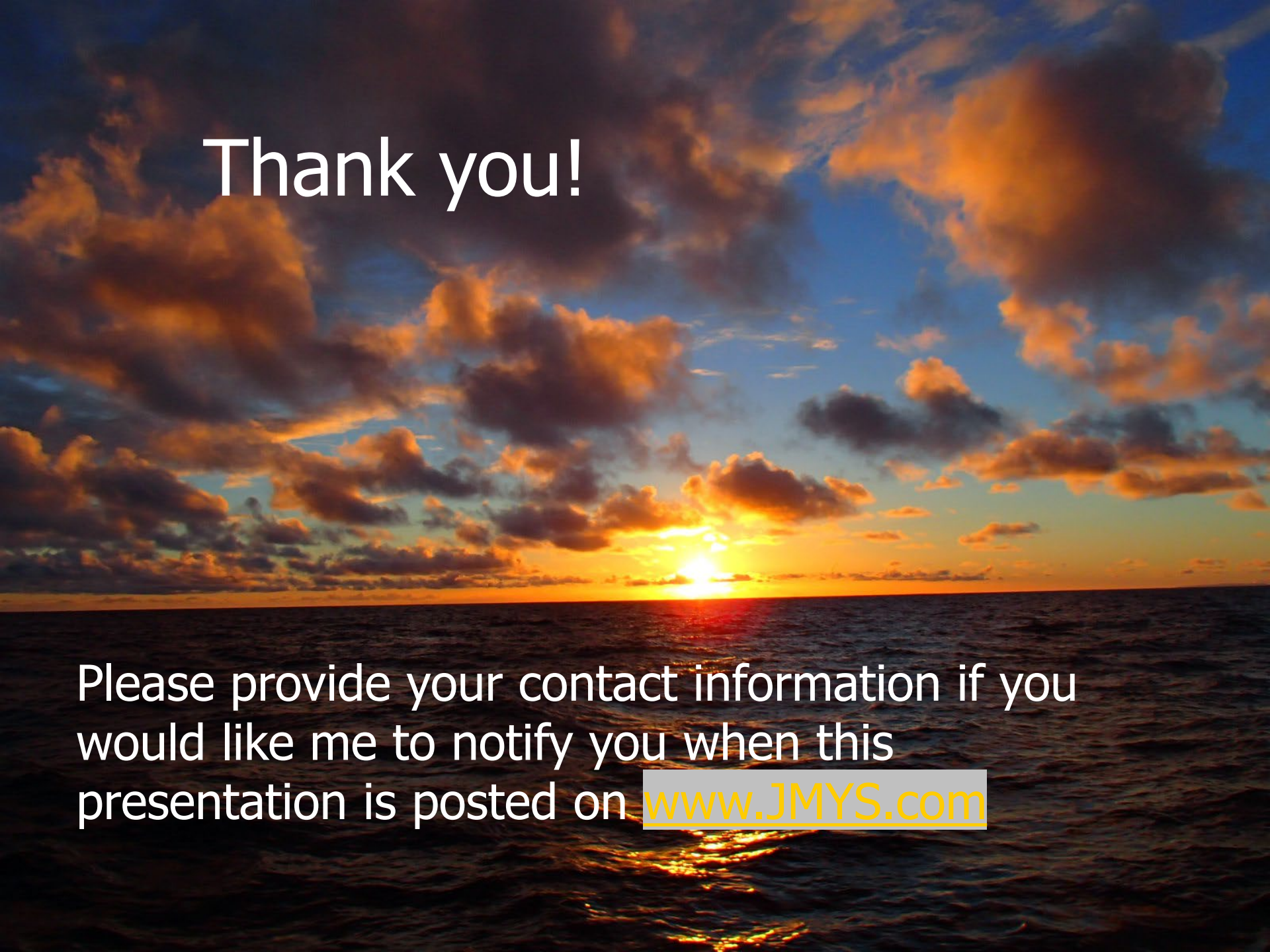


***Shutdown list – handout**

Coming in to the dock, take your time, don't assume person catching your lines knows what to do with them…

JMYS SHUT DOWN CHECKLIST (ARRIVAL AT DESTINATION)
HARBOR APPROACH
Run main engine hard for 10 - 15 minutes to blow out soot (during last hour before arrival)
Holding tank? (5 miles off shore) then close valves
Fenders and dock lines ready?
Slip location - contact harbor master for arrangements? -hours, dock hand, slip assignment, tides, VHF, gate key, wifi password, etc.
FINAL APPROACH
Make sure fenders and dock lines are ready and crew knows intended docking maneuver
Center fins on stabilizers
Confirm thruster(s) ready
SECURE AT DOCK OR ANCHORED AT MOORING?
ENGINE ROOM
Check engine room for loose tools or parts
Check bilge for excess oil or water
Make sure bilge pump strainer is cleaned out
Check fuel valves to make sure the appropriate fuel valves are positioned correctly for next start up
Check fuel quantity in all fuel tank sight glasses - then close valves
WHEEL HOUSE
Check all battery voltage
Shore power selected and coming in on ? AC voltage coming in from dock?
Bilge pump breakers on?

Questions & Answers:
Any tips or suggestions?
Open discussion…


Thank you!
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