



# Computer Magnification

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Screen magnification software enlarges the image presented on the computer screen without eliminating or altering the data in any way. These programs run in the background and do not interfere with the normal use of the computer except when the user wants to adjust the accessibility feature (e.g., increase the magnification).

## Frequently Asked Questions

### **Why shouldn't a person just use a larger font size?**

Without screen magnification software, a person with low vision may choose to increase the size of text (font) in his or her document to make the words easier to read. However, when he or she finishes editing the document, the font size must be reduced before printing in order to maintain a "professional" appearance. Some software will also allow the user to zoom in or out of a page to magnify the text up to 5x. Screen magnification software will increase the image of the document, for any software, without changing the font size. In addition, screen magnification programs will enlarge not only text, but also icons and graphics on the screen.

### **Is there a Windows setting to change the icon text?**

In Windows, it is possible to enlarge the text on icon labels by adjusting the Accessibility Options (one of the Settings / Control Panel choices) to High Contrast. This increases the font size slightly, and gives the user the option of displaying white text on a dark background. This might be a good option for someone who only needs a slight adjustment.

### **Would using a larger monitor help?**

Using a larger monitor will cause the information on the screen to look larger, but will provide less than 2x magnification. This might be a good option for someone who needs the information to be slightly larger. When used along with magnification programs, larger monitors can also allow a person a larger part of the screen. However, the additional cost of the largest monitors may be more than the cost of other assistive technology options, and may not be as effective.

### **How well do physical magnifiers that are mounted on a monitor work?**



Fairly well, and they may also provide some anti-glare features to improve readability. However, these products are designed to provide only lower levels of magnification. In addition, some products cause screen distortion at the edges (and can be tiring to use).

### **Are there any disadvantages with using this technology?**

The difficulty with screen magnification is that, once magnified, the entire image does not fit on the computer monitor. The user must use a mouse, or other pointing device, to scroll across the image. The movement required to view the entire image increases with higher magnification.

People considering computer magnification should also determine whether they are able to read at a reasonable speed with the magnification. If too much effort is needed to just identify each letter, it may be more practical to use other technology, such as voice output software.

### **What features can help a person keep track of where he or she is on the screen?**

At lower magnifications, use a feature to enlarge just the information at the cursor. This provides an enlarged box at the area of the screen where the person is working, but he or she can still see the layout of the other parts of the screen.

At higher magnifications, “tracking bars” may help. These are reversed color areas on the top and side of the display to show what part of the screen is being magnified. They move as the cursor moves.

### **What other software features should be considered?**

- The ability to present the magnified image in different formats. For example: full screen magnification; split screen or box magnification (the magnified image is confined to one portion of the screen); magnifying glass (the enlarged image moves with the mouse, as with a magnifying glass).
- The ability to have multiple magnification windows.
- The ability to identify a specific area to be magnified.
- Status tracking features that will draw the user’s attention to information being displayed outside of the current field of vision, such as letting the user know when another window pops up.



### **Can the screen contrast be changed?**

Increase in contrast can improve readability. Light colors on dark backgrounds provide the highest contrast. Windows 95 and later versions offer Accessibility Options in the control panel that include high contrast colors and screen enlargement. The enlargement feature is not intended to be a replacement for dedicated magnification software.

### **Can only the cursor be enlarged?**

There is some software (R.J. Cooper's Biggy, Applied Human Factor's Mouse & Caret Buddy) that make the cursor larger, higher contrast or place additional visual cues near the cursor.

### **Can both magnification and voice output be used?**

Some magnification programs include some basic voice output capabilities. Note that those programs are designed for people with low vision, and they do not have all of the features that would be included in voice output software for an individual who is blind. Other magnification programs are compatible with the more popular voice output software and/or voice output software made by the same manufacturer.

### **Can a CCTV/Video Magnifier be used to provide computer magnification?**

A few CCTVs are computer compatible and will allow a user to display the information from the computer on the CCTV, with magnification and contrast options, instead of on a computer monitor. These products easily switch between reviewing printed and computer information, or may allow both to be displayed on a split screen. For computer access, however, the types of magnification options are usually more limited than those provided by computer software. Check with CCTV vendors to determine whether their product line includes a computer-compatible video magnifier.

### **How hard is it to learn to use this technology?**

Some training is required, but once the system is set up to fit the needs of the user, the settings rarely require adjustment.

### **What type of computer is needed?**

It is available for most DOS/Windows and Macintosh operating systems, with a larger number of products available for the Windows environments.



## How much does it cost?

Magnification software typically costs between \$400 and \$700.

### Product Resources:

Ai Squared  
P.O. Box 669  
Manchester Center, VT 05255  
802/362-3612  
[www.aisquared.com](http://www.aisquared.com)

Alva Access Group, Inc.  
436 14<sup>th</sup> Street, Suite 700  
Oakland, CA 94612  
888/318-2582  
510-451-0879 TTY  
[www.aagi.com](http://www.aagi.com)

Ann Morris Enterprises  
551 Hosner Mountain Road  
Stormville, NY 12582  
800/454-3175  
[www.annmorris.com](http://www.annmorris.com)

Applied Human Factors  
P.O. Box 781076  
San Antonio, TX 78278  
888/243-0098  
[www.ahf-net.com](http://www.ahf-net.com)

Artic Technologies Int'l  
55 Park Street  
Troy, MI 48083  
248/588-7370  
[www.artictech.com](http://www.artictech.com)

Bausch & Lomb  
1400 N. Goodman Street

P.O. Box 450  
Rochester, NY 14603-0450  
800/553-5340  
[www.bausch.com](http://www.bausch.com)

Biolink  
4770 Glenwood Ave. North  
Vancouver, B.C. Canada  
V7R 4G8  
604/984-4099  
[www.biolink.bc.ca](http://www.biolink.bc.ca)

Dolphin Computer Access  
60 East Third Ave., Suite 130  
San Mateo, CA 94401  
866/797-5921  
[www.dolphinusa.com](http://www.dolphinusa.com)

Eschenbach Optik of America  
904 Ethan Allen Highway  
Ridgefield, CT 06877  
800/456-7097  
[www.eschenbach.com](http://www.eschenbach.com)

Florida New Concepts  
Marketing  
P.O. Box 261  
Port Richey, FL 34673  
800/456-7097  
[www.gulfside.com/compulenz](http://www.gulfside.com/compulenz)

Henter-Joyce  
11800 31<sup>st</sup> Court North  
St. Petersburg, FL 33716  
800/444-4443



## Assistive Technology Partners

SCHOOL OF MEDICINE

UNIVERSITY OF COLORADO ANSCHUTZ MEDICAL CAMPUS

[www.hj.com/main.html](http://www.hj.com/main.html)

Innovation Management Group (IMG)  
4425 East Sahara Ave., Suite 9  
Las Vegas, NV 89104  
800/889-0987

[www.IMGPresents.com](http://www.IMGPresents.com)

R.J. Cooper  
27601 Forbes Rd., #39  
Laguna Niguel, CA 92677  
800/752-6673

[www.rjcooper.com](http://www.rjcooper.com)

### Other Resources

Assistive Technology Partners  
601 E. 18<sup>th</sup> Ave., Suite 130  
Denver, CO 80203  
303/315-1280 Main

800/255-3477 within Colorado

303/837-8964 TTY

303/837-1208 FAX

[www.uchsc.edu/atp](http://www.uchsc.edu/atp)

Assistive Technology Partners  
Western Slope Technical Assistance  
Center (WesTAC)

2897 North Ave., Module 3A

Grand Junction, CO 81501

970/248-0876 Main

970/248-0877 FAX/TTY

[www.uchsc.edu/atp](http://www.uchsc.edu/atp)

The Center for the Partially Sighted

[www.low-vision.org/computer.html](http://www.low-vision.org/computer.html)

The Screen Magnifiers Homepage

[www.magnifiers.org/main2.html](http://www.magnifiers.org/main2.html)

**For more information contact:  
Assistive Technology Partners  
601 East 18<sup>th</sup> Avenue, Suite 130  
Denver, CO 80203**

**303.315.1280 office**

**303.837.1208 fax**

**303.837.3477 TTY**

**800.255.3477 toll free**

**[generalinfo@at-partners.org](mailto:generalinfo@at-partners.org)**

**[www.assistivetechologypartners.org](http://www.assistivetechologypartners.org)**

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