L3

Marine Systems

Automatic Identification System (AIS) with STEDS Functionality
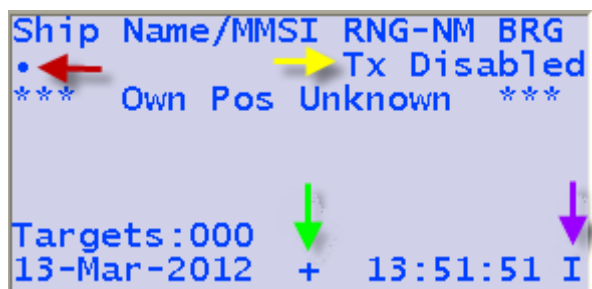# Quick Reference Guide

FOR OFFICIAL USE ONLY
See complete Use and Export Control legend on reverse

This Quick Reference Guide is intended to help you use the Sensitive but Unclassified Tactical Information Exchange and Display System (STEDS) functionality of your AIS transponder. For complete details about installing and operating AIS, refer to the STEDS AIS Manual (165M0014-90).

CONTROLS COMMON TO ALL OPERATIONS

Use the arrow keys to navigate through menus or fields. Press ENT to select a menu choice, then press ENT again to save a change within a field.
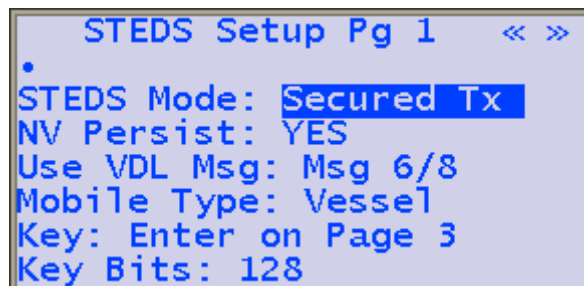
DEFAULT DISPLAY ON START-UP and NORMAL OPERATING INDICATORS

✓ The field indicated by the yellow arrow shows the current STEDS mode. As shipped from the factory, the default value is "Tx Disabled."

✓ Within two minutes of power-up, the GPS source indicator (purple arrow) should display "I", which means the unit's internal GPS is operating and has acquired a sufficient number (and quality) of GPS satellite signals for proper operation. This "I" indicator should remain displayed at all times, and if it displays a different value (such as "F," "S," or "N") it means that internal timing has been lost (consult manual 165M0014-90 to help determine a cause and find a solution). Time is always displayed as UTC.

✓ The "+" (green arrow) should be always be displayed, meaning that the unit's internal GPS is in use. If the "+" is not displayed, press the FNC (function) button and release it, then press the numeral "4" button to toggle the internal GPS position on.

✓ For AISA3 transponders only: The dot (red arrow) should always be flashing – this indicates that the unit is operating.

ENABLING THE TRANSPONDER FOR STEDS OPERATIONS

✓ To display the STEDS Setup menu Press the FNC (function) button and then release it, and then press the numeral "6" button.

✓ In the "STEDS Mode" field, select "Secured TX." The available STEDS modes are: "Tx Disabled" (unit operates as an AIS receiver only); "Secured Tx" (all transmissions from the unit are encrypted); "Class A" (all transmissions from the unit are unencrypted ("in the clear").

✓ "YES" in the "NV Persist" field will retain STEDS settings after the unit's power has been cycled.

✓ Use VDL Msg: The default for this field is "Msg 6/8."

✓ Key Bits: Set this field to match the bit value of your key (which will be 128, 192 or 256 bits).

(ENABLING STEDS OPERATIONS instructions continued on other side)

ENABLING THE TRANSPONDER FOR STEDS OPERATIONS *(continued from other side)*

✓ Press the "right arrow" key to enter the "STEDS Setup Pg 2" or "STEDS Setup Pg 3" display (above, left to right, respectively).

✓ In the "STEDS Setup Pg 2" page, the normal values are shown in the drawing above.

✓ When in the "STEDS Setup Pg 3" display, enter the encryption key in the "Key" field. Continue to push a button until the desired character appears, then wait a moment for the cursor to move to the next space.

✓ **NOTE:** The key is <u>hexadecimal</u>, and will only accept "A" through "F" and 0 through 9 alphanumeric characters.

✓ Enter the same encryption key in the "Verify" field. Press ENT – if correct, the message "Key accepted!" will be displayed (red arrow). If not correct, the message "Key mismatch!" will be displayed, and you must reenter the key.

DISPLAYING OWN SHIP INFORMATION and THE TARGET LIST

✓ Press the NAV button to toggle between the Own Ship Information and the Target List display (above, left to right, respectively).

✓ In the Own Ship Information Display, the data shown includes the following:

➢ MMSI – Maritime Mobile Service Identity number (a nine-digit number that is unique to the particular vessel).

▪ **NOTE:** The unit will not transmit unless a valid MMSI number has been set.

➢ N – Navigational status (such as "underway," "moored," "anchored," etc. (The default is "underway.")

➢ Name – The vessel's name (may be preceded by a law-enforcement agency identifier, such as "USCG," etc.)

➢ PSrc – Position source indicator ("Int Uncorr" for "internal uncorrected" which is displayed when using internal GPS).

➢ Position – This is the vessel's latitude and longitude displayed in degrees and minutes (minutes displayed decimally).

✓ In the Target List display, the nearest three vessels' information will be shown. The information includes the type of station (AIS for a ship-borne AIS transponder, BASE for a base station, ATON for an aid to navigation, and SAR for a search-and-rescue AIS aboard an aircraft. Also shown is the vessel's name or its MMSI number, the range (in nautical miles) to the vessel, and the bearing to the target vessel (referenced from true north).