

# **TAWS Terrain Database Field Load Procedures**

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TAWS Terrain Database Field Loading Procedures

**Terrain Database Loading Instructions for TAWS:**

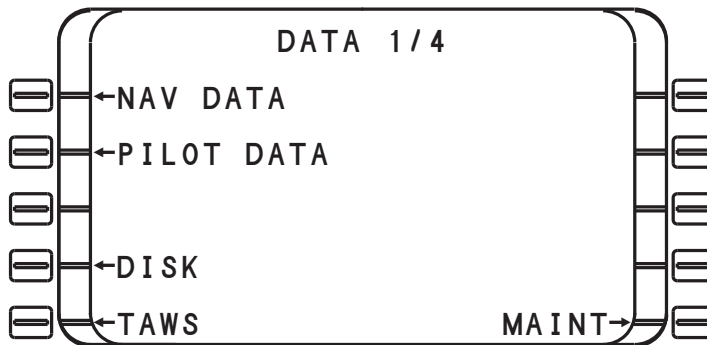
Installation and update of the Terrain database is accomplished through Universal's Flight Management System and SSDTU or DTU-100.

If there is not a Universal FMS installed, TAWS is updated directly using a Windows® compatible computer, SSDTU or DTU-100 and the Terminal Monitor Program.

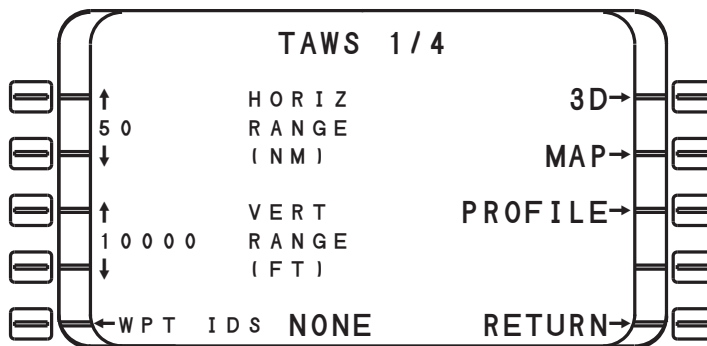
**NOTE:** If an SSDTU or DTU-100 is not installed, **DISK** selection is not displayed.

**Database Loading through the FMS (TAWS SCN 10.5 and later)**

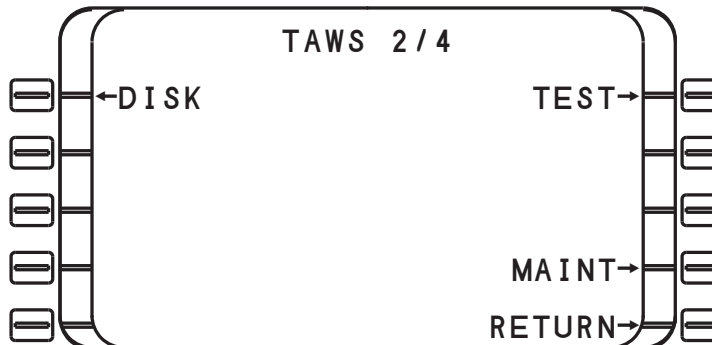
- (1) Press function key [DATA] on the FMS keyboard to display **DATA 1/4** page.



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

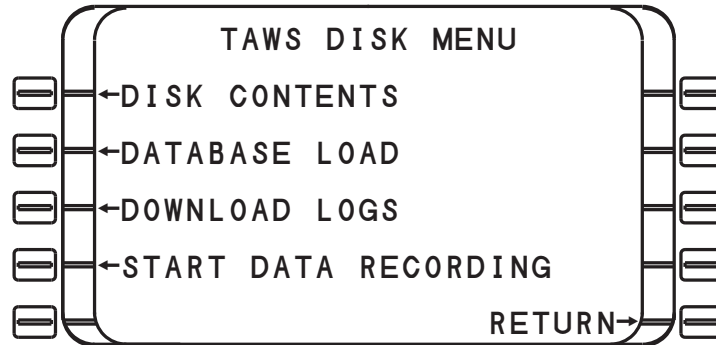


- (3) Press function key [NEXT] to display **TAWS 2/4** page.

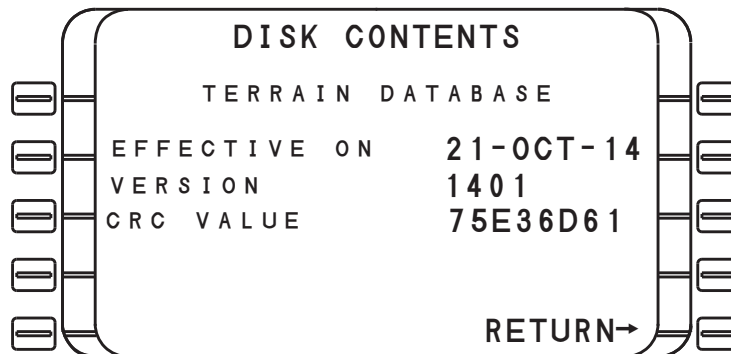


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- (4) Press LSK [1L] **DISK** to display **TAWS DISK MENU** page.



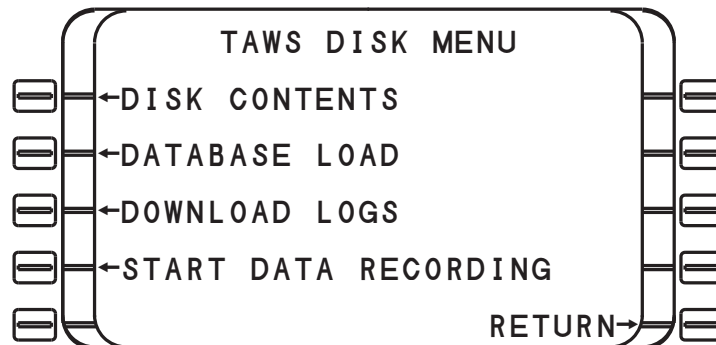
- (5) Insert the USB flash drive into the SSDTU or first disk into the DTU-100.  
(6) Press LSK [1L] to display **DISK CONTENTS** page.



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

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



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- (9) Press **LOAD LSK [5L]**. Once selected, the **LOAD** selection will disappear from the display. During the database loading process the text **LOADING** is displayed. **COMPLETE** is displayed after successful loading of the database.

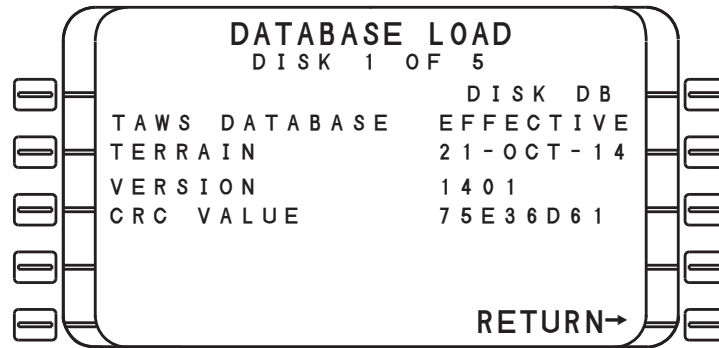
When the next disk in the database load is required, the message **INSERT DISK 2 OF 5** is displayed and repeated with the next disk in the sequence until all disks have been loaded.

**NOTE:** Only one USB flash drive is used to load 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 **TERR INOP** annunciator will illuminate and the display will go blank

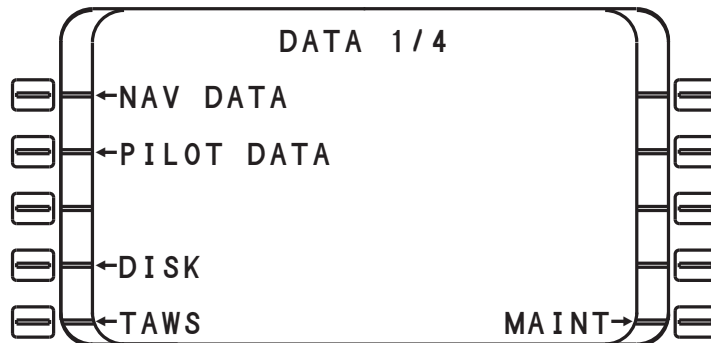
**NOTE:** If an error is detected during the database loading process, a message corresponding to the error condition is displayed on the **DISK MENU** page.



- (10) Upon completion of database load, TAWS will shutdown 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.

- (11) Verify that the Terrain Database version has been completed. Press the TAWS LSK [5L] to display TAWS 1/4 page.



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- (12) 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 part 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.

TAWS 4 / 4		
DB	VER	DATE / CRC
AIRPORT	XXXX	03 - JAN - 04 XXXXXXXXXX
TERRAIN	1401	21 - OCT - 14 75E36D61
OBSTACLE	XXXX	03 - JAN - 04 XXXXXXXXXX
RETURN→		

- (13) Verify that the TERRAIN DB displays the uploaded version and correct date and CRC 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<sup>®</sup> compatible computer, SSDTU or DTU-100 and Universal Avionics' Universal Serial Tool 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 Terminal Monitor 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 Terminal Monitor Program.

- (5) From the Terminal Monitor menu enter **Page 30 (SCN 10.X and 11.X) Page 32 (SCN 12.X)** 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 instructed, insert the next database disk. Repeat this until loading is complete.

**NOTE:** One USB thumb drive contains the entire Terrain Database.

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 10.X and 11.X) Page 28 (SCN 12.X)** 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 particular disk fails to load, retry to load the disk and continue loading.
- 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 return the TAWS unit to Universal Avionics**

**Configuration Procedure**

In the unlikely event that the TAWS system requires reconfiguration after installation of this software upgrade, refer to the previously recorded configuration data and the System Data Installation section of the TAWS Configuration Manual Report No. 34-40-07 for SCNs 10.X and 11.X or 34-40-09 for SCN 12.X.

**Checkout Procedure**

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