

**advantage**  
**boating** 

## Section VII: Part C – Seamanship – Aids to Navigation

# Lesson Outline



- Lateral & Cardinal buoyage system
- Special buoys
- Ranges

# Lesson Objectives



- In this lesson you will learn about the different types of buoyage systems including special buoys.
- Similar to signage on roadways to help guide drivers, we have aids to navigation on the water to help guide boaters!

# Introduction



- Seamanship encompasses the knowledge and skill pertaining to the navigation, safety, and maintenance of your vessel.
- Good seamanship and safety go hand in hand!

# Aids to Navigation



- Aids consist of buoys, day beacons, range markers and lighthouses.
- These aids to navigation:
  - Help boaters determine their position & course
  - Warn of dangers or obstructions
  - Indicate the location of the safest or preferred route to take

# Lateral Buoyage System



## Starboardhand Bifurcation Buoy

Keep on **starboard** side when going in to harbour or upstream because top colour is **red**

## Porthand Lateral Buoy (Spar type)

Keep on **port** side when going in to harbour or upstream

## Porthand Lateral Buoy (Can type)

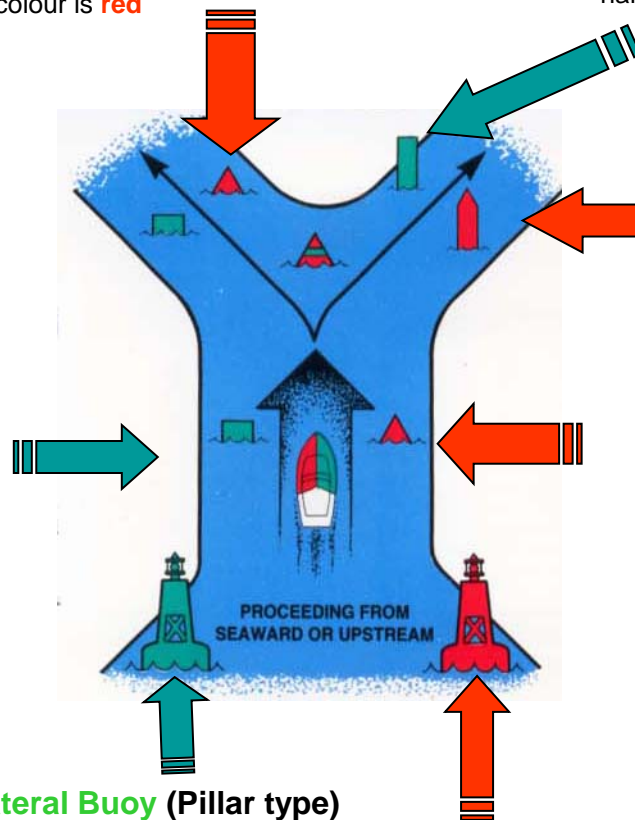
## Starboardhand Lateral Buoy (Spar type)

Keep on **starboard** side when going in to harbour or upstream

## Starboardhand Lateral Buoy (Cone type)

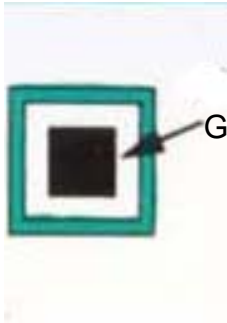
## Porthand Lateral Buoy (Pillar type)

## Starboardhand Lateral Buoy (Pillar type)





# Standard Day Beacons

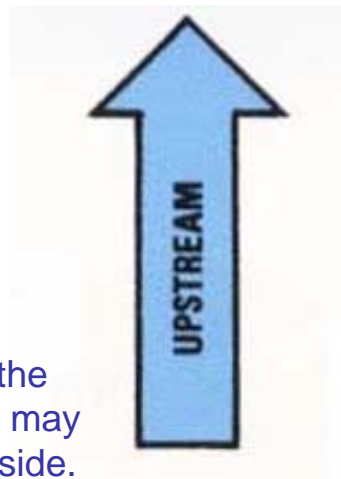


Green or black

**Port Hand Daybeacon** - must be kept on vessel's portside

When proceeding **upstream**

**Starboard Hand Daybeacon** - must be kept on vessel's starboard side



**Junction Daybeacon**

Marks a point where the channel divides and may be passed to either side. To transit the preferred channel this daybeacon should be kept on the vessel's port side (treat as green lateral buoy)

**Junction Daybeacon**

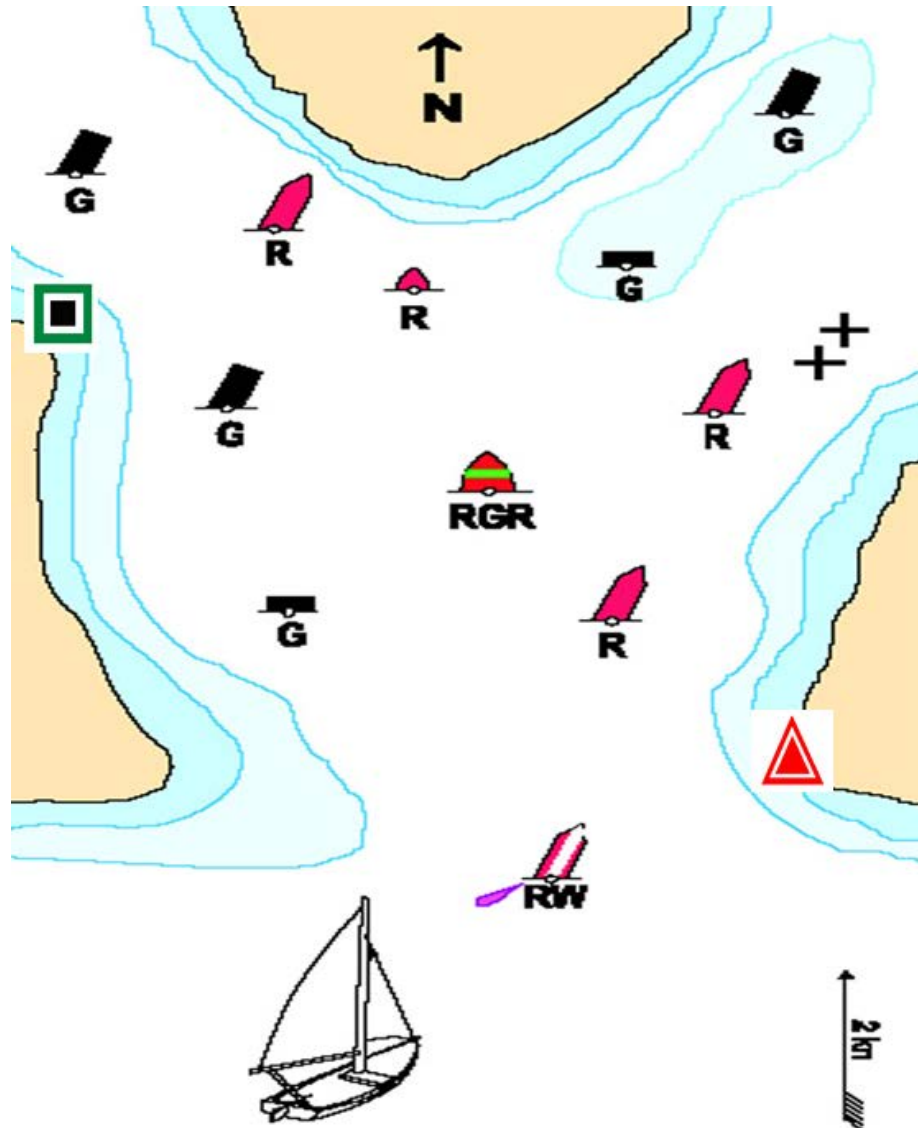
Marks a point where the channel divides and may be passed to either side. To transit the preferred channel this daybeacon should be kept on the vessel's starboard side (treat as red lateral buoy)



# Lateral Buoys



## Lateral Buoys

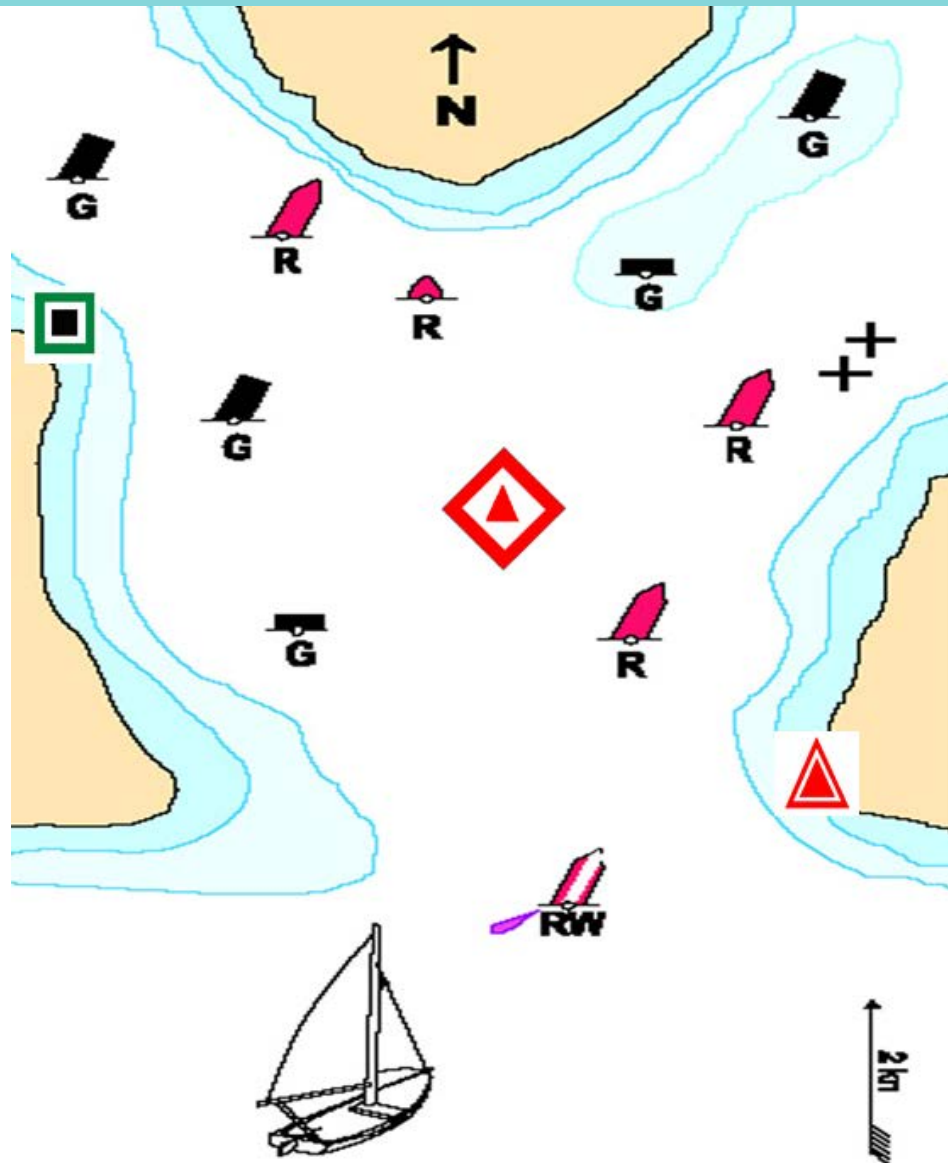




# Lateral Buoys



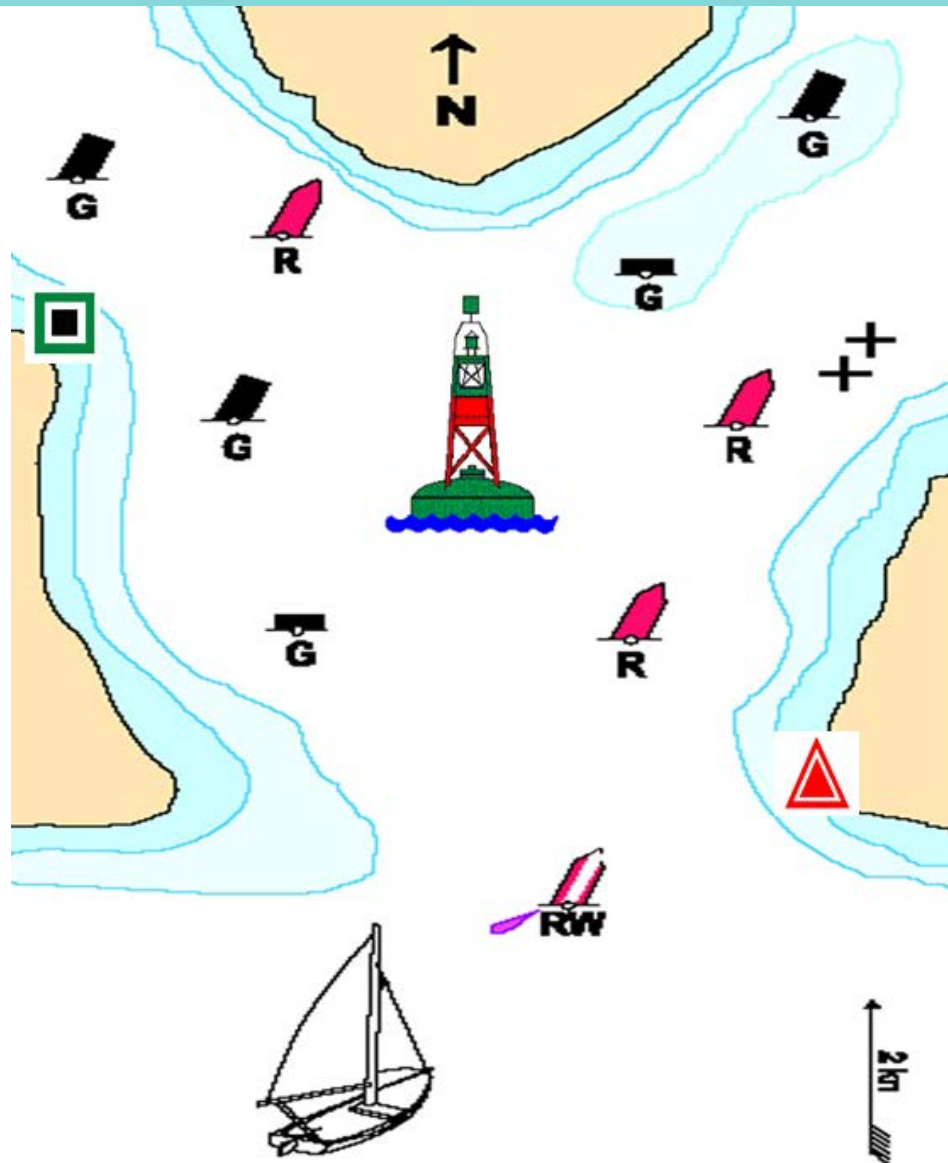
## Lateral Buoys



# Lateral Buoys



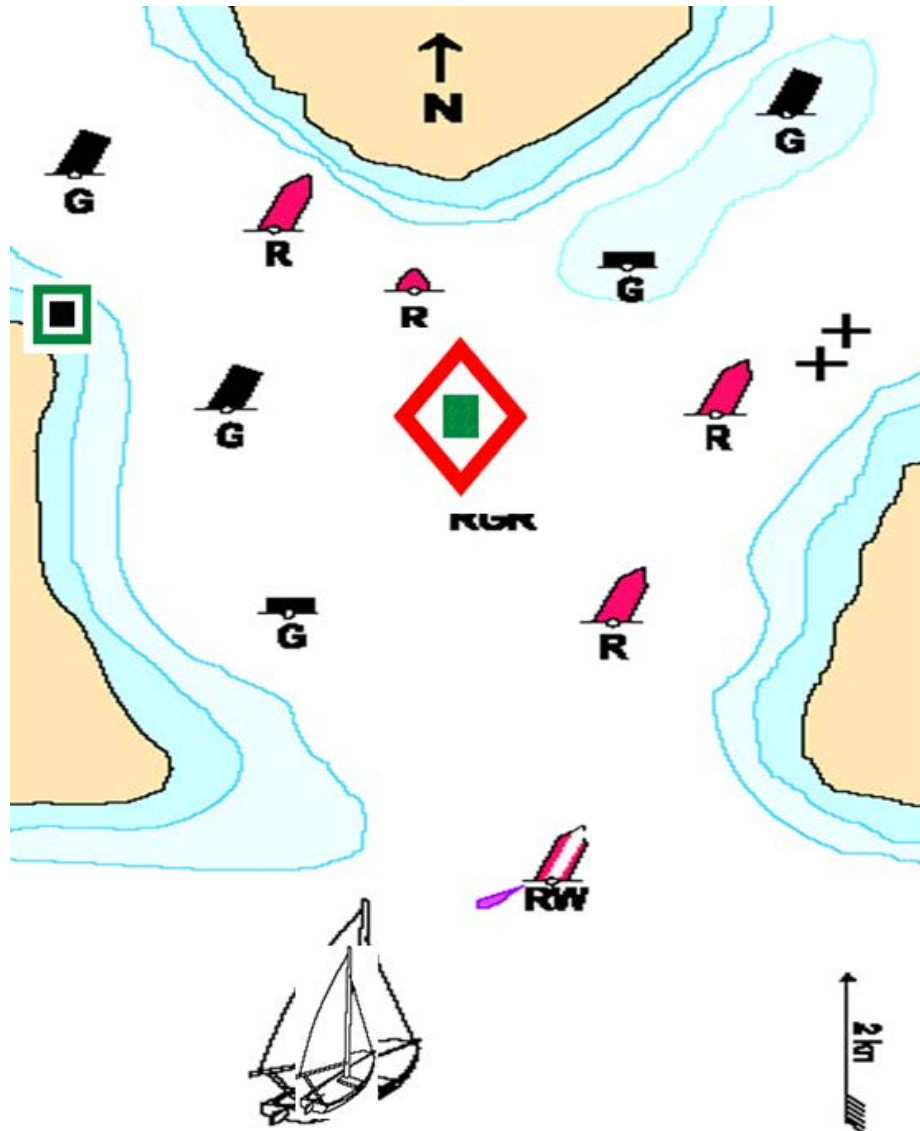
## Lateral Buoys



# Lateral Buoys



## Lateral Buoys





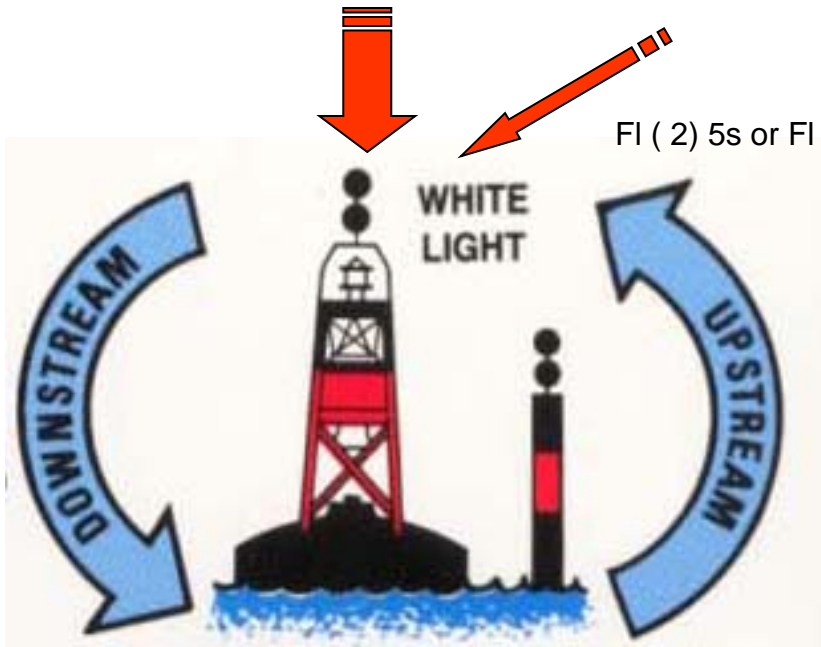
# Isolated Danger and Fairway Buoys

## Isolated Danger Buoy

(2 black balls on top)

Flashing White light on top

Fl ( 2 ) 5s or Fl ( 2 ) 10s



Isolated danger underneath buoy

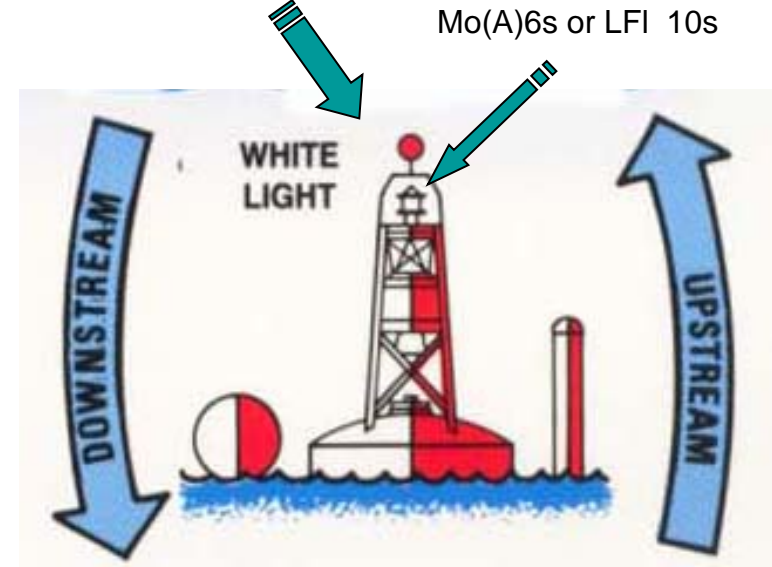
**Note : the different shapes**

## Fairway Buoy

(1 red ball on top)

Flashing White light on top

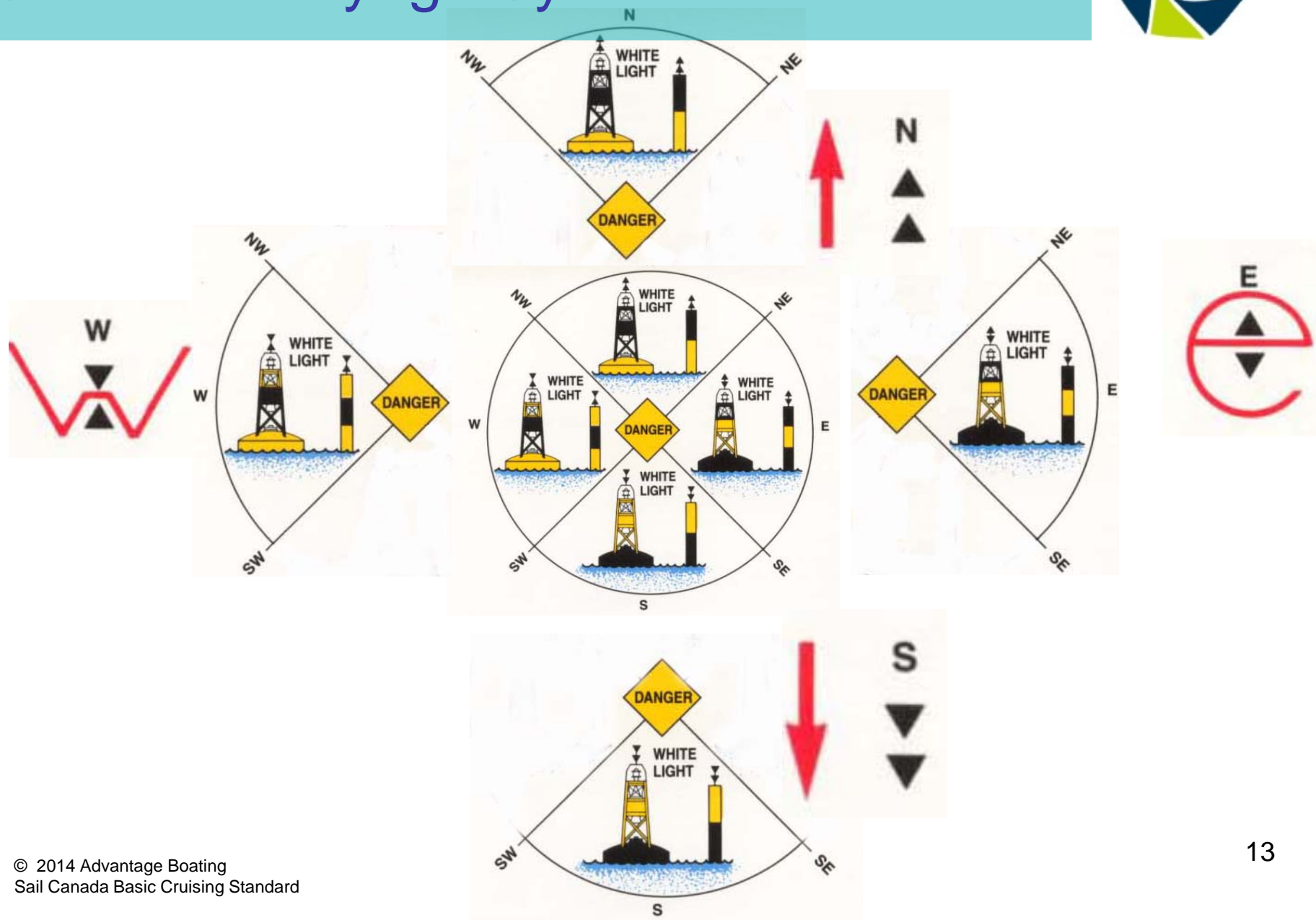
Mo(A)6s or LFI 10s



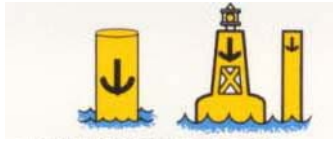
Keep on port side marks centre of shipping channel

**Note : the different shapes**

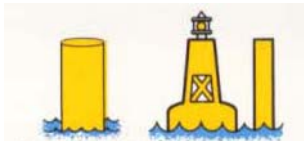
# Cardinal Bouyage System



# Special Buoys



**Anchor buoy** (usually denotes an anchoring field)



**Cautionary buoy** (denotes dangers such as firing ranges e.g. Meaford Tank Range Georgian Bay)



**Diving buoy** (This is the symbol(flag) in common use in N America)



**Mooring buoy** (usually large and meant for large vessels)



**ODAS** (scientific buoy) e.g. mid-lake in Simcoe for weather & sea condition reporting

# Special Buoys



**Control Buoy:** Usually with speed limit or no wash restriction signage



**Keep Out Buoy:** Denies access to buoyed off area often with a heavy fine attached e.g. end of runway for Toronto Island Airport

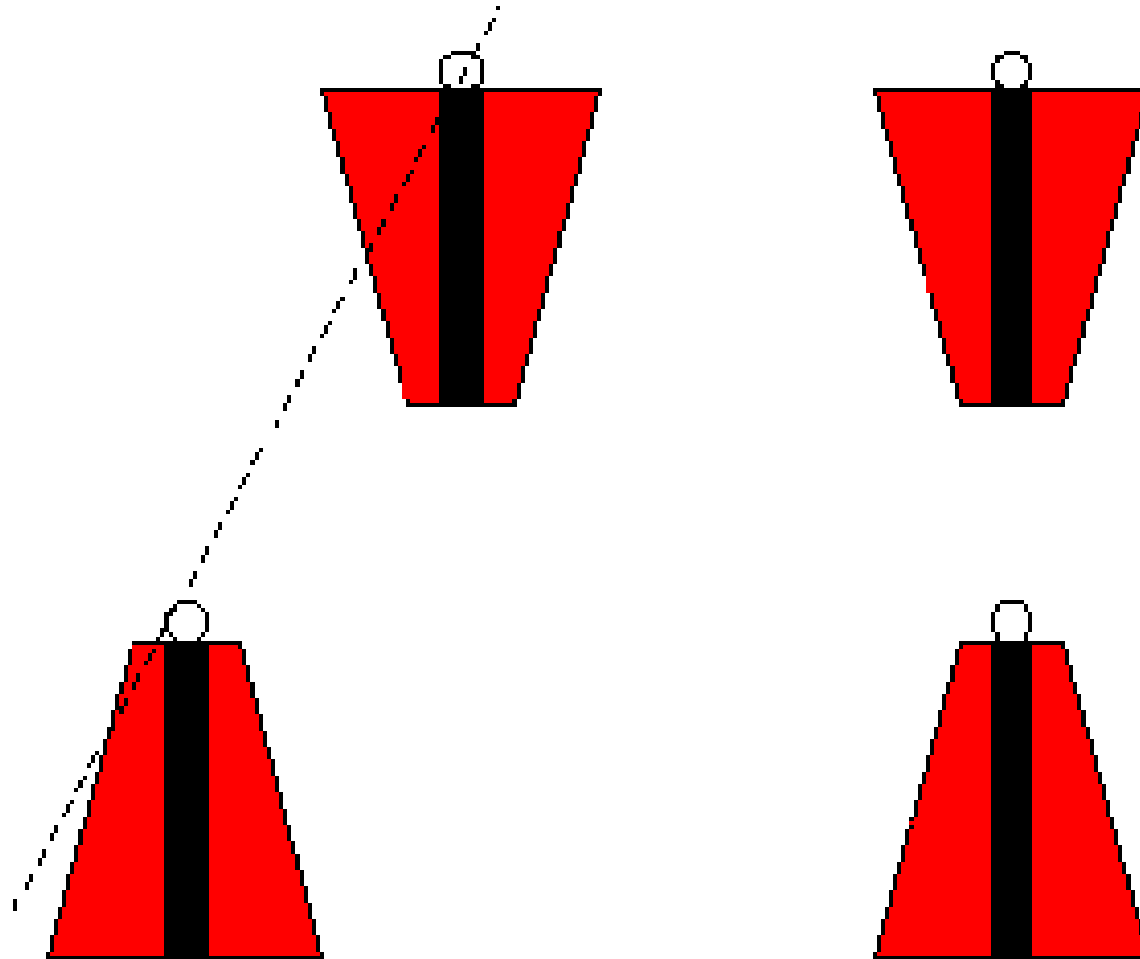


**Hazard Buoy:** Marks random hazards like shoal or rocks and information is displayed within the orange diamond.



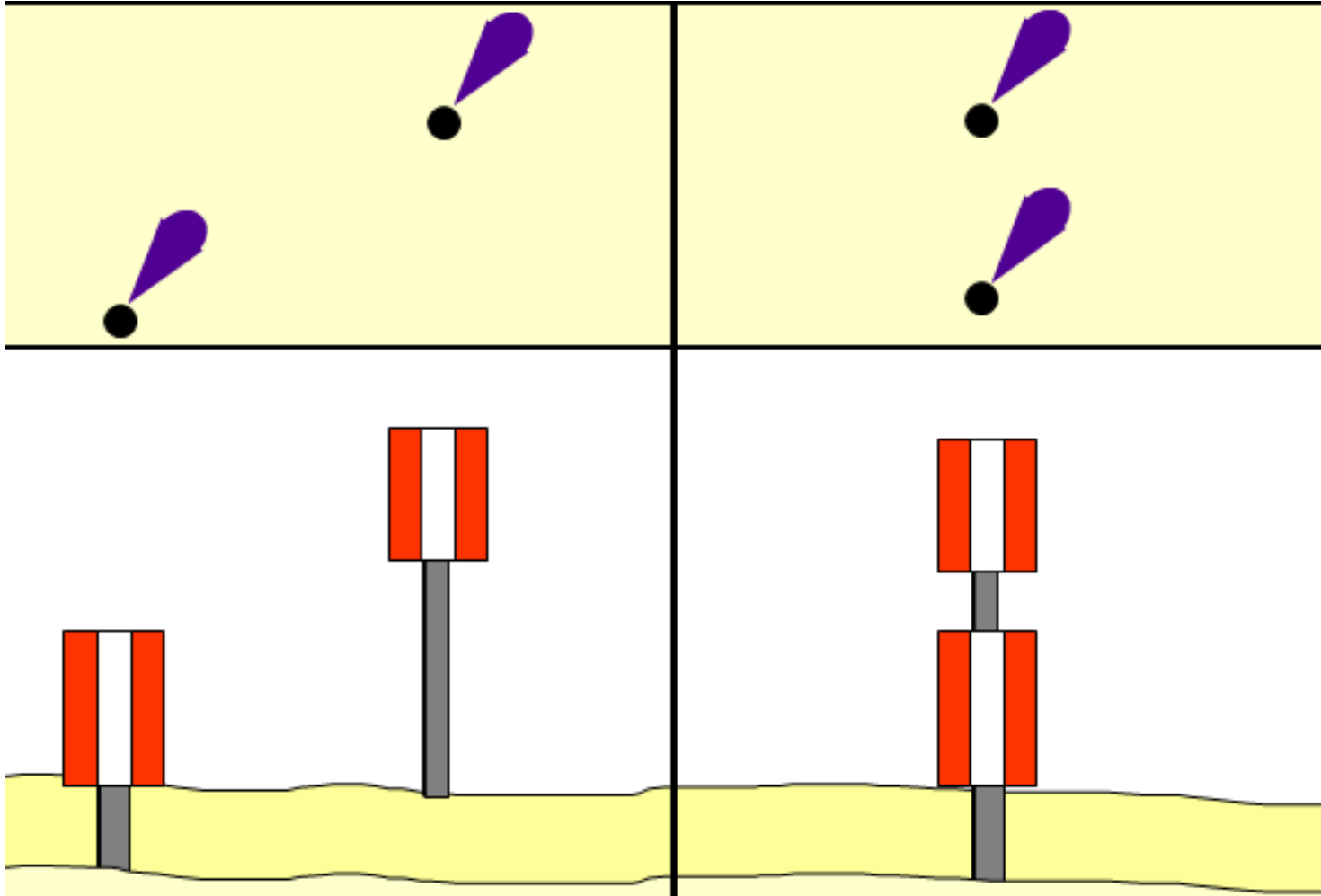
**Information Buoy:** General boater info like campsites, marina etc.

# Range Markers





# Ranges



# Summary



- In this module, you learned about the different aids to navigation.
- It's important to have a good understanding about aids to navigation in order to stay in safe water.

# Next Steps!



- In the next lesson you will learn about knots and emergencies on the water.

# Let's practice!



- Complete the following quiz to test your knowledge about aids to navigation.



- Identify these buoys:



- Once you have identified the buoys above, describe what they mean and the required course of action.