Small Power Boat & RIB Master Course

NIWA small Boat driving license less than 15m

Lecture delivered

by

Cdr Stephen Ochepo Edeh
08026763306

Metropolitan Waterways Concept Ltd.

PRINCIPAL TRAINING CORDINATOR

STEPHEN OCHEPO EDEH

He is an avid visionary leader and a serial Entrepreneur having spent over 15 year in the Nigerian Navy (NN) before venturing into the business world. While in the NN, he held several operational and management appointments both ashore and afloat and also attended several tactical, operational, leadership and management courses in Nigeria and abroad. He graduated from the NN Junior Officers Sub-Technical Course with Distinction before obtaining his Officers Watch Keeping Certificate onboard the Nigerian Navy Flag Ship-NNS ARADU. Afterwards he was nominated for his Specialization course in Maritime Navigation & Direction at the Indian Navy Premier Naval Institute; INS VENDURUTHY Kochin India, where he graduated with Distinction.

During his career with the Nigerian Navy, Stephen received numerous personal and military awards. He was awarded the Commanding Officer NNS QUORRA's award for the Best Graduating Officer, Sub-Technical Course in December 1996. He also received the Commanding Officer (CO) INS VENDURUTHY's award for the Best Graduating Foreign Officer, Navigation and Direction course in April 2002. The Commandant, Command and Staff College (CSC) award for the Best contributing paper-Junior Officers Staff Course in November 2002.

In the corporate world of business, as a serial entrepreneur and inspirational business coach, he pioneered an entrepreneurship hands-on business skills acquisition programme in collaboration with EndTimes Revival Ministries titled- “Programme for Acquiring Competence in Entrepreneurship” (PACE). The programme has helped equipped many aspiring entrepreneurs and SMEs, helping them to start and grow their own businesses.

When appointed as the Marine Consultant for the maiden edition of the Lagos AllSail Championship in December 2018, he successfully piloted and stirred the affairs of the first ever boats, jet skis and canoes racing competition in different categories held in the Lagos State waterways.

He has worked with a number of companies in Nigeria and abroad, where he obtained practical hands-on experience and skills in human and financial resources management, business start-ups and administration, strategic planning and implementation. In recognition of his expertise and enormous potentials to grow and develop businesses, Mr. Edeh was appointed as an Executive Director to Head the Operations, Management and Administration in a number of companies, notably BICS Boat Club (BBC) Nigeria Limited, Sebata Integral resources Nigeria Limited a subsidiary of Sebata Group of Companies, South Africa and POA ADIT Nigeria Limited and also the CEO of Audaculus Marinus Limited.

He is a great achiever and always bring onboard his unique operational and strategic experiences in developing and managing portfolios of unrelated businesses in different industries within and outside Nigeria. The industries range from Defence, Security, Maritime, Housing, Oil and Gas to Tourism, Transport, Telecommunication as well as ICT. With his wealth of experience and sound business acumen, he led most of the companies through a significant period of re-engineering and growth. This invariably improved their competitiveness in the market place while at the same time cutting costs and enhancing their profitability.

He also holds a Bachelor's degree in Chemistry from the Nigerian Defence Academy (NDA), Kaduna and a Master of Arts degree in Intelligence & International Security from the King's College London(KCL). In addition, he graduated with Distinction in Master of Business Administration (MBA) from Edinburgh Business School, Heriot Watts University, Edinburgh Scotland.

Domestic Arrangements

FIRE / FIRE ASSEMBLY POINT

BREAK TIMES

TEA / COFFEE

LUNCH

TOILETS

SMOKING

MOBILE PHONE

PRAYER TIMINGS

QUESTIONS

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Introduction

Please introduce yourself:

1- Tell us your name:

2- Company & Job function:

3- Experience in Marine field:

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EXPERIENCED BOAT CAPTAINS

First day, Theory training will take a full day (09:00 – 17:30)

Second day, Practical training will take 3-4 hours (10:00 – 14:30)

Theory exam waived

Student who misses a class with no prior agreement with instructor, he/she will be responsible for any charges applied by the management.

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BEGINNERS NO PRIOR EXPERIENCED

First day, Theory training will take a full day (09:00 – 17:30)

Second day, Theory training will take full day (9:00 – 17:30)

Third day, Practical training will take 3-4 hours (10:00 – 14:30)

Theory exam will be taken after the training is done. Student has six month to do his exam otherwise he/she will re-sit the course again

Student who misses a class with no prior agreement with instructor, he/she will be responsible for any charges applied by the management.

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Small Powerboat and RIB Master

Competence after course:

- Covers vessels up to 15 m (45’)
- Operation in coastal regions
- Driven by outboard or inboard motors
- In fair weather
- No horsepower limitations
- No accommodation

- **This three day course covers two day of theory and one day of practical boat handling.**
- **Minimum entry level: zero**

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About METROPOLITAN WATERWAYS CONCEPTS LTD TRAINING SCHOOL

- MWCL was established in 2014 and is in partnership with the world's leading provider of yacht/boat training services.
- The professional courses are recognised by different government agencies in Nigeria for commercial use including NIWA.

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COPY OF CERTIFICATE

WITH PICS

At the end of this Training, you will receive a Certificate of Competence in Safe Boating and Navigation

METROPOLITAN WATERWAYS CONCEPT LTD.

A1001

NATIONAL INLAND WATERWAYS AUTHORITY
(IN COLLABORATION WITH METROPOLITAN WATERWAYS CONCEPTS LTD.)

Certificate

THIS IS TO CERTIFY THAT

MANSOUR BAHIJ BILAL

No: A1001

Has satisfied the requirements of the Authority by having successfully Completed the Training on **SMALL POWER BOAT AND RIB MASTER COURSE** for Boat Skippers with Experience for the issuance of the following Award.

Certificate in Safe Boating & Navigation

Engr. (Dr) Lateef A. Onikoyi
President, Metropolitan Waterways Concepts Ltd

General Manager, Marine (NIWA)

METROPOLITAN WATERWAYS CONCEPT LTD.

COPY OF LICENSE

WITH PICS

License valid for 3 years and to be renewed

NATIONAL INLAND WATERWAYS AUTHORITY

Providing Ways & Means on Nigeria Waters

National Boat Skippers' License

Surname
MANSOUR

Given Names
BAHIJ BILAL

Cert No.: A1001
Issued: 04-JAN-2022
Expires: 15-APR-2024
Gender: MALE
DOB: 15-APR-1963

LAGOS STATE

Has been approved by NIWA to hold this licence of Competency.

SMALL POWERBOAT & RIB MASTER

(Vessels up to 20m)

Holder's Signature

Chief Dr. George N Moghalu
Managing Director/CEO (NIWA)
Authorised Signature

A1001

ICC – 24M

ICC – 10M

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Required documents for Marine Craft Driving License:

- Application form for Marine Crew Licensing.
- One recent personal photograph with white colour background.
- Official means of identification.
- Certificate of qualification specified by MWCL or its approved institutes/Original Driving License

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Courses offered By METROPOLITAN WATERWAYS CONCEPTS LTD

- IYT VHF / DSC Operator
- FTA Pleasure Craft Operator (theory course for Vessels up to 15 meter)
- IYT Small Powerboat & RIB Master (for vessels up to 15 meter)
- IYT International Bareboat Skipper (for vessels up to 24 meter)
- IYT Master of Yachts Coastal (vessels up to 24 meter/First Mate 200t)
- IYT Master of Yachts Offshore (for vessels up to 200t)

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NAVIGATION

SEAMANSHIP / SAFETY

METEOROLOGY

TIDES AND CURRENTS

BUOYS, LIGHTS AND SHAPES

PILOTAGE / BOATHANDLING

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Contents of Small Powerboat and RIB Master Course

1. Safety
2. VHF radio operations
3. Small powerboats & rigid inflatable boats
4. Launching and recovery
5. Anchors and anchoring
6. Nautical terminology
7. Boat handling under power
8. MOB – man overboard procedures
9. Ropes and rope work
10. Basic rules of the road

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Safety at sea

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Life Jackets

Inflatable
Must be serviced annually

Solid

There must be at least one life jacket per person on board

Keep the head of unconscious person above surface of the water

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Buoyancy Aid / Flotation Aid

- Buoyancy aids are only used for water sports activities and will not keep an unconscious person's head out of the water.

- These are only to provide buoyancy

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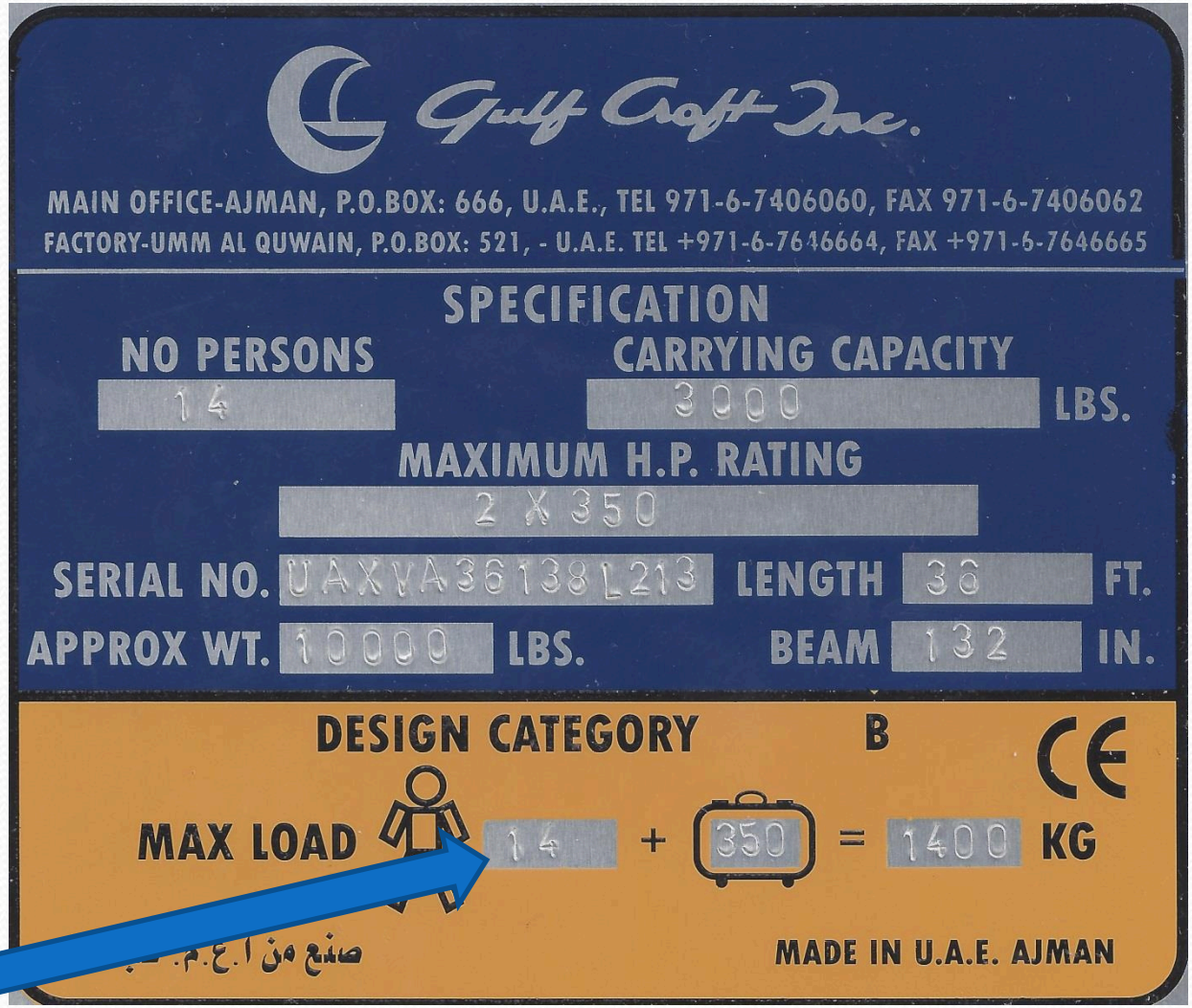
VESSEL CAPACITY PLATE



Never Exceed the limit

Never overload your boat or...

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This could happen!!!

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Life Harness

- Life Harnesses should be used in rough weather and / or night time.
- This must be the decision on the captain.
- It will prevent you falling off the boat.

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Ring Buoy

Hard, long lasting but you must be careful when you throw it to the person in the water

Horse shoe Buoy

Soft, light but it can not go for long distance in windy conditions

Used for saving Man Overboard

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FLARES / Distress signals

- Red Rocket / parachute flare
- Red Handheld
- White Handheld
- Orange Smoke

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Red Rocket / Parachute flare
Used to attract attention of all the boats in the vicinity
It goes up to 300 meters high.
Preferably at night

Red hand held flare
Used to attract attention of all the boats in close proximity
Preferably at night

White hand held
Used for avoiding a collision with another vessel
Used at night

Orange Smoke
Used in daytime only
Burns for 3 minutes

RED HAND-HELD

WHITE HAND-HELD

RED PARACHUTE

ORANGE SMOKE

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First Aid Kit

Tool Kit

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Fire Extinguisher

Must be serviced annually

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Types of Fire Extinguishers

1- Water

2- Dry Powder

3- Foam

4- CO2

Dry Powder (ABC) is the most suitable fire extinguisher for small boats

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Fire Blanket

- This is used to control a galley fire.
- It will smoother the fire and starve it of oxygen.

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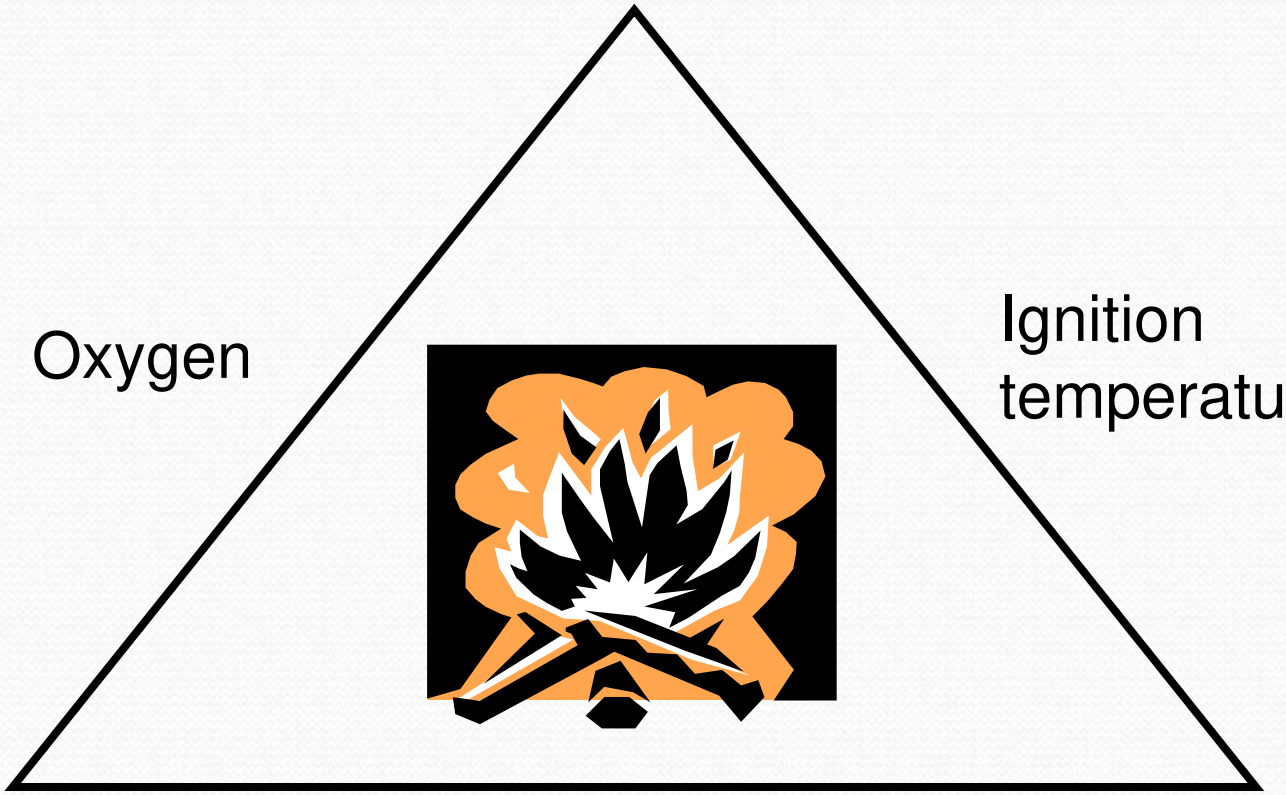
Fire Triangle



Plus: catalyst/chemical chain reaction

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Bilge pumps

Automatic Pump

Manual Pump

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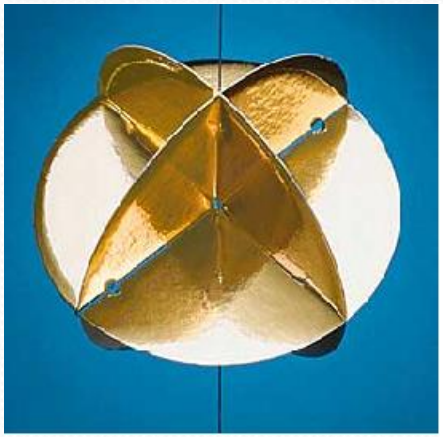
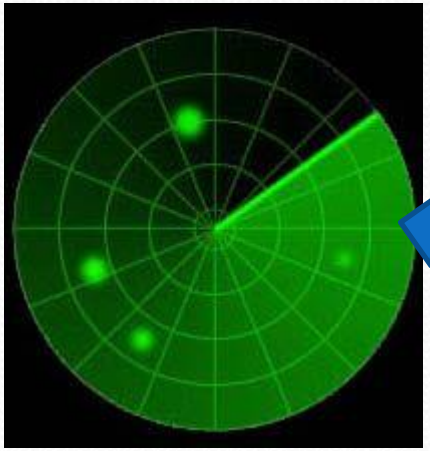
Radar Reflector



- Radar reflector is required to make your vessel more obvious to another boat using radar.
- Radar is used to detect all objects and vessels in its range. It shows the distance and direction to the object.



Boat is using Radar

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Ropes

- Ropes are one of the most useful items on a boat.
- Name some of the reasons you would use ropes??

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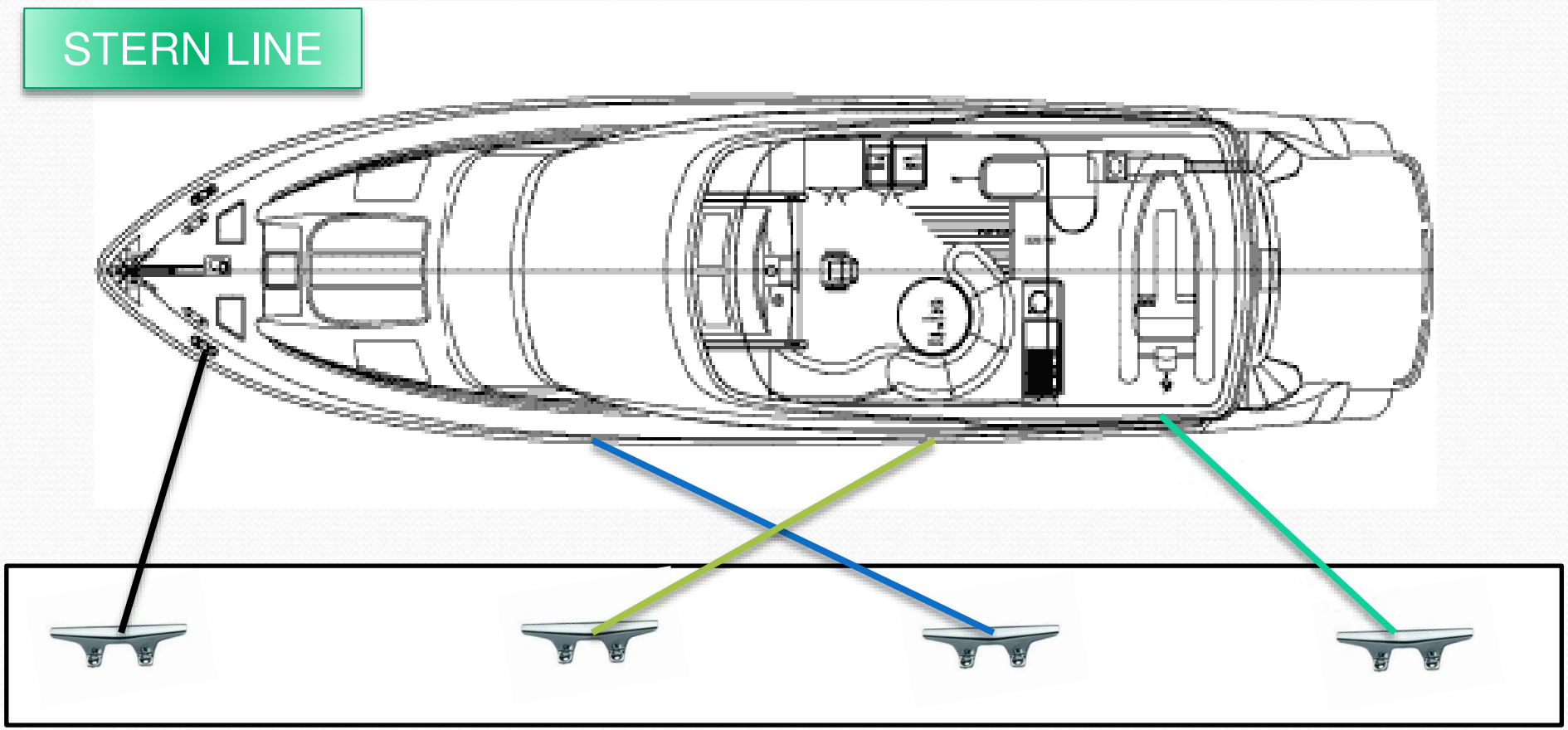
Mooring up

BOWLINE

SPRING AFT

SPRING FWD

STERN LINE



Anchors

- Use these to keep you in position when you want to stop the boat.
- Have a spare if possible.
- Use it to stop dragging at high winds, or to moor.

Kedge: a portable, smaller anchor most commonly used for temporary / emergency anchoring

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Seacock

- It is a thru hull fitting isolator valve, at the beginning of a vessel cooling system.

- Seacocks are left open or are closed depending on the situation:

1- The engine cooling system, are almost always left open

2- A sink drain, might be opened up in port but closed when at sea

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Boat Hook

Extra Horn

Torch

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VHF Radio

- Fixed and hand held VHF radio's is the single most important safety equipment you can carry on board!!

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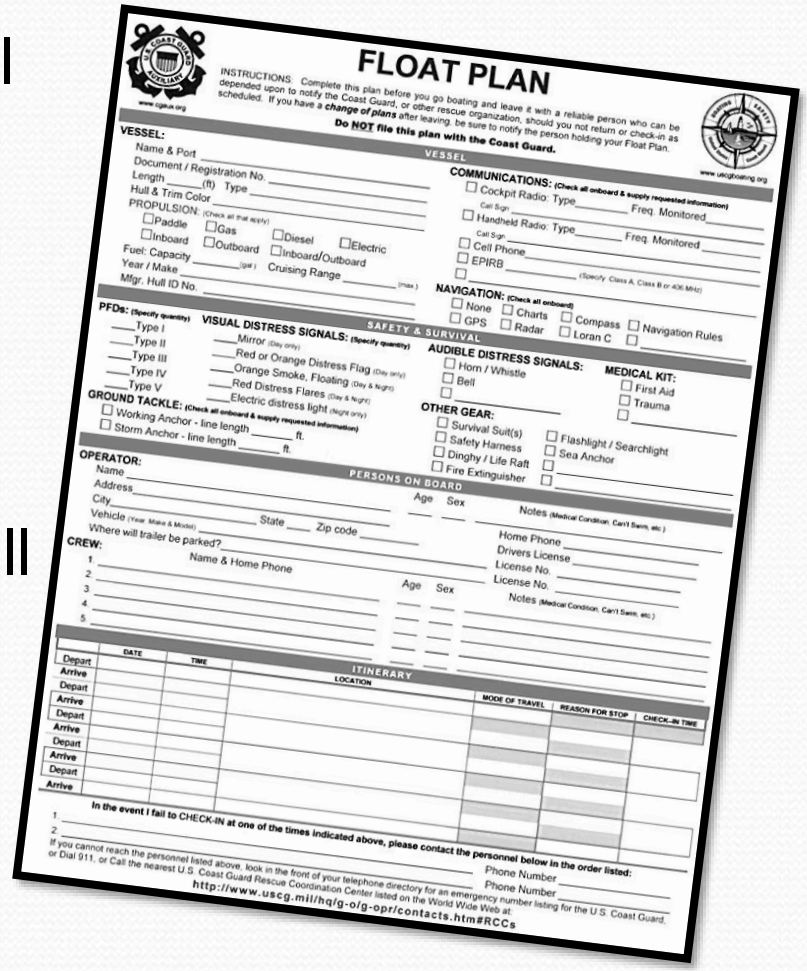
Passage plan / Float plan

- A plan that contains all the vessel information, safety equipment, number of people, and the destination to be filed and kept a shore before departing.
- In the event of emergency this will greatly increase the chances of prompt rescue.



FLOAT PLAN

INSTRUCTIONS: Complete this plan before you go boating and leave it with a reliable person who can be depended upon to notify the Coast Guard, or other rescue organization, should you not return or check-in as scheduled. If you have a **change of plans** after leaving, be sure to notify the person holding your Float Plan.

Do NOT file this plan with the Coast Guard.

www.uscgboating.org

VESSEL

Name & Port
Document / Registration No.
Length ____(ft) Type
Hull & Trim Color
PROPULSION: (Check all that apply)
☐Paddle ☐Gas ☐Diesel ☐Electric
☐Inboard ☐Outboard ☐Inboard/Outboard
Fuel: Capacity ____(gal.) Cruising Range ____(max.)
Year / Make
Mfgr. Hull ID No.

COMMUNICATIONS: (Check all onboard & supply requested information)
☐Cockpit Radio: Type Freq. Monitored
Call Sign
☐Handheld Radio: Type Freq. Monitored
Call Sign
☐Cell Phone
☐EPIRB
☐ (Specify: Class A, Class B or 406 MHz)

NAVIGATION: (Check all onboard)
☐None ☐Charts ☐Compass ☐Navigation Rules
☐GPS ☐Radar ☐Loran C ☐

SAFETY & SURVIVAL

PFDs: (Specify quantity)
___Type I
___Type II
___Type III
___Type IV
___Type V

VISUAL DISTRESS SIGNALS: (Specify quantity)
___Mirror (Day only)
___Red or Orange Distress Flag (Day only)
___Orange Smoke, Floating (Day & Night)
___Red Distress Flares (Day & Night)
___Electric distress light (Night only)

AUDIBLE DISTRESS SIGNALS:
☐Horn / Whistle
☐Bell
☐

MEDICAL KIT:
☐First Aid
☐Trauma
☐

GROUND TACKLE: (Check all onboard & supply requested information)
☐Working Anchor - line length ____ ft.
☐Storm Anchor - line length ____ ft.

OTHER GEAR:
☐Survival Suit(s) ☐Flashlight / Searchlight
☐Safety Harness ☐Sea Anchor
☐Dinghy / Life Raft ☐
☐Fire Extinguisher ☐

OPERATOR:
Name
Address
City State Zip code
Vehicle (Year, Make & Model) Where will trailer be parked?
Home Phone
Drivers License
License No.

PERSONS ON BOARD

CREW:

	Name & Home Phone	Age	Sex	Notes (Medical Condition, Can't Swim, etc.)
1				
2				
3				
4				
5				

ITINERARY

	DATE	TIME	LOCATION	MODE OF TRAVEL	REASON FOR STOP	CHECK-IN TIME
Depart						
Arrive						
Depart						
Arrive						
Depart						
Arrive						
Depart						
Arrive						
Depart						
Arrive						

In the event I fail to CHECK-IN at one of the times indicated above, please contact the personnel below in the order listed:

1. Phone Number
2. Phone Number

If you cannot reach the personnel listed above, look in the front of your telephone directory for an emergency number listing for the U.S. Coast Guard or Dial 911, or Call the nearest U.S. Coast Guard Rescue Coordination Center listed on the World Wide Web at:
http://www.uscg.mil/hq/g-o/g-opr/contacts.htm#RCCs

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2
VHF RADIO OPERATIONS

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What is VHF?

- VHF stands for very high frequency.
- Range is short but coverage is excellent.
- Cheap to purchase and easy to install.
- Easy to use.(after this course)

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What are VHF Channels

- Channels are used for ease, instead of frequencies.
- Operation between 156MHz and 174MHz
- Channel 16 = 156.8MHz
- Must send and receive on the same channel.

Channel 16 mainly used for international emergency, urgency, safety, and calling.

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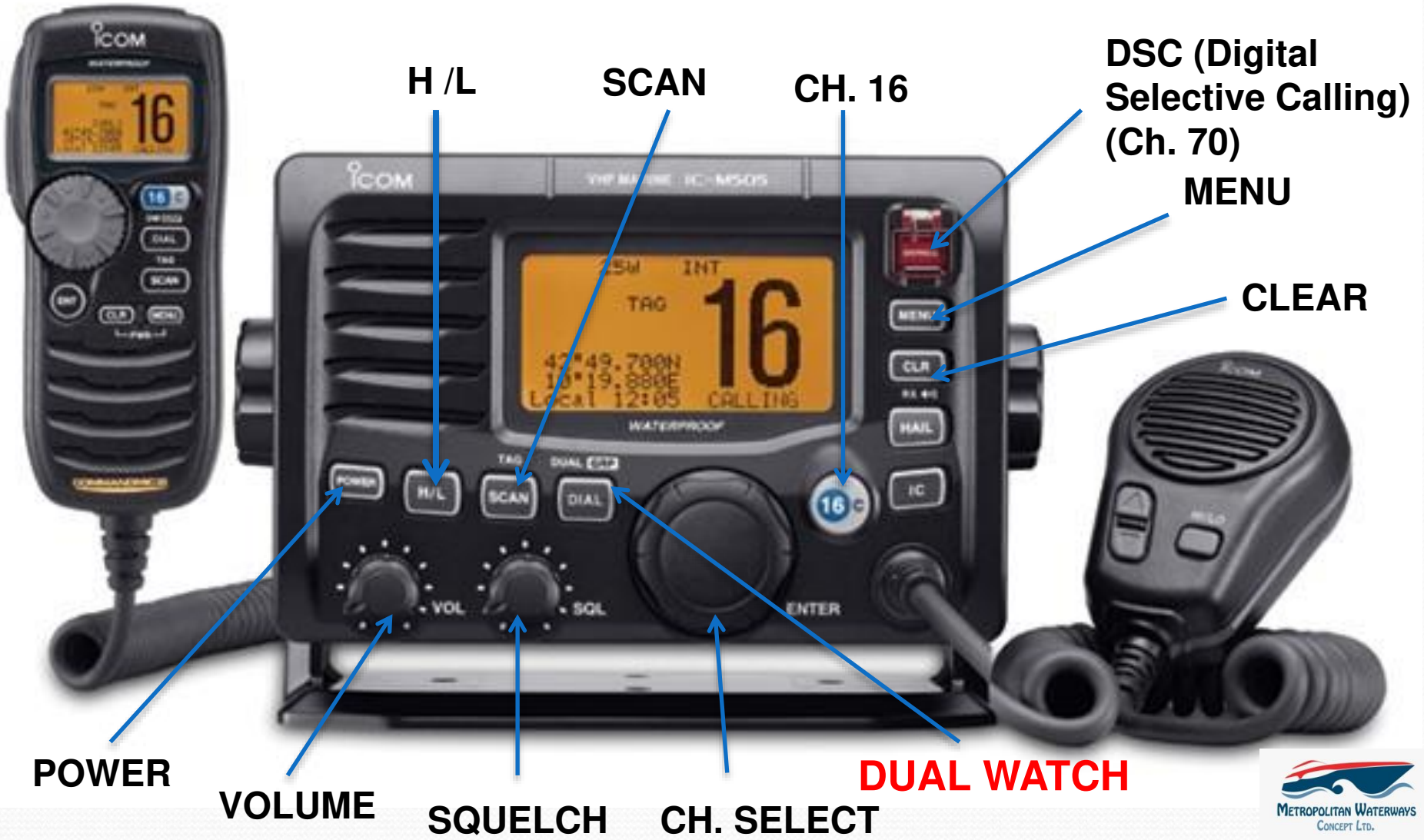
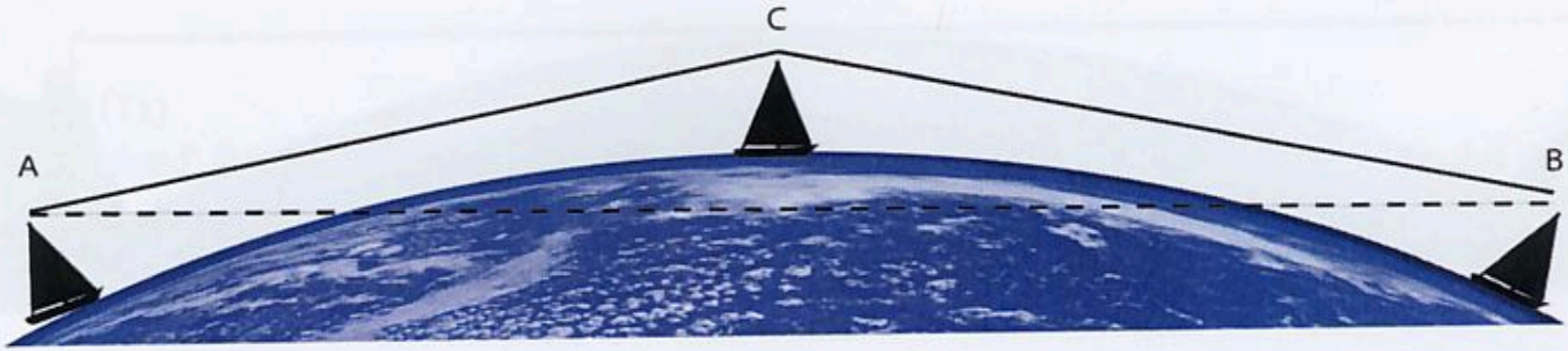
VHF main unit functions




ICOM
LOW
TAG
16
SQL
VOL
C
16
DUAL
SCN
LOCK
H/L
TAG
DIAL
MONI
SQL
VOL
WATER RESISTANT
VHF MARINE TRA

Due to earth's curvature the sailing boat, with the higher aerial, has a greater VHF radio range than a motor boat.



A and B cannot talk to each other but they can relay their message through C

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Two Factors affect VHF range

- Aerial height of the receiver & the transmitter.

- Power setting on the radio – high (25W) or Low (1W)

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VHF Channel Allocations

International		Local (Nigeria)	
International Distress	- **Ch.16**	International Distress	- **Ch.16**
Ship to Ship	- Ch.06	Other free channel	- Ch.88
Ship to Port	- Ch. 12, 14		
Ship to Coast	- Ch. 24 – 28		
DSC (non-voice)	- Ch. 70		

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Phonetic Alphabet

- Developed to minimize confusion during radio communication.

- You are not a Hollywood actor, so never say phrases like OVER AND OUT!

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The Phonetic Alphabet for use on the Marine Radio					
When it is necessary to spell words, the following phonetic pronunciation is recommended.					
A	Alpha	AL fah	N	November	no VEM ber
B	Bravo	BRAH vo	O	Oscar	OS cah
C	Charlie	CHAR lee	P	Papa	pah PAH
D	Delta	DELL tah	Q	Quebec	keh BECK
E	Echo	ECK oh	R	Romeo	ROW me oh
F	Foxtrot	FOKS trot	S	Sierra	see AIR rah
G	Golf	GOLF	T	Tango	TANG go
H	Hotel	ho TELL	U	Uniform	YOU nee form
I	India	IN dee ah	V	Victor	VIK tah
J	Juliet	JEW lee ett	W	Whiskey	WISS key
K	Kilo	KEY loh	X	X-ray	ECKS ray
L	Lima	LEE mah	Y	Yankee	YANG key
M	Mike	MIKE	Z	Zulu	ZOO loo

Types of radio calls

- Mayday
- Pan Pan
- Securite
- Normal Ship to ship / ship to shore communication

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MAYDAY CALL

- This indicates that the ship and people are in grave and imminent danger and need immediate assistance.
- This takes overall priority and cannot be interrupted

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- **HAVING THIS NEXT TO YOUR RADIO WILL ENSURE THAT YOU CAN MAKE A MAYDAY CALL, EVEN IN A PANIC SITUATION!!!**

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- MAYDAY, MAYDAY, MAYDAY
- THIS IS *Metro,Metro,Metro*
- MAYDAY *Metro*
- MY POSITION IS *25°15.5' NORTH and 055°10.8' EAST*
- WE *ARE TAKING ON WATER AND ARE SINKING*
- I REQUIRE IMMEDIATE ASSISTANCE
- WE HAVE *12* PEOPLE ON BOARD
- ANY OTHER USEFUL INFORMATION
- OVER.

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Reply to MAY DAY

- MAY DAY
- Metro, Metro, Metro
- This is Coast guard, Coast guard, Coast guard
- Received May day
- E.T.A. will be 15 minutes.
- Over

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PAN PAN CALL

- (PAH-N PAH-N) is an urgent message concerning the safety of a person or vessel but the situation doesn't require immediate assistance. Examples: An injury under control, unexplained water coming onboard but pumps containing the flow, etc.

Situation could change into MAYDAY

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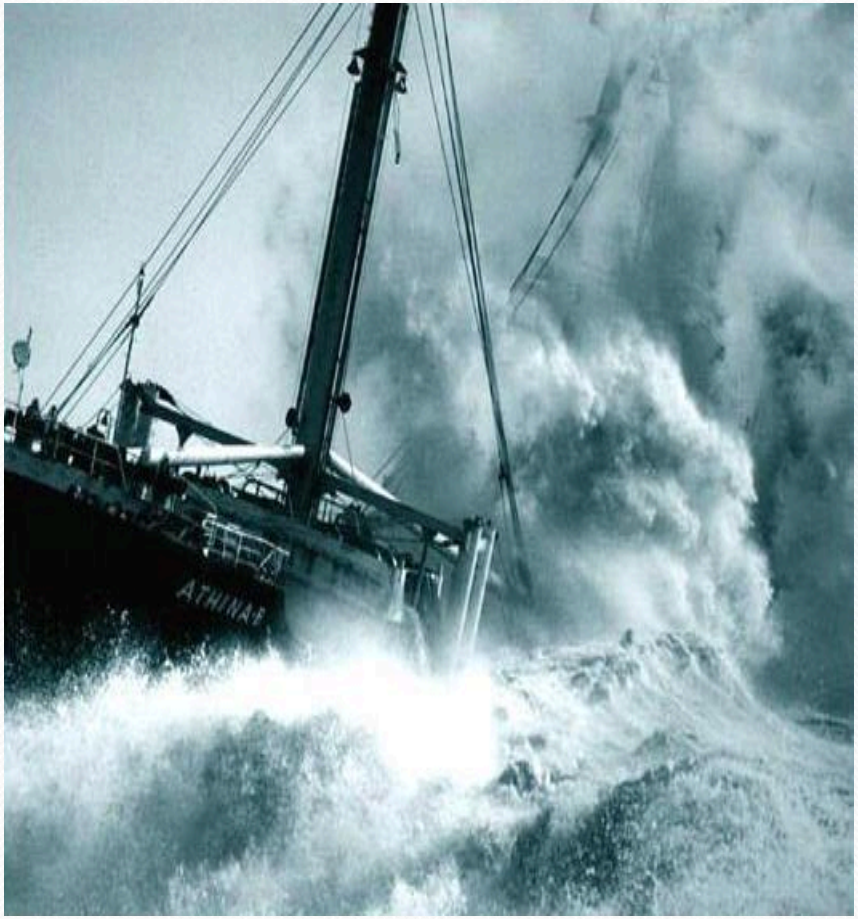
SECURITE

- (SEA-CURE-EE-TAY) is the least critical level and is used to advise on safety or navigation information. Example: Vessel proceeding in heavy fog from point A to point B, strong weather warning, etc.
- **This is normally done by coast guard**



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SHIP TO SHIP COMMUNICATION

- This type of Communication is the most common
- This can be used commercially or on pleasure boats.
- In the U.A.E Ch.88 is ship to ship channel.
- Nigeria has no specific channel of it own for ship to ship communication. Nigeria uses international Ch.16

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3
SMALL POWER BOAT & RIGID INFLATABLE BOATS (RIB)

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Types of boats

Inflatable dinghy

Rigid dinghy

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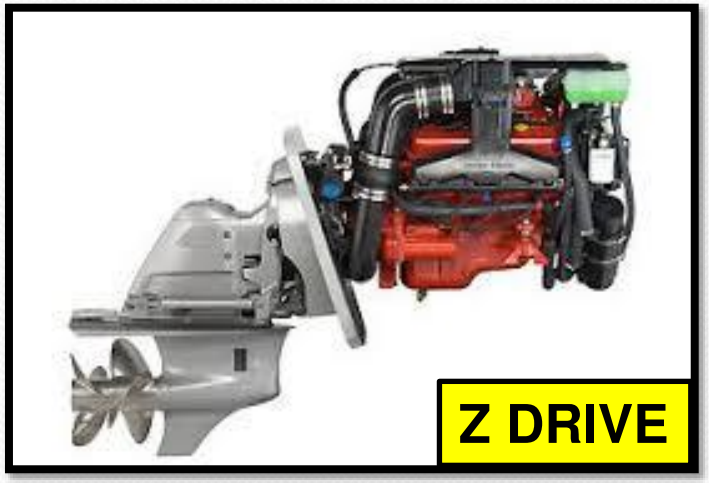
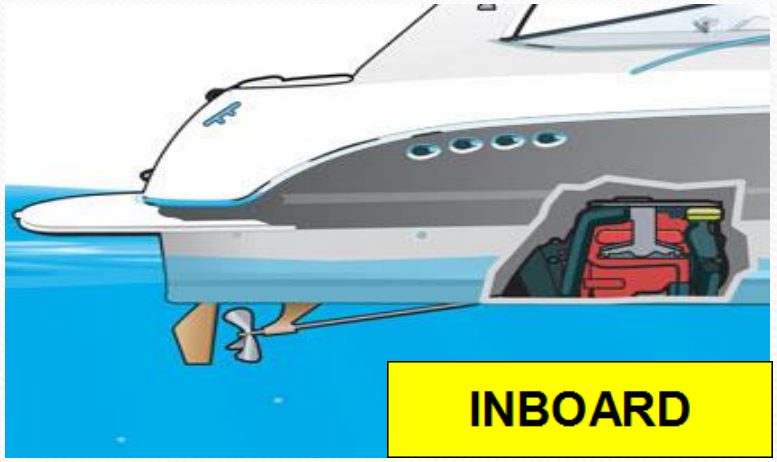
Types of Engines

OUTBOARD

JET DRIVE



Z DRIVE



INBOARD

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Rotation of Propellers

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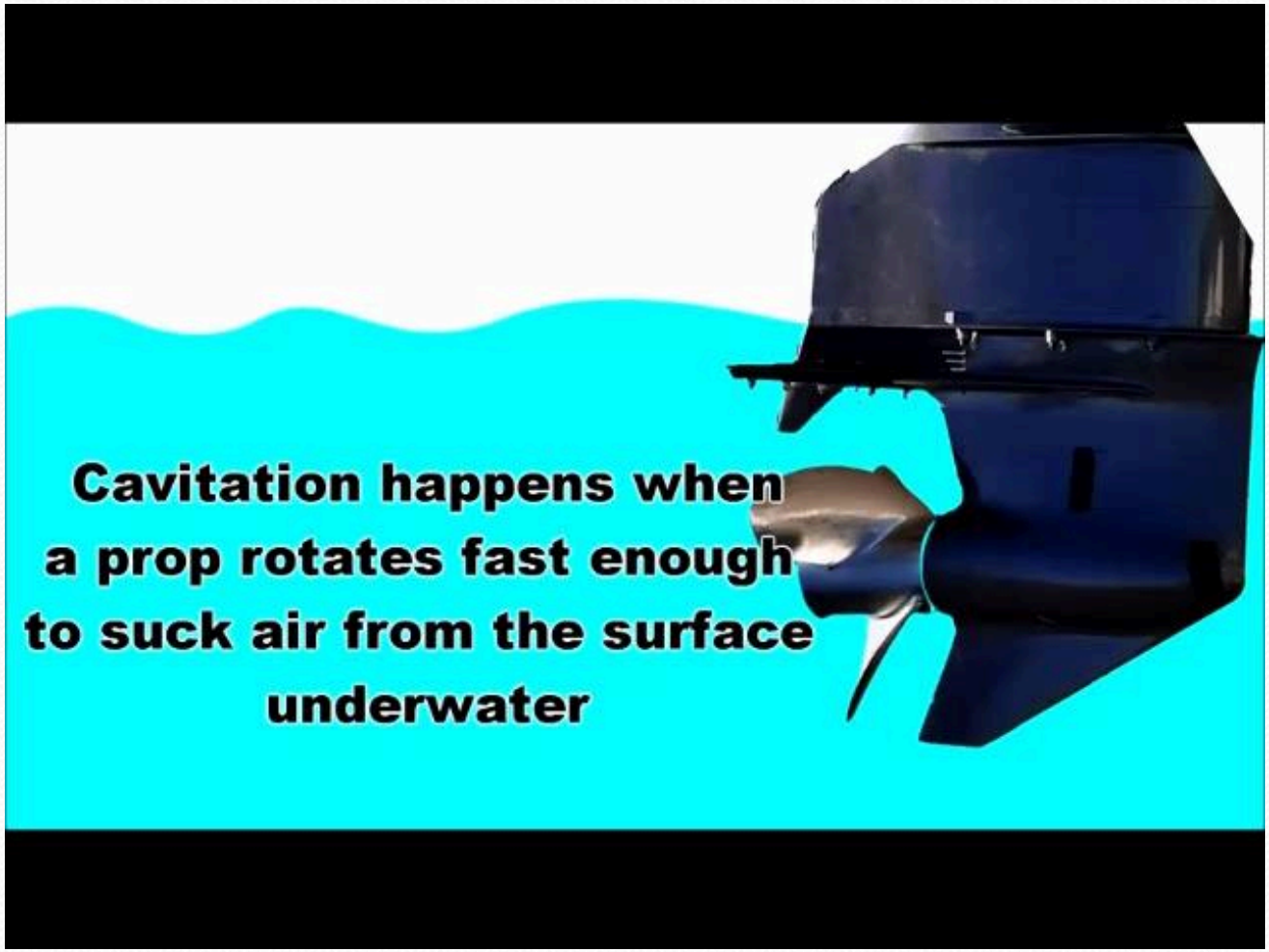
Cavitation: the loss of effective propeller thrust due to ventilation onto the blades of a rotating propeller.



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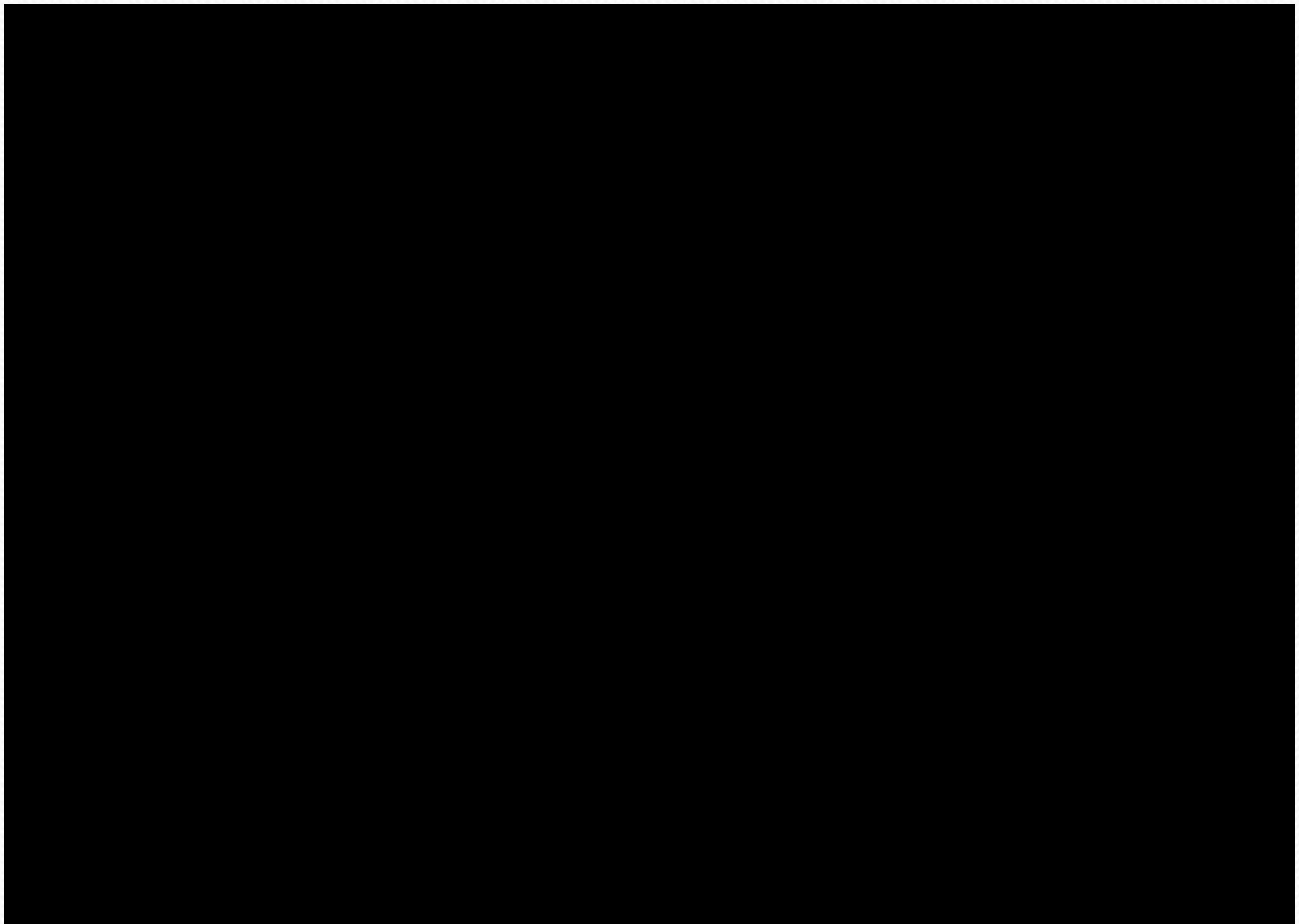
Prop walk: the sideways effect of a propeller that swings the bow or stern depending on the hand of the propeller and whether the boat is moving ahead or stern



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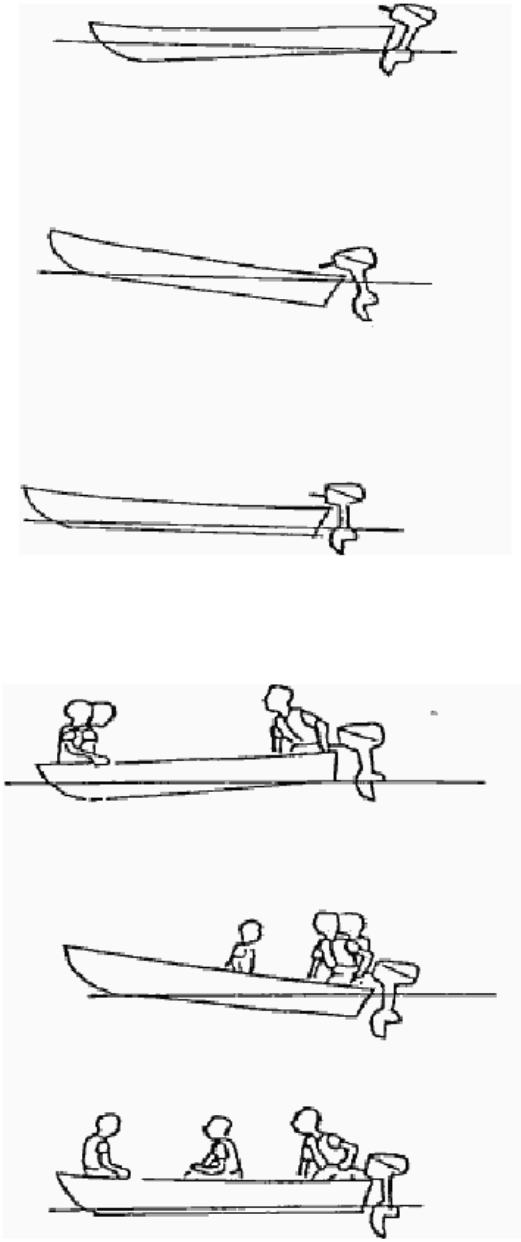
Trimming Outboard Engines

Trimming the engines can achieve many beneficial results, including:

- **better fuel consumption;**
- **better boat handling characteristics;**



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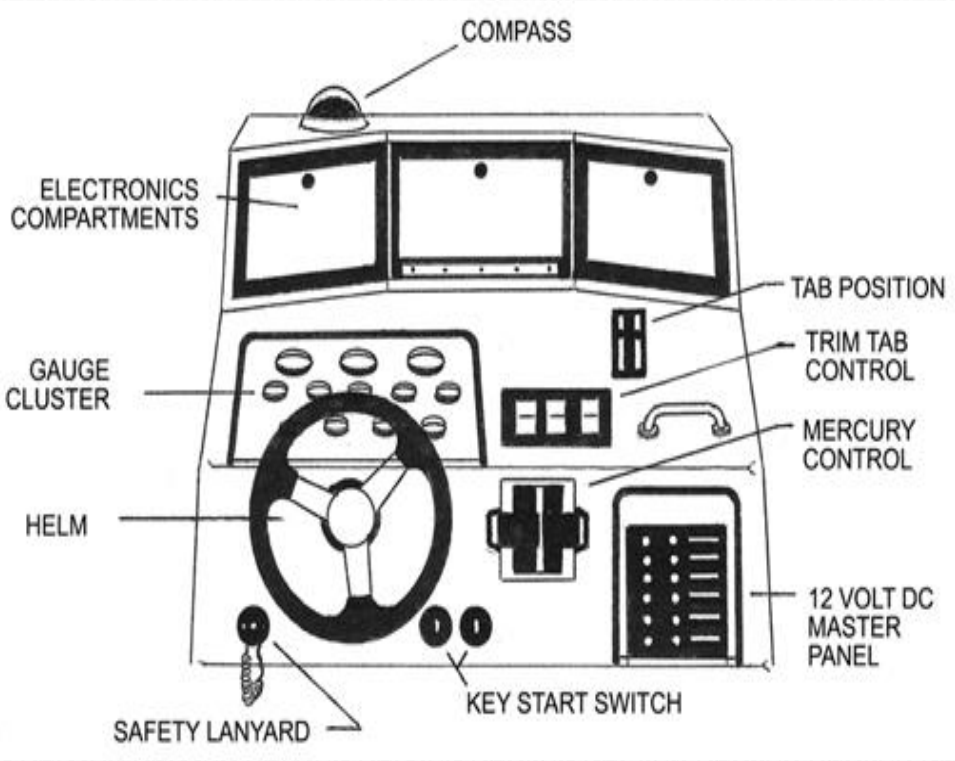
Boat Console



Note: these consoles are not exactly the same

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Kill cord

- When disconnected the kill cord will cut power to your engines and they will stop.
- You must attach it to yourself in case of falling off the boat. The engines will stop and you will be able to retrieve your boat.

When this is removed your engines will cut off.

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Kill cord

- **When you forget to connect the kill cord**

- Show video of boat without kill cord
- Talk about the dangers
- Talk about the possible solution

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4
LAUNCHING & RECOVERY PROCEDURE

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Ways to launch a RIB

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Ways to launch a RIB

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5
ANCHORS & ANCHORING

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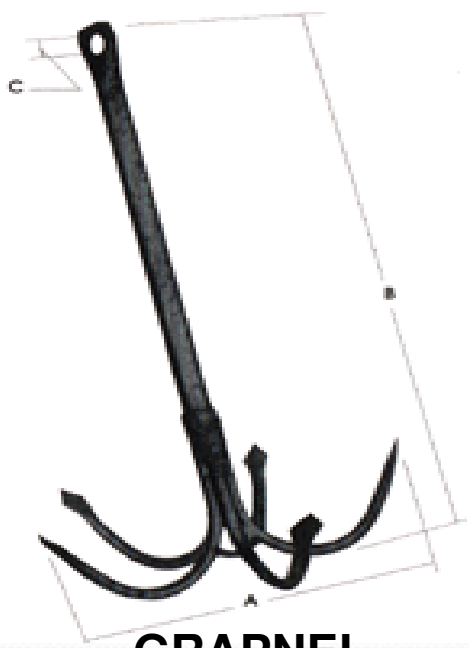
DANFORTH

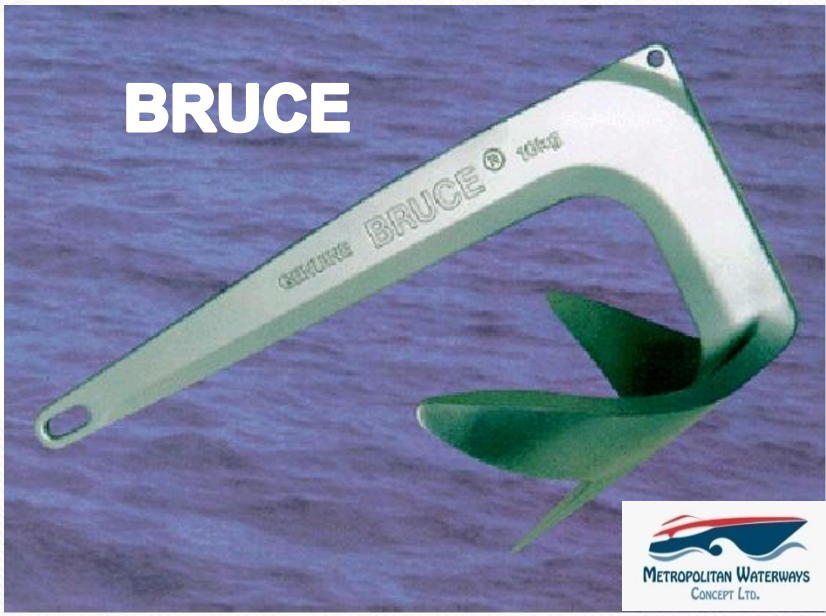
DELTA



GRAPNEL

FISHERMAN

CQR / PLOUGH



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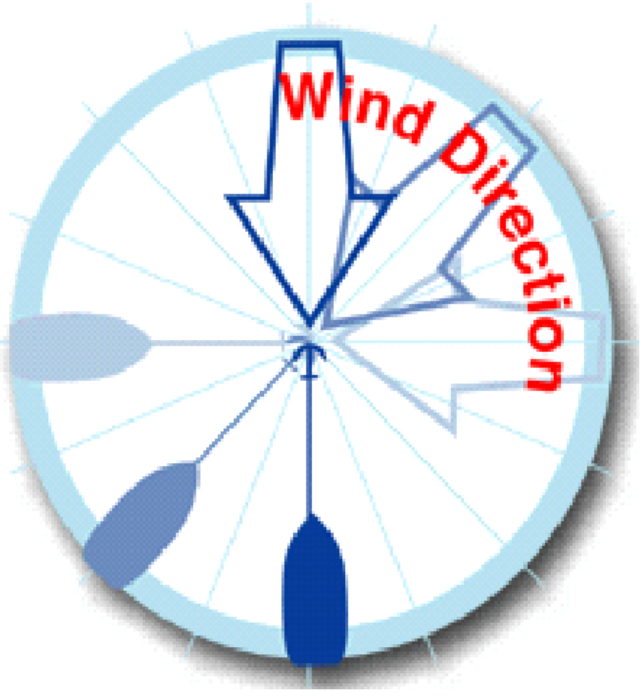
Anchoring

1. Picking a good place to anchor. To know where to anchor, you need to familiarize yourself with a chart of the area.
2. Enough depth (4 m) to avoid the danger of grounding but not so much depth (11 m) that your anchor can breakout.
3. Sufficient room for your boat to swing in all directions.
4. A quiet location out of any channel.
5. A location protected from waves and strong winds.



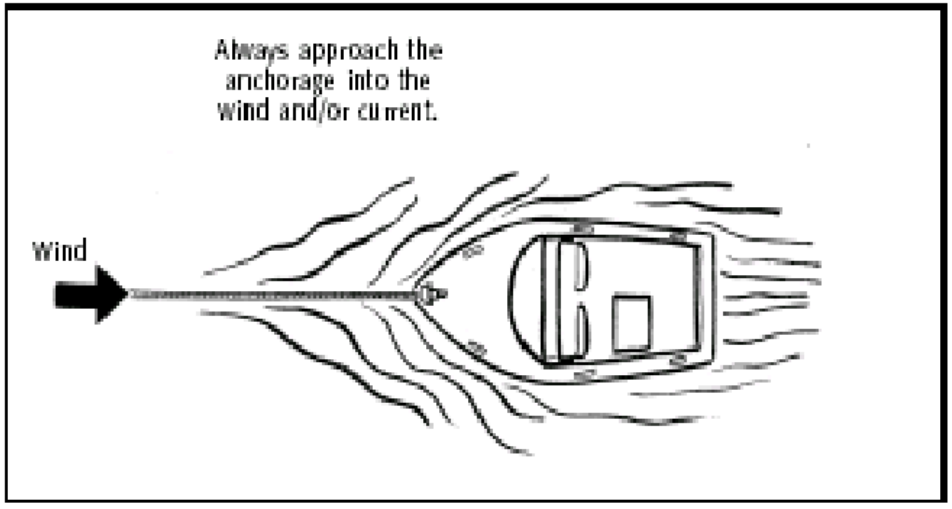


Figure 9.19: Approaching an anchorage

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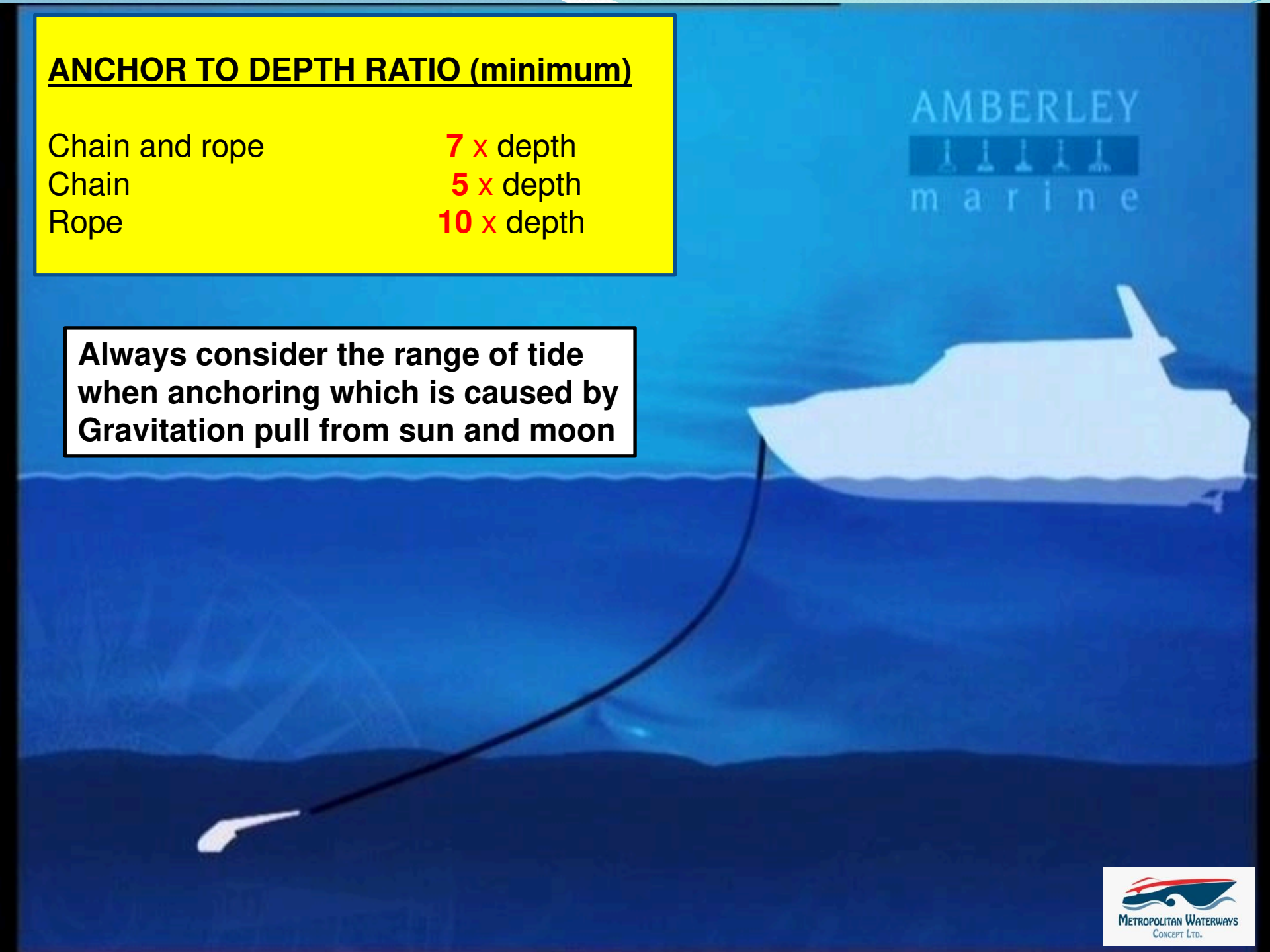
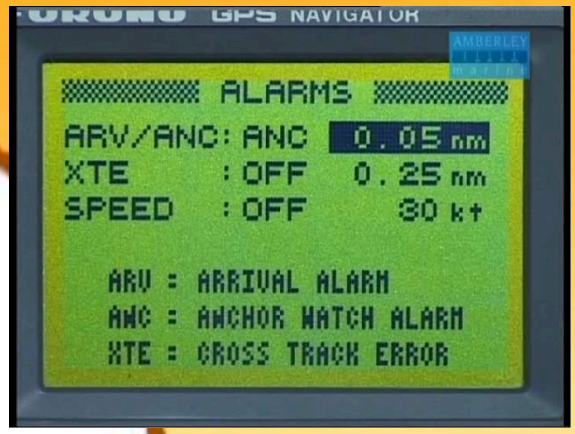
ANCHOR TO DEPTH RATIO (minimum)

Chain and rope	7 x depth
Chain	5 x depth
Rope	10 x depth

Always consider the range of tide when anchoring which is caused by Gravitation pull from sun and moon



METROPOLITAN WATERWAYS
CONCEPT LTD.



18:30 = 94º
19.00 = 93º
20.00 = 94º

1- Take a bearing of a charted object.
2- Line up a transit with fixed objects.
3- Using the GPS anchor drift alarm

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Anchor ball displayed while at anchor during daytime.

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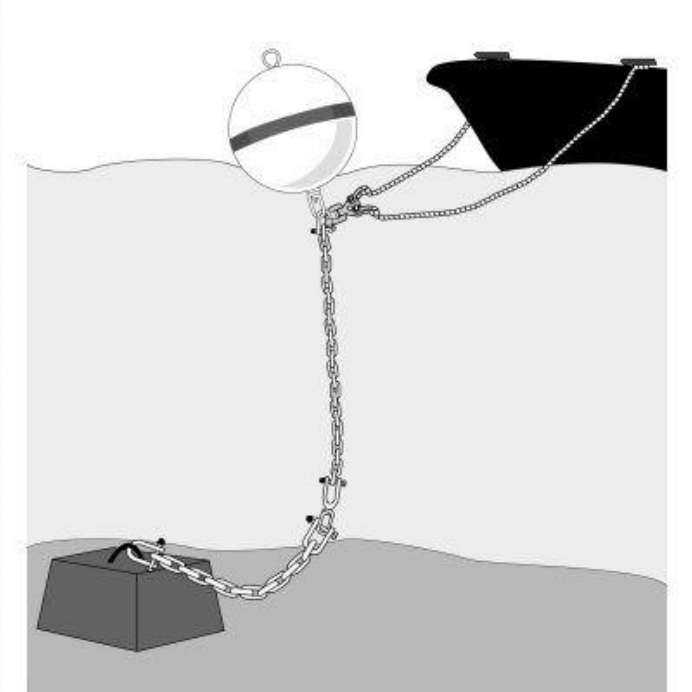
Mooring Buoy

When picking up a mooring buoy for anchoring . It is best to approach with the wind from ahead.



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6
NAUTICAL TERMINOLOGY

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Nautical Terminology

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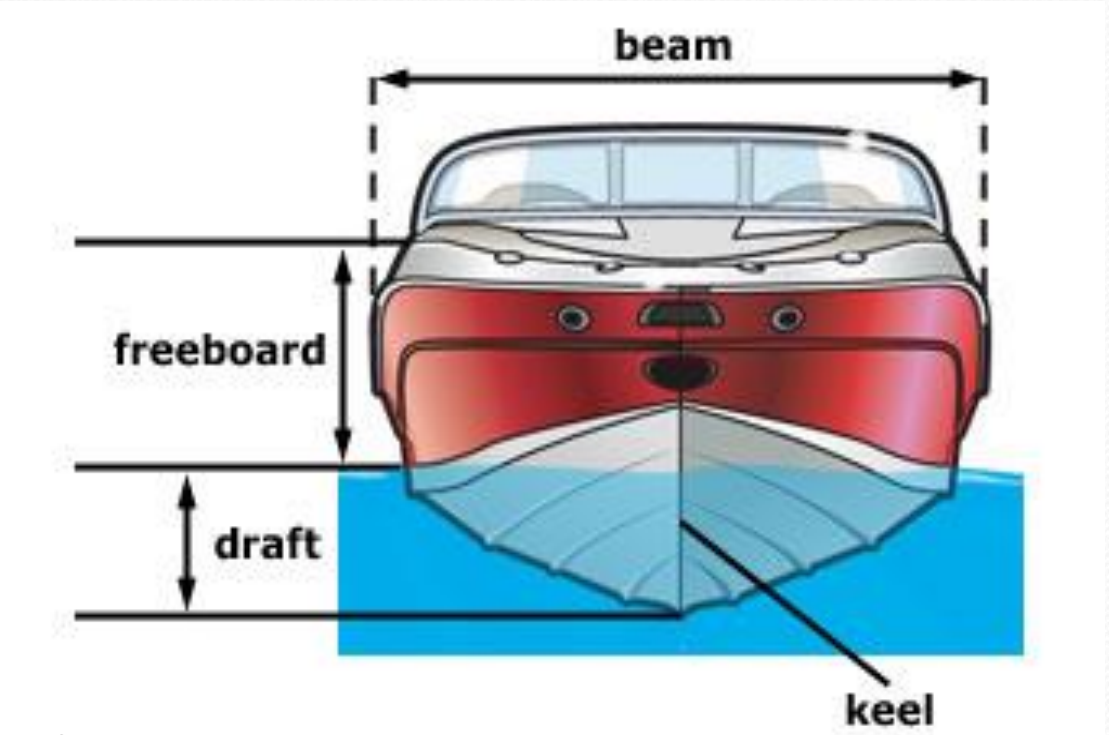
Nautical terminology continued..

L.O.A : Length Overall



Beam: the width of the boat from its widest point.
Freeboard: the distance from waterline to upper deck.
Water line: where the surface of the water reaches on the hull.
Draft: the vertical distance from the keel to waterline.

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There are 2 main types of Hulls

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7
BOAT HANDLING UNDER POWER

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Boat handling under power

- All done on the practical day.
- Steering by compass
- Manoeuvering
- Parking / mooring
- M.O.B.
- Vessel check

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8
MAN OVERBOARD PROCEDURE

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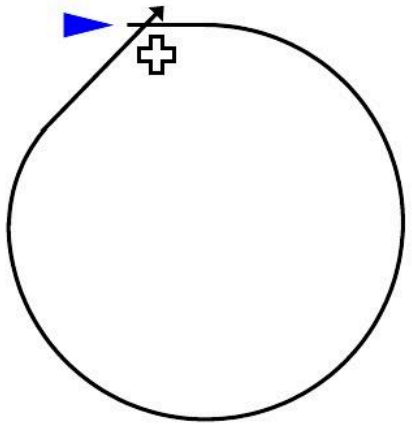
Saving man overboard

Williamson Turn

Most effective technique to save for a power driven vessel to retrieve a man overboard that has **not** been immediately seen.

Anderson Turn



- Primary use:
  - used by destroyers, cruisers, etc…ships that have considerable power available and tight turning characteristics
  - **during good visibility.**

The vessel should approach the victim from it's downwind and avoid sudden movement

Mild hypothermia

A patient suffering from mild hypothermia may be conscious and alert, yet shivering and displaying slightly impaired coordination .

TREATMENT

- Removed person from the elements (wind, water)
- Remove wet clothes, dry person, place in dry clothes.
- Cover with warm blankets.
- Give warm drinks, **NOT ALCOHOL**
- Encourage movement.

9
ROPES & ROPEWORK

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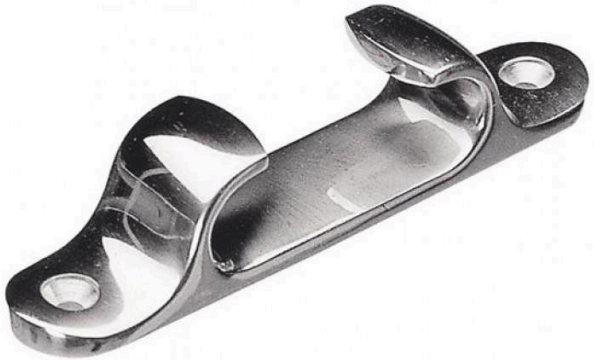
Cleat: a T-shaped piece of metal or wood on a boat or ship, to which ropes are attached.

Fairlead: a fitting with smooth edges, designed to guide the lines that have been secured to inboard cleats, preventing damage or scratching to the line or other components.



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Coiling a Line

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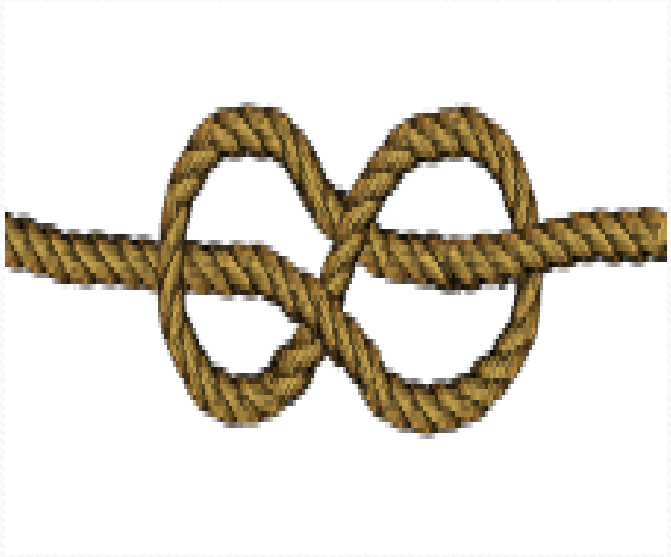
Figure of eight



Stopper knot used to prevent the end of a rope running out through a block or fairlead.

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Round Turn and Two Half Hitches

Mainly used for securing to a post or ring.

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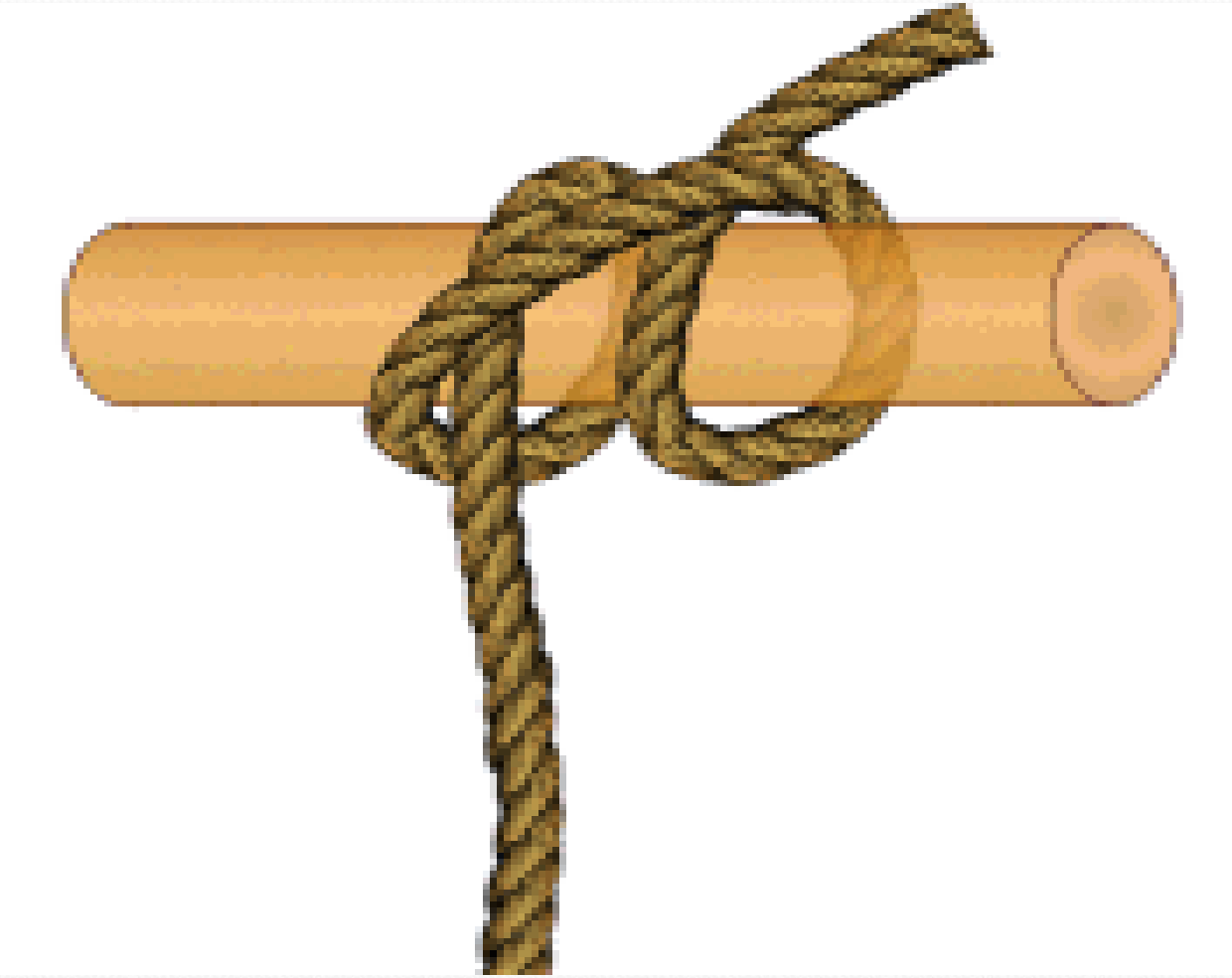
Clove Hitches



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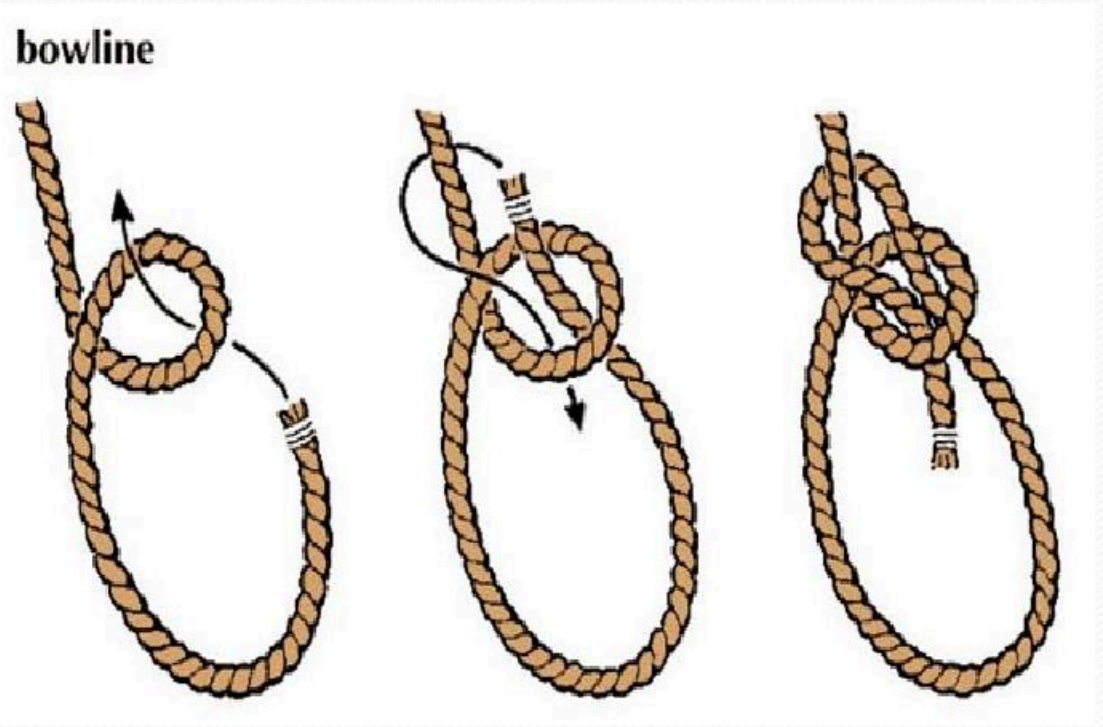
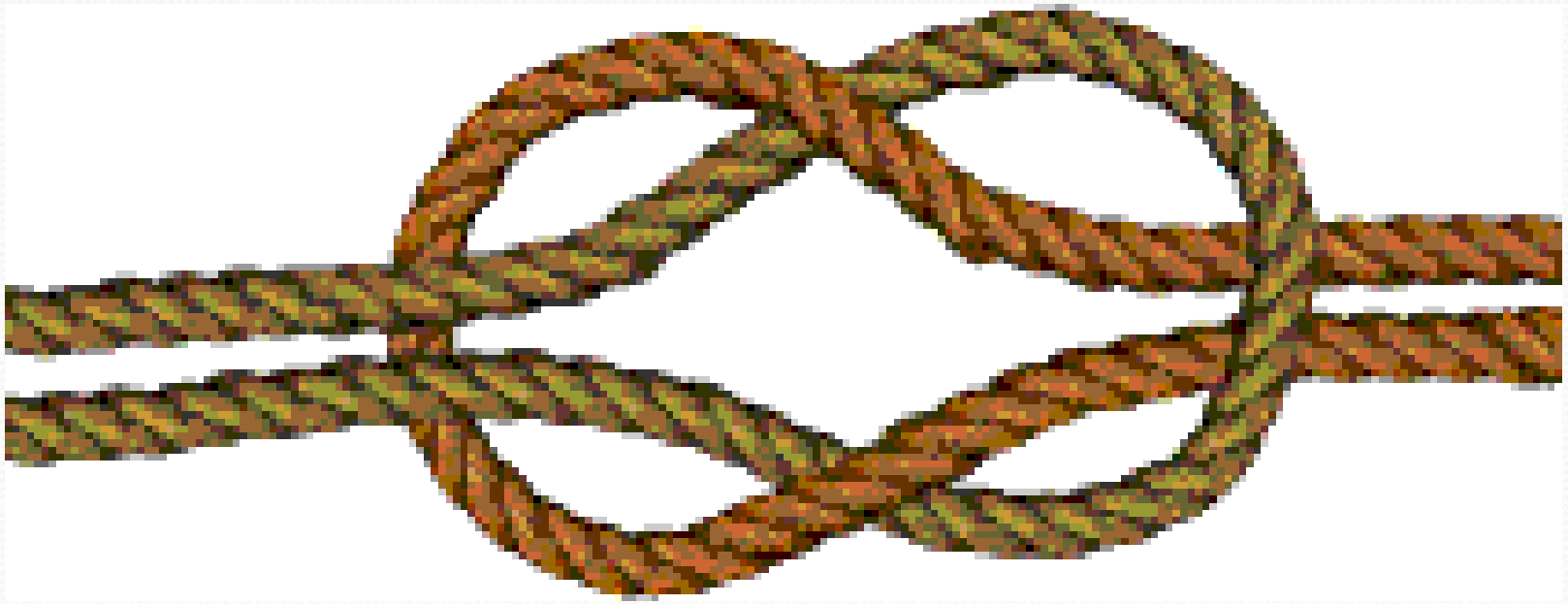
Bowline



Bowline is used to create a fixed loop for a multitude of uses!!

Reef Knot



Mainly for fastening reef ties when shortening sail. Or Joining two ropes with same diameter

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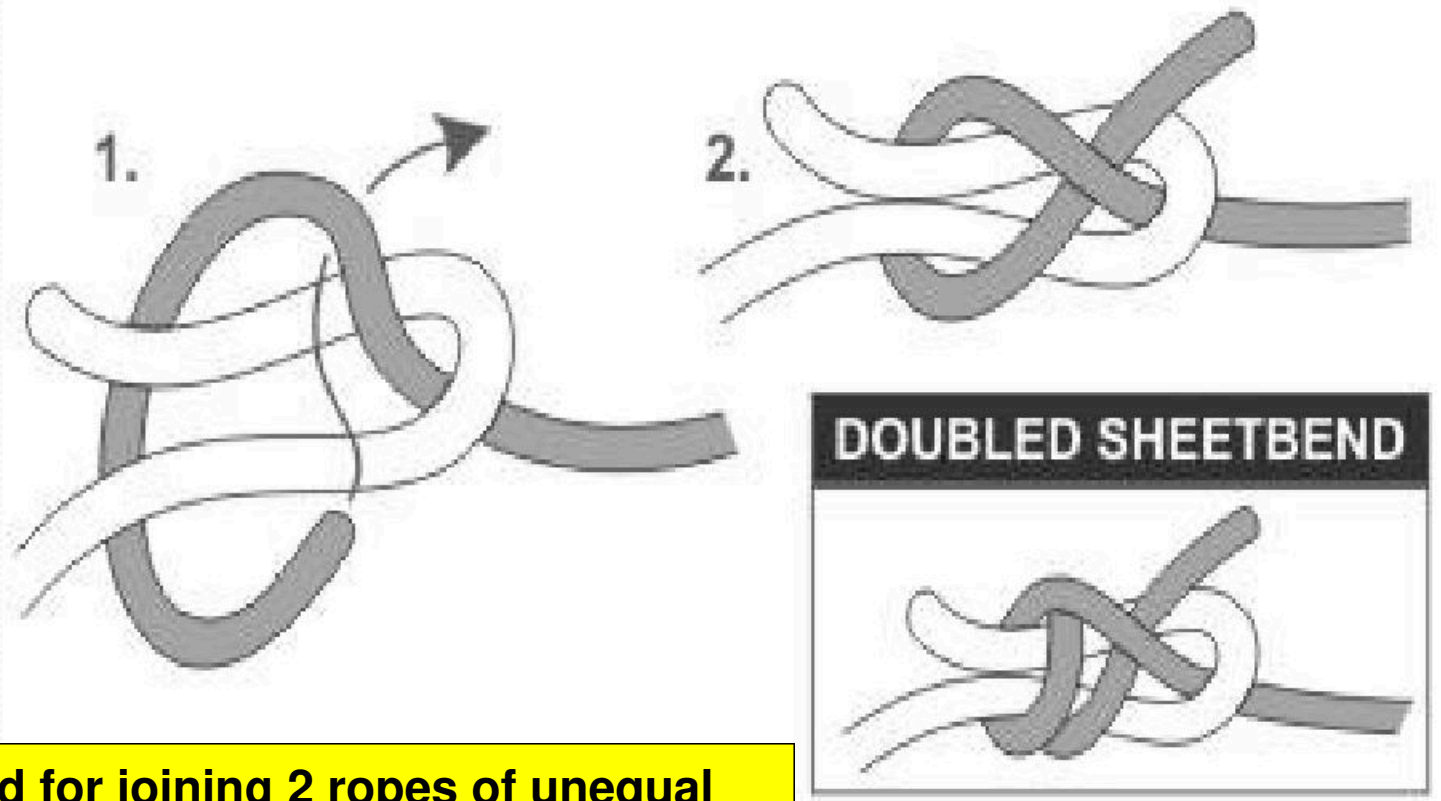
Double sheet bend



Used for joining 2 ropes of unequal diameter together

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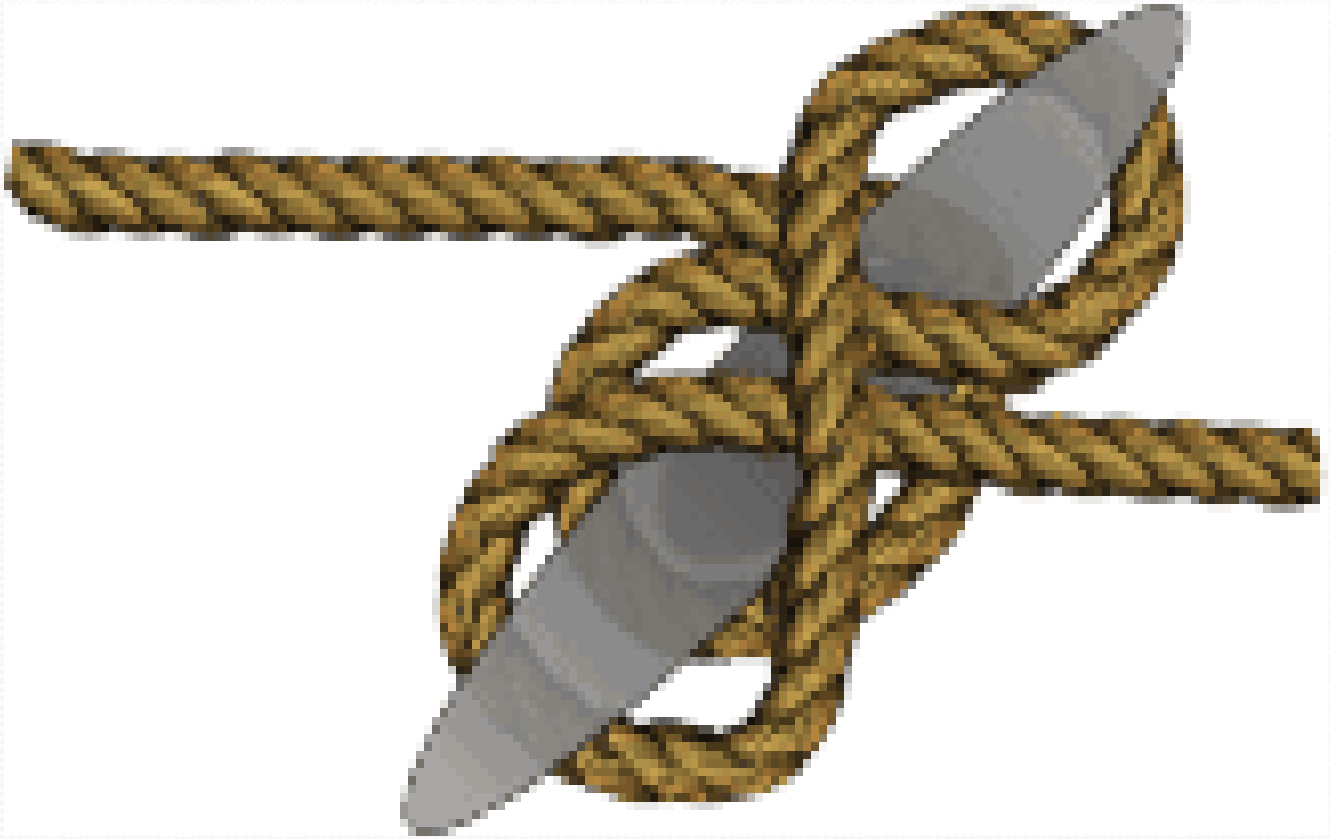
Securing to a Cleat



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10
BASIC RULES OF THE ROAD

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International Regulations For Preventing Collisions At Sea, 1972 (COLREGS)

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The Collision Regulations were agreed by a conference of the International Maritime Organization (IMO).

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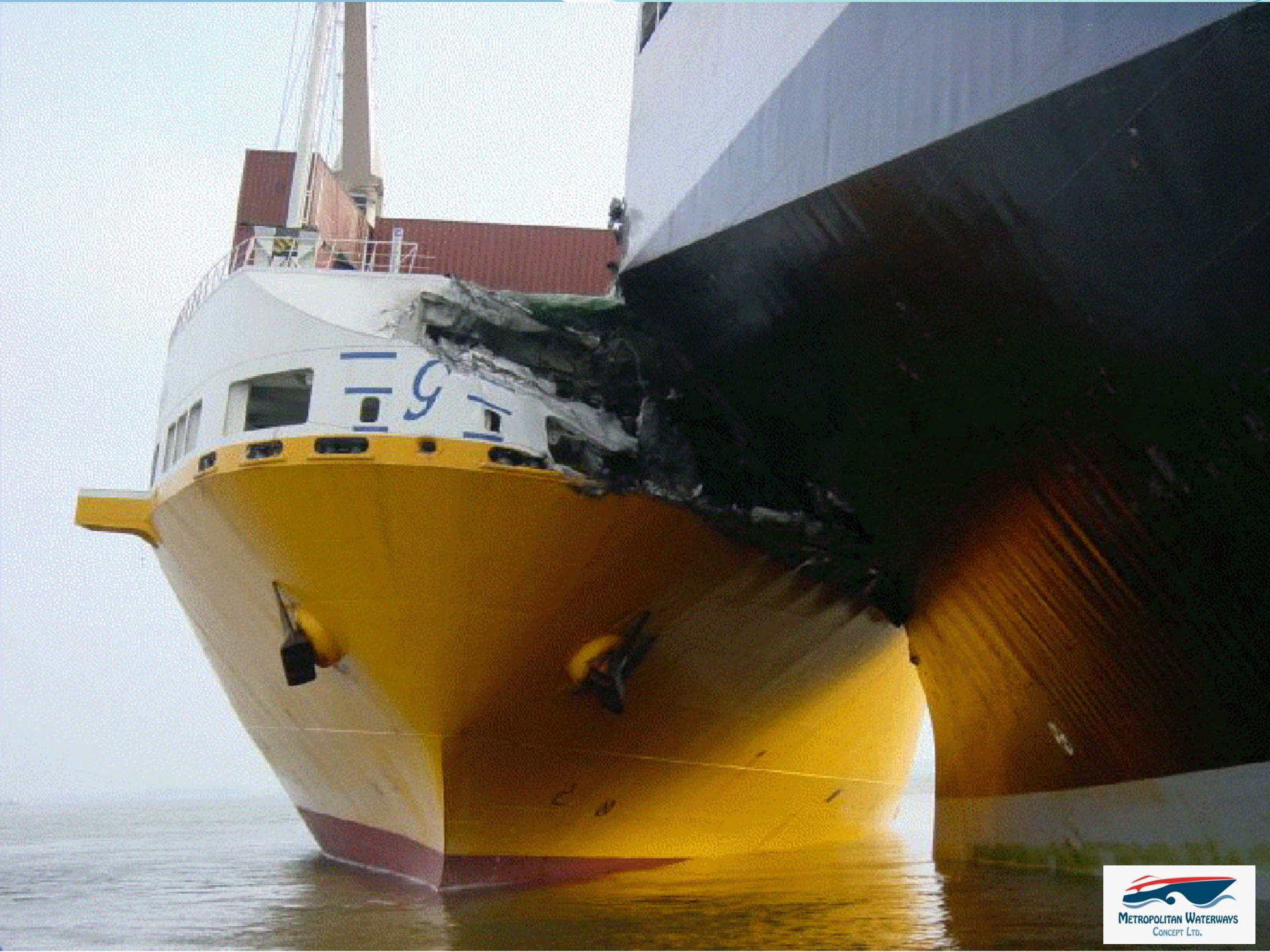
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Keeping a lookout

A good lookout, through sight and sound, must be kept at all times.

The master is responsible for keeping a lookout for dangers. Be aware of the boating environment, especially in bad weather, restricted visibility and darkness.

Safe Speed

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Safe Speed:

A safe speed is one at which the vessel can be stopped in time to avoid any danger which arises suddenly. In judging a safe speed the master must consider a number of issues including:

1- Sea state (Wind, Waves, Current)
2- Traffic density
3- Visibility
4- Manoeuvrability of the Vessel
5- Background / shore light
6- Draught in relation to depth

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Avoiding Collisions:

All masters (drivers) must be aware of the International Regulations for Preventing Collisions at Sea. A summary of these rules is given in this section.

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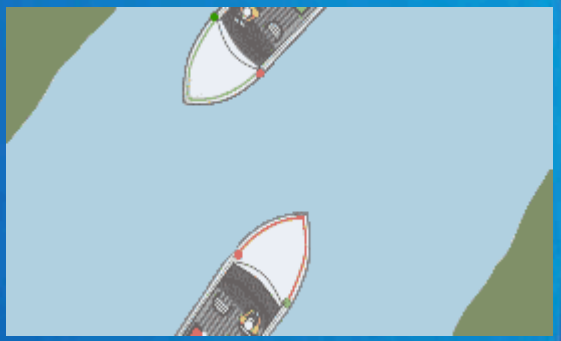
Rivers and channels:

A vessel must always be navigated on the starboard side (right) of a river or channel.

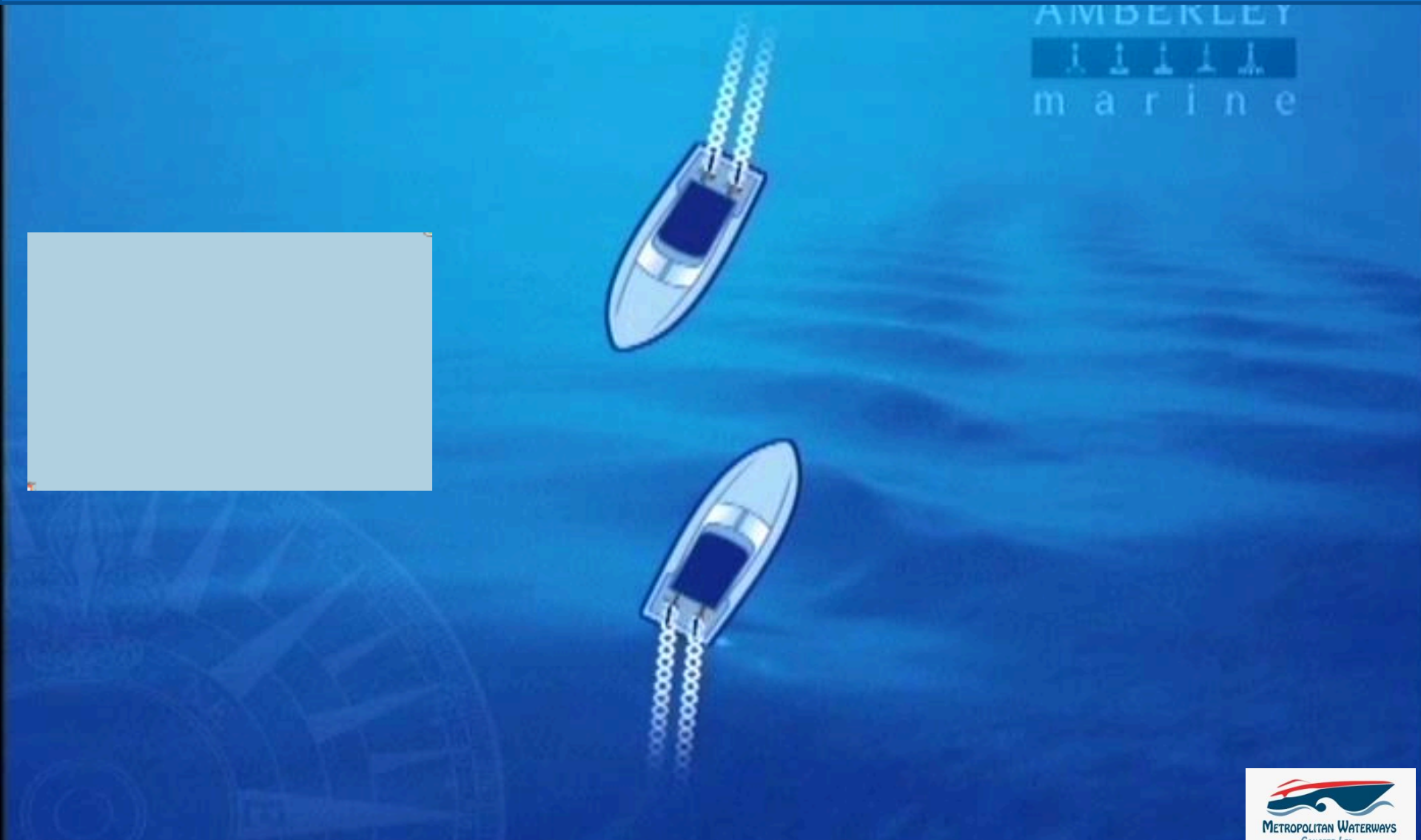


Power driven vessel navigating in narrow channel:
1- Do Not anchor in the channel.
2- Give way to larger vessel which can navigate only in the middle of channel (e.g. constrained by draft)

METROPOLITAN WATERWAYS

Approaching head on to another boat:

Each boat alters course to starboard (right) and passes port to port (left). Always assume this situation exists.



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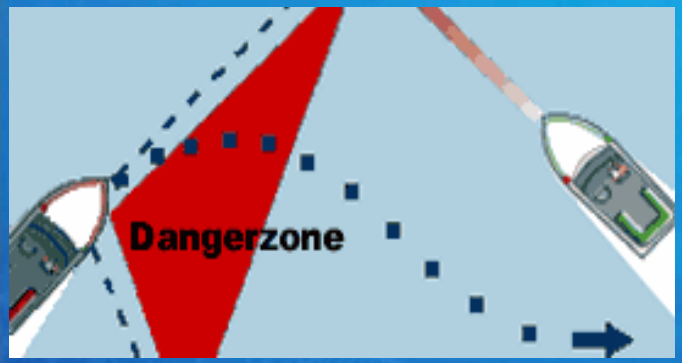
Power-driven boats crossing:

A boat approaching from your starboard (right) side has right of way. If you are approaching another boat from its starboard side, you have right of way. However, if the other boat does not give way, you must take action to avoid a collision.



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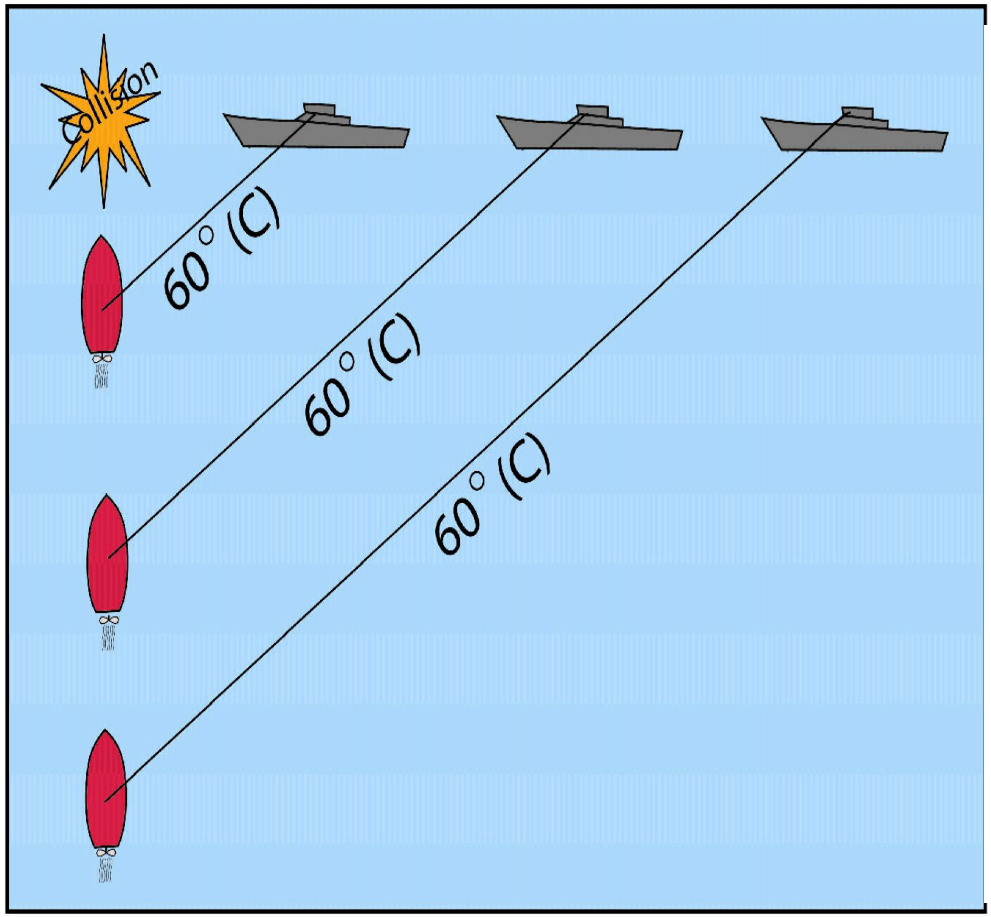

Take a bearing of the approaching vessel. If it does not appreciably change risk of collision exists

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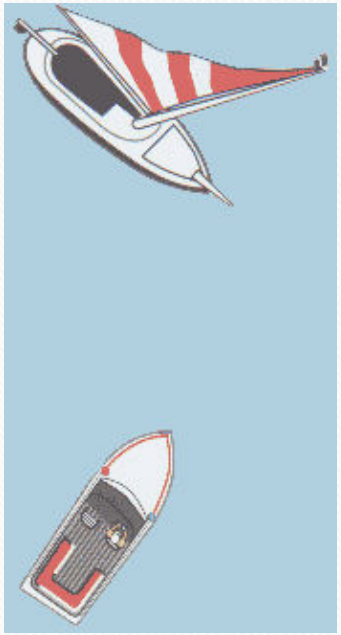
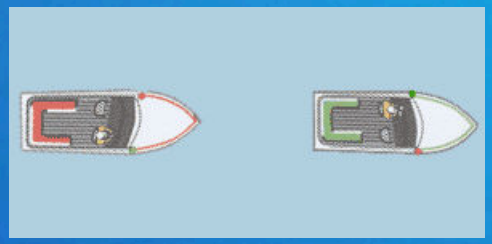
Sailing boats and power-driven boats:

Power usually gives way to sail. However, this does not always apply. Larger vessels, such as ferries or container ships, have difficulty manoeuvring due to their size. Masters of other boats, including sail boats, should always apply common sense and seamanship by giving larger vessels a wide berth.



Overtaking:

If you are overtaking a boat, you can do so to either side of the boat you wish to pass. However, you must keep well clear of the boat you are overtaking. This applies to both sail and power boats.



A vessel is deemed to be overtaking when it approaches a vessel more than 22.5 degrees abaft the beam(sector of stern light).

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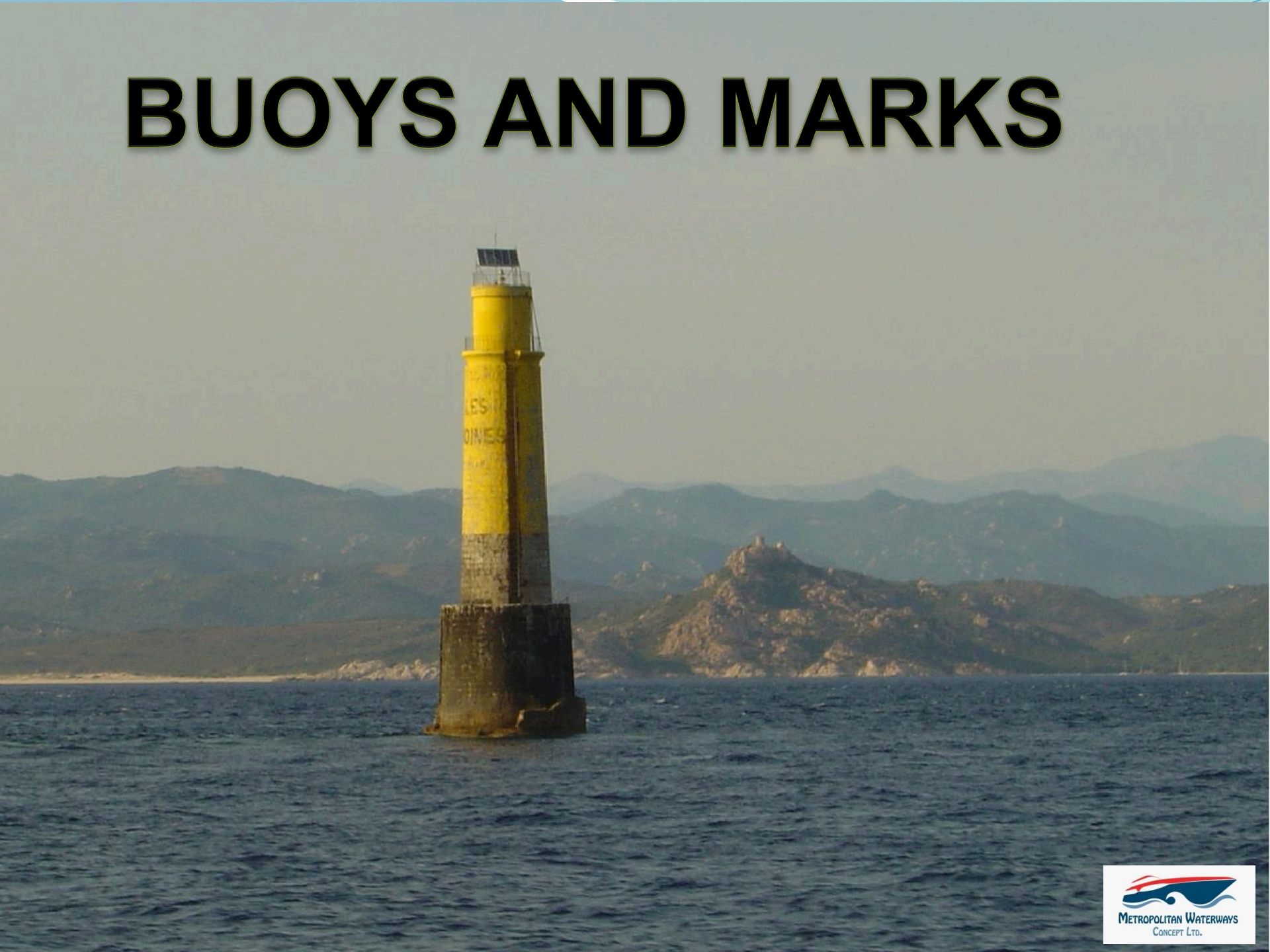
BUOYS AND MARKS



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To help ensure safety and to clearly mark out obstacles and hazards that exist both in and under the water there exists and internationally agreed sets of marks and lights.

These are developed with the assistance of the "International Association of Lighthouse Authorities".
(IALA)

There are two major systems

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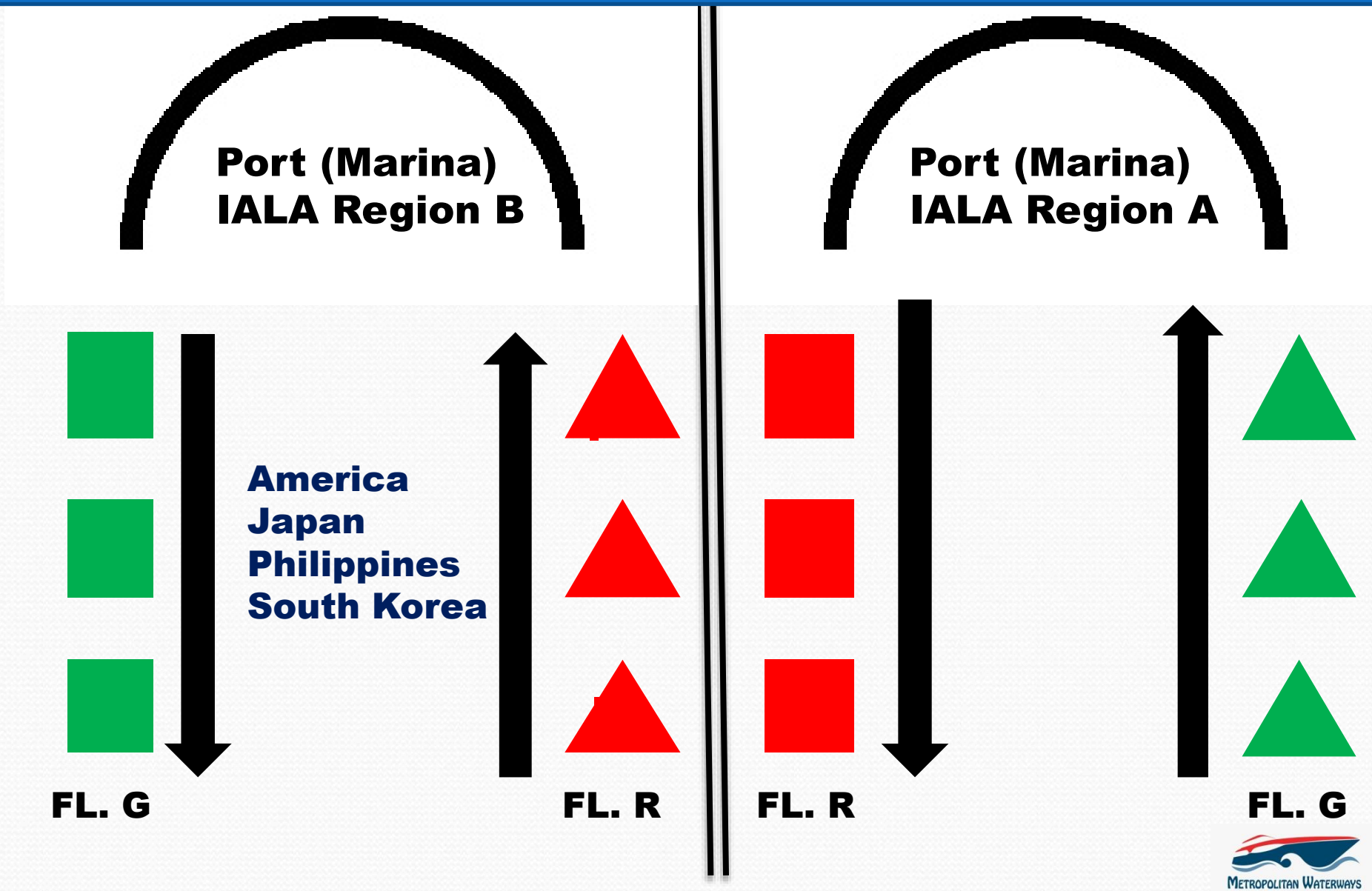
Channel Lateral Marks



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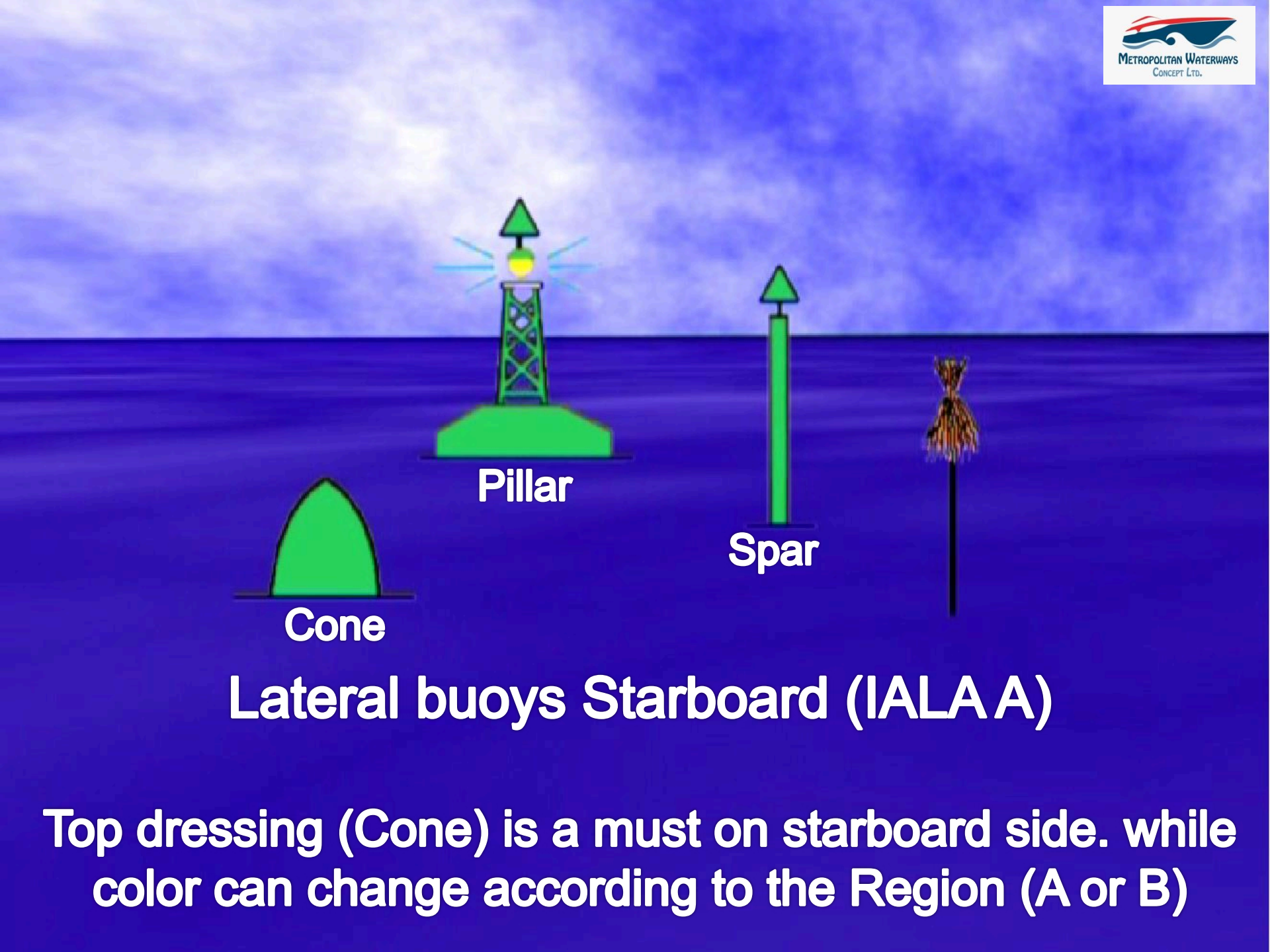
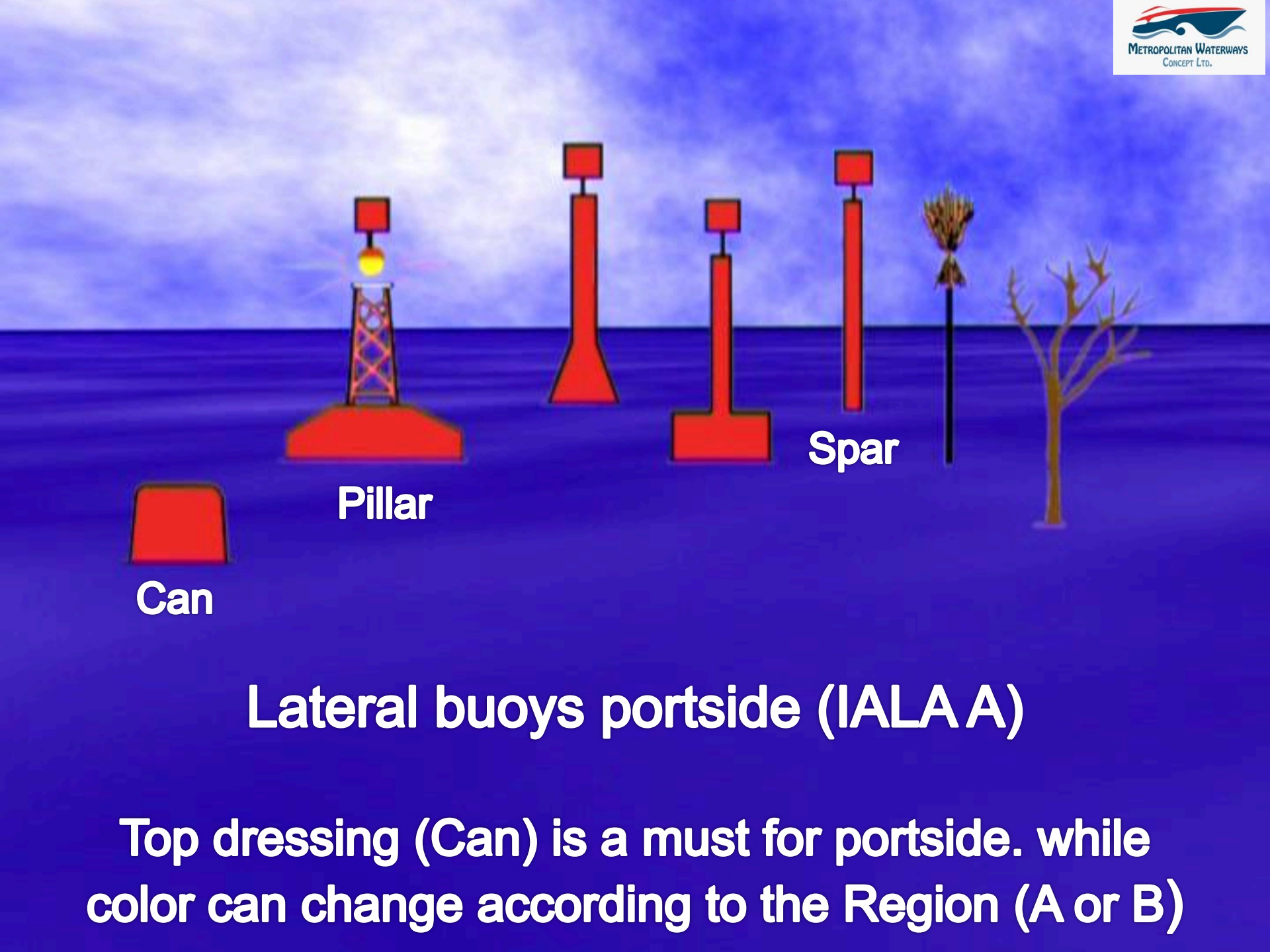


Lateral buoys Starboard (IALA A)

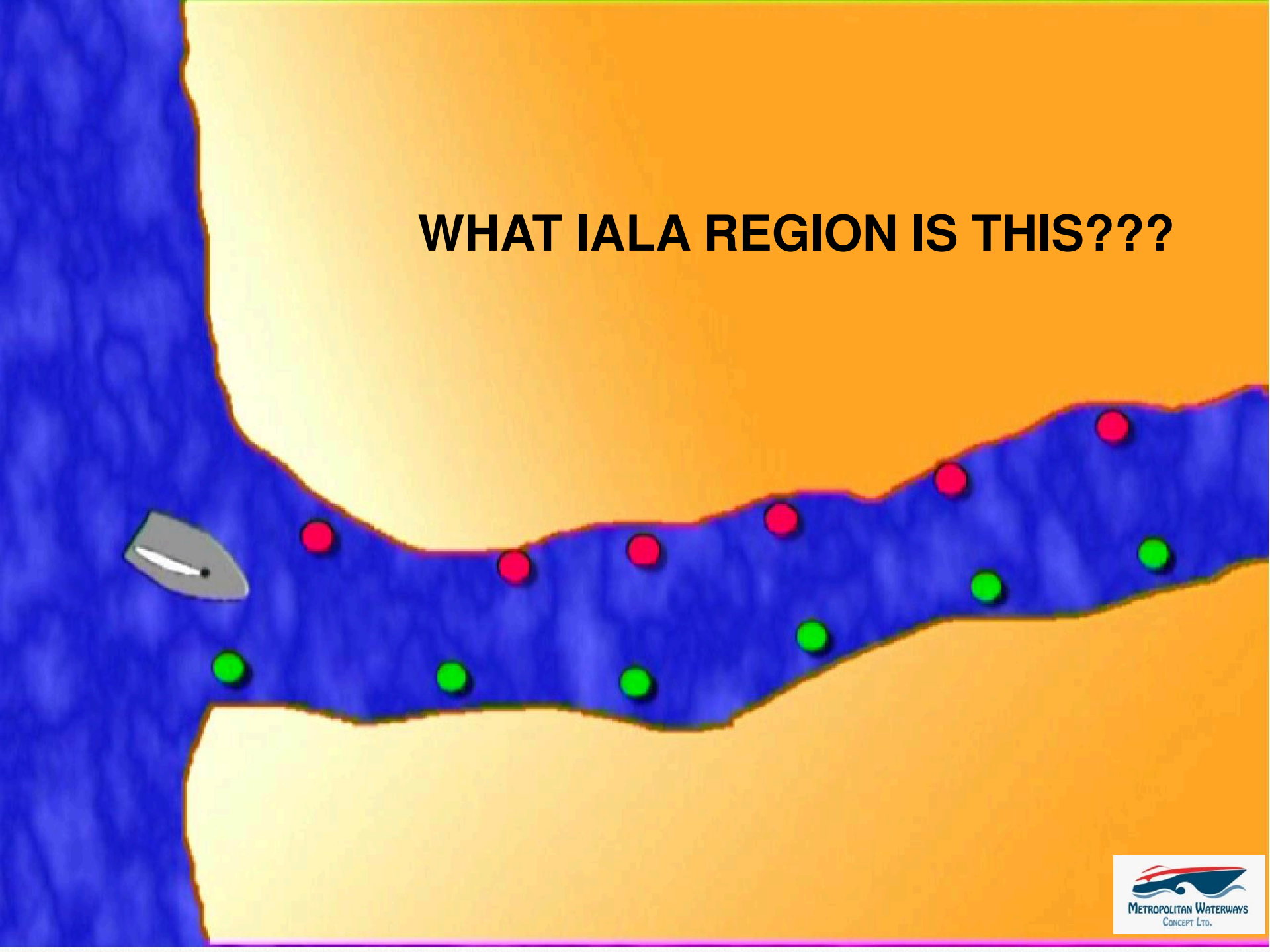
Top dressing (Cone) is a must on starboard side. while color can change according to the Region (A or B)



Lateral buoys portside (IALA A)

Top dressing (Can) is a must for portside. while color can change according to the Region (A or B)

WHAT IALA REGION IS THIS???



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CARDINAL MARKS
IALA (A&B)

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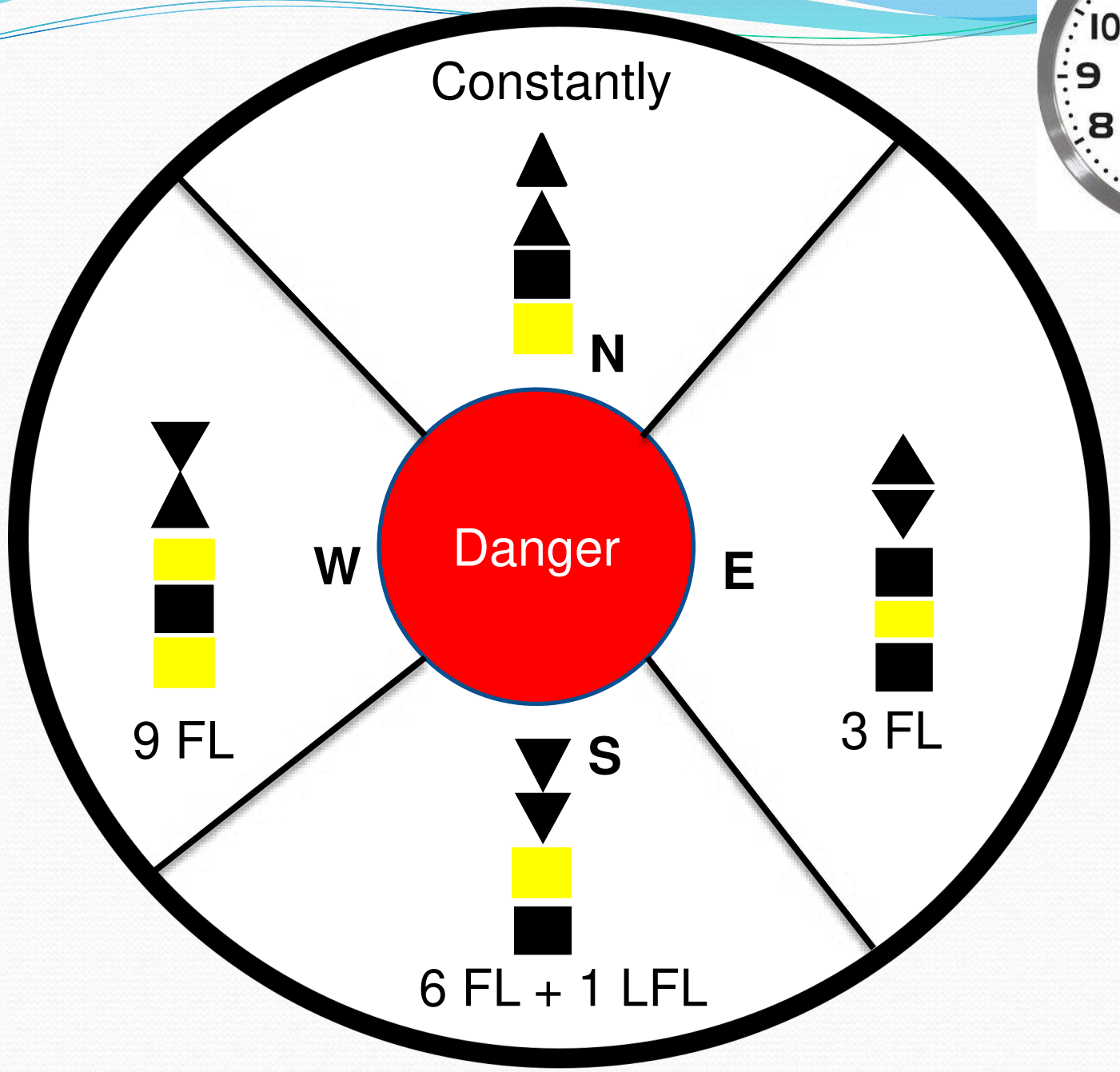

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Special Mark

Used to Mark:

1- Restricted areas / Exercise areas

2- Spoil ground

3- Shallow areas

4- Pipelines

Night: Yellow flashes

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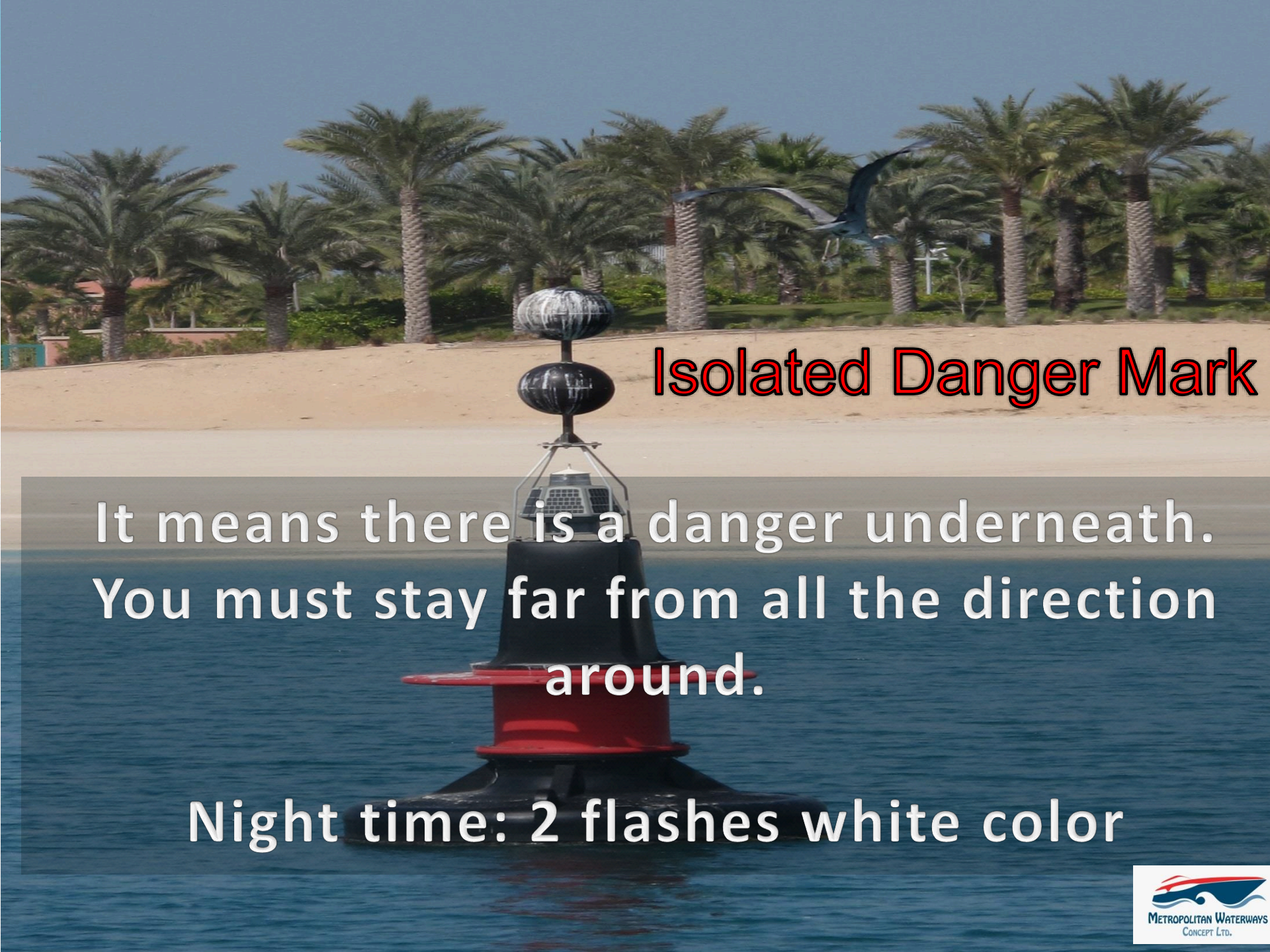
Isolated Danger Mark
It means there is a danger underneath. You must stay far from all the direction around.
Night time: 2 flashes white color
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Safe Water Mark

It is available in the beginning of the channel to mark the safe navigable water

Night : Long flash white color

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Emergency Wreck buoy

Indicating that there is a new wreck and the buoy is available temporarily
Flashing Blue & Yellow at night

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Introduction to lights

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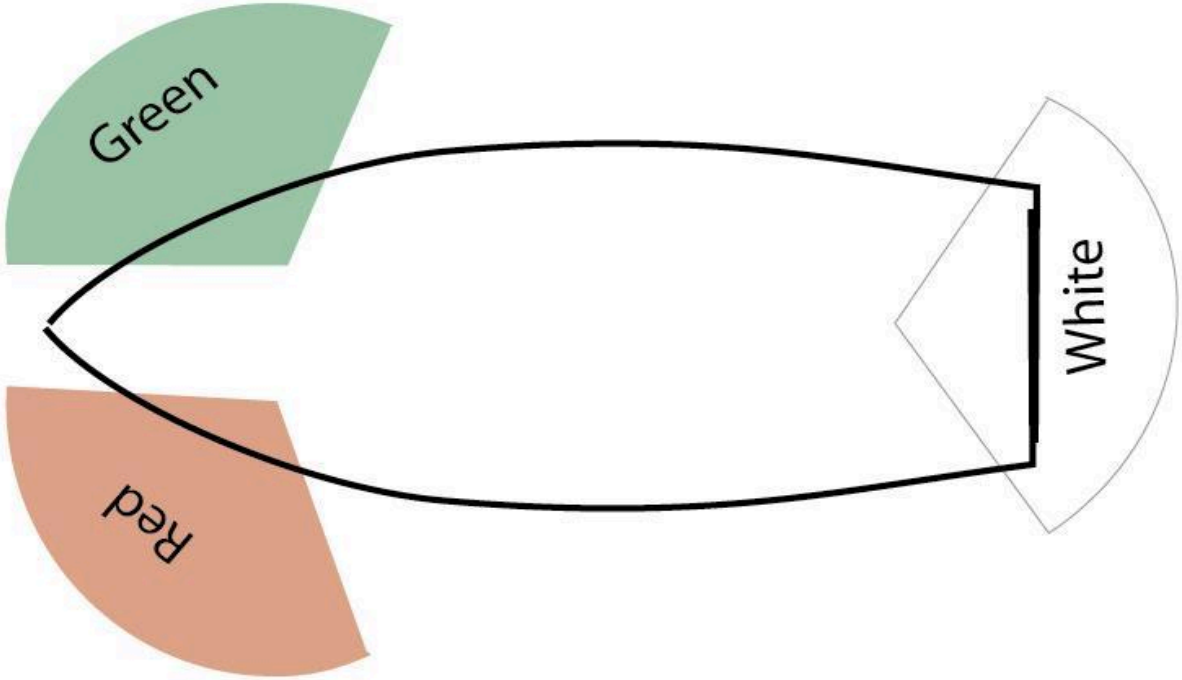
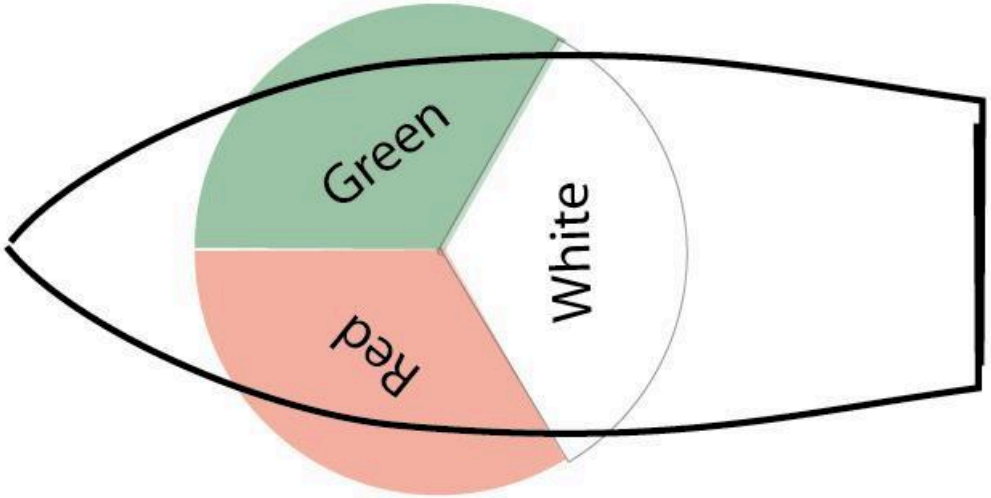
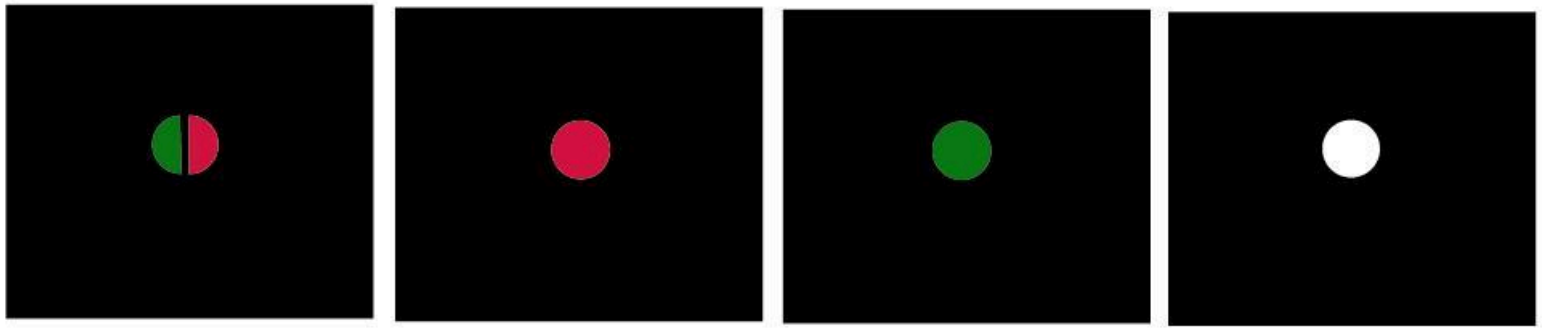


Sidelights and stern light of vessel underway

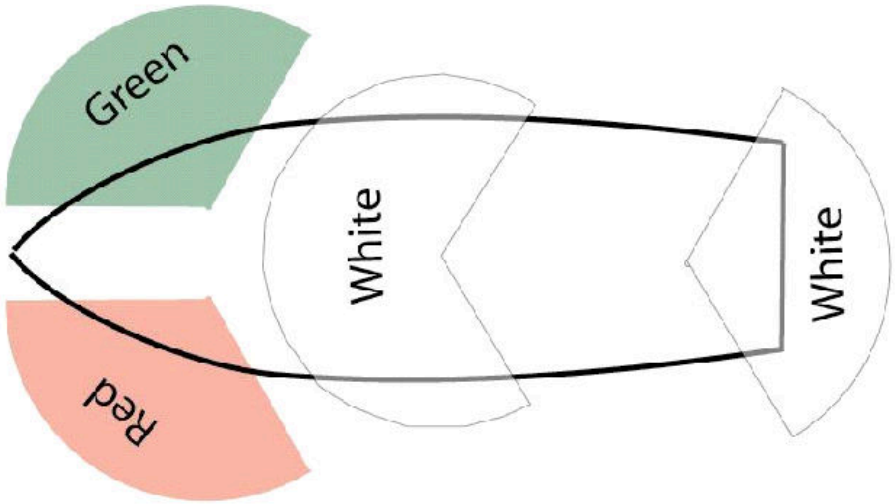
Seen From:	*Ahead*	*Port*	*Starboard*	*Astern*



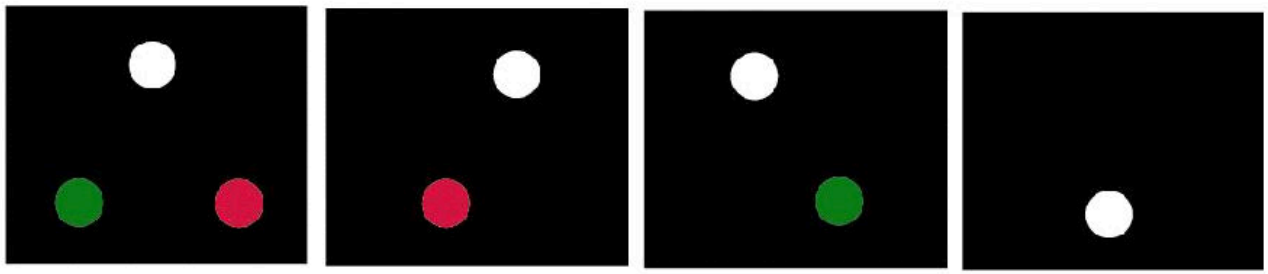
Sailing vessels less than 20 meters may use a combined side and stern light



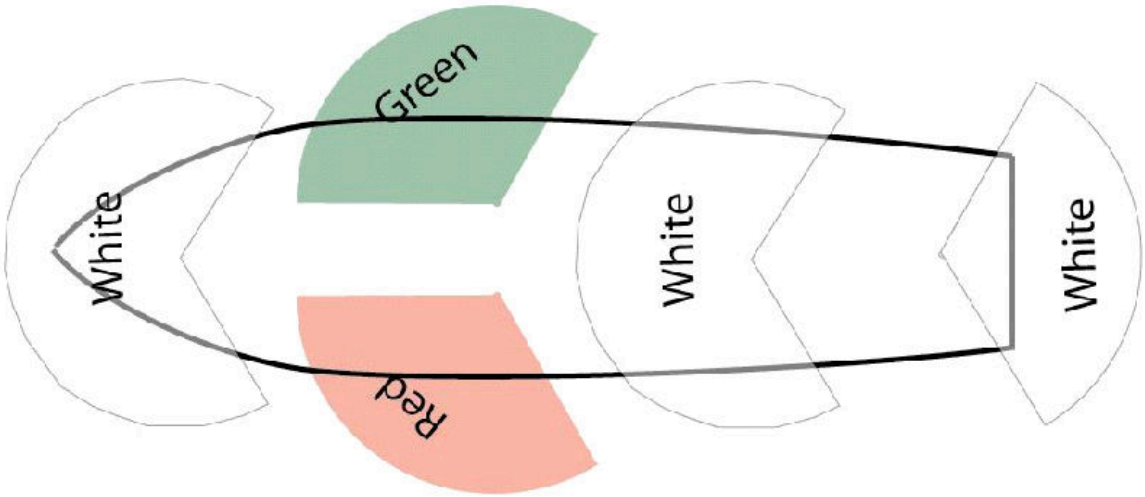
Seen From: *Ahead* *Port* *Starboard* *Astern*



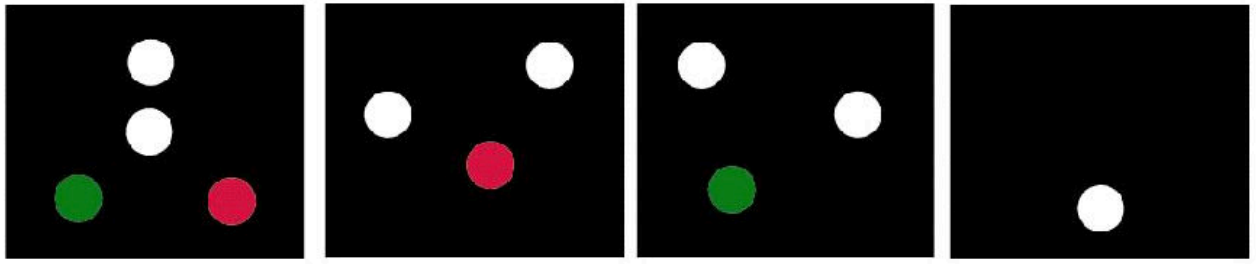
Power driven vessel underway, less than 50 meters in length



Seen From:	Ahead	Port	Starboard	Astern



Power driven vessel underway, greater than 50 meters in length



Seen From:	Ahead	Port	Starboard	Astern

Motorboats of less than 12 meters in length.

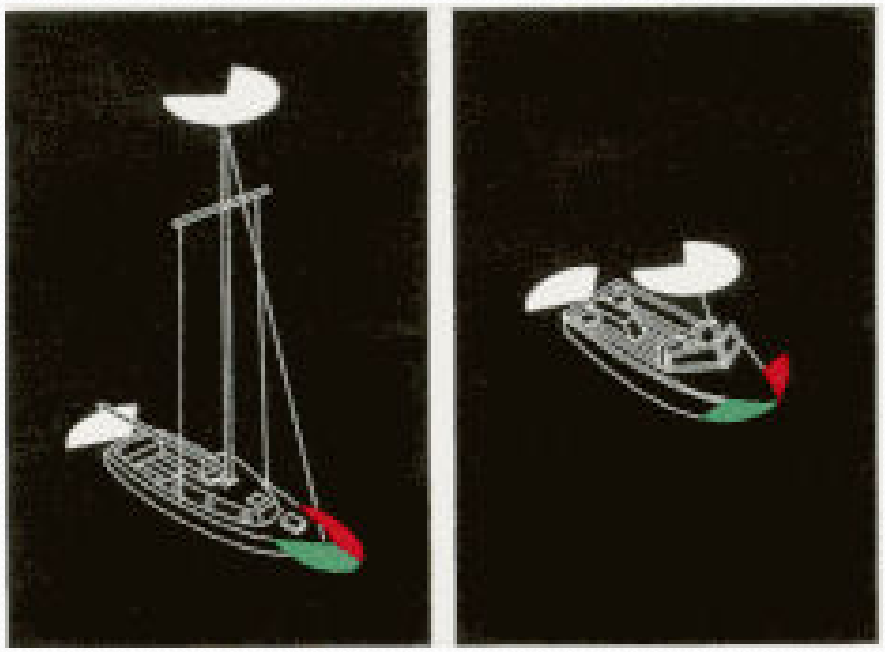


Figure 1

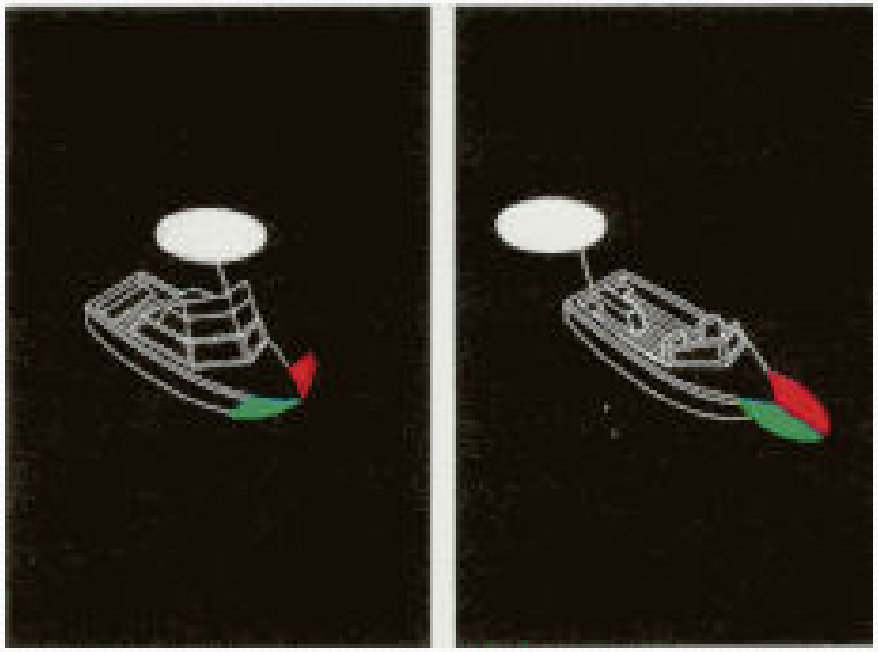


Figure 2

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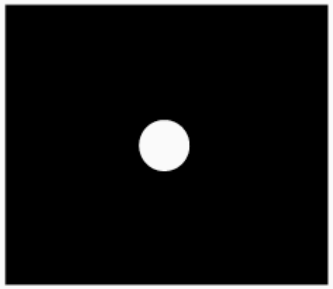
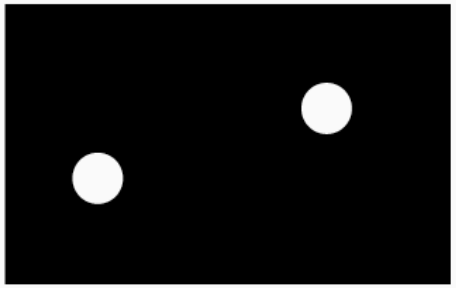
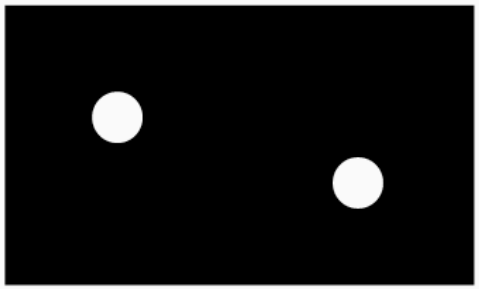
Vessels at Anchor



< than 50 m



> than 50 m, side, starboard



> than 50 m, port side

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Sound Signals

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Nautica
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Concept Ltd.

= 1 second horn blast

= 4 to 6 second horn blast

Morse 'U'

Means "You are running into danger":
This signal is often used by oil rigs, etc.

Sound Signals In Poor Visibility

Sound Signal		Every
	Power underway, making way	2 min
	Power underway, not making way	2 min
	Vessel sailing; vessel fishing; restricted in ability to maneuvre; constrained by draft; not under command; vessel towing or pushing	2 min
	Last manned vessel of tow	2 min
	Warning from vessel at anchor	when required
	Pilot vessel on duty	
5 secs	Vessel at anchor: Rapid bell for 5 secs. (+ gong aft for 5 s if vessel > 100 m)	1 min
1 2 3 — — 1 2 3 5 secs	Vessel aground As for at anchor + 3 strokes on bell before & after rapid bell rings	

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■ = 1 second horn blast

▬ = 4 to 6 second horn blast

Morse 'U' ■ ■ ▬

Means "You are running into danger":
This signal is often used by oil rigs, etc.

Maneuvering and Warning Signals For Vessels In Sight Of Each Other

■	I am altering course to starboard
■ ■	I am altering course to port
■ ■ ■	I am operating astern propulsion
■ ■ ■ ■ ■ (Or More)	I do not understand your intentions! I doubt you are taking sufficient or appropriate action to avoid collision
▬ ▬ ■	I intend to overtake on your starboard side
▬ ▬ ■ ■	I intend to overtake on your port side
▬ ■ ▬ ■	Agreement by overtaken vessel
▬	Approaching blind bend in channel
▬	Reply from vessel on other side of bend

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What is Meteorology?

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The result of obtaining a weather forecast for the duration of the proposed trip will dictate to the mariner whether to sail or not to sail.

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Sources of Weather Information

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Sources of weather

- News paper
- TV
- Radio
- Coast Guard
- Marina Offices
- VHF Radio
- Weather fax

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Internet:
www.meteosail.com
www.windguru.cz
www.wunderground.com

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United Arab Emirates - Dubai

[Options]

GFS 15.05.2007 00 UTC	Tu 15. 04 h	Tu 15. 07 h	Tu 15. 10 h	Tu 15. 13 h	Tu 15. 16 h	Tu 15. 19 h	Tu 15. 22 h	We 16. 04 h	We 16. 07 h	We 16. 10 h	We 16. 13 h	We 16. 16 h	We 16. 19 h	We 16. 22 h	Th 17. 04 h	Th 17. 07 h	Th 17. 10 h	Th 17. 13 h	Th 17. 16 h	Th 17. 19 h	Th 17. 22 h	Fr 18. 04 h	Fr 18. 07 h	Fr 18. 10 h	Fr 18. 13 h	Fr 18. 16 h	Fr 18. 19 h
Wind speed (Bft)	2	4	4	4	4	3	3	4	2	2	3	6	4	3	2	3	4	4	6	5	3	3	2	4	4	3	3
Wind direction	↖	↑	↗	→	→	→	→	→	→	↗	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Temperature (°C)	29	31	36	38	36	33	30	30	32	36	40	35	32	30	29	32	36	37	34	32	31	29	31	36	37	36	32
Cloud cover (%)	-	0	0	0	0	1	11	22	5	6	7	4	3	38	8	1	1	2	3	17	20	7	4	2	0	1	0
Rain (mm/3h)	-																										
Windguru rating		★	★	★	★			★				★★★	★				★	★	★★★	★★				★	★	★	★

GFS 15.05.2007 00 UTC	Fr 18. 22 h	Sa 19. 04 h	Sa 19. 07 h	Sa 19. 10 h	Sa 19. 13 h	Sa 19. 16 h	Sa 19. 19 h	Sa 19. 22 h	Su 20. 04 h	Su 20. 07 h	Su 20. 10 h	Su 20. 13 h	Su 20. 16 h	Su 20. 19 h	Su 20. 22 h	Mo 21. 04 h	Mo 21. 07 h	Mo 21. 10 h	Mo 21. 13 h	Mo 21. 16 h	Mo 21. 19 h	Mo 21. 22 h	Tu 22. 04 h	Tu 22. 07 h	Tu 22. 10 h	Tu 22. 13 h	Tu 22. 16 h
Wind speed (Bft)	2	2	3	3	4	4	3	3	2	3	2	3	4	3	2	2	2	3	4	4	4	2	1	2	2	4	4
Wind direction	→	→	↗	→	→	→	→	→	↗	↗	↗	→	→	→	→	↖	↗	→	→	→	→	→	↑	↑	↗	→	→
Temperature (°C)	29	28	30	35	36	35	31	28	28	30	35	37	36	32	29	28	32	36	37	36	31	28	26	30	35	37	35
Cloud cover (%)	0	0	0	0	0	0	0	0	0	5	5	6	5	0	0	0	0	0	0	0	0	0	3	0	0	0	0
Rain (mm/3h)																											
Windguru rating				★	★	★						★	★						★	★★★	★					★	★

[Detail / Map] Lat: **25.25**, Lon: **55.27**, Timezone: **GST** (UTC+4) 5:34 - 18:56 [Archive] [Link]

Navigation

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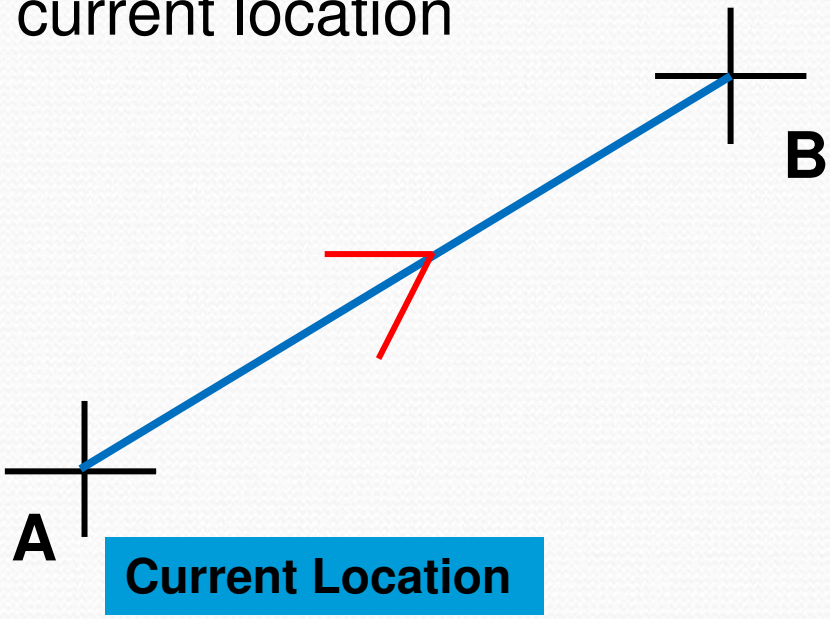
Navigation is a technique to find your way by knowing your current location and destination



You can navigate into a swimming area only if you are involved in rescue operations

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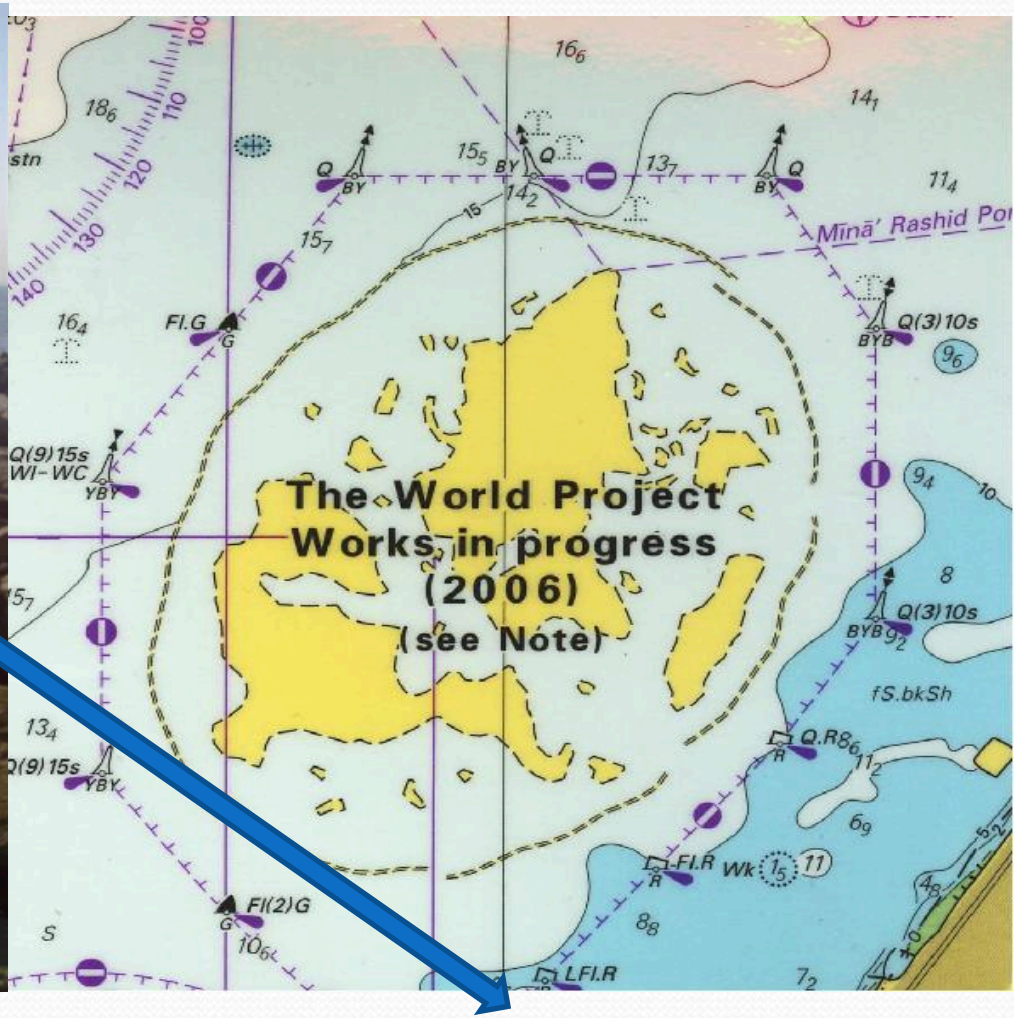

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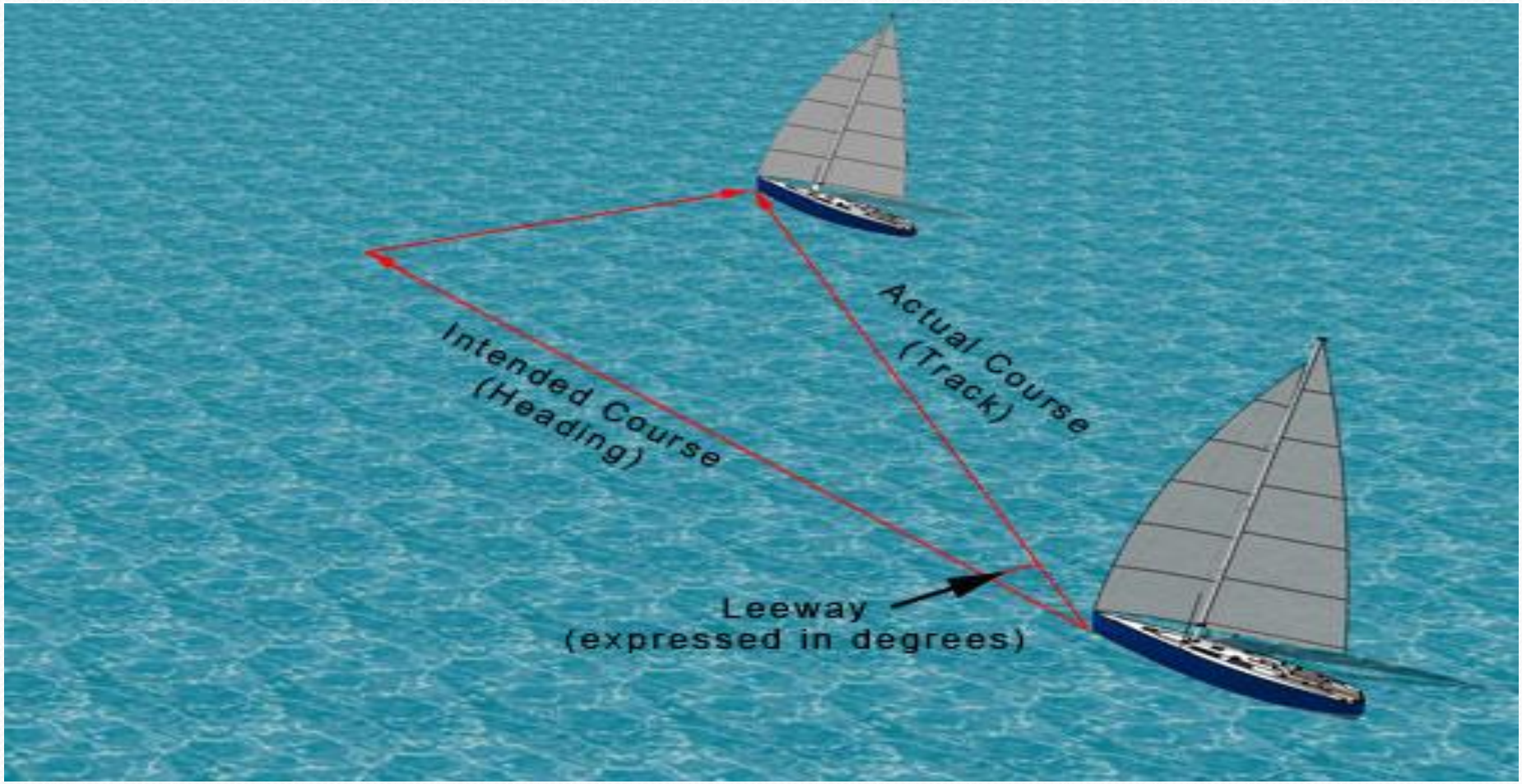
Leeway: is the distance your boat will be pushed sideways when you sail across wind or current.



Boat speed is always measured by **“Knot”**

Distance is always measured by **“Nautical Mile”**

One Nautical Mile = 1852 Meters

One knot = 1 Nautical Mile per hour.

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Marine Pollution

- It is your duty to look after the environment and the marine life.
- Never throw garbage at sea.
- Marine pollution is an offense unless it is essential to save lives.

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Thank you for listening