INTERNATIONAL MARITIME ORGANIZATION

E

4 ALBERT EMBANKMENT
LONDON SE1 7SR
Telephone: +44 (0)20 7735 7611 Fax: +44 (0)20 7587 3210

SN.1/Circ.243/Rev.1
23 May 2014

AMENDED GUIDELINES FOR THE PRESENTATION OF NAVIGATIONAL-RELATED SYMBOLS, TERMS AND ABBREVIATIONS

1 The Maritime Safety Committee, at its seventy-ninth session (December 2004), approved *Guidelines for the presentation of navigational-related symbols, terms and abbreviations* (SN/Circ.243) prepared by the Sub-Committee on Safety of Navigation (NAV), at its fiftieth session (July 2004) and encouraged their use for all shipborne navigational systems and equipment.

2 The Maritime Safety Committee, at its eighty-fifth session (26 November to 5 December 2008), approved the amendment to the *Guidelines for the presentation of navigation-related symbols, terms and abbreviations* (SN.1/Circ.243/Add.1) regarding an addition to table 3 of the appendix to annex 1 of the *Guidelines for the presentation of navigation-related symbols, terms and abbreviations* (SN/Circ.243), introducing a new symbol for AIS Search and Rescue Transmitter (AIS-SART) prepared by the Sub-Committee on Safety of Navigation (NAV), at its fifty-fourth session (July 2008).

3 The Sub-Committee on Safety of Navigation (NAV), at its fifty-ninth session (2 to 6 September 2013), agreed on improved symbols for portrayal of AIS Aids to Navigation (AIS AtoN) in annexed new tables 4.1, 4.2 and 4.3 for the replacement of existing symbols for AIS-based AtoN in existing table 4 of annex 1 of the *Guidelines for the presentation of navigation-related symbols, terms and abbreviations* (SN/Circ.243).

4 The Maritime Safety Committee, at its ninety-third session (14 to 23 May 2014), concurred with the Sub-Committee's views, and approved the *amended Guidelines for the presentation of navigation-related symbols, terms and abbreviations*, as set out in the annex.

5 Member Governments are invited to bring the amended *Guidelines for the presentation of navigation-related symbols, terms and abbreviations* to the attention of all parties concerned.

6 This circular revokes SN/Circ.243 and SN.1/Circ.243/Add.1.

***

WORLD MARITIME DAY 2014
IMO CONVENTIONS
EFFECTIVE IMPLEMENTATION

ANNEX 1

GUIDELINES FOR THE PRESENTATION OF NAVIGATION-RELATED SYMBOLS

1 Purpose

The purpose of these annexed Guidelines is to provide guidance on the appropriate use of navigation-related symbols to achieve a harmonized and consistent presentation.

2 Scope

The use of these Guidelines will ensure that the symbols used for the display of navigation-related information on all shipborne navigational systems and equipment are presented in a consistent and uniform manner.

3 Application

These Guidelines apply to all shipborne navigational systems and equipment. The symbols listed in the appendix should be used for the display of navigation-related information to promote consistency in the symbol presentation on navigational equipment.

The symbols listed in the appendix should replace symbols which are currently contained in existing performance standards. Where a standard symbol is not available, another symbol may be used, but this symbol should not conflict with the symbols listed in the appendix.

APPENDIX

NAVIGATION-RELATED SYMBOLS

Table 1: Own Ship Symbols

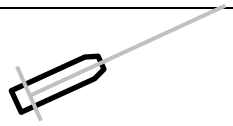
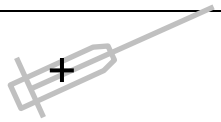
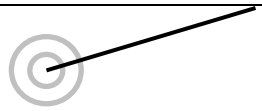
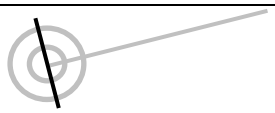
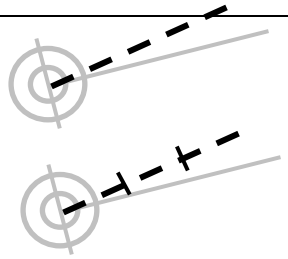
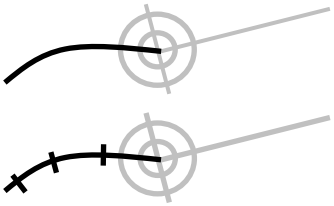
Topic	Symbol	Description
Own ship		Double circle, located at own ship's reference position. Use of this symbol is optional, if own ship position is shown by the combination of Heading Line and Beam Line.
Own Ship True scale outline		True scale outline located relative to own ship's reference position, oriented along own ship's heading. Used on small ranges/large scales.
Own Ship Radar Antenna Position		Cross, located on a true scale outline of the ship at the Physical location of the radar antenna that is the current source of displayed radar video.
Own Ship Heading line		Solid line thinner than the speed vector line style, drawn to the bearing ring or of fixed length, if the bearing ring is not displayed. Origin is at own ship's reference point.
Own Ship Beam line		Solid line of fixed length; optionally length variable by operator. Midpoint at own ship's reference point.
Own Ship Speed vector		Dashed line – short dashes with spaces approximately twice the line width of heading line. Time increments between the origin and endpoint may optionally be marked along the vector using short intersecting lines. To indicate Water/Ground stabilization optionally one arrowhead for water stabilization and two arrowheads for ground stabilization may be added.
Own Ship Path prediction		A curved vector may be provided as a path predictor.
Own Ship Past Track		Thick line for primary source. Thin line for secondary source. Optional time marks are allowed.

Table 2: Tracked Radar Target Symbols

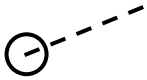
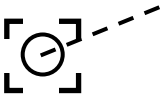
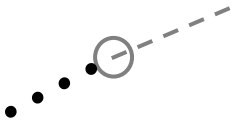
Topic	Symbol	Description
Tracked Target including Dangerous Target		Solid filled or unfilled circle located at target position. The course and speed vector should be displayed as dashed line, with short dashes with spaces approximately twice the line width. Optionally, time increments, may be marked along the vector. For a **"Dangerous Target"**, bold, red (on colour display) solid circle with course and speed vector, flashing until acknowledged.
Target in Acquisition State		Circle segments in the acquired target state. For automatic acquisition, bold circle segments, flashing and red (on colour display) until acknowledged.
Lost Target		Bold lines across the circle, flashing until acknowledged.
Selected Target		A square indicated by its corners centred around the target symbol.
Target Past Positions		Dots, equally spaced by time.
Tracked Reference Target	R	Large R adjacent to designated tracked target. Multiple reference targets should be marked as R1, R2, R3, etc.

Table 3: AIS Target Symbols

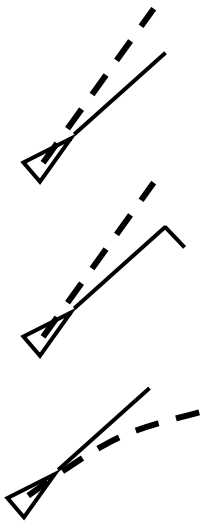
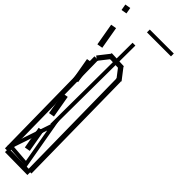
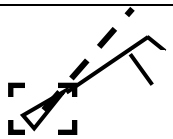
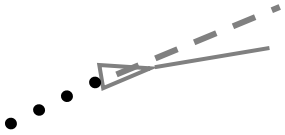
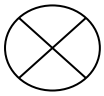
Topic	Symbol	Description
AIS Target (sleeping)		An isosceles, acute-angled triangle should be used. The triangle should be oriented by heading, or COG if heading missing. The reported position should be located at centre and half the height of the triangle. The symbol of the sleeping target should be smaller than that of the activated target.
Activated AIS Target Including Dangerous Target		An isosceles, acute-angled triangle should be used. The triangle should be oriented by heading, or COG if heading missing. The reported position should be located at centre and half the height of the triangle. The COG/SOG vector should be displayed as a dashed line with short dashes with spaces approximately twice the line width. Optionally, time increments may be marked along the vector. The heading should be displayed as a solid line thinner than speed vector line style, length twice of the length of the triangle symbol. Origin of the heading line is the apex of the triangle. The turn should be indicated by a flag of fixed length added to the heading line. A path predictor may be provided as curved vector. For a **"Dangerous AIS Target"**, bold, red (on colour display) solid triangle with course and speed vector, flashing until acknowledged.
AIS Target – True Scale Outline		A true scale outline may be added to the triangle symbol. It should be: Located relative to reported position and according to reported position offsets, beam and length. Oriented along target's heading. Used on low ranges/large scales.
Selected target		A square indicated by its corners should be drawn around the activated target symbol.
Lost target		Triangle with bold solid cross. The triangle should be oriented per last known value. The cross should have a fixed orientation. The symbol should flash until acknowledged. The target should be displayed without vector, heading and rate of turn indication.
Target Past Positions		Dots, equally spaced by time.
AIS Search and Rescue Transmitter (AIS-SART)		A circle containing a cross drawn with solid lines.

Table 4: Other Symbols

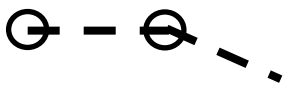
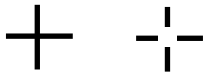
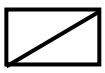
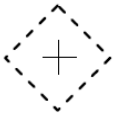
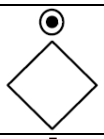
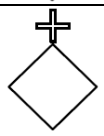
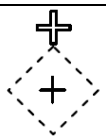
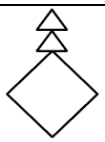
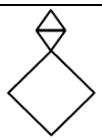
Topic	Symbol	Description
Monitored Route		Dashed bold line, waypoints (WPT) as circles.
Planned or Alternate Route		Dotted line, WPT as circles.
Trial Manoeuvre	T	Large T on screen.
Simulation Mode	S	Large S on screen.
Cursor		Crosshair (two alternatives, one with open centre).
Range Rings		Solid circles.
Variable Range Markers (VRM)		Circle. Additional VRM should be distinguishable from the primary VRM.
Electronic Bearing Lines (EBL)		Dashed line. Additional EBL should be distinguishable from the primary EBL.
Acquisition/ Activation Area		Solid line boundary for an area.
Event Mark		Rectangle with diagonal line, clarified by added text (e.g. "MOB" for man overboard cases).

Table 4.1: Improved symbols for portrayal of AIS Aids to Navigation (AIS AtoN)

Type of AIS AtoN (Type of code in AIS msg. 21)	Symbol (Physical)	Symbol (Virtual)	Description
Portrayal when indication of type is not selected			Solid diamond (Shown with chart symbol. Chart symbol not required for radar.) **Note:** Applicable only for Physical AIS AtoN
Default, type not specified (0) Reference point (1) Light, without sectors (5) Light, with sectors (6) Leading Light Front (7) Leading Light Rear (8)			Physical: Solid diamond (Shown with chart symbol. Chart symbol not required for radar.) Virtual: Dotted diamond with cross hair centred at reported position
Fixed structure offshore/obstruction (3) Light Vessel/LANBY/Rigs (31)			Solid diamond (Shown with chart symbol. Chart symbol not required for radar.) **Note:** Fixed structure offshore/obstruction and Light Vessel/LANBY/Rigs versions are not applicable for Virtual AIS AtoN
Racon (2)			Solid diamond with double circle of black inner circle on the top of diamond **Note:** Racon version is not applicable for Virtual AIS AtoN
Emergency Wreck Mark (4)			Physical: Solid diamond with cross on the top of diamond (Shown with chart symbol. Chart symbol not required for radar.) Virtual: Dotted diamond with cross hair centred at reported position and cross on the top of diamond
Beacon, Cardinal N (9) Floating, Cardinal Mark N (20)			Physical: Solid diamond with 2 triangles, one above the other, point upward, on top of diamond (Shown with chart symbol. Chart symbol not required for radar.) Virtual: Dotted diamond with cross hair centred at reported position and 2 triangles, one above the other, points upward, on the top of diamond
Beacon, Cardinal E (10) Floating, Cardinal Mark E (21)			Physical: Solid diamond with 2 triangles, one above the other, base to base, on the top of diamond (Shown with chart symbol. Chart symbol not required for radar.) Virtual: Dotted diamond with cross hair centred at reported position and 2 triangles, one above the other, base to base, on the top of diamond

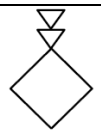
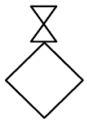
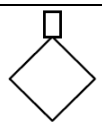
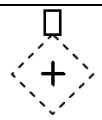
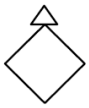
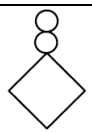
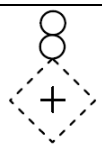
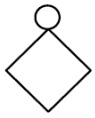
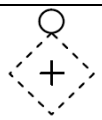
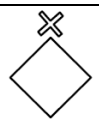
Type of AIS AtoN (Type of code in AIS msg. 21)	Symbol (Physical)	Symbol (Virtual)	Description
Beacon, Cardinal S (11) Floating, Cardinal Mark S (22)			Physical: Solid diamond with 2 triangles, one above the other, point downward, on the top of diamond (Shown with chart symbol. Chart symbol not required for radar.) Virtual: Dotted diamond with cross hair centred at reported position and 2 triangles, one above the other, points downward, on the top of diamond
Beacon, Cardinal W (12) Floating, Cardinal Mark W (23)			Physical: Solid diamond with 2 triangles, one above the other, point to point, on the top of diamond (Shown with chart symbol. Chart symbol not required for radar.) Virtual: Dotted diamond with cross hair centred at reported position and 2 triangles, one above the other, point to point, on the top of diamond
Beacon, Port hand (13) Beacon, Preferred Channel Port hand (15) Port hand Mark (24) Preferred Channel Port hand (26)			Physical: Solid diamond with rectangle, short side up, on the top of diamond (Shown with chart symbol. Chart symbol not required for radar.) Virtual: Dotted diamond with cross hair centred at reported position and rectangle, short side up, on the top of diamond
Beacon, Starboard hand (14) Beacon, Preferred Channel Starboard hand (16) Starboard hand Mark (25) Preferred Channel Starboard hand (27)			Physical: Solid diamond with triangle, points upward, on the top of diamond (Shown with chart symbol. Chart symbol not required for radar.) Virtual: Dotted diamond with cross hair centred at reported position and triangle, points upward, on the top of diamond
Beacon, Isolated danger (17) Isolated danger (28) Beacon, Safe			Physical: Solid diamond with 2 circles, one above the other, on the top of diamond (Shown with chart symbol. Chart symbol not required for radar.) Virtual: Dotted diamond with cross hair centred at reported position and 2 circles, one above the other, on the top of diamond
Beacon, Safe water (18) Safe Water (29)			Physical: Solid diamond with circle on the top of diamond (Shown with chart symbol. Chart symbol not required for radar.) Virtual: Dotted diamond with cross hair centred at reported position and circle on the top of diamond
Beacon, Special mark (19) Special Mark (30)			Physical: Solid diamond with bold outlined "X" on the top of diamond (Shown with chart symbol. Chart symbol not required for radar.) Virtual: Dotted diamond with cross hair centred at reported position and bold outlined "X" on the top of diamond

Table 4.2 – Portrayal of AIS AtoN indicating off position or failure

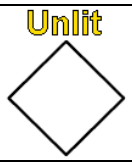
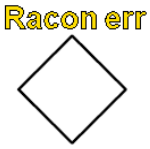
Type of failure condition	Symbol (Physical)	Description
AIS AtoN indicating to be in Off Position		Failure is indicated using yellow caution colour for the basic diamond part of the symbol with cross hair centred at reported position and for text "Off Posn" in top of the Physical AIS AtoN. **Note:** Physical AIS AtoN indicates realtime EPFS position of drifting AtoN (obstacle).
AIS AtoN indicating Lights failure		Failure is indicated using yellow caution colour with text "Unlit" in top of the Physical AIS AtoN.
AIS AtoN indicating Racon failure		Failure is indicated using yellow caution colour with text "Racon err" in top of the Physical AIS AtoN

Table 4.3 – Portrayal of AIS AtoN indicating the absence of a charted Physical AtoN

Type of failure condition	Symbol (Virtual)	Description
AIS AtoN indicating the absence of a charted Physical AtoN		The absence of a charted AtoN is indicated using yellow caution colour for both the basic diamond part of the symbol and for text "Missing". The basic diamond part is always empty without symbol of the type of the AtoN. **Note:** This case is communicated as a combined state of "Virtual" and "off position". Type of absent AtoN can be determined be the underlying charted object, or selecting the Virtual AIS AtoN Object.

***

ANNEX 2

GUIDELINES FOR THE PRESENTATION OF NAVIGATION-RELATED TERMS AND ABBREVIATIONS

1 Purpose

The purpose of these Guidelines is to provide guidance on the use of appropriate navigation-related terminology and abbreviations intended for presentation on shipborne navigational displays. These are based on terms and abbreviations used in existing navigation references.

2 Scope

These Guidelines are issued to ensure that the terms and abbreviations used for the display of navigation-related information on all shipborne navigation equipment and systems are consistent and uniform.

3 Application

These Guidelines apply to all shipborne navigational systems and equipment including, radar, ECDIS, AIS, INS and IBS. When navigation-related information is displayed as text, the standard terms or abbreviations listed in the appendix should be used, instead of using terms and abbreviations which are currently contained in existing performance standards.

Where a standard term and abbreviation is not available, another term or abbreviation may be used. This term or abbreviation should not conflict with the standard terms or abbreviations listed in the appendix and provide a clear meaning. Standard marine terminology should be used for this purpose. When the meaning is not clear from its context, the term should not be abbreviated.

Unless otherwise specified, standard terms should be shown in lower case while abbreviations should be presented using upper case.

APPENDIX

List of Standard Terms and Abbreviations

Term	Abbreviation
Acknowledge	ACK
Acquire, Acquisition	ACQ
Acquisition Zone	AZ
Adjust, Adjustment	ADJ
Aft	AFT
Alarm	ALARM
Altitude	ALT
Amplitude Modulation	AM
Anchor Watch	ANCH
Antenna	ANT
Anti Clutter Rain	RAIN
Anti Clutter Sea	SEA
April	APR
Audible	AUD
August	AUG
Automatic	AUTO
Automatic Frequency Control	AFC
Automatic Gain Control	AGC
Automatic Identification System	AIS
Auxiliary System/Function	AUX
Available	AVAIL
Background	BKGND
Bearing	BRG
Bearing Waypoint To Waypoint	BWW
Brilliance	BRILL
Built in Test Equipment	BITE
Calibrate	CAL
Cancel	CNCL
Carried (e.g. carried EBL origin)	C
Centre	CENT
Change	CHG
Circular Polarised	CP
Clear	CLR
Closest Point of Approach	CPA
Consistent Common Reference Point	CCRP
Consistent Common Reference System	CCRS
Contrast	CONT
Correction	CORR
Course	CRS
Course Over the Ground	COG
Course Through the Water	CTW
Course To Steer	CTS
Course Up	C UP (See note 2)
Cross Track Distance	XTD
Cursor	CURS
Dangerous Goods	DG
Date	DATE
Day/Night	DAY/NT
Dead Reckoning, Dead Reckoned Position	DR

Abbreviation	Term
ACK	Acknowledge
ACQ	Acquire, Acquisition
ADJ	Adjust, Adjustment
AFC	Automatic Frequency Control
AFT	Aft
AGC	Automatic Gain Control
AIS	Automatic Identification System
ALARM	Alarm
ALT	Altitude
AM	Amplitude Modulation
ANCH	Anchor Watch
ANCH	Vessel at Anchor (applies to AIS)
ANT	Antenna
APR	April
AUD	Audible
AUG	August
AUTO	Automatic
AUX	Auxiliary System/Function
AVAIL	Available
AZ	Acquisition Zone
BITE	Built in Test Equipment
BKGND	Background
BRG	Bearing
BRILL	Brilliance
BWW	Bearing Waypoint To Waypoint
C	Carried (e.g. carried EBL origin)
C UP (See note 2)	Course Up
CAL	Calibrate
CCRP	Consistent Common Reference Point
CCRS	Consistent Common Reference System
CENT	Centre
CHG	Change
CLR	Clear
CNCL	Cancel
COG	Course Over the Ground
CONT	Contrast
CORR	Correction
CP	Circular Polarised
CPA	Closest Point of Approach
CRS	Course
CTS	Course To Steer
CTW	Course Through the Water
CURS	Cursor
D	Dropped (e.g. dropped EBL origin)
DATE	Date
DAY/NT	Day/Night
DEC	December
DECR	Decrease
DEL	Delete

Term	Abbreviation
December	DEC
Decrease	DECR
Delay	DELAY
Delete	DEL
Departure	DEP
Depth	DPTH
Destination	DEST
Deviation	DEV
Differential Galilleo	DGAL (See note 2)
Differential GLONASS	DGLONASS (See note 2)
Differential GNSS	DGNSS (See note 2)
Differential GPS	DGPS (See note 2)
Digital Selective Calling	DSC
Display	DISP
Distance	DIST
Distance Root Mean Square	DRMS (See note 2)
Distance To Go	DTG
Drift	DRIFT
Dropped (e.g. dropped EBL origin)	D
East	E
Electronic Bearing Line	EBL
Electronic Chart Display and Information System	ECDIS
Electronic Navigational Chart	ENC
Electronic Position Fixing System	EPFS
Electronic Range and Bearing Line	ERBL
Enhance	ENH
Enter	ENT
Equipment	EQUIP
Error	ERR
Estimated Position	EP
Estimated Time of Arrival	ETA
Estimated Time of Departure	ETD
Event	EVENT
Exclusion Zone	EZ
External	EXT
February	FEB
Fishing Vessel	FISH
Fix	FIX
Forward	FWD
Frequency	FREQ
Frequency Modulation	FM
Full	FULL
Gain	GAIN
Galilleo	GAL
Geometric Dilution Of Precision	GDOP
Global Maritime Distress and Safety System	GMDSS

Abbreviation	Term
DELAY	Delay
DEP	Departure
DEST	Destination
DEV	Deviation
DG	Dangerous Goods
DGAL (See note 2)	Differential Galilleo
DGLONASS (See note 2)	Differential GLONASS
DGNSS (See note 2)	Differential GNSS
DGPS (See note 2)	Differential GPS
DISP	Display
DIST	Distance
DIVE	Vessel Engaged in Diving Operations (applies to AIS)
DPTH	Depth
DR	Dead Reckoning, Dead Reckoned Position
DRG	Vessel Engaged in Dredging or Underwater Operations (applies to AIS)
DRIFT	Drift
DRMS (See note 2)	Distance Root Mean Square
DSC	Digital Selective Calling
DTG	Distance To Go
E	East
EBL	Electronic Bearing Line
ECDIS	Electronic Chart Display and Information System
ENC	Electronic Navigational Chart
ENH	Enhance
ENT	Enter
EP	Estimated Position
EPFS	Electronic Position Fixing System
EQUIP	Equipment
ERBL	Electronic Range and Bearing Line
ERR	Error
ETA	Estimated Time of Arrival
ETD	Estimated Time of Departure
EVENT	Event
EXT	External
EZ	Exclusion Zone
FEB	February
FISH	Fishing Vessel
FIX	Fix
FM	Frequency Modulation
FREQ	Frequency
FULL	Full
FWD	Forward
GAIN	Gain
GAL	Galilleo
GC	Great Circle
GDOP	Geometric Dilution Of Precision

Term	Abbreviation
Global Navigation Satellite System	GNSS
Global Orbiting Navigation Satellite System	GLONASS
Global Positioning System	GPS
Great Circle	GC
Grid	GRID
Ground	GND
Group Repetition Interval	GRI
Guard Zone	GZ
Gyro	GYRO
Harmful Substances (applies to AIS)	HS
Head Up	H UP (See note 2)
Heading	HDG
Heading Control System	HCS
Heading Line	HL
High Frequency	HF
High Speed Craft (applies to AIS)	HSC
Horizontal Dilution Of Precision	HDOP
Identification	ID
In	IN
Increase	INCR
Indication	IND
Information	INFO
Infrared	INF RED
Initialisation	INIT
Input	INP
Input/Output	I/O
Integrated Radio Communication System	IRCS
Interference Rejection	IR
Interswitch	ISW
Interval	INT
January	JAN
July	JUL
June	JUN
Latitude	LAT
Limit	LIM
Line Of Position	LOP
Log	LOG
Long Pulse	LP
Long Range	LR
Longitude	LON
Loran	LORAN
Lost Target	LOST TGT
Low Frequency	LF
Magnetic	MAG
Manoeuvre	MVR
Manual	MAN
Map(s)	MAP
March	MAR
Maritime Mobile Services Identity number	MMSI
Maritime Pollutant (applies to AIS)	MP

Abbreviation	Term
GLONASS	Global Orbiting Navigation Satellite System
GMDSS	Global Maritime Distress and Safety System
GND	Ground
GNSS	Global Navigation Satellite System
GPS	Global Positioning System
GRI	Group Repetition Interval
GRID	Grid
GRND	Vessel Aground (applies to AIS)
GYRO	Gyro
GZ	Guard Zone
H UP (See note 2)	Head Up
HCS	Heading Control System
HDG	Heading
HDOP	Horizontal Dilution Of Precision
HF	High Frequency
HL	Heading Line
HS	Harmful Substances (applies to AIS)
HSC	High Speed Craft (applies to AIS)
I/O	Input/Output
ID	Identification
IN	In
INCR	Increase
IND	Indication
INF RED	Infrared
INFO	Information
INIT	Initialisation
INP	Input
INT	Interval
IR	Interference Rejection
IRCS	Integrated Radio Communication System
ISW	Interswitch
JAN	January
JUL	July
JUN	June
LAT	Latitude
LF	Low Frequency
LIM	Limit
LOG	Log
LON	Longitude
LOP	Line Of Position
LORAN	Loran
LOST TGT	Lost Target
LP	Long Pulse
LR	Long Range
MAG	Magnetic
MAN	Manual
MAP	Map(s)
MAR	March
MAX	Maximum
MAY	May

Term	Abbreviation
Maritime Safety Information	MSI
Marker	MKR
Master	MSTR
Maximum	MAX
May	MAY
Medium Frequency	MF
Medium Pulse	MP
Menu	MENU
Minimum	MIN
Missing	MISSING
Mute	MUTE
Navigation	NAV
Normal	NORM
North	N
North Up	N UP (See note 2)
November	NOV
October	OCT
Off	OFF
Officer of the Watch	OOW
Offset	OFFSET
On	ON
Out/Output	OUT
Own Ship	OS
Panel Illumination	PANEL
Parallel Index Line	PI
Passenger Vessel (applies to AIS)	PASSV
Performance Monitor	MON
Permanent	PERM
Person Overboard	POB
Personal Identification Number	PIN
Pilot Vessel (applies to AIS)	PILOT
Port/Portside	PORT
Position	POSN
Positional Dilution Of Precision	PDOP
Power	PWR
Predicted	PRED
Predicted Area of Danger	PAD
Predicted Point of Collision	PPC
Pulse Length	PL
Pulse Modulation	PM
Pulse Repetition Frequency	PRF
Pulse Repetition Rate	PRR
Pulses Per Revolution	PPR
Racon	RACON
Radar	RADAR
Radius	RAD
Rain	RAIN
Range	RNG
Range Rings	RR
Raster Chart Display System	RCDS
Raster Navigational Chart	RNC
Rate Of Turn	ROT
Real-time Kinemetic	RTK
Receiver	RX (See note 2)

Abbreviation	Term
MENU	Menu
MF	Medium Frequency
MIN	Minimum
MISSING	Missing
MKR	Marker
MMSI	Maritime Mobile Services Identity number
MON	Performance Monitor
MP	Maritime Pollutant (applies to AIS)
MP	Medium Pulse
MSI	Maritime Safety Information
MSTR	Master
MUTE	Mute
MVR	Manoeuvre
N	North
N UP (See note 2)	North Up
NAV	Navigation
NORM	Normal
NOV	November
NUC	Vessel Not Under Command (applies to AIS)
OCT	October
OFF	Off
OFFSET	Offset
ON	On
OOW	Officer of the Watch
OS	Own Ship
OUT	Out/Output
PAD	Predicted Area of Danger
PANEL	Panel Illumination
PASSV	Passenger Vessel (applies to AIS)
PDOP	Positional Dilution Of Precision
PERM	Permanent
PI	Parallel Index Line
PILOT	Pilot Vessel (applies to AIS)
PIN	Personal Identification Number
PL	Pulse Length
PM	Pulse Modulation
POB	Person Overboard
PORT	Port/Portside
POSN	Position
PPC	Predicted Point of Collision
PPR	Pulses Per Revolution
PRED	Predicted
PRF	Pulse Repetition Frequency
PRR	Pulse Repetition Rate
PWR	Power
RACON	Racon
RAD	Radius
RADAR	Radar
RAIM	Receiver Autonomous Integrity Monitoring
RAIN	Anti Clutter Rain
RAIN	Rain
RCDS	Raster Chart Display System
REF	Reference
REL (See note 3)	Relative

Term	Abbreviation
Receiver Autonomous Integrity Monitoring	RAIM
Reference	REF
Relative	REL (See note 3)
Relative Motion	RM
Revolutions per Minute	RPM
Roll On/Roll Off Vessel (applies to AIS)	RoRo
Root Mean Square	RMS
Route	ROUTE
Safety Contour	SF CNT
Sailing Vessel (applies to AIS)	SAIL
Satellite	SAT
S-Band (applies to Radar)	S-BAND
Scan to Scan	SC/SC
Search And Rescue Transponder	SART
Search And Rescue Vessel (applies to AIS)	SARV
Select	SEL
September	SEP
Sequence	SEQ
Set (i.e., set and drift, or setting a value)	SET
Ship's Time	TIME
Short Pulse	SP
Signal to Noise Ratio	SNR
Simulation	SIM (See note 4)
Slave	SLAVE
South	S
Speed	SPD
Speed and Distance Measuring Equipment	SDME
Speed Over the Ground	SOG
Speed Through the Water	STW
Stabilized	STAB
Standby	STBY
Starboard/Starboard Side	STBD
Station	STN
Symbol(s)	SYM
Synchronisation	SYNC
Target	TGT
Target Tracking	TT
Test	TEST
Time	TIME
Time Difference	TD
Time Dilution Of Precision	TDOP
Time Of Arrival	TOA
Time Of Departure	TOD
Time to CPA	TCPA
Time To Go	TTG
Time to Wheel Over Line	TWOL
Track	TRK
Track Control System	TCS
Track Made Good	TMG (See note 5)
Trail(s)	TRAIL
Transceiver	TXRX (See note 2)

Abbreviation	Term
RIM	Vessel Restricted in Manoeuvrability) (applies to AIS)
RM	Relative Motion
RMS	Root Mean Square
RNC	Raster Navigational Chart
RNG	Range
RoRo	Roll On/Roll Off Vessel (applies to AIS)
ROT	Rate Of Turn
ROUTE	Route
RPM	Revolutions per Minute
RR	Range Rings
RTK	Real-time Kinemetic
RX (See note 2)	Receiver
S	South
SAIL	Sailing Vessel (applies to AIS)
SART	Search And Rescue Transponder
SARV	Search And Rescue Vessel (applies to AIS)
SAT	Satellite
S-BAND	S-Band (applies to Radar)
SC/SC	Scan to Scan
SDME	Speed and Distance Measuring Equipment
SEA	Anti Clutter Sea
SEL	Select
SEP	September
SEQ	Sequence
SET	Set (i.e., set and drift, or setting a value)
SF CNT	Safety Contour
SIM (See note 4)	Simulation
SLAVE	Slave
SNR	Signal to Noise Ratio
SOG	Speed Over the Ground
SP	Short Pulse
SPD	Speed
STAB	Stabilized
STBD	Starboard/Starboard Side
STBY	Standby
STN	Station
STW	Speed Through the Water
SYM	Symbol(s)
SYNC	Synchronisation
T	True
TCPA	Time to CPA
TCS	Track Control System
TD	Time Difference
TDOP	Time Dilution Of Precision
TEST	Test
TGT	Target
THD	Transmitting Heading Device
TIME	Ship's Time
TIME	Time
TM	True Motion
TMG (See note 5)	Track Made Good

Term	Abbreviation
Transferred Line Of Position	TPL
Transmitter	TX (See note 2)
Transmitting Heading Device	THD
Trial	TRIAL (See note 4)
Trigger Pulse	TRIG
True	T
True Motion	TM
Tune	TUNE
Ultrahigh Frequency	UHF
Universal Time, Co-ordinated	UTC
Unstabilised	UNSTAB
Variable Range Marker	VRM
Variation	VAR
Vector	VECT
Very High Frequency	VHF
Very Low Frequency	VLF
Vessel Aground (applies to AIS)	GRND
Vessel at Anchor (applies to AIS)	ANCH
Vessel Constrained by Draught (applies to AIS)	VCD
Vessel Engaged in Diving Operations (applies to AIS)	DIVE
Vessel Engaged in Dredging or Underwater Operations (applies to AIS)	DRG
Vessel Engaged in Towing Operations (applies to AIS)	TOW
Vessel Not Under Command (applies to AIS)	NUC
Vessel Restricted in Manoeuvrability) (applies to AIS)	RIM
Vessel Traffic Service	VTS
Vessel Underway Using Engine (applies to AIS)	UWE
Video	VID
Voyage	VOY
Voyage Data Recorder	VDR
Warning	WARNING
Water	WAT
Waypoint	WPT
West	W
Wheel Over Line	WOL
Wheel Over Time	WOT
X-Band (applies to Radar)	X-BAND

Abbreviation	Term
TOA	Time Of Arrival
TOD	Time Of Departure
TOW	Vessel Engaged in Towing Operations (applies to AIS)
TPL	Transferred Line Of Position
TRAIL	Trail(s)
TRIAL (See note 4)	Trial
TRIG	Trigger Pulse
TRK	Track
TT	Target Tracking
TTG	Time To Go
TUNE	Tune
TWOL	Time to Wheel Over Line
TX (See note 2)	Transmitter
TXRX (See note 2)	Transceiver
UHF	Ultrahigh Frequency
UNSTAB	Unstabilised
UTC	Universal Time, Co-ordinated
UWE	Vessel Underway Using Engine (applies to AIS)
VAR	Variation
VCD	Vessel Constrained by Draught (applies to AIS)
VDR	Voyage Data Recorder
VECT	Vector
VHF	Very High Frequency
VID	Video
VLF	Very Low Frequency
VOY	Voyage
VRM	Variable Range Marker
VTS	Vessel Traffic Service
W	West
WARNING	Warning
WAT	Water
WOL	Wheel Over Line
WOT	Wheel Over Time
WPT	Waypoint
X-BAND	X-Band (applies to Radar)
XTD	Cross Track Distance

List of Units of Measurement and Abbreviations

Unit	Abbreviation
cable length	cbl
cycles per second	cps
degree(s)	deg
fathom(s)	fm
feet/foot	ft
gigahertz	GHz
hectopascal	hPa
hertz	Hz
hour(s)	hr(s)
kilohertz	kHz
kilometre	km
kilopascal	kPa
knot(s)	kn
megahertz	MHz
minute(s)	min
Nautical Mile(s)	NM

Abbreviation	Unit
cbl	cable length
cps	cycles per second
deg	degree(s)
fm	fathom(s)
ft	feet/foot
GHz	gigahertz
hPa	hectopascal
Hz	hertz
hr(s)	hour(s)
kHz	kilohertz
km	kilometre
kPa	kilopascal
kn	knot(s)
MHz	megahertz
min	minute(s)
NM	Nautical Mile(s)

Notes:

1. Terms and abbreviations used in nautical charts are published in relevant IHO publications and are not listed here.

2. In general, terms should be presented using lower case text and abbreviations should be presented using upper case text. Those abbreviations that may be presented using lower case text are identified in the list, e.g. "dGNSS" or "Rx".

3. Abbreviations may be combined, e.g. "CPA LIM" or "T CRS". When the abbreviation for the standard term "Relative" is combined with another abbreviation, the abbreviation "R" should be used instead of "REL", e.g. "R CRS".

4. The use of the abbreviations "SIM" and "TRIAL" are not intended to replace the appropriate symbols listed in annex 1.

5. The term "Course Made Good" has been used in the past to describe "Track Made Good". This is a misnomer in that "courses" are directions steered or intended to be steered with respect to a reference meridian. "Track Made Good" is preferred over the use of "Course Made Good".

6. Where other information is presented using SI units, the respective abbreviations should be used.