

SpotOff and Spot-O-Meter

**Spotlight Control and Monitoring Utilities
for the Mac OS X Operating System**

Product Profile

Software and Computer Systems Company, LLC

What are *SpotOff* and *Spot-O-Meter*?

SpotOff is a tool that allows an end user to enable and disable Spotlight® indexing on Mac systems, while *Spot-O-Meter* is a tool that allows an end user to monitor Spotlight® indexing. Intense Spotlight indexing can interfere with a system's operation because it can consume an incredible amount of system resources, effectively slowing some systems to a crawl. If *Spot-O-Meter* detects a high level of indexing at an inconvenient time (more on this later), a user can effectively shut down Spotlight indexing by using *SpotOff*, thus returning that power back to the user.

If Spotlight indexing is disabled via *SpotOff*, you'll ***still*** be able to use Spotlight to find things. *SpotOff* disables the updating of Spotlight information, it doesn't prevent you from searching information already stored on your system. Simply use *SpotOff* to re-enable indexing and it will update Spotlight's information stores to bring them up to date!

Both *SpotOff* and *Spot-O-Meter* are universal binaries and can work on systems equipped with Macintosh® OS X Versions 10.5 (Leopard), 10.6 (Snow Leopard), 10.7 (Lion), and 10.8 (Mountain Lion) using Intel® or PowerPC processors. ***SpotOff* requires administrative privileges to execute, but *Spot-O-Meter* does not.**

Software and Computer Systems Company, LLC (SCSC) also offers several other utilities for Mac OS X users, including *Scannerz*, *Scannerz Lite*, *FSE*, *Phoenix*, and *Performance Probe*. *Scannerz* is the most advanced hard drive scanning tool commercially available for Mac OS X. *FSE* is a file system events monitor for Mac OS X. *Phoenix* is an operating system extraction and cloning tool. *Performance Probe* is an abbreviated version of *Activity Monitor* that can tell you when your system is being heavily loaded without taking up all the screen space that *Activity Monitor* uses. The full versions of *Scannerz* come with *FSE* or *FSE-Lite* and also include *Performance Probe* and *Phoenix*.

SpotOff and *Spot-O-Meter* may be useful to *FSE* users since Spotlight can saturate file system activity, making it difficult for an *FSE* user to monitor a specific file system event. If other problems persist even when Spotlight indexing is minimal, you may wish to take a look at *Performance Probe*.

Why Use *SpotOff* and *Spot-O-Meter*?

Many users of Mac's have experienced the sometimes intrusive properties of Spotlight. Spotlight is, in case you didn't know this already, a feature built into Mac OS X since 10.4 that allows a user to search their storage media for files. It's a great idea, but one cumbersome feature that many users have complained about are the delays, slowdowns, and other CPU and resource problems that can occur when Spotlight begins its periodic indexing and updating sequences, frequently without warning.

When tSpotlight indexing occurs, CPU and drive access can become quite intense. A user may experience the following during periods of heavy indexing:

- Applications that normally complete quickly now take much longer.
- Web access slows down considerably.
- Laptops may become hotter than normal, usually kicking on fans
- Games may become “jerky” due to CPU cycles being taken away from them.
- Videos, either online or on DVD seem to have unexplainable pauses in them.
- Battery consumption on laptops seems to degrade at a much higher rate than normal.
- Applications that normally launch quickly take seconds, sometimes tens of seconds to launch.

SpotOff was developed by SCSC to give control over Spotlight indexing back to the user, and *Spot-O-Meter* was developed to tell the user when they might be interested in disabling Spotlight.

The logic behind *SpotOff* is based on the following observations:

- Most people, when working with their systems, are fully aware of what they're doing, what files they're updating, what changes they're making, etc., and they don't necessarily need a robotic process to automatically kick in and start updating what they're already fully aware of.
- Most people take breaks when their Macs can be left alone and Spotlight indexing can occur without interfering with any their activities.

Spotlight is a beast that appears to have a life of its own. It starts and stops indexing in what appears to be (but isn't) an almost random fashion. *SpotOff* allows the user to control Spotlight indexing by allowing a user to turn it off and turn it back on at will while still allowing access to the information Spotlight has already collected. When indexing is turned off, it's off, even between reboots and shutdowns. When *SpotOff* allows Spotlight indexing to resume, Spotlight may start re-indexing the storage media. Whether this occurs or not depends on how long Spotlight has been disabled, and how many file changes have occurred since the last time Spotlight was run.

As an illustration, the following screen captures from Activity Monitor (which can be found under Applications->Utilities->Activity Monitor) show typical CPU and memory consumption when Spotlight is going through its indexing phases:

PID	Process Name	% CPU	Real Mem	Kind	CPU Time
55	mds	53.2	162.2 MB	Intel (64 bit)	1:10.42
237	mdworker	51.6	5.9 MB	Intel (64 bit)	27.85
227	mdworker	0.0	45.1 MB	Intel (64 bit)	3.44
226	mdworker	0.0	13.6 MB	Intel (64 bit)	0.49
225	mdworker	47.4	21.2 MB	Intel (64 bit)	41.66
213	mdworker	0.0	12.0 MB	Intel (64 bit)	0.54
235	mdworker32	0.0	4.8 MB	Intel	0.26

In the preceding illustration (which was taken using dual core system), the mds server (for **Meta Data Server**) has spawned off six worker threads and the instance this screenshot was taken, the %CPU utilization was a total of 152.2% out of a possible of 200% (100% for each CPU core). Spotlight indexing is thus using over three quarters of the systems processing power. If *SpotOff* is allowed to disable Spotlight, mds and all its worker threads stop, and all that CPU power is returned to the user.

How Difficult is *SpotOff* to use?

The *SpotOff* interface is very easy to use and is illustrated below:

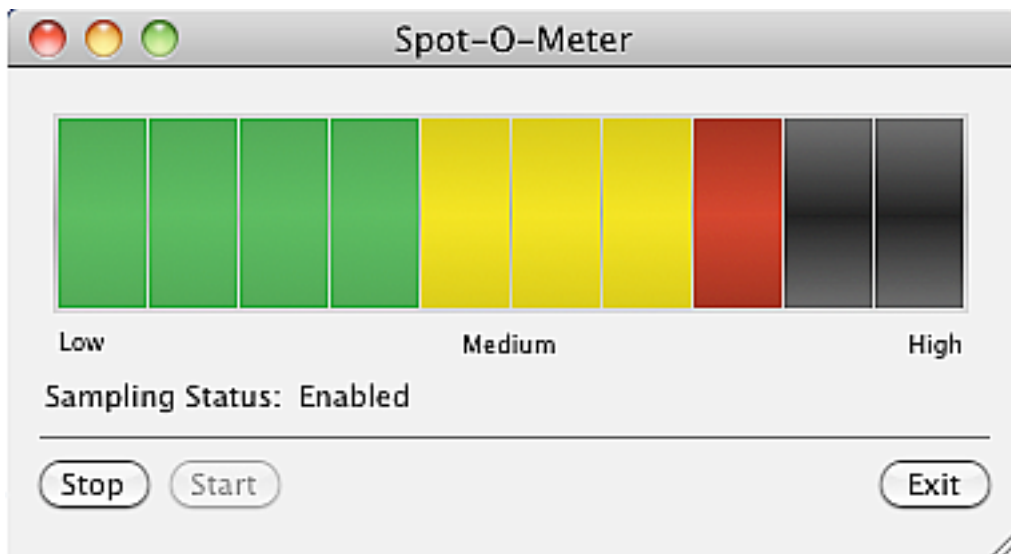


The stop light image on the left side as well as the “Indexing Status” in the user interface indicate the status of Spotlight on a system. If the light is green, as it is above, Spotlight is active. If it's yellow, then Spotlight is transitioning from active to inactive, and if it's red, it indicates Spotlight has been disabled.

To disable Spotlight, all the user need do is click on the *Stop* button. To re-enable Spotlight, the user clicks on the *Start* button. To end the application, the user clicks on the *Exit* button. That's all there is to it!

How Difficult is Spot-O-Meter to use?

The screen shot below illustrates the *Spot-O-Meter* interface. Once started, a user simply clicks on the *Start* button to begin monitoring Spotlight activity. If the user wishes to stop monitoring Spotlight without exiting the application, the click on the *Stop* button. To exit the application, click on the *Exit* button. In the illustration below, *Spot-O-Meter* is indicating fairly intense Spotlight activity.



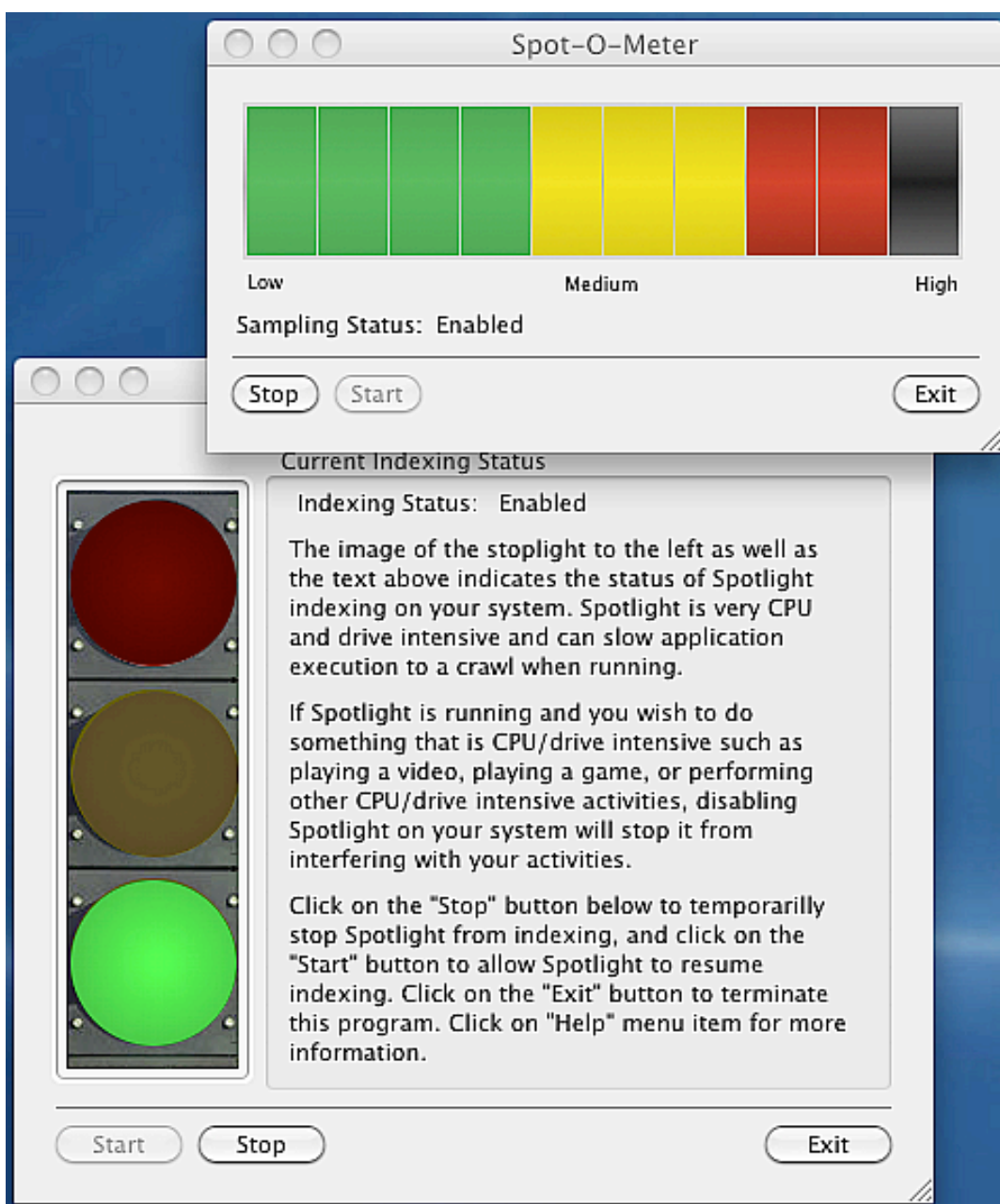
Spot-O-Meter indicates the severity of Spotlight activity by use of a color bar indicator across the top half of the user interface. If all indicators are black, there is no activity. If the indicators show 1-4 green indicator bars, the activity is light to moderate. If the indicators move into the yellow range the activity is moderately intense to intense. If they move into the red range, then Spotlight activity is very intense. Users with single processor systems may find that Spotlight begins to become somewhat obtrusive with 3 or 4 green indicators, and users with two cores typically begin to notice effects when it's in the yellow range. *Spot-O-Meter* interrogates the system for the CPU count and adjusts the readings and factors in a scaled I/O factor to determine Spotlight intensity

readings.

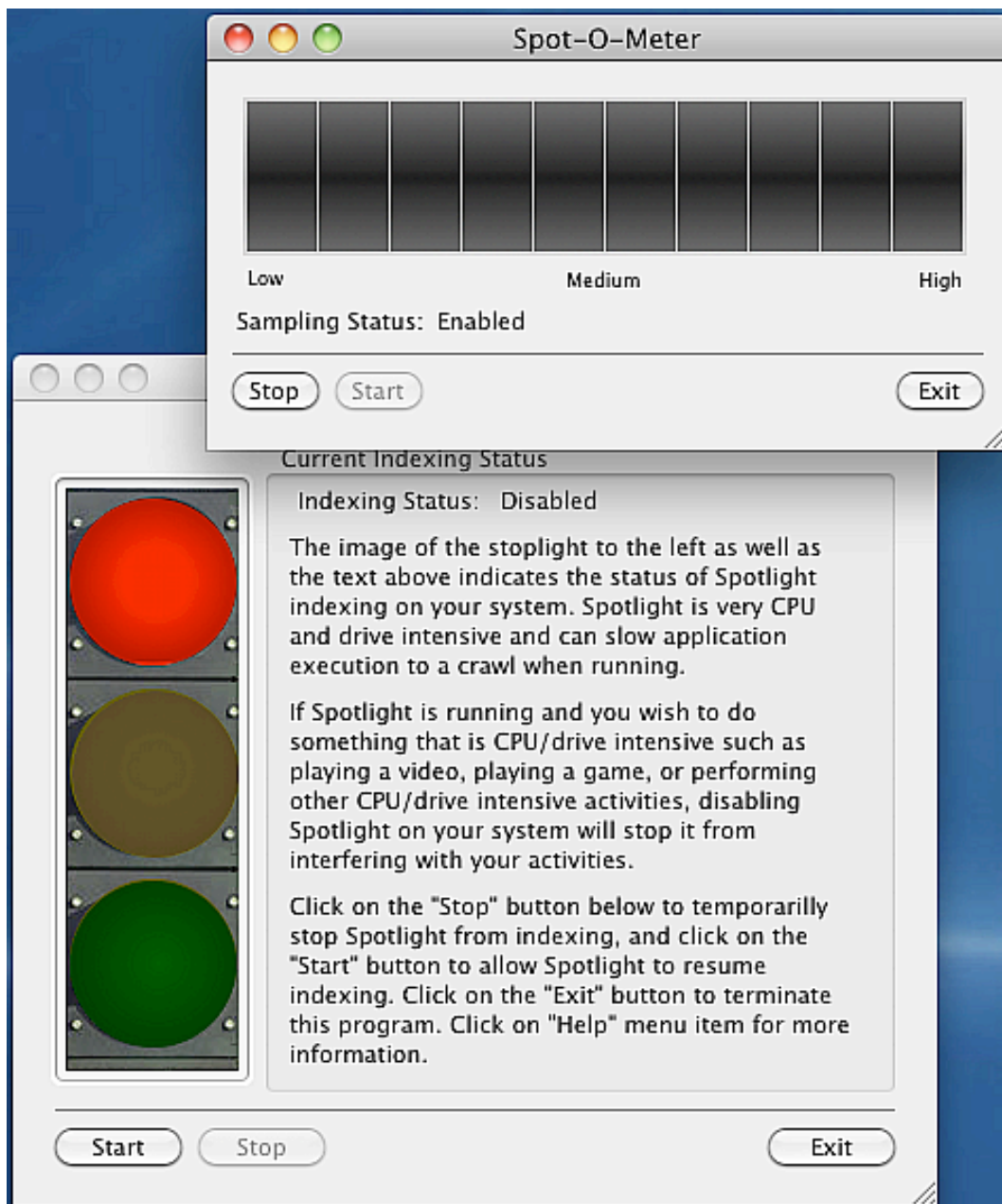
Spot-O-Meter by itself can only report on Spotlight activity, but it can't control it. It can, however, let a user know when Spotlight is in its intense indexing phase. If a system is needed to perform tasks that are somewhat CPU or I/O intensive, they'll at least know why delays are occurring, and if needed, avoid them until Spotlight is done.

An Illustration Using SpotOff and Spot-O-Meter Together

To illustrate SpotOff in use, look at the screenshots below. In the first screenshot, Spot-O-Meter is indicating very high Spotlight indexing and SpotOff indicates that indexing is enabled (green light.)



After clicking on the *Stop* button on *SpotOff*, Spotlight indexing is disabled. Within minutes of using *SpotOff* to disable Spotlight, *Spot-O-Meter* reports the following:



Spot-O-Meter indicates that Spotlight indexing has fallen to an undetectable level and *SpotOff* is indicating that Spotlight has been disabled.

Contact Information

If you have more questions, please visit our web site at:

<http://www.scsc-online.com>

For specific questions about the product, feel free to drop us a line at the following e-mail addresses:

Sales: sales@scsc-online.com

Support: support@scsc-online.com

Thank you for your interest in SpotOff and Spot-O-Meter.

Legal Information

All Software and Computer Systems Company, LLC logos are a trademark (TM) of Software and Computer Systems Company, LLC. **Scannerz**, **FSE**, **SpotOff**, and **Spot-O-Meter** are trademarks (TM) of Software and Computer Systems Company, LLC. All software produced and licensed by Software and Computer Systems Company, LLC is copyright© Software and Computer Systems Company, LLC 2005 - 2012. The contents of all pages and images contained in this document are copyright© Software and Computer Systems Company, LLC, 2010-2012.

Apple is a trademark of Apple Inc., registered in the U.S. and other countries. Apple Macintosh, Mac, Safari, and MacOS are registered trademarks of Apple Inc, in the U.S. and other countries. PowerPC™ is a trademark of International Business Machines Corporation. Intel is a trademark of Intel Corp. in the U.S. and other countries.

Unless explicitly stated, original products and services offered, sold, or licensed by Software and Computer Systems, LLC are the exclusive right of Software and Computer Systems Company, LLC, and clients, users, or interested parties should not assume an affiliation exists between Software and Computer Systems Company, LLC and any of the computer manufacturers, operating system distributors, or other vendors that may be used in the production or completion of a work produced by Software and Computer Systems Company, LLC for a customer or product.