



MARINE

Aids To Navigation IALA Maritime Buoyage System



JFC Marine Aids To Navigation

JFC Marine with over 30 years' experience manufacturing innovative plastic products, manufacture and supply a complete range of precision engineered navigation buoys complete with Aton's systems.

We offer an extensive range of aids to navigation equipment including lanterns, AIS systems, battery and solar powered solutions.

The JFC Marine range are being used to mark out shipping channels, hazardous waters, aquaculture sites and a variety of other marine installations. They are made from rotationally moulded UV stabilised virgin polyethylene designed especially for marine applications (UV15 rating).

Designed for use for both inshore and offshore applications JFC'S modular designed buoys aim to set a new standard in floating aids to navigation. A member of IALA (Association of Marine Aids to Navigation and Lighthouse Authorities), JFC buoys and beacons are available in a wide range of IALA recommended colours and configurations.

IALA Regions

The IALA Maritime Buoyage System has 2 systems in use, IALA A and IALA B.

 **IALA A** is used by countries in Africa, most of Asia, Australia, Europe and India.

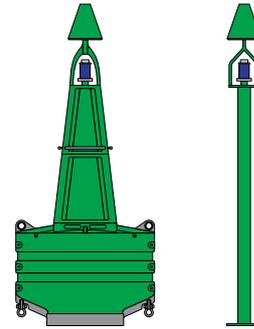
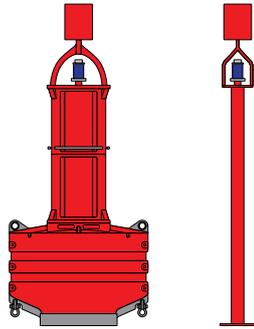
 **IALA B** is used by countries in North, Central and South America, Japan, Korea and the Philippines.



Lateral Marks

Lateral Marks define a channel and indicate the port and starboard sides of the navigation route to be followed into a waterway such as a harbour, river or estuary from seaward.

The vessel should keep port marks to its left and keep starboard marks to its right. If lateral marks are unable to be represented by a can or cone shaped buoy they should carry the appropriate topmark.



Port Hand Mark - Region A

COLOUR	Red
BUOY SHAPE	Cylindrical (Can), Pillar Or Spar
TOPMARK	Single Red Cylinder (Can)
LIGHT COLOUR	Red
LIGHT RHYTHM	Any Apart From Composite Group Flashing (2+1)

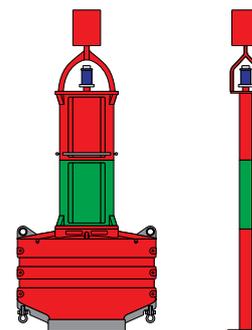
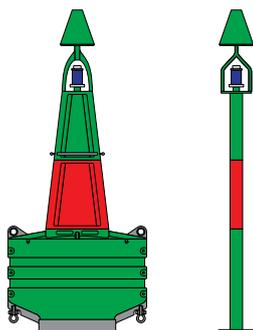
Starboard Hand Mark - Region A

COLOUR	Green
BUOY SHAPE	Conical, Pillar Or Spar
TOPMARK	Single Green Cone, Point Upwards
LIGHT COLOUR	Green
LIGHT RHYTHM	Any Apart From Composite Group Flashing (2+1)

Preferred Channel Marks

At the point where a channel divides, a modified lateral mark is used to indicate a preferred channel (often a deep channel suitable for heavy commercial vessels) on the side and a secondary channel on the other.

A preferred channel is indicated by red and green horizontal bands on the lateral marker. If a vessel wants to use the preferred channel they observe the top colour of the mark while a vessel wishing to use the secondary channel observes the bottom colour.



Preferred Channel To Starboard - Region A

COLOUR	Green With One Broad Red Horizontal Band
BUOY SHAPE	Conical, Pillar Or Spar
TOPMARK	Single Green Cone, Point Upwards
LIGHT COLOUR	Green
LIGHT RHYTHM	Any Apart From Composite Group Flashing (2+1)

Preferred Channel To Port - Region A

COLOUR	Red With One Broad Green Horizontal Band
BUOY SHAPE	Cylindrical (Can), Pillar Or Spar
TOPMARK	Single Red Cylinder (Can)
LIGHT COLOUR	Red
LIGHT RHYTHM	Any Apart From Composite Group Flashing (2+1)

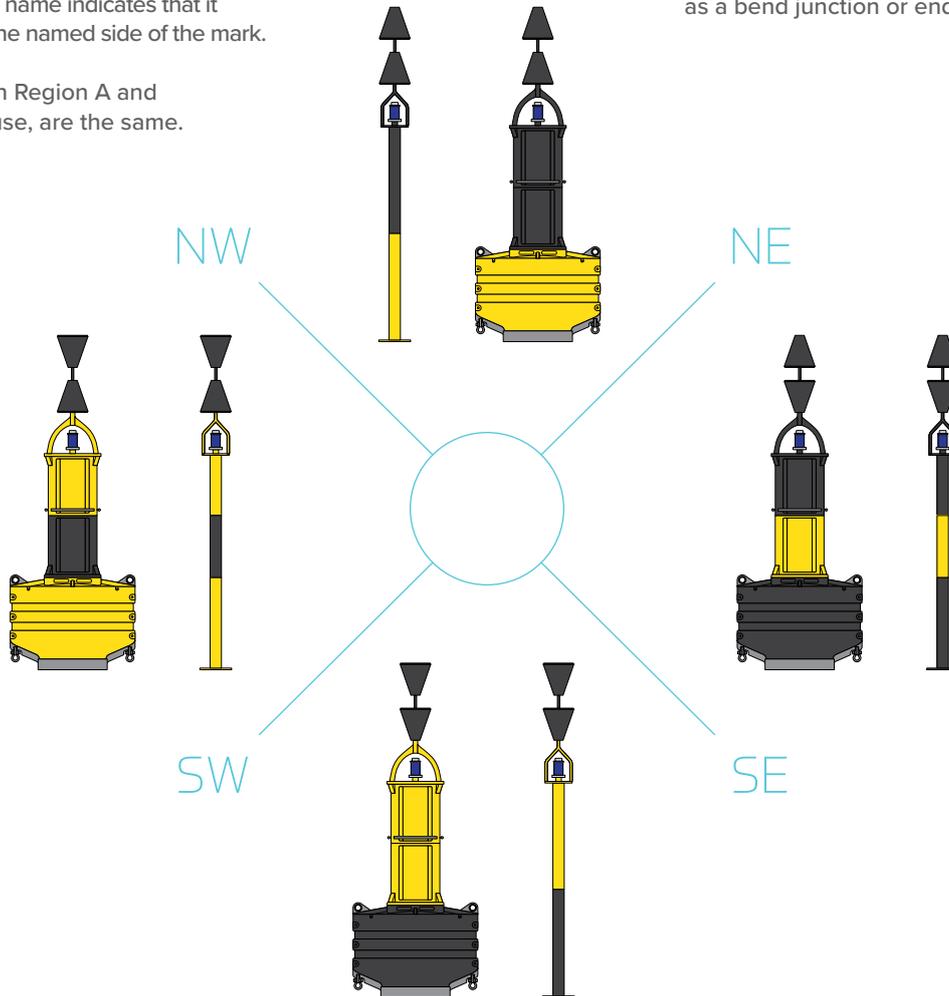
Cardinal Marks

Cardinal Quadrants & Marks

The four quadrants (North, South East & West) are bounded by the true bearings NW-NE, NE-SE, SE-SW, and SW-NW, taken from the point of interest.

A cardinal Mark is named after the quadrant in which it is placed. The name indicates that it should be passed to the named side of the mark.

The cardinal marks in Region A and Region B, and their use, are the same.



Use of Cardinal Marks

Cardinal marks can be used to show:

- The deepest water on area on the named side of the mark.
- The safe side on which to pass a danger.
- To draw attention to a feature in a channel such as a bend junction or end of a shoal.

North Cardinal Mark - Region A & B

COLOUR	2 Black Cones, Stacked Vertically, Points Upward
BUOY SHAPE	Pillar or Spar
TOPMARK	Black Above Yellow
LIGHT COLOUR	White
LIGHT RHYTHM	VQ or Q

East Cardinal Mark - Region A & B

COLOUR	2 Black Cones, Stacked Vertically, Base To Base
BUOY SHAPE	Pillar or Spar
TOPMARK	Black With A Single Broad Horizontal Yellow Band
LIGHT COLOUR	White
LIGHT RHYTHM	VQ (3) Every 5 Seconds or Q (3) Every 10 Seconds

South Cardinal Mark - Region A & B

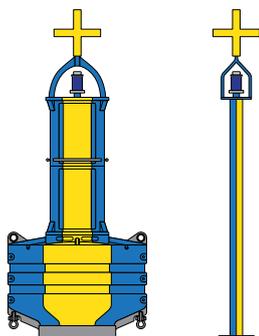
COLOUR	2 Black Cones, Stacked Vertically, Points Downward
BUOY SHAPE	Pillar Or Spar
TOPMARK	Yellow Above Black
LIGHT COLOUR	White
LIGHT RHYTHM	VQ (6) + Long flash Every 10 Seconds or Q (6) + Long Flash Every 15 Seconds

West Cardinal Mark - Region A & B

COLOUR	2 Black Cones, Stacked Vertically, Point To Point
BUOY SHAPE	Pillar or Spar
TOPMARK	Yellow With A Single Broad Horizontal Black Band
LIGHT COLOUR	White
LIGHT RHYTHM	VQ (9) Every 10 Seconds or Q (9) Every 15 Seconds

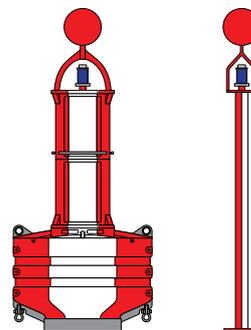
New Dangers / Wreck Marks

New Dangers should be appropriately marked using Lateral, Cardinal, Isolated Danger Marks or by using the Emergency Wreck Marking.



Safe Water Marks

Safe water marks serve to indicate that there is navigable water all-round the mark. These include centre line marks and mid-channel marks. Such a mark may also be used to indicate channel entrance, port or estuary approach, or landfall. The light rhythm may also be used to indicate best point of passage under bridges.



New Dangers / Wreck Mark - Region A & B

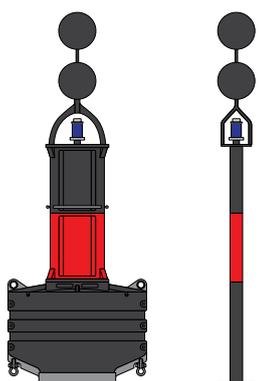
COLOUR	Blue / Yellow Vertical Stripes In Equal Number (Min 4 Stripes, Maximum 8)
BUOY SHAPE	Pillar Or Spar
TOPMARK	Vertical / Perpendicular Yellow Cross
LIGHT COLOUR	Yellow / Blue Alternating
LIGHT RHYTHM	One Second Of Blue Light And One Second Of Yellow Light With 0.5 Sec Of Darkness Between

Safe Water Mark - Region A & B

COLOUR	Red & White Vertical Stripes
BUOY SHAPE	Spherical; Pillar Or Spar With Spherical Topmark
TOPMARK	Single Red Sphere
LIGHT COLOUR	White
LIGHT RHYTHM	Isophase, Occulting, One Long Flash Every 10 Seconds Or Morse "A"

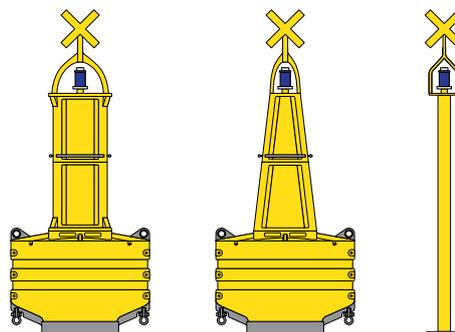
Isolated Danger Marks

An isolated danger mark is a mark erected on, or moored on or above, an isolated danger which has navigable water all around it.



Special Marks

Marks used to indicate a special area or feature whose nature may be apparent from reference to a chart or other nautical publication. They are not generally intended to mark channels or obstructions where other marks are more suitable.



Isolated Danger Mark - Region A & B

COLOUR	Black With One More Broad Horizontal Red Bands
BUOY SHAPE	Optional, Not Conflicting With Lateral Marks; Pillar Or Spar Preferred
TOPMARK	2 Black Spheres, Stacked Vertically
LIGHT COLOUR	White
LIGHT RHYTHM	Group Flashing (2)

Special Mark - Region A & B

COLOUR	Yellow
BUOY SHAPE	Optional, Not Conflicting With Navigational Marks
TOPMARK	Single Yellow "X" Shape
LIGHT COLOUR	Yellow
LIGHT RHYTHM	Any Other Than Those Described In Cardinal, Isolated Danger & Safe Water Marks
PICTOGRAM	The Use Of Pictograms Is Authorized, As Defined By A Competent Authority



MARINE



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