

U.S. Coast Guard to Test Automatic Identification System (AIS) Aids to Navigation (ATON)

In the near future, the U.S. Coast Guard and other authorized agencies and organizations (i.e., U.S. Army Corps of Engineers, National Oceanic and Atmospheric Administration, Marine Exchange of Alaska) will begin transmitting AIS ATON messages and marine safety information via AIS for testing and evaluation. The exact content, location, and times of these broadcasts will be announced in future Local Notices to Mariners.

AIS is an internationally adopted radio communication protocol that enables the autonomous and continuous exchange of navigation safety related messages amongst vessels, lifeboats, aircraft, shore stations, and aids to navigation (AIS ATON). AIS ATON stations broadcast their presence, identity (9-digit Marine Mobile Service Identity (MMSI) number), position, and status at least every three minutes or as needed. These broadcasts can originate from an AIS station located on an existing physical aid to navigation (Real AIS ATON) or from another location (i.e., AIS Base Station). An AIS Base Station signal broadcasted to coincide with an existing physical aid to navigation is known as a Synthetic AIS ATON. An electronically charted, but non-existent as a physical aid to navigation, is identified as a Virtual AIS ATON. The latter two can be used to depict an existing aid to navigation that is off station or not watching properly or to convey an aid to navigation that has yet to be charted. All three variants can be received by any existing AIS mobile device, but they would require an external system for their portrayal (i.e., AIS message 21 capable ECDIS, ECS, radar, PC). How they are portrayed currently varies by manufacturer, but the future intention is for the portrayal to be in accordance with forthcoming International Standards (i.e., IEC 62288 (Ed. 2), IHO S-4 (Ed. 4.4.0)).

Mariners capable of receiving and displaying these test AIS messages are encouraged to provide feedback and report any anomalies to the USCG NAVCEN Website: <http://www.navcen.uscg.gov> | Contact Us Tab | Subject: AIS | Category: AIS Testing.

Example of Local Notice to Mariners Chart Corrections for AIS ATONs

Chart Correction for *Real AIS ATON*

12326	52nd Ed.	01-JUNE-13	Last LNM: 53/13	NAD 83		LNLM/14
<i>Chart Title: Approaches to New York</i>						
ADD		Magenta circle AIS Chart No. 1: S17.2 to ABC Channel Lighted Whistle Buoy A and			CGD 40-27-27.991N	073-50-12.228W
CHANGE		Characteristic to RW "A" Mo (A) WHIS Racon (^) AIS				

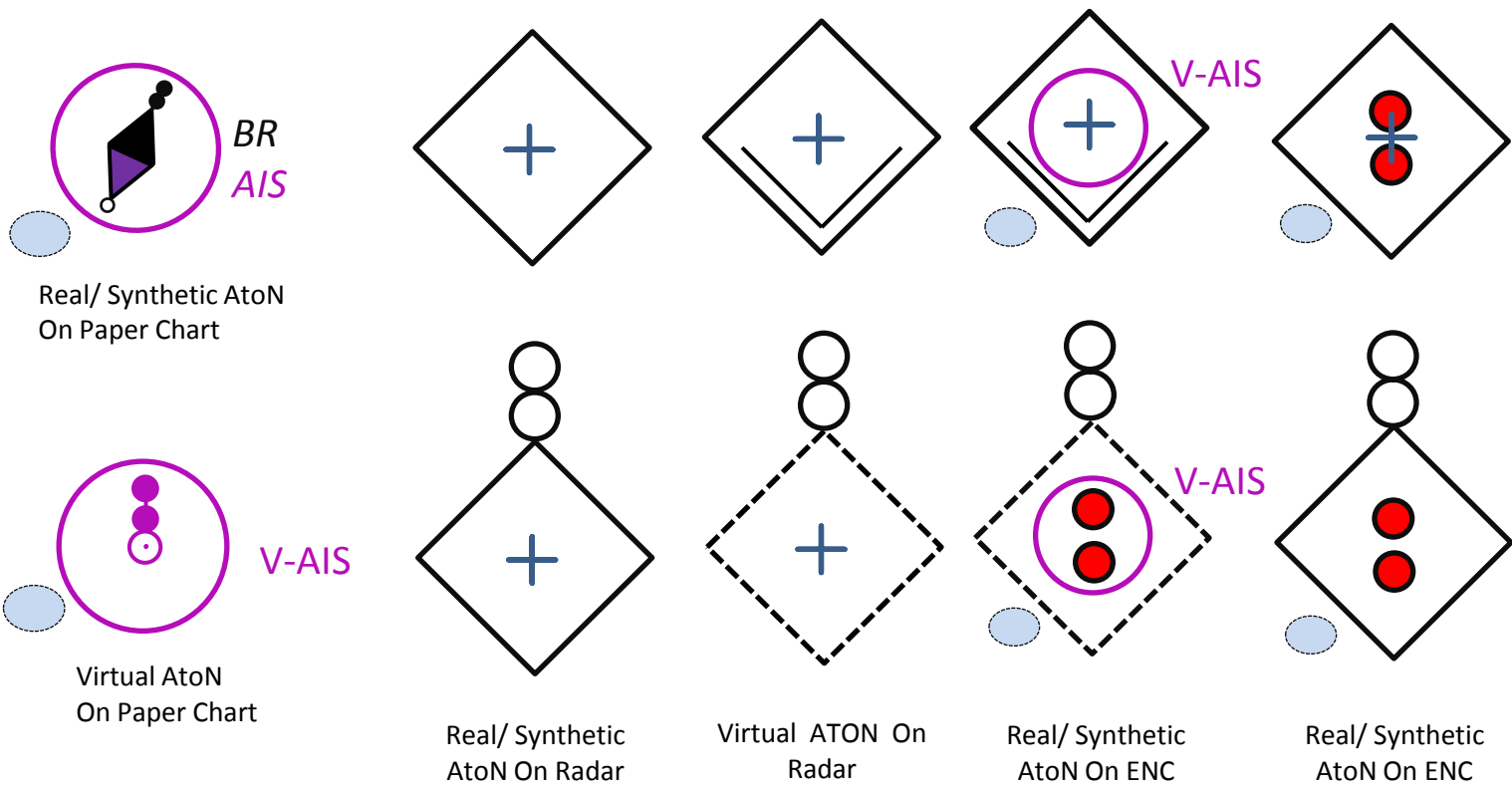
Chart Correction for *Synthetic AIS ATON*

18649	68th Ed.	01-JUNE-13	Last LNM: 52/13	NAD 83		LNLM/14
<i>Chart Title: Entrance to San Francisco Bay</i>						
ADD		Magenta circle AIS Chart No. 1: S17.2 to ABC Approach Lighted Whistle Buoy AB and			CGD 37-44-59.749N	122-41-33.940W
CHANGE		Characteristic to RW "AB" Mo (A) WHIS Racon (-) AIS				

Chart Correction for *Virtual AIS ATON*

12314	33rd Ed.	01-JUNE-12	Last LNM: 51/13	NAD 83		LNLM/14
<i>Chart Title: Delaware River Philadelphia to Trenton</i>						
ADD		ABC Railroad Bridge South Starboard V-AIS ATON Chart No. 1: S18.2		to	CGD 39-58-55.059N	075-04-06.856W
ADD		ABC Railroad Bridge South Port V-AIS ATON Chart No. 1: S18.2		to	38-58-55.803N	076-23-04.547W

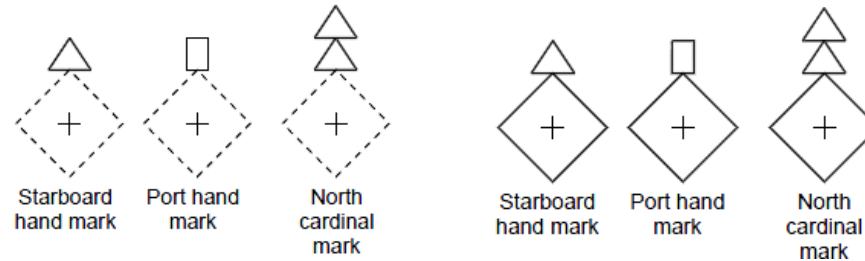
How an AIS 'Isolated Danger' AtoN will potentially be portrayed per IHO and IEC standards on paper charts, radar and electronic nautical charts (ENC)



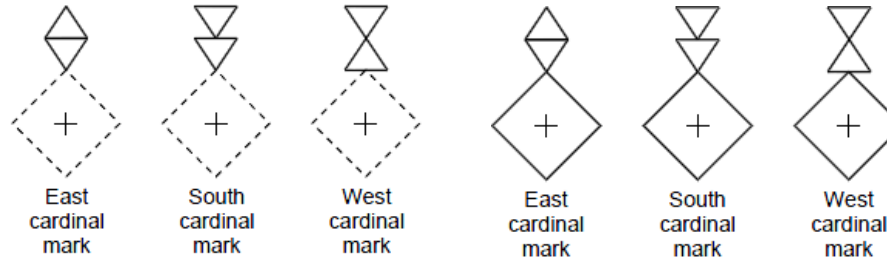
IEC 62288 (Ed.1)

IEC 62288 (Ed.2)

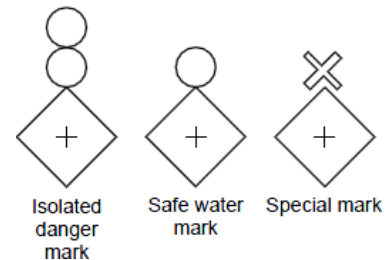
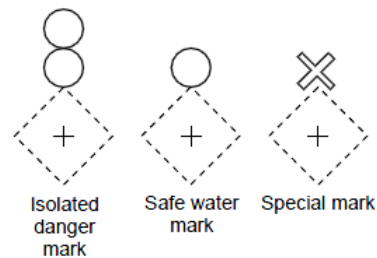
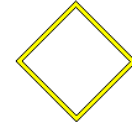
Other Examples of how AIS ATON will be portrayed on future (IEC 62288, Ed.2 compliant) radars



Missing



Off Pos



Virtual ATON

Real/Synthetic ATON