

How SkyScout Technology Works

How did we get a hand-held device to instantly identify and/or locate over 6,000 celestial objects, without any calibration or set up procedure whatsoever? Does the device “see” the stars and planets? Does it recognize patterns? Will it work on a cloudy day? What if you’re in the Southern Hemisphere? And how does it find stars that are on the opposite side of the Earth???

SkyScout™ patented technology works by combining data from 3-axis sensors measuring both the magnetic and gravitational fields of the Earth, along with GPS and a substantial celestial database. Put simply, the SkyScout knows where you are on Earth, what date and time it is, and the precise angle at which you are holding it. It then mathematically determines what celestial object is in its direct path from exactly that location and that moment in time.

Because the SkyScout figures out what it is aligned with based on how you’re holding it, where you are, and the day/time, it isn’t required to actually “see” the celestial object. Therefore, the SkyScout works just as well with cloud cover, or even inside, as it will outside on a clear night. Even more impressive is that the SkyScout can identify a celestial object even it’s on the other side of the Earth.

This revolutionary technology allows the SkyScout to perform two major functions. First, it can instantly identify any celestial object that the user targets through the viewfinder. Second, it works in reverse, locating any celestial object that the user has chosen through the menu system. Directional arrows light up in the viewfinder to guide the user to their desired object. Again, it doesn’t matter where that object is, the SkyScout will instantly find it.

Mathematical calculations in the software allow the SkyScout to have some incredible features that help guarantee a great user experience. For instance, each time the SkyScout is turned on, it automatically determines the objects above the horizon for that date and location, and then provides a real-time list of the top 20 most interesting objects for the user to view. Also, to protect against potential errors, the SkyScout calculates the magnetic declination on-the-fly, detecting any anomalies in the Earth’s magnetic field, so if something is altering the field (like a big piece of metal nearby), it will notify the user to change their position. Additionally, since the SkyScout employs GPS technology, it can display much of the data found in standard portable GPS units.

The SkyScout displays scientific, mythological and other interesting information about each celestial object selected. There is a built in field guide with descriptions for hundreds of stars and planets along with easy to understand explanations for many astronomical terms. The user can also view images of each constellation and star hop through their outlines. For many of the objects, the SkyScout will play a planetarium-like audio narration for the user, with great stories drawn from around the world. The SkyScout can also be connected to audio speakers so that an entire family can enjoy the stories simultaneously, or a guide can educate a larger group on astronomy.

The SkyScout is entirely about user experience. It was designed to make learning about the night sky easier and more entertaining than ever before. With no setup or calibration procedure, it’s easy enough to use for any novice, yet sophisticated enough for serious astronomers.

For more information about the SkyScout, please visit www.celestron.com.



SkyScout™
Personal Planetarium

