TheSky Databases Module

Thank you for purchasing *TheSky Databases* module. The Database module solid-state drive (SSD) contains about 180 GB of astronomical data that augments the standard, core databases that are distributed with TheSky.

The optional, additional data on the SSD includes the large and small TheSky-optimized Gaia DR3 star catalogs, the complete 10x compression Palomar Digitized Sky Survey and the AAVSO Photometric All Sky Survey.

Table 1: Astronomical Data on the Databases module SSD

Catalog Name	Approximate Number of Objects/Sky Coverage	Approximate Size (GB)
Large Gaia DR3 Subset	1.8 billion stars	115
Small Gaia DR3 Subset	100 million stars	6
Digitized Sky Survey (10x compression)	Monochrome photographic data of the entire celestial sphere.	60
All Sky Image Link Database	TheSky's proprietary All Sky coverage Image Link database.	2
Total		**~180**

The Databases module includes a Windows installer for the All-Sky Image Link

database in the All Sky/Windows folder. macOS, and Linux users should read *Manually Install All Sky.txt* t in located the **All Sky > Mac and Linux** folder on the SSD. It contains step by step instructions to copy the All-Sky Image Link database to your computer.

Minimum System Requirements

TheSky version 10.5.0 Build 13405 or later is required to display show the Gaia DR3 star catalog. From TheSky, click **Help** > **Check for Updates** to get the latest release.

Compatible Operating Systems

The Databases module SSD can be accessed from *TheSky Professional Edition for macOS*, *Linux*, *Raspbian* (Raspberry Pi) and *Windows*.
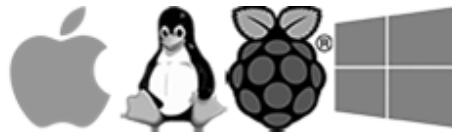
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Packing List

The Databases module includes the following items:

Quantity	Description
1	500 GB Portable SSD
1	6 in./15 cm USB Type-C cable
1	USB Type-C to USB Type-A adapter

Getting Started

After unpacking the SSD and cable from the shipping box:

1. Connect the USB cable to the SSD, then plug the SSD USB cable into your

computer.
2. The standard cable uses USB Type-C connectors; use the USB Type-C to USB Type-A adapter if your device does not have a USB Type-C port.
3. Wait for the operating system to recognize the new volume (macOS/Linux) or drive (Windows), named *TheSky Databases*.

The Databases module SSD is now ready to use. The next step is to configure TheSky's Database Manager so that TheSky can access the data on the SSD.

Windows AutoPlay

If your computer is configured to run Autoplay when a USB drive is plugged in, Windows may scan the contents of the drive before showing the Autoplay choices window. *Databases module* contains over 1.2 million files, so this process is very time consuming. When the Autoplay window appears, click **Cancel** to bypass this step and show the Autoplay choices window.

Configuring TheSky Professional Edition

Configuring *TheSkyX Professional Edition* to access the *Databases module* star catalogs and photos from Digitized Sky Survey is straightforward.
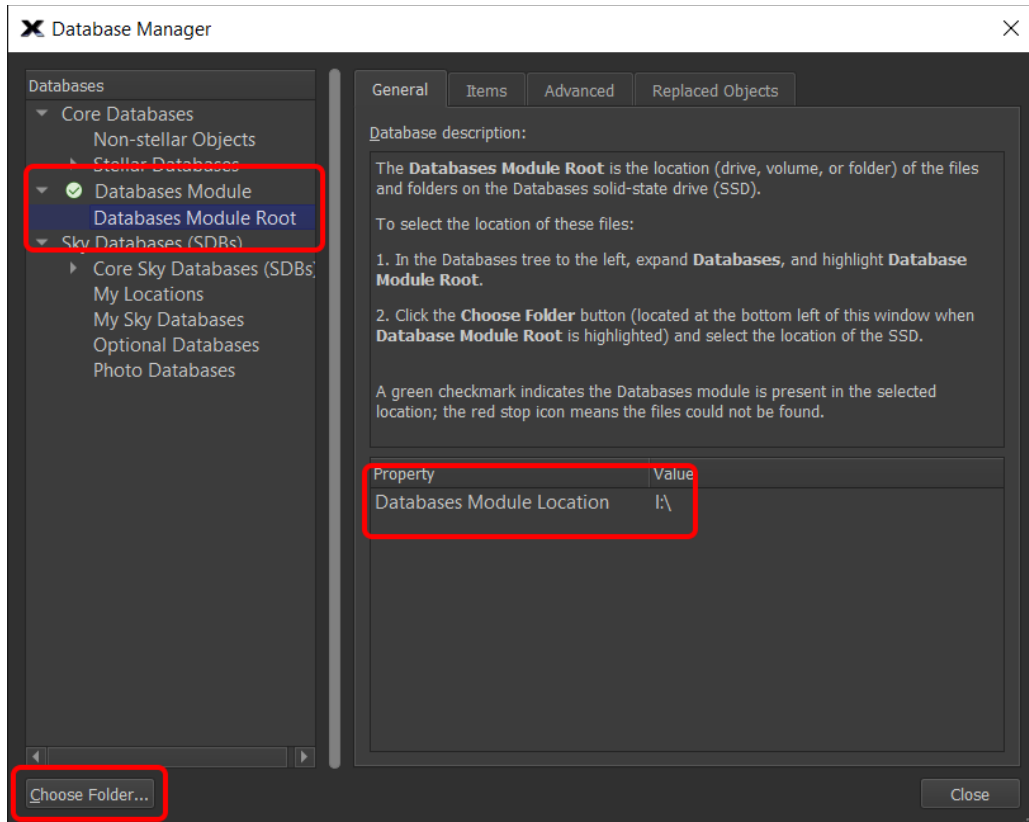
Figure 1: Configure the Database Manager window to access the Databases module SSD.

1. Launch *TheSky Professional Edition*.
2. From *TheSky Professional*, click **Input** > **Database Manager**.
3. In the list of databases, expand **Databases Module**, then highlight the **Databases Module Root**.
4. Click the **Choose Folder** button (located in the lower left of the **Database Manager** window, see Figure 1).
5. On the **Choose a Folder** select the volume name (macOS, Linux) or drive letter (Windows) for the SSD and click the **Choose** or **Open** button. From the **General** tab on the **Database Manager** window, the first row in the **Property/Value** table shows the selected folder. A small graphic appears next to the **Database Module** text to indicate whether the files are in the selected folder:

✓	TheSky has found the Databases module and the required files are in this folder.
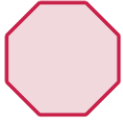
	The Databases module is not in this folder. Double-check to make sure you have selected the correct folder or drive letter.

6. Click **Close**.
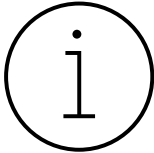
	If stars from the Gaia or APASS catalogs do not appear on the Sky Chart:
	• Make sure that the catalog's **Core Databases > Stellar Databases** checkbox is turned on.
	• Right-click any star on the Sky Chart, then click **Edit Star Attributes**. Click the **Magnitude Limits** tab and set **Hide Fainter Than** to **30** to show all faint stars.
	• Zoom in to show a smaller field of view. Gaia stars are displayed at fields of view of about 8-degree fields and smaller. APASS stars are shown below 10-degree fields of view.

The Sky Chart now shows stars from the Gaia star catalog at small fields of view.

When the **Digitized Sky Survey Setup**'s **Disc Or Other Drive** option is turned on, photos from the Digitized Sky Survey will be retrieved from the SSD when the **Show Digitized Sky Survey Photo** command is selected from the **Tools** menu.

Copying the Databases Module to Another Drive

Accessing the *TheSkyX Professional Edition Databases module* files from the SSD is a fast and efficient process. However, contents of the SSD can be copied to a different drive (subject to the copyright notices below).

If you want to copy the databases to a different drive, make sure to copy the entire contents of *TheSkyX Professional Edition Databases module* drive to the second drive, then configure *TheSkyX Pro* as described above.

Copyright Notices

TheSky Professional Edition Databases module is a compilation of copyrighted astronomical catalogs from various sources. Please carefully read the copyright information below.

The Gaia DR3 Database

The *complete* Gaia catalog consumes over *1.2 TB* of free memory and can be downloaded from the [Gaia archive page](#). When the complete catalog is present, *TheSky Professional Edition's* Sky Chart displays every star from the Gaia catalog and the accompanying "metadata" that is associated with each star.

If you do not have a super-fast Internet connection, or do not want to clutter your computer with star-specific data you may not need, the *Databases module* provides two Gaia star catalog subsets that should suit the needs of most observers.

- The large Gaia subset contains the RA, Dec, magnitude, spectral class, and proper motion for 1.8 billion stars.
- The small Gaia subset contains about 100 million stars that are equally distributed across the celestial sphere and is ideal for determining the astrometric solution for photos with a field of view down to about *3 arc minutes*.

The Supplemental APASS Catalog

TheSky Databases module SSD includes the [AAVSO APASS Sky Survey](#) and contains accurate photometric magnitudes in multiple wavelengths for stars from magnitude 7 to 17.

The Gaia DR2 dataset does not contain the above information, so the APASS data complements the Gaia data. Note that the Hipparcos/Tycho star catalog contains the brighter stars to about magnitude 12; the Gaia star catalog does not include the brighter stars.
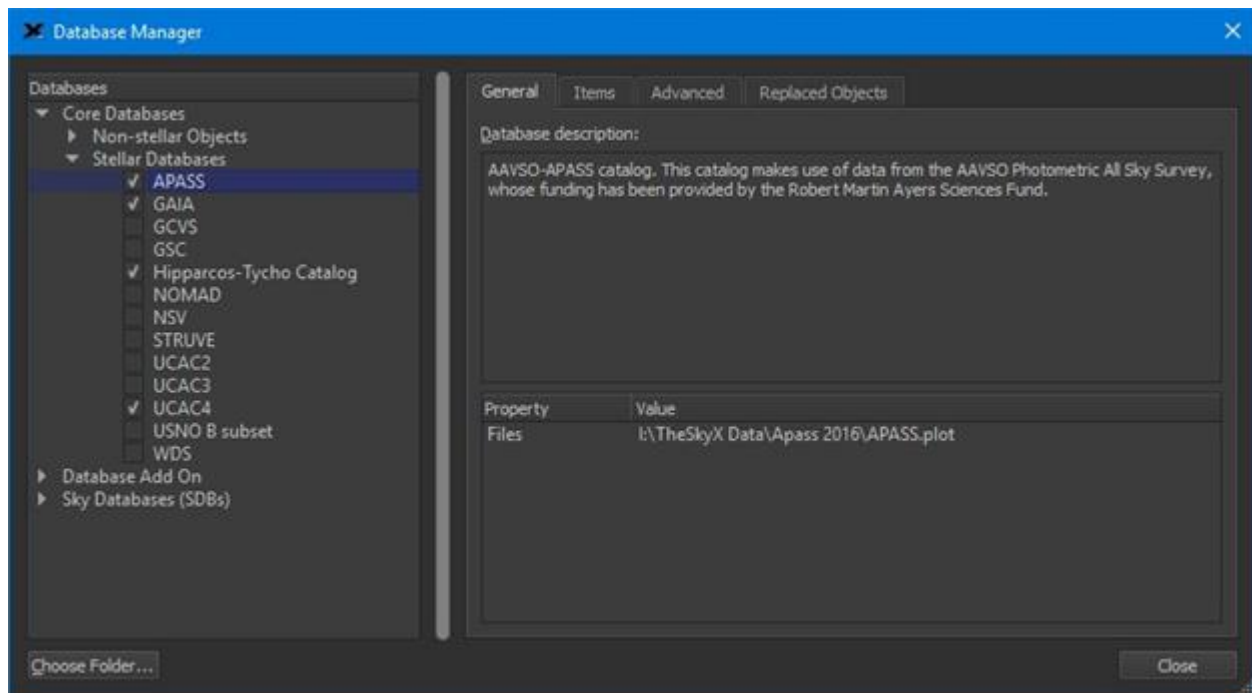
Figure 2: Database Manager window showing the APASS database.

Palomar Sky Survey

The data supplied in the Palomar folder is licensed under agreements between the Association of Universities for research in Astronomy, Inc (AURA), the UK Astronomy Technology Centre, ROE and Software Bisque.

This dataset is distributed for scientific and educational use, primarily to amateur astronomers and educational institutions. **Redistribution of this dataset is prohibited without explicit permission from STScI and ROE.**

TheSky Professional Edition Optimized Catalogs

The large and small *TheSky Professional Edition-specific plot files* included on the *Databases* SSD are copyright Software Bisque. They are licensed to you for private, non- commercial use with *TheSky Professional Edition* and cannot be redistributed.

APASS

The AAVSO Photometric All-Sky Survey (APASS) was funded by the Robert Martin Ayers Sciences Fund. When using data from this catalog, please acknowledge the source of the data, and if appropriate, please include a specific citation.

Warranty Information

Software Bisque warrantees the Databases module media for thirty (30) days from the date of purchase and will replace it free of charge (please return defective media to Software Bisque). Provide proof of purchase is required for warranty replacements.

Backing Up the SSD

Software Bisque *strongly recommends* that you make a backup copy of the contents of the Databases SSD.

1. Launch the operating system's file manager (for example, macOS Finder, Windows Explorer).
2. Open the **Databases** volume/drive.
3. Click **Edit** > **Select All** to select every file and folder on the drive. Click **Edit** > **Copy** these files to the clipboard.
4. Navigate to and open the backup folder or drive. Click **Edit** > **Paste** to start the backup process.

Notes:

*   There are about 1.2 million files and 180 GB of data) on the Databases module SSD; copying so much data to a different location, even on a very fast computer with USB 3.0 or faster can take *hours* to complete.
*   The total amount of storage required to perform the backup may be larger than 180 GB if the backup drive is formatted with a sector size (that is, the smallest size a given file can occupy on the drive) greater than 512 bytes.
*   The Databases module SSD is formatted with the NTFS file system using a 64-byte sector size.
*   The NTFS file system is read only on macOS.