


































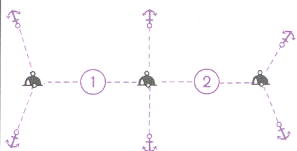






























# Q Buoys, Beacons

Buoys and Beacons				
IALA Maritime Buoyage System, which includes Beacons → Q 130				
1			Position of buoy	
Colors of Buoys and Beacon Topmarks				
Abbreviations for Colors → P				
2	G	B	Green and black	G  B  G  B  G
3	R	Y	Single colors other than green and black	R  Y  R  Y  R
4	RG	BY  GRG	Multiple colors in horizontal bands, the color sequence is from top to bottom	BY  GRG  BRB
5	RW	RW	Multiple colors in vertical or diagonal stripes, the darker color is given first	RW  RW  RW
6			Retroreflecting material	
Note: Retroreflecting material may be fitted to some unlit marks. Charts do not usually show it. Under IALA Recommendations, black bands will appear blue under a spotlight.				
Lighted Marks				
Marks with Fog Signals → R				
7		FI R  FI G	Lighted marks on standard charts	FI G  FI R
8			Lighted marks on multicolored charts	FI R  RW /so  FI G
Topmarks and Radar Reflectors				
For Application of Topmarks within the IALA-System → Q 130			Topmarks on Special Purpose Buoys and Beacons → Q	
9			IALA System buoy topmarks (beacon topmarks shown upright)	
10			Beacon with topmark, color, radar reflector and designation	
11			Buoy with topmark, color, radar reflector and designation	
Note: Radar reflectors on floating marks are usually not charted.				






































# Q Buoys, Beacons

Buoys <i>Features Common to Buoys and Beacons → Q 1–11</i>					
Shapes of Buoys					
20			Conical buoy, nun buoy		
21			Can or cylindrical buoy		
22			Spherical buoy		
23			Pillar buoy		
24			Spar buoy, spindle buoy		
25			Barrel buoy		
26			Super buoy		
Light Floats					
30		 <i>Fl G 3s</i> Name	Light float as part of IALA System	 <i>Fl.G.3s</i> No 3 Name	
31		 <i>Fl(2) 10s 11M</i>	Light float (unmanned light-vessel) not part of IALA System	 <i>Fl.10s 12m 26M</i>	
Mooring Buoys					
Oil or Gas Installation Buoy → L			Small Craft Mooring → U		
40			Mooring buoys	   	
41		 <i>Fl Y 2s</i>	Lighted mooring buoy (example)	 <i>Fl.Y.2.5s</i>	
42			Trot, mooring buoys with ground tackle and berth numbers		
43	See Supplementary national symbols M,N		Mooring buoy with telegraphic or telephonic communication		
44		 (5 buoys) Moorings	Numerous moorings (example)		

# Q Buoys, Beacons

Special Purpose Buoys			
Note: Shapes of buoys are variable. Lateral or Cardinal buoys may be used in some situations.			
50		Firing danger area (Danger Zone) buoy	 DZ
51		Target	 Target
52		Marker Ship	 Marker Ship
53		Barge	 Barge
54		Degaussing Range buoy	
55	 Tel	Cable buoy	
56		Spoil ground buoy	
57		Buoy marking outfall	
58	 ODAS	ODAS-buoy (Ocean-Data-Acquisition System). Data-Collecting buoy of superbuoy size	 ODAS
	 W or  Y  Y  W or  Y  Y	Special-purpose buoys	
59		Wave recorder, current meter	
60	 AERO	Seaplane anchorage buoy	
61		Buoy marking traffic separation scheme	
62		Buoy marking recreation zone	
Seasonal Buoys			
70	 Priv (maintained by private interests, use with caution)	Buoy privately maintained (example)	 (priv)
71		Seasonal buoy (example)	 (Apr–Oct)

# Q Buoys, Beacons

Beacons					
Lighted Beacons → P			Features Common to Beacons and Buoys → Q 1–11		
80	□ Bn	 ○ Bn	Beacon in general, characteristics unknown or chart scale too small to show	 ○ Bn	
81	□ RW  	 BW	Beacon with color, no distinctive topmark	 BW	
82		 R  BY	Beacons with colors and topmarks (examples)	 R  BY  BRB	
83			Beacon on submerged rock (topmark as appropriate)	 BRB	 BRB
Minor impermanent Marks usually in drying Areas (Lateral Mark of Minor Channel)					
Minor Pile → F					
90	◦ Pole • Pole		Stake, pole		
91	◦ Stake • Stake		Perch. stake	PORT HAND 	STARBOARD HAND 
92			Withy		
Minor Marks, usually on Land					
Landmarks → E					
100	 CAIRN  Cairn	 CAIRN  Cairn 	Cairn		
101			Colored or white mark	□ Mk	
Beacon Towers					
110	□ RW	 R  G  R  G	Beacon towers without and with topmarks and colors (examples)	 R  G  R  G  BY  BRB	
111			Lattice beacon		







# Q Buoys, Beacons

Special Purpose Beacons				
Leading Lines, Clearing Lines → M				
Note: Topmarks and colors shown where scale permits.				
120			Leading beacons	
121			Beacons marking a clearing line	
122			Beacons marking measured distance with quoted bearings	
123			Cable landing beacon (example)	
124			Refuge beacon	
125			Firing danger area beacons	
126			Notice board	

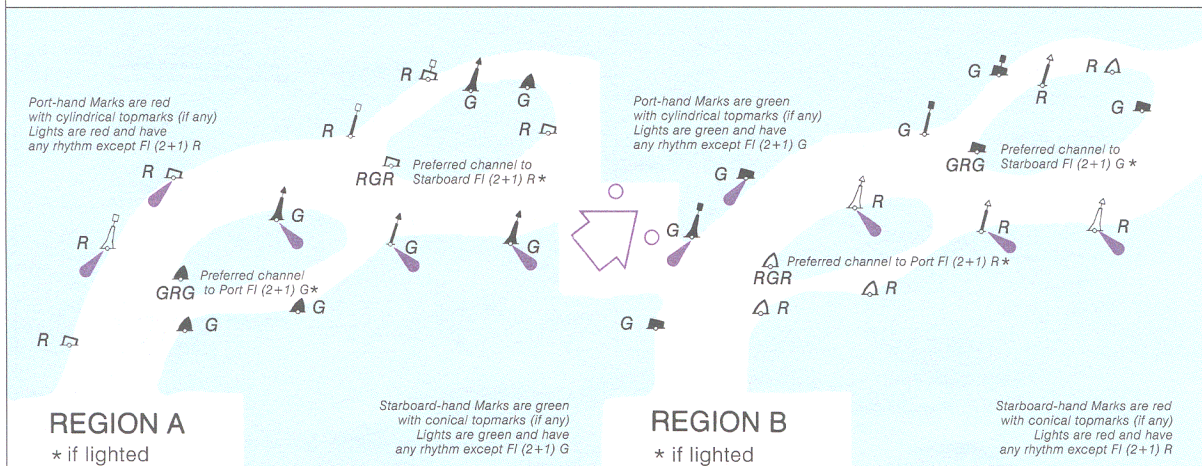
# Q Buoy, Beacons

## 130 IALA Maritime Buoyage System

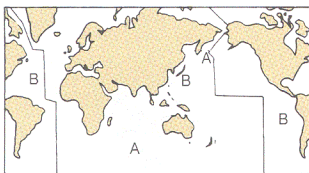
IALA International Association of Lighthouse Authorities

Where in force, the IALA System applies to all fixed and floating marks except lighthouses, sector lights, leading lights and leading marks, light-vessels and lanbyss. The standard buoy shapes are cylindrical (can) , conical , spherical , pillar , and spar , but variations may occur, for example: light-floats . In the illustrations below, only the standard buoy shapes are used. In the case of fixed beacons (lit or unlit) only the shape of the topmark is of navigational significance.

130.1 **Lateral marks** are generally for well-defined channels. There are two international Buoyage Regions – A and B – where Lateral marks differ.



A preferred channel buoy may also be a pillar or a spar. All preferred channel marks have horizontal bands of color. Where for exceptional reasons an Authority considers that a green color for buoys is not satisfactory, black may be used.



IALA Buoyage Regions A and B

## 130.2 Direction of Buoyage

The direction of buoyage is that taken when approaching a harbor from seaward or along coasts, the direction determined by buoyage authorities, normally clockwise around land masses.



Symbol showing direction of buoyage where not obvious.



Symbol showing direction of buoyage on multicolored charts.



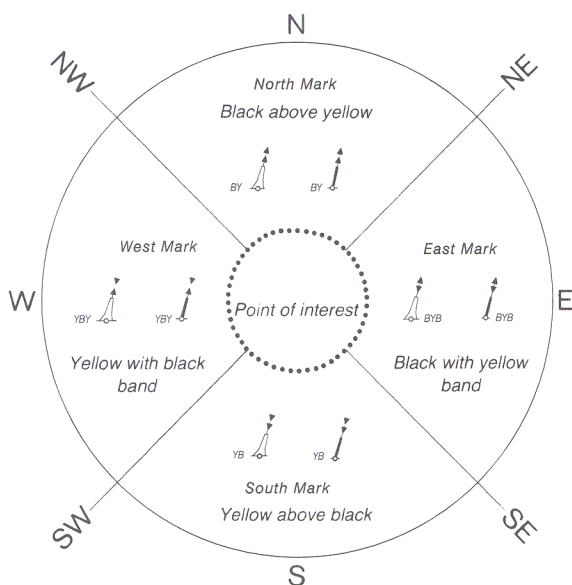
# Q Buoys, Beacons

In the illustrations below all marks are the same in Regions A and B.

## 130.3 Cardinal Marks indicating navigable water to the named side of the marks.

### UNLIT MARKS

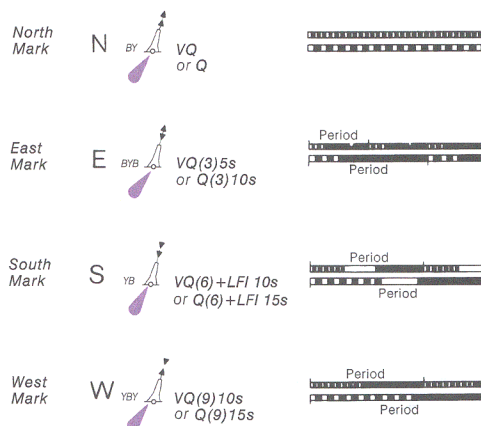
Topmark: 2 black cones



### LIGHTED MARKS

Time (seconds)  
0 5 10 15

White Light



The same abbreviations are used for lights on spar buoys and beacons.  
The periods 5s, 10s and 15s, may not always be charted.

## 130.4 Isolated Danger Marks stationed over dangers with navigable water around them.

Body: black with red horizontal band(s)  
Topmark: 2 black spheres

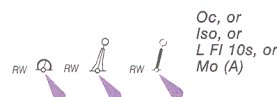


Fl(2)

white light

## 130.5 Safe Water Marks such as mid-channel and landfall marks.

Body: red and white vertical stripes  
Topmark (if any): red sphere



Oc, or  
Iso, or  
L Fl 10s, or  
Mo (A)

white light

## 130.6 Special Marks not primarily to assist navigation but to indicate special features.

Body (shape optional): yellow ‡  
Topmark (if any): yellow X



Fl.Y etc.

yellow light (rhythm optional)

‡ In special cases yellow can be in conjunction with another color.

BEACONS with IALA System topmarks are charted by upright symbols, eg.































Beacon towers are charted: etc. (occasionally lighted)

RADAR REFLECTORS on buoys and beacons are not generally charted.

COLOR ABBREVIATIONS under symbols, especially those of spar buoys, may be omitted, or may be at variance with symbols shown above.

LIGHT FLOATS: The IALA System is not usually applied to large lightfloats (replacing manned lightships) but may be applied to smaller lightfloats.

# Q BuOys, Beacons

Supplementary National Symbols			
a	 BELL  BELL	Bell buoy	
b	 GONG  GONG	Gong buoy	
c	 WHIS  WHIS	Whistle buoy	
d	 RW	Fairway buoy (RWVS)	
e	 RW	Midchannel buoy (RWVS)	
f	 R "2"	Starboard - hand buoy (entering from seaward - US waters)	
g	 "1"  "1"	Port - hand buoy (entering from seaward - US waters)	
h	 BR  RG  GR  G	Bifurcation, Junction, Isolated danger, Wreck and Obstruction buoys	
i	 Y	Fish trap (area) buoy	
j	 Y	Anchorage buoy (marks limits)	
k	B	Black	
l	 R Bn  RG Bn	Triangular shaped beacons	
	 G Bn  GR Bn  W Bn  B Bn	Square shaped beacons	
	 Bn	Beacon, color unknown	
m	 Tel  Tel	Mooring buoy with telegraphic communications	
n	 T  T	Mooring buoy with telephonic communications	
o		Lighted beacon	 Bn 