UNIVERSAL *AVIONICS*
S Y S T E M S   C O R P O R A T I O N

TAWS Obstacle Database
Field Loading Procedures

Obstacle Database Loading Instructions for TAWS:

Installation and update of the Obstacle database is accomplished through Universal Avionics Flight Management System (FMS) and SSDTU or DTU-100.
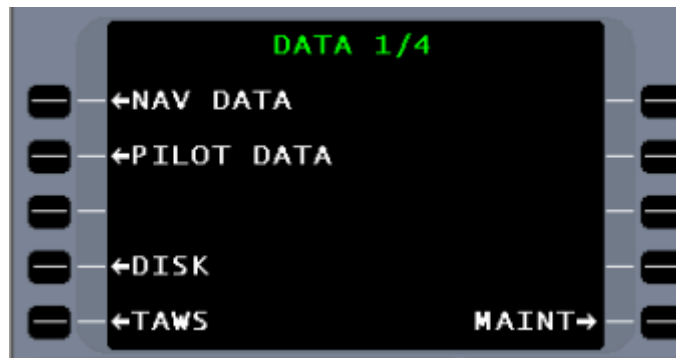
If there is not a Universal FMS installed, TAWS is updated directly using a Windows® compatible computer, SSDTU or DTU-100 and the Universal Avionics Universal Serial Tool Program.

NOTE: If an SSDTU or DTU-100 is not installed and configured in TAWS, **DISK** selection is not displayed.
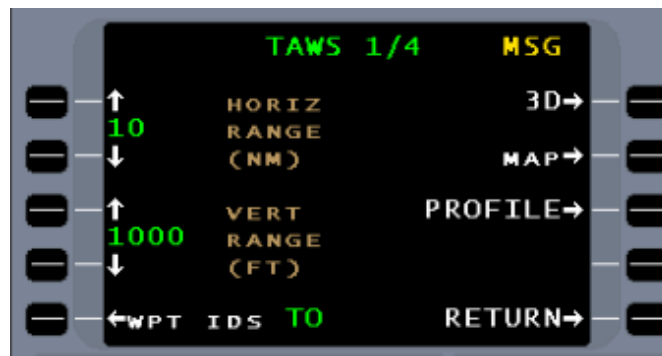
NOTE: The screen captures in this document are shown as an aide. The information shown in these captures may not reflect the correct database information (date, version number, CRC number etc.). That information is shown on the USB flash drive/disk/kit received.

Database Loading through the FMS

(1)   Press function key [DATA] on the FMS keyboard to display **DATA 1/4** page.

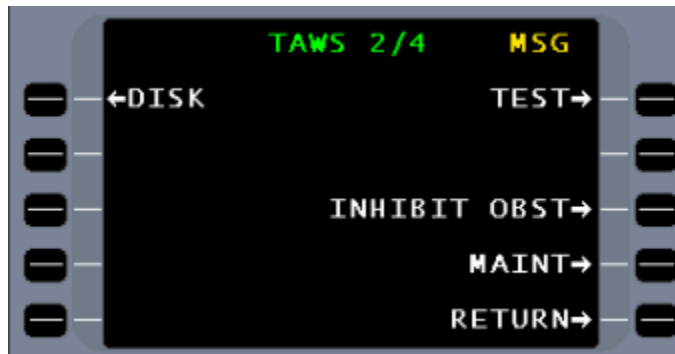(2)   Press line select key (LSK) [5L] to display **TAWS 1/4** page.

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(3)   Press function key [NEXT] to display **TAWS 2/4** page.

(4)   Press LSK [1L] **DISK** to display **TAWS DISK MENU** page.

(5)   Insert the USB flash drive into the SSDTU or Zip disk into the DTU-100.

(6)   Press LSK [1L] to display **DISK CONTENTS** page.

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(7)   Wait approximately 20 seconds for the USB flash drive or disk to be read. Compare the information displayed with the data on the USB flash drive or disk label; **EFFECTIVE ON**, **VERSION** and **CRC VALUE**.

(8)   Press **RETURN** to exit.

   NOTE: If disk contents are not filled after approximately 20 seconds, remove USB flash drive or eject the disk and reinsert and wait 20 seconds for the disk contents to fill.

(9)   Press **DATABASE LOAD** LSK [2L].

(10)   Press **LOAD** LSK [5L]**.** Once selected, the **LOAD** selection will disappear from the display. During the database loading process, the text **LOADING** is displayed, the **OBST INOP** lamp will be illuminated, and the TAWS image is removed from the display.
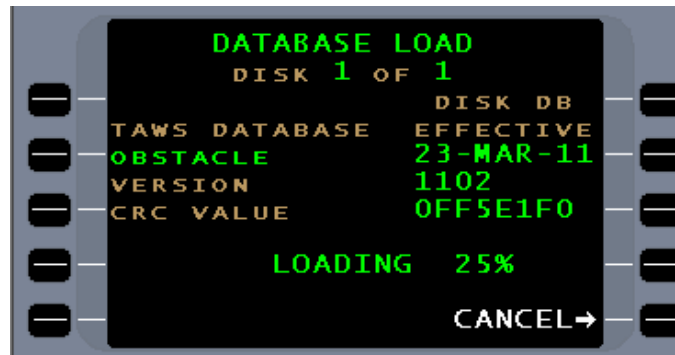
(11)   **COMPLETE** is displayed on the FMS after successful loading of the database.

> **NOTE:** If the incorrect disk is inserted into the DTU the message **INCORRECT DISK FILE FOUND** is displayed.

> **NOTE:** If the database load is aborted before completion, the **OBST INOP** annunciator will remain illuminated due to no obstacle database loaded in TAWS

> **NOTE:** If an error is detected during the database loading process, a message corresponding to the error condition is displayed on the **DATABASE LOAD** page.
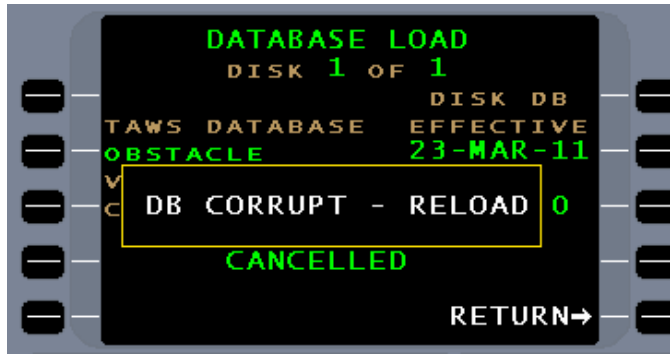
(12)   Upon completion of database load, TAWS will shut down and reboot and display a pop-up message window **"TAWS/FMS COMM ERROR RESELECT TAWS"**.
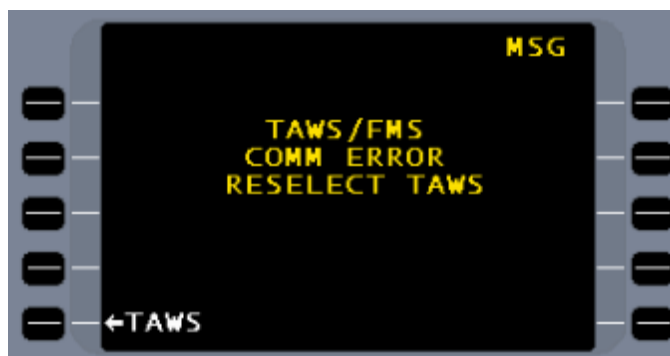
> **NOTE:** The **TAWS** line select key will become active when TAWS restarts. The **COMM ERROR** message will be displayed until the **TAWS** line select key is reselected.

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(13) Verify that the Obstacle Database version has been completed. Press the **TAWS** LSK [5L] to display TAWS 1/4 page.
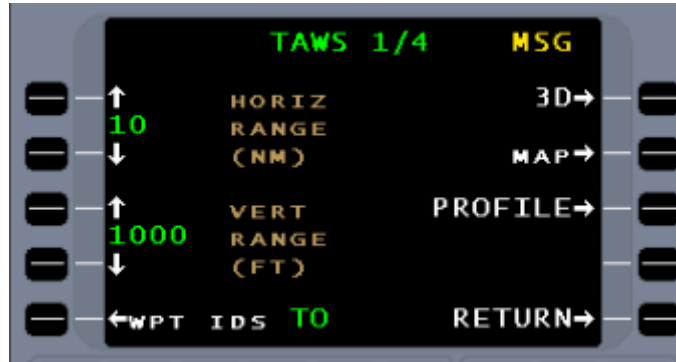
(14) The TAWS current database listings are found on TAWS page 4/4 and can be accessed from TAWS page 1/4 by pressing the PREV or NEXT key.

NOTE: When using an MFD for TAWS display, page 4/4 is renumbered 3/3.

This page provides version number, date, and CRC information about the Airport, Obstacle, and Terrain databases that have been loaded into TAWS.

If memory contains an invalid or corrupt database, the message "**DATABASE FAILED**" will be displayed with the corresponding failed database.

If the Obstacle database is not configured, the message "**DATABASE UNUSED**" will be displayed with the obstacle database.

(15) Verify that the OBSTACLE DB version, date, and CRC matches what is **printed on the Zip disk or USB drive**. Display of correct data signifies the loading procedure has been accomplished correctly and no errors occurred during loading.

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Database Loading using a Personal Computer (PC)

TAWS can be updated directly using a Windows® compatible computer, SSDTU or DTU-100 and Universal Avionics Universal Serial Tool Program available as part of the Configuration Module Editor Kit part number K12073.

(1)   Connect an RS-232 cable to the cockpit TAWS RS-232 Monitor Port and the other end to a PC.

   The Universal Serial Tool Program is only displayed on the PC.

(2)   Start the PC.

(3)   Apply power to TAWS and the onboard SSDTU or DTU-100, or, connect a portable SSDTU or portable DTU-100 and apply power.

(4)   On the PC start the Universal Serial Tool Program.

(5)   From the Universal Serial Tool menu enter **Page 30** (SCN 12.0) or **Page 32** (SCN 12.1) to select DTU Options page.

(6)   Insert the Database USB thumb drive into the SSDTU or Zip disk into the DTU-100.

(7)   On the DTU Options page tab down to the **LOAD DB** command and press **Enter** on the PC.

   The DTU Options page will display the Version, Effectivity Date and CRC of the database that is being loaded.

(8)   On the DTU Options page tab down to the **CONTINUE** command and press **Enter**.

(9)   The loading process will begin.

(10)   When the database has finished loading, **LOAD COMPLETE** is displayed and after 10 seconds TAWS will begin rebooting.

(11)   After TAWS has completed rebooting and the Universal Serial Tool is displayed, enter **Page 26** (SCN 12.0) or **Page 28** (SCN 12.1) to select the **Misc. Data (SCNs, CRCs)** to verify that the Database and Effectivity Date of the database loaded is correct and no errors occurred during loading.

(12)   Disconnect and remove PC, SSDTU or DTU-100 (if applicable) and cables.

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Database Installation Failure

If the database fails to load:

- If the database has an incorrect CRC, reload the database.

- If a disk fails to load, retry loading the disk.

- If the disk still has an incorrect CRC or fails to load, contact Universal Avionics to obtain another copy of the database.

- If a failure continues to occur during the load process, replace the SSDTU or DTU-100 and attempt to reload database.

- If the failure persists, contact Universal Avionics to return the TAWS unit for testing and/or repair

Checkout Procedure

After performing the Field Loading Procedures, it is recommended that a complete onboard test of the TAWS system be done utilizing your normal installation facility procedures and/or by using the checkout procedures in the TAWS Installation Manual, Report No. 34-40-01.

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