FIXED AIDS

MAJOR LIGHTED AIDS

Major lighted aids to navigation may display a main light and may be equipped with a fog signal and/or RACON.

The colour and character of the light are advertised on the nautical chart and in the "List of Lights, Buoys and Fog Signals" publication. The colour of the structure may not have lateral significance. The focal height of the light above water level, in metres (m) or feet (ft), and nominal range, in nautical miles (M), may be indicated on nautical charts. When the colour of the light is not specified for any marine aid to navigation light, it is

Fog signal characteristics are advertised on charts and in the "List of Lights, Buoys and Fog Signals".

A RACON (radar beacon) transmits a Morse code pulse that can be seen on a radar display distinguishing it from surrounding radar targets. Information concerning RACONS can be found in "Radio Aids to Marine Navigation".



AIS-ATON

An AIS AtoN is an electronic (digital) aid to navigation that is broadcast by an authorized service provider using the AIS Message 21 (Aids-to-navigation report) and may be displayed on properly configured shipborne and shore-based navigation equipment. There are two types of AIS AtoN being used in Canada: Physical and Virtual. AIS AtoN provide a positive and all-weather means of identification to mariners. For more information, please go to CCG e-Navigation Portal.



This is a fictitious EXAMPLE of a mariner's view from vessel's electronic equipment



MINOR LIGHTED AIDS/

ECONDARY LANDFALL AIDS

GREEN OR BLACK

PORT HAND

description of these aids.

STARBOARD HAND SECONDARY LANDFALL A minor lighted aid may display characteristics of lateral significance. Consult the "List of Lights" for physical

FIXED AIDS

DIRECTIONAL SYMBOLS

bifurcation

RANGES

DESCRIPTION A range consists of two or more fixed navigation marks situated some distance apart and at different elevations. May or may not be lighted. The shapes and colours of the aymarks and the colours and characters of lights are advertised in the "List of

FIXED AIDS

USER'S GUIDE A range provides a leading line for navigators. When both marks are in line the observer is on the recommended track Consult the nautical charts for the portion of channel serviced by the range.

ON RANGE LINE

contain submerged pipelines, power cables, etc.

NO ANCHORAGE

FIXED AIDS

DESCRIPTION

background.

USER'S GUIDE

Black anchor symbol centre on a

white background, with a red

fluorescent diagonal (top left to

the black anchor and white

Do not anchor within the zone

indicated on the chart. Area may

SECTOR LIGHTS FIXED AIDS

DESCRIPTION A sector light's beam is divided into sectors of different

USER'S GUIDE The different coloured sectors provide a warning or a leading line to mariners. Sector colours and boundaries are indicated in the "List of Lights", and on marine charts.

ISOLATED DANGER AIDS

. Black with one red horizontal band.

Two black spherical topmarks.

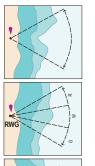
White retroreflective material

Lettered – no numbers.

• White light, group FI(2) 5s or group FI(2)10s (if equipped).

✓ BRB ✓ BRB

DESCRIPTION



Green fluorescent or black square centre on a white background with a green retroreflective horder It may display an odd number made of white retroreflective material.

DESCRIPTION

PORT HAND

USER'S GUIDE When proceeding upstream, must be kept on the vessel's port (left)

PORT BLACK OR GREEN BIFURCATION

STANDARD DAYBEACONS CHARACTERISTICS FIXED AIDS



Green retroreflective square on

a white diamond with a red

Marks a point where the channel

divides and may be passed on

either side. If the preferred

the vessel's port (left) side.

channel is desired (right), the

daybeacon should be kept or

DESCRIPTION

fluorescent border.

USER'S GUIDE

DESCRIPTION Red retroreflective triangle on a white diamond with a red fluorescent border.

STARBOARD

BIFURCATION

USER'S GUIDE

Marks a point where the channel divides and may be passed on either side. If the preferred channel is desired (left), the daybeacon should be kept on the vessel's starboard (right) side.

STARBOARD HAND

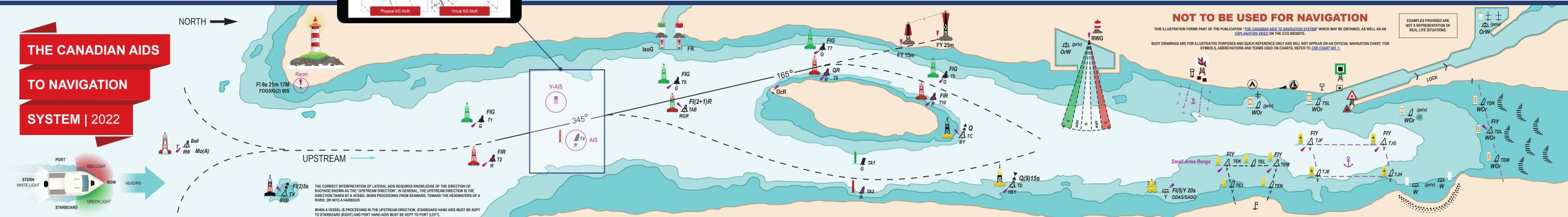


DESCRIPTION

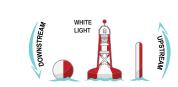
Red fluorescent triangle centre on a white background and with a red retroreflective border. It may display an even number made of white retroreflective material.

USER'S GUIDE

When proceeding upstream, must be kept on the vessel's starboard (right) side.



LATERAL BUOYS



DESCRIPTION

- Red & white vertical stripes
- White light Mo(A) 6s or (LFI) 10s (if equipped). • If unlighted, it has a spherical top.
- Red spherical topmark (if equipped). • Lettered - no numbers.
- White retroreflective material.

This buoy indicates safe water. Used to mark landfalls. channel entrances or channel centers. It may be passed on either side but should be kept on the vessel's port(left) side when proceeding in either direction.

PORT HAND LATERAL BUOYS

- Green light (FI) 4s or (Q) 1s (if equipped).
- If unlighted, it has a flat top. • Topmark is a single green cylinder (if equipped).
- Letter and odd number(s).

Green retroreflective material

(FI) 4S

USER'S GUIDE

A port hand buoy marks the port (left) side of a channel or the location of a danger which must be kept on the vessel's port (left) side when proceeding in the upstream direction

STARBOARD HAND LATERAL BUOYS

DESCRIPTION

- Red light (FI) 4s or (Q) 1s (if equipped).
- If unlighted, it has a pointed (conical) top.
- Topmark is a single red cone, point upward (if equipped).
- Red retroreflective material
- 0 sec 4 8 12 16 0 sec 5 or 10 15

USER'S GUIDE

A starboard hand buoy marks the starboard (right) side of a channel or the location of a danger which must be kept on the vessel's starboard (right) side when proceeding in the upstream direction.

PORT BIFURCATION **LATERAL BUOYS**



DESCRIPTION

- Green with one red horizontal band. Green light, composite group FI(2+1) 6s or FI(2+1) 10s (if equipped).
- If unlighted, it has a flat top. • Topmark is a single green cylinder (if equipped
- Lettered no numbers. Green retroreflective material.
- FI/2 + 1)10S

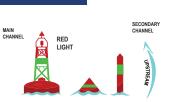
 Bell A

 GRG
 GRG

USER'S GUIDE

A port bifurcation buoy marks the point where a channel divides when proceeding in the upstream direction. When the preferred (main) channel is desired, the buoy should be kept on the vessel's port

STARBOARD BIFURCATION LATERAL BUOYS



DESCRIPTION

 Red with one green horizontal band. • Red light, composite group FI(2+1) 6s or FI(2+1) 10s (if equipped).

• If unlighted, it has a pointed (conical) top. • Topmark is a single red cone, point upward (if equipped).

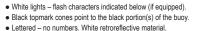
 Lettered – no numbers Red retroreflective material FI(2 + 1)10S

USER'S GUIDE

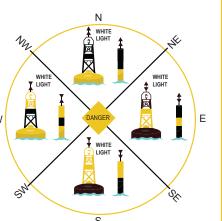
A starboard bifurcation buoy marks the point where a channel divides when proceeding in the upstream direction. When the preferred (main) channel is desired, the buoy should be kept on the vessel's starboard (right) side.

CARDINAL AIDS

DESCRIPTION Yellow and black.

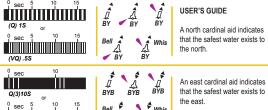


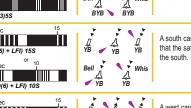
Two conical topmarks. Direction of points have significance.



Note: may be available in the form of buoys or fixed aids.



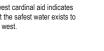






A south cardinal aid indicates that the safest water exists to





USER'S GUIDE An isolated danger aid is moored on, near or installed above an isolated danger which has navigable water all around it. Consult the chart for information concerning the danger (dimensions, depth, etc.). May be used to mark natural dangers such as small shoals or obstructions such as wrecks.

SPECIAL BUOYS

through channel exists.

within the orange square.

SCIENTIFIC (ODAS/SADO)

Information buovs display information such as

locality, marina, campsite, etc. Mariners are

encouraged to follow the information illustrated

Ocean data acquisition system buoy (ODAS) collect

meteorological and other scientific data.

INFORMATION

Cautionary buoys mark dangers such as firing ranges, underwater

pipelines, race courses, seaplane bases and areas where no

DESCRIPTION • Shapes have no significance.

Yellow lights - flash characters indicated below (if equipped)

May be lettered – no numbers.

Cautionary, scientific and anchorage buoys may display a yellow "x" topmark

Anchorage buoys mark the perimeter of

Diving buoys mark an area where scuba or other such

diving activity is in progress. Not normally charted.

the chart for water depth.

Hazard buovs mark random hazards such as

shoals and rocks. Information concerning the

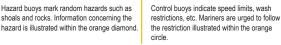


Mooring buoys are used for mooring or securing vessels. Mariners should be aware that a vessel



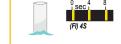






Keen-out huov marks areas in restrictions, etc. Mariners are urged to follow which boats are prohibited.





Swimming buoys mark the perimeter of a swimming area. May not be charted.



Canadä