Honeywell

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HT GPS Data Loader
For Data Loader Part No. 81635-10

User Guide

Software Version 4.8

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Honeywell warrants that the media on which the database is recorded will be free from defects in materials and workmanship under normal use for a period of two (2) years from the Delivery Date. Purchaser's sole and exclusive remedy, and Honeywell's sole and exclusive liability, under this warranty will be Honeywell's replacement of the media.

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For each revision, put the revised pages in your manual and discard the superseded pages. Write the revision number and date, date put in manual, and the incorporator's initials in the applicable columns on the Record of Revisions. The initial H shows Honeywell is the incorporator.

Revision Number	Revision Date	Date Put In Manual	By	Revision Number	Revision Date	Date Put In Manual	By
1	9 Sep 1996	9 Sep 1996	H				
2	20 Jan 1997	20 Jan 1997	H				
3	11 Aug 1997	11 Aug 1997	H				
4	22 Sep 1997	22 Sep 1997	H				
5	24 Nov 1997	24 Nov 1997	H				
6	19 Jan 2000	19 Jan 2000	H				
7	1 Aug 2002	1 Aug 2002	H				

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■   indicates a changed or added page.
F   indicates a foldout page.

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HT GPS Data Loader / Part No. 81635-10

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CHAPTER 1

1. Overview

A. General

(1) The HT GPS Data Loader, Part No. 81635-10, is a hand-held device used to transfer data from, or save data to, PCMCIA cards to HT9100, HT1000, HT9000 and TNL8100 systems. The data loader can accomplish the following tasks:

- Update system Navigation Database (FAA 28-day cycle)
- Upgrade the microprocessor's operating system software
- Save or program the HT9100/1000 configuration module
- Save or program HT9100/1000 user routes & waypoints.

CAUTION: TNL8100 USERS. THIS DATA LOADER USES DIFFERENT MEDIA THAN THE TNL8100DL DATA LOADER. USE ONLY THE 68-PIN PCMCIA CARD (HI SPEC 81651) IN DATA LOADER 81635-10. ATTEMPTS TO USE THE 40-PIN FLASH CARD WILL DAMAGE THE LOADER.

CAUTION: THE TNL8100DL IS NO LONGER IN PRODUCTION AND IS REPLACED BY GPS DATA LOADER 81635-10 (KIT 81154-30) FOR ALL HT/TNL SYSTEMS, AND USES THE SAME CONNECTING CABLE (81153-00).

CAUTION: OPERATORS MAY SUBSCRIBE THE HONEYWELL HT9000/TNL8100 NAVIGATION DATABASE OR NOTIFY JEPPENSEN TO CHANGE MEDIA TO THE 68-PIN PCMCIA.

C. Getting Started

(1) General

    (a) Using the cable, Part No. 81153-00, connect the data loader to the maintenance port on the front of the NPU.

(2) Inserting the Data Card

    (a) Regardless of which side the primary label is on, always hold the data card with the write protector at top right and insert it into the slot in the top of the data loader. When inserted properly, the eject button will pop up.

        NOTE: The user can remove the data card at any time without harm to the unit. The data loader display will inform the user that the card is removed. During data transfer, if the card is removed, the following messages will be shown alternately on the display:

CARD REMOVED

PROCESS ABORTED

(3) Turning the Unit On

    (a) Press the ON/OFF key to turn the unit on. The data loader will perform a series of self-tests. If it passes these tests, it will display:

BITE OK vX.X

(where X.X is the version number).

    (b) If it fails these tests, it will display:

BITE FAIL

        NOTE: If the data loader displays the BITE FAIL message, try restarting it. If the problem persists, return the unit to Honeywell for repair.

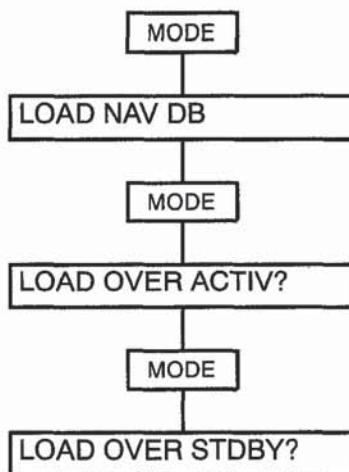# Honeywell

CHAPTER 2

1. Loading From Data Cards

A. General

(1) The HT GPS Data Loader is designed for easy operation using the MODE and the EXE keys. The data loader can be used to load the navigation database from the NAV data card or to update operating system software. When a card is inserted in the slot, the data loader will automatically detect the card type and provide the appropriate options available from the data loader.

B. Loading the Database

(1) HT navigation units are capable of storing two separate worldwide databases. To upload a database into an NPU, connect the data loader to the maintenance port of the NPU and turn on the data loader. Wait 20 seconds after power-up for the unit to warm up, then perform the following:

(a) Insert the HT GPS Data Loader NAV data card into the data loader.

<u>1</u>   Pressing the MODE key consecutively cycles through the following options:

```
        ┌──────────┐
        │   MODE   │
        └────┬─────┘
             │
    ┌────────┴─────────┐
    │   LOAD NAV DB    │
    └────────┬─────────┘
             │
        ┌────┴─────┐
        │   MODE   │
        └────┬─────┘
             │
    ┌────────┴──────────┐
    │  LOAD OVER ACTIV? │
    └────────┬──────────┘
             │
        ┌────┴─────┐
        │   MODE   │
        └────┬─────┘
             │
    ┌────────┴──────────┐
    │  LOAD OVER STDBY? │
    └───────────────────┘
```

<u>2</u>   The LOAD NAV DB option will overwrite the oldest or invalid database in the NPU. The LOAD OVER ACTIV? option will overwrite the active database. The LOAD OVER STDBY? option will overwrite the inactive (or standby) database.

(b) With the desired option displayed, press the EXE key. The data loader then displays:

```
┌─────────────────────────────────────┐
│ CYCLE #9609 OK?                      │
└─────────────────────────────────────┘
```

<u>1</u>   This is the cycle number of the card. (The number shown will differ depending on the expiration date of the card.)

3   During the transfer, the communication baud rate may be temporarily viewed by pressing the MODE key, which will display one of the following:

XFER AT 250KBD

XFER AT 125KBD

XFER AT 62.5KBD

XFER AT 9.6KBD

(e)   The data loader will display 99% COMPLETE for about one minute while the navigation unit's database processor verifies the checksums of the new database. If the load is successful, the data loader will display:

DATABASE LOADED

1   If the database load is unsuccessful, it will display:

DB UPLOAD FAILED

2   If this happens, the database load must be repeated.

(f)   When the database load is completed successfully, load the second database or press and hold the ON/OFF key of the data loader for three seconds while it turns off. Disconnect it from the NPU.

(g)   Press the card ejector to the left of the card slot and remove card.

C.   Loading Operating System Software

(1)   The HT GPS Data Loader can also be used to reprogram the navigation unit's operating system software.

(a)   Insert the software update data card and turn on the data loader. The data loader operating software is included in some software update cards. If the data loader software is out-of-date, the message LOAD DATA LDR OS will be displayed. The data loader software must be updated before continuing. See paragraph D. for instructions on updating the Data Loader software. If the data loader software is current, this message will not be displayed.
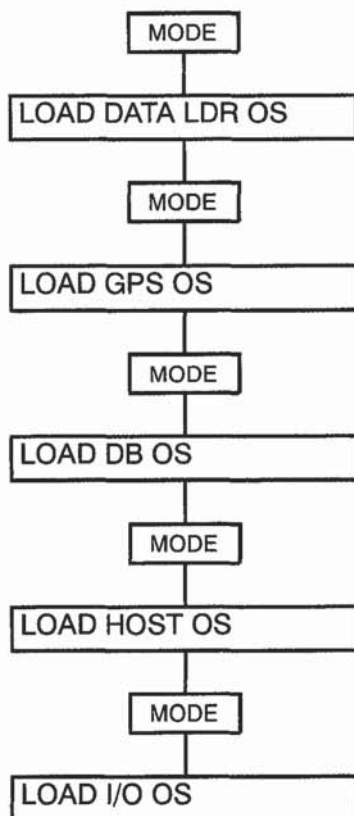
CAUTION: **POWER TO THE NPU MUST BE MAINTAINED DURING THE UPLOADING PROCESS AND FOR AT LEAST 30 SECONDS AFTER UPLOADING IS COMPLETED. IF POWER IS INTERRUPTED DURING THIS TIME, THE NPU'S OPERATING SOFTWARE WILL BE ERASED AND THE NPU MUST BE RETURNED TO THE FACTORY TO HAVE IT RESTORED.**

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2 The following options are available for the HT9000 and TNL8100:

```
┌──────────────┐
│     MODE     │
└──────────────┘
        │
┌──────────────────────┐
│  LOAD DATA LDR OS    │
└──────────────────────┘
        │
   ┌──────────┐
   │   MODE   │
   └──────────┘
        │
┌──────────────────────┐
│     LOAD GPS OS      │
└──────────────────────┘
        │
   ┌──────────┐
   │   MODE   │
   └──────────┘
        │
┌──────────────────────┐
│     LOAD DB OS       │
└──────────────────────┘
        │
   ┌──────────┐
   │   MODE   │
   └──────────┘
        │
┌──────────────────────┐
│    LOAD HOST OS      │
└──────────────────────┘
        │
   ┌──────────┐
   │   MODE   │
   └──────────┘
        │
┌──────────────────────┐
│    LOAD I/O OS       │
└──────────────────────┘
```

a   Press the MODE key to select the desired operation.

(b)   Press the EXE key to select a processor for new software uploading.

NOTE: Before loading, the data loader will verify the contents of the card. If the card checksum fails, the data loader will display:

┌─────────────────────────────────────┐
│ CARD CRC FAIL   │
└─────────────────────────────────────┘

If this occurs, contact Honeywell for a replacement card. (Note: The data loader will verify each card's contents only once per session.)

3 If the GPS software is not programmed properly, the data loader will display:

> | GPS UPLOAD FAIL |

4 If this occurs, repeat the loading process.

(f) When the load process is completed, the data loader will send the software part numbers to the host processor to update the system part number. Then, if the operating software is uploaded correctly, the data loader will display the following:

> | **** PROGRAM OK |

1 If the process fails, the data loader will display:

> | **** UPLOAD FAIL |

2 If the upload fails, repeat the load process.

(g) When each processor has been programmed successfully, press and hold the ON/OFF key of the data loader for three seconds while it turns off. Disconnect the data loader from the navigation unit. Cycle power on the NPU and verify the invalid software configuration message is not displayed. Affix the label identifying the new software version to the NPU.

D. Loading Data Loader Software Upgrade

(1) The user can upgrade the data loader operating system software with a program data card containing the latest data loader software.

(a) Insert the program data card containing the latest data loader software into the data loader. The display will show:

> | LOAD DATA LDR OS |

(b) Press the EXE key to begin the upgrade. The following screen will be displayed:

> | UPDATING SELF |

CAUTION: NEVER TURN OFF THE POWER DURING THIS PROCESS!

(c) When the upgrade is complete, the display will go blank and the data loader will restart the new software. The following display will be shown indicating the new software version:

> | BITE OK vX.XX |

(where X.XX is the new version number).

CHAPTER 3

1. Saving and Loading Configuration Data

A. General

(1) For HT9100 and HT1000 only. Configuration data may be saved from the NPU or stored to the NPU using the data loader.

B. Saving Configuration Data

(1) Insert a configuration card into the data loader.

    (a) If it is a blank card, the display will show:

> | SAVE CONFIG? |
> | --- |

    (b) If the card contains configuration data, the data loader displays:

> | LOAD CONFIG? |
> | --- |

    (c) To switch to the save mode, press the MODE key.

(2) Press the EXE key. The data loader displays:

> | REQUEST SENT |
> | --- |

(3) When the configuration data are saved, the display reads:

> | CONFIG SAVED |
> | --- |

NOTE: A maximum of 63 configuration modules with distinct IDs can be saved on an 8 Meg PCMCIA card. If any attempt is made to save a configuration module to a full card, the data loader will display:

> | CARD IS FULL |
> | --- |

    (a) New configuration data will overwrite any data stored on the card with an identical configuration ID.

C. Loading Configuration Data

(1) Insert a configuration card into the data loader. The display will show:

> | LOAD CONFIG? |
> | --- |

    (a) Press the EXE key to display the first configuration on the card.

CHAPTER 4

1. Saving and Loading User Database Data

A. General

(1) For HT9100 and HT1000 only; -0060 and subsequent. The user database data may be saved from the NPU or stored to the NPU using the data loader. A data card can hold exactly one user database.

B. Saving User Database Data

(1) Insert either a blank data card or a data card containing user database data into the data loader. If the card is blank the display will show:

SAVE CONFIG?

(a) If the card contains user database data, the display shows:

LOAD USER DB?

(2) Press the MODE key until the display shows:

SAVE USER DB?

(3) Press the EXE key. The data loader will begin erasing the card (any data on the card will be lost). While the card is being erased the display will show:

ERASING CARD xx%

(a) Once the card is erased, the data loader transfers the user database data from the NPU to the data card. When the transfer is completed the display will show:

USER DB SAVED

(b) If the data loader is unable to transfer the user database to the card, or if the NPU has no entries in its user database, then the display will show:

DB SAVE FAILED

(3) Press the EXE key. The data loader will erase the data card, and any data on the card will be lost. While the card is being erased the display will show:

ERASING CARD xx%

(a) Once the card is completely erased the display will show:

CARD IS ERASED

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