



Technical Circular

No.: 013/2014

Date: 18th June 2014

To Whomsoever it may concern

Subject: USCG Testing of Virtual ATON or eATON

1. Please be advised that United States Coast Guard (USCG) have sent an advisory stating that a testing of virtual aids to navigation, i.e., Automatic Identification System (AIS) Aids to Navigation (ATON) messages is being conducted in several ports around the US.
2. Standard symbols for AIS ATON have been developed by the International Hydrographic Organization (IHO) and will be displayed on the Electronic Chart Display and Information System (ECDIS) or radar. However, unlike regular aids to navigation, the new "AIS ATON" may appear to be coming from an aid to navigation – but that ATON may or may not be physically present. To assist mariners, the National Oceanic and Atmospheric Administration (NOAA) will add new symbols to upcoming affected NOAA nautical charts.
3. 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, radar, personal computer (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)).
4. Prior to arrival in a US port, ship Masters should
 - 4.1 request their local agent to determine if AIS ATON is being tested in that port and to provide the appropriate details, e.g., type of AIS ATON, location, etc.
 - 4.2 ensure that the ship's Officers of the Watch (OOWs) are familiar with the AIS ATON symbols (the attached notice gives the details of the symbols)
 - 4.3 confirm with the pilot during the Master / Pilot exchange whether AIS ATON is being tested.

Enclosure: 1. AIS ATON Symbols

AIS ATON Symbols

Depending on the purpose of the virtual aid, NOAA charts and NOAA Electronic Navigation Charts (ENCs) will use the following depictions (which can also be found on the NOAA website at http://www.nauticalcharts.noaa.gov/mcd/updates/ais_aton.html):

| Purpose of Virtual Aid | Definition | ENC Portrayal | Paper Chart Portrayal |
|----------------------------|--|---|---|
| North Cardinal | A virtual object that indicates navigable water lies northwards |  V-AIS |  |
| East Cardinal | A virtual object that indicates navigable water lies eastwards |  V-AIS |  |
| South Cardinal | A virtual object that indicates navigable water lies southwards |  V-AIS |  |
| West Cardinal | A virtual object that indicates navigable water lies westwards |  V-AIS |  |
| Port lateral (IALA A) | A virtual object marking the port side of a channel |  V-AIS |  |
| Starboard Lateral (IALA A) | A virtual object marking the starboard side of a channel |  V-AIS |  |
| Port lateral (IALA B) | A virtual object marking the port side of a channel |  V-AIS |  |
| Starboard Lateral (IALA B) | A virtual object marking the starboard side of a channel |  V-AIS |  |
| Isolated Danger | A virtual object marking an isolated danger |  V-AIS |  |
| Safe Water | A virtual object marking safe water |  V-AIS |  |
| Special Purpose | A virtual object used to mark an area or feature referred to in nautical documents |  V-AIS |  |
| Emergency Wreck Marking | A virtual object marking a wreck |  V-AIS |  |

Example of USCG 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 LNM/14
 Chart Title: *Approaches to New York*

| | | | | |
|--------|---|--|----------------------|----------------|
| 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 LNM/14
 Chart Title: *Entrance to San Francisco Bay*

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|--------|---|--|----------------------|----------------|
| 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 LNM/14
 Chart Title: *Delaware River Philadelphia to Trenton*

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|-----|---|----|----------------------|----------------|
| 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 |

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