TheSky6 Getting Started Guide

Revision 1.11
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Table of Contents

Welcome!

Thank you for purchasing *TheSky6*™! No other astronomy software offers as much power, versatility and expandability. Whether you're just getting started or a seasoned professional, *TheSky6* has many features to help you increase the enjoyment of your hobby.

This document introduces many new features in *TheSky6*, and helps you get the software installed and running on your computer. Detailed information is available in *TheSky6* User's Guide and in *TheSky6*'s Help. See Going Further on page 16 for details about accessing these additional resources.

You can use *TheSky6* to:

- Learn basic astronomy concepts.
- See "what's up" in your back yard tonight.
- Print custom star charts for "in the field" use.
- Go back or forward in time to see the sky (like, say, how it looked on the day you were born).
- Access astronomical catalogs with up to a *billion* objects.
- Plan your observing sessions.
- See the phase of the moon.
- Find out when the next solar or lunar eclipse takes place.
- Move around a three dimensional view of the solar system.
- Watch a slide show of fascinating astronomical pictures.
- View simulations of astronomical events.
- Control your telescope.
- Create custom databases of astronomical objects.
- Script or automate control of *TheSky6*.
- Generate and export custom reports of astronomical data.
- Much, much more!

These features – combined with the ease-of-use of a graphical interface and the speed of our exclusive plotting technology – provide the most-advanced astronomy program available. *TheSky6* can keep pace with your astronomical interests, no matter how far you progress.

What's New in this Release

TheSky6 introduces new features and major improvements. This section gives a brief description of what's "new and improved". The basic operation of *TheSky6* is essentially the same as previous versions. If you're familiar with any of them, you can use *TheSky6* right away.

5

New and Improved Features of *TheSky6*

- Updated *Location command* lets you select your viewing site by clicking on a world map, or from a list of over a thousand pre-defined sites.
- New *Image Manager* allows you to easily add and display your own gallery of images directly on the Virtual Sky.
- Use the new *Display Explorer command* to control virtually every display option in *TheSky6*.
- New *Data Wizard command* allows open-ended database queries for planning observing sessions or automated control.
- Improved *Field of View Indicators command* lets you grow your FOVI list with your ever-changing collection of equipment.
- *Field of View Indicators* can be moved, copied, rotated or pinned to a particular coordinate.
- The new *Time dialog box* makes controlling time a snap.
- Show beautiful, high-resolution *Bevis* constellation drawings.
- Customize the local horizon using your own panoramic photographs.
- Satellites move smoothly across the Virtual Sky using *sub-pixel* positioning.
- Satellite labels are customizable and can include the satellite's name, range and more. The label also moves with the satellite.
- Simulated sunrise and sunset glow, along with horizon shading.
- The Moon and Sun incorporate simulated halos.
- The display of all reference lines is smoother.
- The horizon's brightness is automatically adjusted based on the position of the Sun.
- New core stellar databases for accurate astrometry, including support for the UCAC 2.0 and USNO B.
- Support for the improved Principal Galaxy Catalog (PGC) with 900,000 galaxies.
- New options allow you to select which stellar catalog you need for your interests – charting/photometry/astrometry/historical research.
- Revised, more accurate NGC and IC data from the NGC/IC project.
- New, searchable and more accurate Washington Double Star (WDS) 2002 catalog even shows double star systems.
- Updated and expanded variable star database (GCVS) and suspected (NSV).
- Easy-to-use interface to access and view low-resolution and 100 meter per pixel high-resolution images (*TheSky6 Professional Edition* only) of the entire lunar surface from the Clementine mission, including thousands of lunar features.
- Display a Moon coordinate grid with labeled features.
- Over 100,000 high-resolution photographs shown "in place" with the correct size and position angle.
- Use the right mouse button to quickly access and modify properties of all items.

- Improved *Find dialog box* displays *every* (up to a billion and more) object in *TheSky6*'s vast databases. The list includes all cross-referenced catalogs.
- Right-click and drag the screen to quickly adjust the current field.
- Easier stellar brightness and contrast control using keyboard accelerators.
- Improved *Moon Phase Calendar command* shows a photograph of the Moon's phase for each day of the month, showing the correct orientation.
- New *Conjunction Finder command*.
- Instantly generate and display the path of any object over time.
- Easily modify the location of *TheSky6*'s core databases using the improved *File Locations command*. This feature is especially useful when installation *TheSky6* on a network (network license required).
- *TheSky6* now incorporates the operating system theme (look and feel) in Windows XP.
- *Night Vision Mode command* now changes the current theme under XP operating systems for better control of screen colors.
- *TheSky6 Database Manager Command* has been simplified and is easier to use.
- Stars are drawn to appear more realistic.
- Galaxies and nebulae are drawn to appear more realistic.
- New Help interface is easier to use.
- More!

Product Editions

TheSky6 is distributed in three editions:

- *Student Edition*
- *Serious Astronomer Edition*
- *Professional Edition*

Each edition includes a broad range of standard features. The *Serious Astronomer* and *Professional Editions* include additional features for advanced astronomers.

Minimum System Requirements

TheSky6 is designed to run on the following operating systems:

- Windows 98™
- Windows Me™
- Windows NT™ 4 (SP 6a required)
- Windows 2000™
- Windows XP Home™
- Windows XP Professional™

7

TheSky6 does not run under Windows™ 95™.

At least 200 MB of disk space is required to install *TheSky6 Student Edition*. Over 5 *GB* is required for full installation of *TheSky6 Professional Edition*. At least 128 MB of RAM is recommended (as always, more RAM is better), and a quad-speed (or faster) CD ROM drive is desirable during installation.

Performance

TheSky6 is advanced, high-performance software that places substantial performance demands on your computer.

- It is *computation-intensive*. It performs complex floating-point calculations to compute the positions of sky objects.
- It is *display-intensive*. It updates hundreds of thousands of pixels when the display changes.
- It is *disk-intensive*. It reads large amounts of data from the hard disk (or network drive) and performs extensive cross-referencing among multiple databases.

Version 6 of *TheSky6* requires more computing power than previous versions. If your computer can satisfactorily run Windows, it should be able to run *TheSky6*. Performance with a processor slower than a 200 MHz Pentium™ (or equivalent) is likely to be unsatisfactory.

Telescope Control Disclaimer

TheSky6 can control most commercial telescopes. Telescopes have a limited range of movement. The telescope's shape, the way it's mounted, or the addition of accessories prevents it from pointing at particular parts of the sky. If the telescope is forced past these regions, the telescope, its mounting, or accessories might be damaged. *TheSky6* includes a "limit line" feature that lets you specify these inaccessible positions; *TheSky6* will try not to touch or cross them.

Software Bisque provides this feature as a *convenience*, not as a panacea. Since any telescope can run into its mechanical limits through accident, carelessness, or component failure, Software Bisque cannot be responsible for any damage to your telescope that occurs when using *TheSky6* to control it.

Sun Warning

NEVER attempt to observe the Sun through your telescope! Without a specially designed solar filter, viewing the Sun – for even a fraction of a second – will cause instant, irreversible eye damage. When observing during the day, do not point the telescope near the Sun. Do not use *TheSky6*'s automatic slew feature to find objects during the day.

Children should *never* use a telescope during the daytime without strict adult supervision.

After installing *TheSky6*, see *TheSky6*'s Help file (click **Help | Contents and Index**) for instructions about setting up and using your telescope.

Installing *TheSky6*

Before starting installation please carefully read readme.htm in the root folder of the installation media. It might have last-minute information we were not able to put in this manual.

TheSky6 Student Edition comes on a single CD-ROM. *TheSky6 Serious Astronomer* and *Professional Editions* are supplied on multiple CD-ROMs (or DVDs).

TheSky6 is licensed as a single-computer, single-user product – please do not access *TheSky6* over a network. If you need a site license, please contact Software Bisque.

Installation

TheSky6 can run on the same computer as earlier versions (1, 2, 4 and 5). So, there's no need to uninstall earlier versions before installing *TheSky6*, unless you want to save disk space.

Step 1   **Put Disc 1 in the CD-ROM or DVD drive.** Shortly after loading the media, the computer should recognize its presence and run the installation program.

If this does not occur…
1. Select **Start | Control Panel** (**Start | Settings | Control Panel** for pre-XP operating systems).
2. **Double-click Add/Remove Programs.** The **Add/Remove Programs Properties** dialog box appears.

9

3. **Click Install, and then click Next.** Windows searches the computer's removable drives for the program named `AutoPlay.exe` and runs it. If it doesn't find it, click **Browse** and navigate to the root folder of the CD-ROM or DVD. Double-click `AutoPlay.exe`.

Step 2

Click **Install** to begin the installation process.

Step 3   Follow the on-screen instructions to complete the installation.

The installation program prompts you for the information it needs, such as the hard disk and folder in which to install *TheSky6*. The **Complete**/**Custom** installation options are described in the following below.

Complete / Custom Installation

The choice of **Complete** or **Custom** installation controls which components that are from the media to your hard disk.

- The *Complete* option copies every component to the Program Files folder of drive C. This is the recommended option.
- The *Custom* option lets you choose the disk drive, folder and which components are copied to the hard disk. If your hard disk not large enough to hold all *TheSky6's* databases, choose **Custom** and choose a disk with more space, or check fewer options to install.

Custom Installation Options

The following options can be selected during a Custom installation.

Option	Description
Program Files	This component installs *TheSky6*'s executable and other critical files.
Data, Databases and Pictures	Items in this group include the celestial object databases, program data, and photographs.
Core Database Files	
Hipparcos-Tycho Catalogs	The Hipparcos and Tycho stellar catalogs.
Non-stellar Databases	Core non-stellar catalogs, including the Principle Galaxy Catalog (PGC), Planetary Nebulae (PLN), New General Catalog (NGC) and Index Catalog (IC).
Guide Star Catalog	Files that hold the optimized Hubble Guide Star Catalog.
UCAC 2.0	Contains the USNO CCD Astrograph Catalog Version 2.0 (*Professional Edition* only)
USNOB 1.0	A subset of the U.S. Naval Observatory 80 GB stellar catalog that covers missing regions missing in the UCAC stellar catalog. (*Professional Edition* only)
Pictures	
Solar System Pictures	
Clementine Lunar Photographs	Contains the low-resolution and high-resolution (Professional Edition only) lunar photographs from the Clementine mission.
Miscellaneous Solar System Objects	Pictures of the planets, sun, Moon, comets, minor planets, Apollo mission, and more.
Hubble Space Telescope Pictures	Photographs from the Hubble Space Telescope. (*TheSky6 Student Edition* on CD-ROM, *Serious Astronomer Edition* on CD-ROM and *Professional Edition* DVD-ROM only.)
Anglo-Australian Observatory Pictures	David Malin photographs taken at the famed Anglo-Australian Observatory. (*TheSky6 Student Edition* on CD-ROM, Serious *Astronomer Edition* on CD-ROM and *Professional Edition* DVD only.)
Constellation Drawings	High- and low-resolution files containing the Bevis constellation drawings.
Compressed Images	100,000 Digitized Sky Survey photographs of IC, NGC, PGC and PLN, NGC objects.
Milky Way	High-resolution photograph of the Milky Way.
Image Groups	Custom in-place color photographs of miscellaneous deep-space objects that are displayed on the Virtual Sky.
Chart Mode Metafile Symbols	Vector-based symbols of objects that are used in Chart Mode.

Troubleshooting Installation

If you've encountered an error during installation, check the following before continuing.

- **Temporarily disable all anti-virus software.** Anti-virus software (including spyware, adware and anti-pest software) may prevent files from being copied to your hard drive. Once the installation is complete, don't forget to re-activate them.
- **Log on to the computer using the Administrator's account.** The current user must have administrative privileges to install software (Windows 2000 and Windows XP Professional only).
- **Delete all files and folders from the computer's temporary folder.** The location of this folder is defined in the PATH environment variable, and is normally named `C:\Temp` or `C:\Windows\Temp`.

Uninstalling *TheSky6*

By design, *TheSky6* stores all user-related files in the **My Documents\ Software Bisque***TheSky6* folder. The uninstaller does not delete these files, so you do not need to back them up before uninstalling.

Uninstalling *TheSky6*

1   Click **Start | Control Panel** (or **Start | Settings | Control Panel** for non-XP operating systems).
2   Double-click **Add/Remove Programs**.
3   Highlight *TheSky6* in the list box.
4   Click **Change/Remove**.
5   In the InstallShield Wizard dialog box, click **Remove**.
6   Click **Next**.
7   Click **OK** when asked if you want to completely remove the selected application and all of its components. *TheSky6* will now be deleted from your computer.
8   Click **OK** to complete the removal.

Running *TheSky6*

The installation program adds *TheSky6* to the Programs menu and an icon to the Desktop. To run *TheSky6*, click **Start | Programs | *TheSky6*** and then click *TheSky6*'s icon. If you want *TheSky6* to run automatically when you start Windows, add *TheSky6* to the Startup folder.

Logging On Your Computer

TheSky6 requires and installs software called the *Microsoft .NET Framework*. After installing *TheSky6*, you may notice that you have to log on to your computer. For security during installation, the .NET Framework installer creates a user account called ASP.NET under Windows XP. This account is not malicious and can be removed using **Start | Control Panel | User Accounts**.

If you wish to remove the requirement to log on to your computer, click **Start | Run**, enter the text control userpasswords2 and then click **OK**. Clear the option **Users Must Enter a User name and Password to Use This Machine** and then click **OK**.

Tip of the Day

Every time *TheSky6* runs it displays the Tip of the Day, a hint about how to use *TheSky6*, or information about some feature you might have overlooked. Click the **Next Tip** button to see more tips.

If you don't want to see the tips, clear the **Show Tips on Start-up** checkbox. You can still read the tips by selecting the **Tip of the Day** command from the **Help** menu.

The tips are in tips.txt, in your My Documents\Software Bisque*TheSky6* folder. You can edit this file with any text editor (such as the Windows Notepad) to add, delete, or modify tips. The "tip" shown above was created this way.

Getting Started

The rest of this section is a brief overview of *TheSky6*. We suggest working through it to get a feel for the program. You can then read the user's manual, help file, or experiment on your own.

Setting the Time and Location

Figure 1 - Time dialog box.

TheSky6 is often used to preview what you expect to see in tonight's sky. The program therefore needs to know your terrestrial coordinates. These are set using the Location dialog box (click **Data | File Locations**). You can select from a list of predefined locations, or from a map of the earth, or enter any set of coordinates. *TheSky6* also needs to know the time to display the heavens. You can choose a specific time, or let the display follow the computer's clock, updating in real time. Click **Data | Time** to display the Time dialog box.
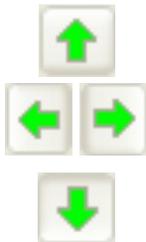
Orienting the Virtual Sky

The first time *TheSky6* runs, it comes up with the *Virtual Sky* in "Zenith Up" mode, looking south. By default, it displays the following objects and labels.

Figure 2 – The Virtual Sky

- The Sun, Moon, planets, the photographic Milky Way, and many deep-space objects.
- The local horizon.
- The "common" names of comets, non-stellar and Messier objects.

The Virtual Sky can be oriented in many ways, using different map projections.

Scrolling the Virtual Sky

You can scroll the display to see a part of the sky that isn't currently visible.

The directional arrows on the keyboard are one way to scroll. Try buttons in the Orientation toolbar. Or right-click and drag the screen.

Changing the Field of View

The Virtual Sky is initially set to a 100° field of view. This is roughly the field of view of the human eye. You can change the display to a wider or narrower field.

The easiest way is the "magnifying glass" buttons in the Orientation toolbar. Try clicking them to see what happens.

Moving to Specific Sky Coordinates

The arrow keys provide only a coarse positioning of the Virtual Sky. The "Move To" command (click **Orientation | Move To**) lets you position the center of the display at *exactly* the altitude/azimuth or right ascension/declination coordinates you want.
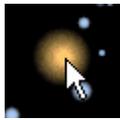
Object Information

TheSky6 can display information about any celestial object in the Virtual Sky. All you have to do is click on the object. The selected object is marked with a bull's eye and information about the object appears in the Object Information dialog box. Information about the Andromeda galaxy (M31) is shown below. To display more information, click the button with the double down arrows.
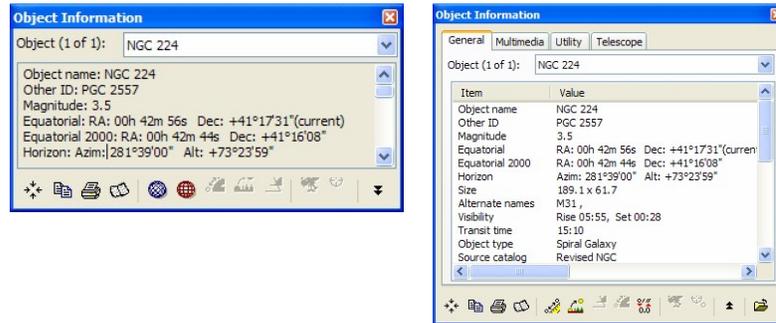
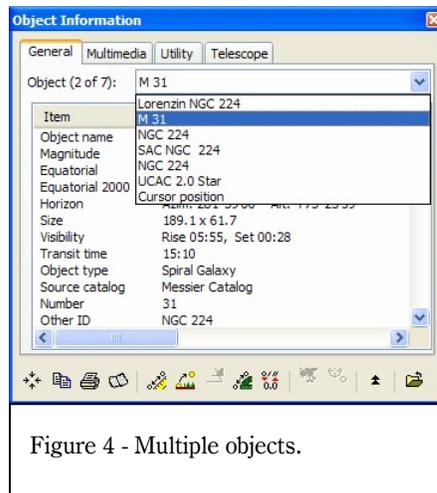Figure 3 – The small and large Object Information dialog boxes

When you click the mouse on the Virtual Sky, up to 10 objects "near" the mouse pointer are displayed on the Object Information dialog box. If the object you're after does not appear at the top of the list, drop down the Object list box to select it (see Figure 4).

If no objects are found near the mouse pointer, information about the current cursor position is displayed.

Figure 4 - Multiple objects.

Finding Objects

15

You don't have to locate an object in the Virtual Sky to get information about it. The Find command can locate every object in *TheSky6*'s databases.

The Find command is in the Edit menu. You can also access it by pressing the binocular button on the Object toolbar.

Printing the Screen

The current display can be printed at any time. If you have a printer connected to your computer, click **File | Print**, or try clicking the Print button on the Standard toolbar.

Optimizing TheSky6's Drawing Speed

Drawing the photographic horizon, Milky Way photograph, and the horizon glow can be taxing on some computers and high-resolution video displays. Disabling these features will greatly improve *TheSky6's* performance. To do so, select the Real Mode Options command on the View menu, and then clear the *Horizon Image*, *Horizon Glow*, and *Milky Way Picture* options. Click the Close button to apply these changes.

Going Further

This introduction barely scratches the surface of *TheSky6'*s features and functions. There are several ways to continue your exploration.

- Experiment with the program. Try anything that comes to mind. You won't damage the software or the computer.
- Read *TheSky6* User's Guide. This document is provided as a PDF ("portable document format") file. Note that Adobe Reader must be installed before this document can be viewed. To install the English Edition of Acrobat Reader for Windows XP, run the AcrobatReader6.exe setup program in the **Adobe Reader** folder on the *TheSky6* Disc 1. Once Adobe Reader is installed (and after *TheSky6* has been installed), click **Start | Programs | *TheSky6* | *TheSky6* User's Manual (PDF)** to view this document. Visit Adobe's web site (www.adobe.com) if you need a different language or version for your operating system.
- Use the **Help | Contents | Index and Search** command to find information about a specific feature.

If You Need Help...

Use *TheSky6*'s Help menu to get additional information.

- If you're unfamiliar with the Windows operating system or Windows Help, click **Start | Help and Support** (Windows XP) or **Start | Help** (Windows 98/Me/NT/2000). Use the help's Search feature to locate specific information.
- *TheSky6*'s **Help | Contents | Index and Search** command displays the Table of Contents, Index and Search options. Index lets you search for specific words or topics. Search lets you search for words or phrases in all help topics.

To get help with a specific menu command, open the menu, and then press the DOWN arrow to highlight the command. (Don't click on the command, or you'll execute it.) Then press F1.

You can also press SHIFT+F1 to turn the regular cursor into the Help cursor. (Or click the Help button in the Standard toolbar.) Click on any button or command to get information about it. Many dialog boxes have Help buttons that supply specific information about the use of that dialog box.

Product Support

We have conscientiously tried to *TheSky6*'s documentation accurate and easy to understand. We therefore ask that you spend a few minutes reading *TheSky6*'s User Guide (PDF), or search *TheSky6*'s Help documentation, before contacting us. A little research and a bit of experimenting should answer your question. If you're still stuck, try the following.

1. Download and install the latest release from www.bisque.com/download.
2. Search the *TheSky6*'s Help for the Update Notes topic at www.bisque.com/help for a list of bug fixes to see if the problem you are encountering has been fixed in an update.
3. Visit the Software Bisque Knowledge Base at www.bisque.com/kb to search for known problems and solutions.
4. Post your question to the Software Bisque User's Group. Visit www.bisque.com/support for details.
5. If you're still stuck, submit a technical support request to: http://www.bisque.com/support.

   Fill out and submit the technical support request form at the above web page. Please include the exact wording of any error messages you've encountered, as well as steps tried to resolve the problem.
6. If you do not have access to the Internet, write us at:

   Software Bisque
   912 Twelfth Street
   Golden, CO 80401
   USA

17

Please include the following information.

- Your version and serial number. They are displayed when you select **About *TheSky6*** from the **Help** menu.
- Your operating system – Windows 98/Me/2000/XP Home/XP Professional or other.
- Your hardware configuration – the exact make and model of computer, processor type and speed, graphics-card manufacturer and model.
- The exact wording of any messages that appeared on your screen.
- What you were doing when the problem occurred.
- How you tried to solve the problem.

Despite our valiant efforts, there may be omissions or errors in *TheSky6*. If you find any, please let us know. Software Bisque maintains a list of documentation corrections at www.bisque.com/corrections.

Software Bisque *really cares* about accuracy, completeness, and usability *TheSky6*. Please note that *TheSky6*'s feature set is open-ended; therefore, not every feature can be addressed in a single document.

For documentation on advanced use of *TheSky6*, as well as tips, and tricks, are available at www.bisque.com/thesky. If you have suggestions about improving our software, please tell us. We *do* listen!

Using the Internet

You can also contact us through our web site, www.bisque.com. Click "Comments" from the "Support" page to send a non-technical message. Besides providing information about Software Bisque products, photos of many astronomical objects, and links to other useful or interesting sites, our Web site also has software updates, revised orbital elements for comets and minor planets, and specialized deep-sky databases.

The contents and organization of the Software Bisque web site are likely to change. Be sure to check from time to time to see "what's new."

Index