

FIXED AIDS

DESCRIPTION Green fluorescent or black square centre on a white background with a green retroreflective border. It may

display an odd number made of white retroreflective material. **USER'S GUIDE**

When proceeding upstream, must be kept on the

DESCRIPTION Green retroreflective square on a white diamond with a red fluorescent border.

USER'S GUIDE

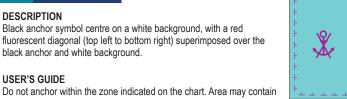
Marks a point where the channel divides and may be passed on either side. If the preferred channel is desired (right), the daybeacon should be kept on the vessel's port (left) side.

NO ANCHORAGE FIXED AIDS



vessel's port (left) side.

Black anchor symbol centre on a white background, with a red fluorescent diagonal (top left to bottom right) superimposed over the black anchor and white background.



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HEN A VESSEL IS PROCEEDING IN THE UPSTREAM DIRECTION, STARBOARD HAND AIDS MUST BE KEPT TO STARBOARD (RIGHT). AND PORT HAND AIDS MUST BE KEPT TO PORT (LETT).

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FIG

FI(2+1)R

AT4

UPSTREAM

GREEN LIGHT

STERN

WHITE LIGHT

FI 6s 21m 17M

THE CANADIAN AIDS

TO NAVIGATION

SYSTEM | 2022

345°

THE CORRECT INTERPRETATION OF LATERAL AIDS REQUIRES KNOWLEDGE OF THE DIRECTION OF BUOYAGE KNOWN AS THE UPSTREAM DIRECTION TAKEN BY A VESSEL WHEN PROCEEDING FROM STREAM DIRECTION TAKEN BY A VESSEL WHEN PROCEEDING FROM SEAWARD, TOWARD THE HEADWATERS OF A RIVER, OR INTO A HARBOUR.

submerged pipelines, power cables, etc.

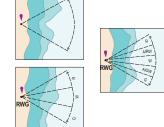


DESCRIPTION A sector light's beam is divided into sectors of different colours

USER'S GUIDE

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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.



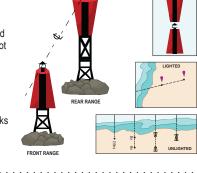
RANGES FIXED AIDS

DESCRIPTION

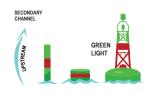
A range consists of two or more fixed navigation marks situated some distance apart and at different elevations. May or may not be lighted. The shapes and colours of the daymarks and the colours and characters of lights are advertised in the "List of Lights".

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.

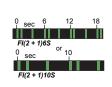


PORT BIFURCATION LATERAL BUOYS



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



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 (left) side.

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.

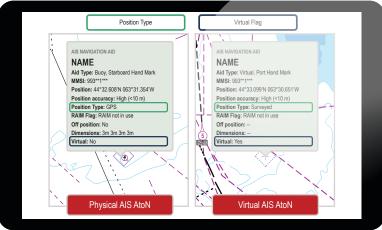
Virtual AIS AtoN



Physical AIS AtoN



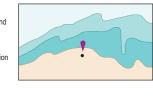
This is a fictitious EXAMPLE of a mariner's view from vessel's electronic equipment



MINOR LIGHTED AIDS SECONDARY LANDFALL AIDS **FIXED AIDS**

A minor lighted aid may display characteristics of lateral significance. Consult the "List of <u>Lights</u>" for physical description of these aids.





PORT HAND LATERAL BUOYS

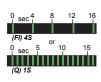


DESCRIPTION

PORT HAND

- 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

SECONDARY LANDFALL



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.

MAJOR LIGHTED AIDS

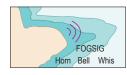
Major lighted aids to navigation may display a main light and may be equipped with a fog signal and/or RACON.

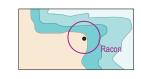
The colour and character of the light are advertised on the nautical chart and in the "List of Lights, Buoys and Fog Signals" publication. The colour of the structure may not have lateral significance. The focal height of the light above water level, in metres (m) or feet (ft), and nominal range, in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



RACON





NOT TO BE USED FOR NAVIGATION

THIS ILLUSTRATION FORMS PART OF THE PUBLICATION " $\underline{\textit{THE CANADIAN AIDS TO NAVIGATION SYSTEM.}}" \text{ WHICH MAY}$ BE OBTAINED, AS WELL AS AN $\underline{\mathsf{EXPLANATION}}$ ON THE CCG WEBSITE.

OFFICIAL NAVIGATION CHART. FOR SYMBOLS, ABBREVIATIONS AND TERMS USED ON CHARTS, REFER TO $\underline{\textit{CHS CHART}}$

EXAMPLES PROVIDED ARE NOT A REPRESENTATION OF REAL LIFE SITUATIONS.

STANDARD DAYBEACONS CHARACTERISTICS **STARBOARD BIFURCATION** DESCRIPTION

Red retroreflective triangle on a white diamond with a

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

STARBOARD HAND

Canadä

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.

Yellow lights – flash characters indicated below (if equipped)

SPECIAL BUOYS

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

DESCRIPTION

vessel's starboard (right) side.

red fluorescent border.

USER'S GUIDE

CAUTIONARY

square.

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Q(9)15s

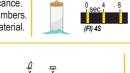
扇 FI(5)Y 20s

TDL'

Viv)

Shapes have no significance.

 May be lettered – no numbers. Yellow retroreflective material.



Cautionary buoys mark dangers such as firing ranges, underwater pipelines, race courses, seaplane bases and areas where no through channel exists.



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ow ow ow

CONTROL

SWIMMING

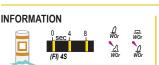
secured to such a buoy.

Mooring buoys are used for mooring

or securing vessels. Mariners should

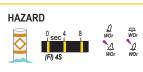
be aware that a vessel may be

Anchorage buoys mark the perimeter of designated anchorage areas. Please consult the chart for water depth.



Information buoys display information such as locality, marina, campsite, etc. Mariners are encouraged to follow the

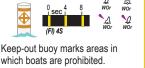
information illustrated within the orange



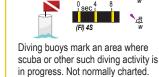
ZI Wor Hazard buoys mark random hazards such as shoals and rocks. Information concerning the hazard is illustrated within the orange

Control buoys indicate speed limits, wash restrictions, etc. Mariners are urged to follow the restriction illustrated within the orange circle.







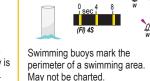


à.ODAS/SADO

DDAS/SADO

diamond.

DIVING



Ocean data acquisition system buoy

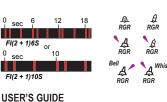
(ODAS) collect meteorological and





DESCRIPTION

- Red with one green horizontal band. • Red light, composite group FI(2+1) 6s or FI(2+1) 10s
- If unlighted, it has a pointed (conical) top. Topmark is a single red cone, point upward (if equipped).
- Lettered no numbers. Red retroreflective material



other scientific data.

FLASH GROUPS

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

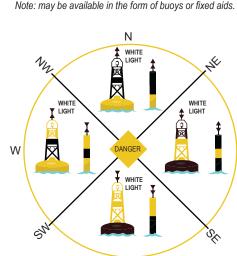
DESCRIPTION

Yellow and black

White lights – flash characters indicated below (if

equipped). • Black topmark cones point to the black portion(s) of the

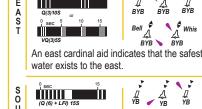
 Lettered – no numbers. White retroreflective material. Two conical topmarks. Direction of points have significance.



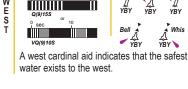
S

TOPMARKS

0 sec 5 10 15 (VQ) .5S A north cardinal aid indicates that the safest water exists to the north.



water exists to the south



A minor lighted aid may display characteristics

of lateral significance. Consult the "List of

MINOR LIGHTED AIDS/ SECONDARY LANDFALL AIDS

DIRECTIONAL SYMBOLS

FIXED AIDS



STARBOARD HAND SECONDARY LANDFALL



Topmark is a single red cone, point upward (if equipped).





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

ISOLATED DANGER AIDS

 Letter and even number(s). Red retroreflective material

• Red light (FI) 4s or (Q) 1s (if equipped).

• If unlighted, it has a pointed (conical) top.

DESCRIPTION

Red.





 White light, group FI(2) 5s or group FI(2)10s (if equipped). Two black spherical topmarks. Lettered – no numbers. White retroreflective material.





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.



White retroreflective material.

This buoy indicates safe water. Used to mark landfalls, channel entrances or channel centers.

• White light Mo(A) 6s or (LFI) 10s (if equipped).

LATERAL BUOYS



kept on the vessel's port(left) side when proceeding in either direction.



 If unlighted, it has a spherical top Red spherical topmark (if equipped). Lettered – no numbers.