
ABLEDATA Fact Sheet on Video Magnifiers



Introduction

Gaining full and easy access to books, magazines, labels, pictures, and other printed material is critical for people with low vision. The need for access to printed material extends into the home, the workplace, the classroom, and many other places where reading and writing are key parts of a person's daily life. Until recently, the primary tools for meeting these needs were optical instruments like magnifying lenses. Today, consumers can also choose from a variety of electronic products called video magnifiers that combine video cameras with a viewing screen or monitor. These devices provide new options to aid people with low vision to view and read printed material. This fact sheet will discuss the types of video magnifiers currently available and their features, and list manufacturers and distributors of video magnifiers as well as more general resources for people with low vision.

Note: This Fact Sheet mentions several specific video magnifiers to illustrate general features. References to specific products do not constitute a recommendation or endorsement of any product by ABLEDATA or the U.S. Department of Education. We encourage our readers to be smart consumers, to conduct research on needed features, and to actively participate in selecting an appropriate product.

What Is A Video Magnifier?

A video magnifier is an electronic device that produces enlarged images of text and objects on a monitor or screen. Video magnifiers can be used to read printed material, look at photographs and illustrations, read prescription bottles and other product labels, write checks, complete forms,

and perform close work such as sewing. An image of the material to be magnified is captured by a digital video camera, sometimes called a CCD (charge-coupled device) camera. The digital video camera is connected to a monitor or screen on which magnified images are displayed. Some video magnifiers have their own monitor or screen, while others are connected to a separate computer or television.

Video magnifiers are often called closed circuit televisions, or CCTV's, because early models used conventional television screens to display images. The camera and television screen were directly connected in a closed circuit, leading to the term "CCTV." The two terms are still more or less interchangeable, even though many video magnifiers today use computer monitors or thin-film transistor (TFT) flat screen displays.

Video magnifiers can be divided into two basic categories—desktop and portable.

Desktop Video Magnifiers

Desktop video magnifiers feature a camera mounted over a tray on which the material to be magnified is placed. Some have a built-in monitor and are known as "stand-alone" magnifiers. Others are designed to connect to a television or personal computer.

Most desktop video magnifiers have a "reading tray" that holds the material to be magnified. This tray can be moved from side to side or forwards and backwards, in order to position the desired part of the material directly under the camera. The reading tray is known as an "X/Y tray," in reference to the x-y coordinates that indicate the horizontal and vertical position of points on a graph.

Desktop video magnifiers usually take about as much desk space as a personal computer, and perhaps a little more because of the need for free space in which to move the reading tray. Because of their built-in monitors, most stand-alone desktop models are too heavy to be called portable.

Some weigh over thirty pounds. Desktop models that connect to a separate computer or a television are lighter but generally require the same amount of desk space.

Stand-Alone Desktop Models

Video magnifiers that have their own monitor or display are called stand-alone models. As noted above, stand-alone desktop models typically consist of a single unit with a monitor, a moveable X/Y tray, and a camera focused on the tray. Usually the monitor is on top of the unit, in what is known as the “in-line” configuration, although some stand-alone models allow the user to place the monitor on the side. There is also a built-in light source, such as a miniature fluorescent tube, to illuminate the tray. Those who wish to use a video magnifier for writing tasks may prefer a model with more space between the camera and the tray.



Optelec's ClearView 317 features an integrated black and white monitor and an X/Y table with wrist rests.

Stand-alone desktop models typically have monitors measuring from 14 to 25 inches diagonally. Larger monitors allow more magnified material to appear on screen at a given level of magnification. Desktop models are also available with flat screens, which are lighter in weight and easier to reposition for a more comfortable viewing angle.

Computer-Linked and TV-Linked Desktop Models

Desktop video magnifiers that connect to a computer or to a standard television monitor via a connector cable are also available. The magnified image is displayed on the computer monitor or TV screen. Like stand-alone models, computer-linked and TV-linked desktop models typically have X/Y trays and a frame to hold the camera above the tray, but most do not have their own



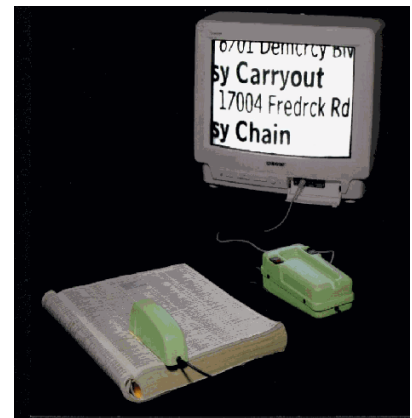
The Aladdin Genie Pro from Telesensory (right) is shown using a split screen to display a graph from the paper on the right half of the computer monitor and text typed into a word processing program on the left side of the screen.

monitors. (The exceptions are a few stand-alone models that have their own monitors, but allow an optional computer connection.) Computer-connected models are often helpful for people who work with computers on the job or at school. A computer-linked video magnifier does not magnify the computer screen—for this purpose, a screen magnifier or screen magnification software are required. Typically, computer-linked models have a split-screen option that shows computer output on part of the computer screen and images magnified by the video magnifier on the other part of the computer screen. Split screen viewing can make it much easier to write responses to memos at work or to copy quotations into papers for school.

The advantage of a model that connects to a television is that most people already have a television. However, standard non-digital televisions have poorer resolution than most computer-type monitors, including those used in stand-alone desktop video magnifiers.

Portable Video Magnifiers

The first “portable” video magnifiers were handheld camera units that resembled a computer mouse, which could be connected to any television. TV-linked mouse-cameras are portable in the sense that they can be moved from one location with a television to another location with a television, but they cannot be used anywhere that lacks a television. It would be difficult to take one to a store to read labels or to a business meeting to look at the agenda. Today, though, a variety of truly portable video magnifiers are available with camera units and displays that can be moved together to any location. Below are descriptions of TV-linked camera-mouse models, along with dual systems that combine a camera-mouse with a desk-top frame; single-unit handheld models; video telescopes; and head-mounted systems.



EEZEE Reader by D&B Electronics is a mouse-style magnifier that displays images on an ordinary black & white or color television.

TV-Linked Camera-Mouse Models

Camera-mouse models feature a camera mounted in a device that resembles a large computer mouse. The camera-mouse unit is connected to a television or other display unit via a control box and a connector cable. To scan a document or other item, the camera unit is moved over it. A light emitting diode (LED) in the camera device illuminates the material. Rollers on the bottom of the unit aid scanning of text and other flat material. The camera unit can also be held over round surfaces such as cans and medicine bottles. Most models can be connected to a television. Depending on the model, other display options may include a computer, a TFT (thin-film transistor) flat screen display, or a goggles-style display unit. Goggles-style displays use a liquid crystal display (LCD) on the inner surface of each eyepiece to present magnified images. Some handheld mouse-camera models come with a small, lightweight TFT display that can sit on any flat surface and be moved from one location to another along with the camera unit. The camera unit itself usually weighs about six or seven ounces, and the camera unit and control box together may weigh about a pound.



Ash Technologies' Liberty Solo is a mouse-style magnifier that comes with a 12-inch color flat screen.



The Magni-Cam from Innoventions is an example of a mouse-style magnifier that can be used with a variety of displays, including a goggles-style display (shown).

Dual Systems (Desktop/Camera-Mouse Models)

A dual system combines desktop and handheld features. These dual systems have a desktop frame with an X/Y tray and a cradle for holding a camera unit. When the camera is sitting in its cradle, the frame and camera form a desktop video magnifier, but the camera unit can also be removed from its cradle and used as a handheld camera unit.

Single-Unit Handheld Models

Some handheld models have a small viewing screen (a flat panel display or LCD) in the same unit as the camera, with power from a rechargeable battery. These models can be used in any location. They are recommended for “spot” use, such as looking at labels, checking addresses on envelopes, looking at bus schedules, etc. One product, the Mini-Viewer from Telesensory, has an LCD screen measuring 5.75 inches diagonally, with a choice of three magnification levels (5 times, 10 times, and 15 times). Another, the PocketViewer from Pulse Data Humanware, has a black-and-white flat panel display that measures 4 inches diagonally, with a fixed magnification level that can be increased by holding the PocketViewer closer to the material being viewed, or decreased by holding it farther away.



The Pulse Data Humanware PocketViewer reading a label at the grocery store.

Video Telescopes

Another type of handheld model is the video telescope, which has a camera at one end and a built-in display at the other end. The display measures about one inch diagonally. To view an object, the display end is held up to one eye while the camera end is aimed at the object. Video telescopes are the only video magnifiers that can be used by pedestrians with low vision as a travel aid. For example, they can be used to read street signs or signs on buildings, and to tell whether a pedestrian signal reads “Walk” or “Don’t Walk.”



Betacom's VisAble Video Telescope offers magnification levels of up to 20 times.

Head-Mounted Systems

Systems that combine display goggles with cameras mounted in front of the goggle eyepieces are called “head-mounted” video magnifiers. Several head-mounted systems are now available. Unfortunately, head-mounted systems cannot be used for walking, because the magnification provided by

the goggles greatly narrows the user's field of vision, making it unsafe to walk with the goggles on. However, head-mounted systems can be used for stationary viewing tasks, such as reading or watching television, and since the systems are lightweight and portable they can be taken to school to watch the blackboard or to a museum to look at paintings.



The Jordy from Enhanced Vision Systems is worn like a pair of glasses and magnifies objects up to 30 times.

Common Features

There are a number of design features found in all the main video magnifier types. Understanding these features can help consumers to compare different types, brands, and models. Some of these features are listed below, with brief explanations.

- **Monitor size**—In general, larger monitors show a larger portion of the material under view at any level of magnification. A disadvantage of larger monitors is that they take more space. In desktop models, flat screen displays take up less space in relation to the size of the display area.
- **X/Y tray size**—Many users find a larger X/Y tray easier to work with as it can accommodate a larger variety of materials, but larger trays require more desk space. Since it is necessary to move the tray from side to side and forward and back, the desk space needed is much more than the size of the tray alone would indicate.
- **Magnification range**—Each model has its own magnification range that defines what levels of magnification are available to users of that model. Depending on model, the maximum magnification may be less than ten times or more than 100 times original size. For models that connect to a computer or television, the manufacturer may state several magnification ranges depending on the size of the computer monitor or television screen to which the video magnifier will be connected. As

magnification increases, less of the magnified material can be seen on the display, and some people may find this makes it difficult to read materials at full magnification. To deal with this problem some models have an overview mode with lower magnification levels, which allows users to orient themselves on a page before increasing magnification to read.

- **Display color**—Some models provide only a black-and-white display, which may be sufficient for those who plan to use the magnifier solely for reading newspapers and other text. Other models have full color displays. Black-and-white models are usually a little less expensive than color models from the same company. Most color models offer a black-and-white viewing mode, and some offer other display options, such as a full color, medium contrast photo mode suitable for viewing photographs.
- **Reverse video**—Many models include a reverse video feature, in which black letters on white paper appear as white letters on a black background. This feature is helpful to individuals who are prone to experience glare when looking at a bright image.
- **Alternative color combinations**—Many models can display text in other color combinations in addition to black and white, such as green on black, light blue on black, etc., for those individuals who find other color combinations easier to view.
- **Magnification controls**—In some models, the magnification level can be changed by raising and lowering the camera above the material being viewed. Examples include desktop models in which the camera can be raised and lowered above the X/Y tray. In other models, a lever or knob controls the magnification level.
- **Manual or automatic focus**—In manual focus models, the camera must be refocused by hand each time the magnification level is changed. For those who find it difficult or tiresome to focus a lens manually by turning a knob, many models offer automatic focus capability, or a

zoom feature that provides extra magnification as needed without refocusing.

- **Windowing and line markers**—Windowing allows a person to narrow the viewing window vertically or horizontally to focus on a selected part of the text that he or she wishes to read. A similar purpose is served by the line marker feature, which puts lines into the display to underline or overline rows or vertically define columns without masking text outside the marker-defined area.
- **Power source**—Desktop magnifiers sold in the U.S. are compatible with (and plug into) standard household alternating current (AC) power outlets. Most handheld camera-mouse models also have a power cord attached to the control box that comes with the camera unit. Single unit handheld magnifiers typically have rechargeable batteries as well as AC adapters. The rechargeable batteries have limited capacity, and may require nightly recharging for people who use their magnifiers on an everyday basis.

Distance Viewing

Video telescopes and head-mounted cameras with a goggle display can be used for distance viewing, such as watching television or viewing a blackboard at school. Video telescopes can also be used much like a monocular telescope to read signs or perform other mobility tasks, but, as noted above, head-mounted systems are not recommended for use while moving.

Several manufacturers have models with rotating cameras or cameras mounted on flexible arms that can be focused on distant objects. Some of these systems are designed specifically for classroom use, including systems with a single camera whose focus can be shifted from a desktop to a blackboard, and others that use two cameras, one focused on a reading tray, and the other focused on the blackboard.

Retinal Displays (Virtual Reality Displays)

In recent years, Telesensory has done research into the possibility of linking a video magnifier to a retinal scanning display (RSD) called Nomad. RSD technology, which projects images directly onto the retina, has been used in virtual reality military training. However, Telesensory has ended this research, and currently has no plans to use this type of display in any product.

A Related Product: Video Magnifier Emulation Software

Software programs are available that enable a computer and scanner to function together as a video magnifier. Material is placed on the scanner and a magnified image appears on the computer monitor. Premier Assistive Technology currently offers software of this type.

Choosing a Video Magnifier

The only person who can decide if a video magnifier is appropriate is the person who will actually be using it. The advice of a low vision optometrist or an assistive technology specialist is often valuable, but it is the person with the disability who ultimately chooses to use the magnifier or let it gather dust. With this fact in mind, the person who will actually use the magnifier should always be the primary decision maker in the selection and purchase of a video magnifier.

Someone who is considering buying a video magnifier but who lacks experience actually using one may feel unsure which of the many video magnifier types and features would be best, or even whether a video magnifier is better than other options. What can the potential buyer do to make the right decision?

Many will find it helpful to **consult a low vision optometrist or assistive technology specialist** before making a decision. Both can provide information and advice regarding the full range of available options for people with low vision, which may include speech output and braille as well as lenses and electronic magnifiers.

Low vision optometrists are optometrists who specialize in helping people with low vision. Unlike regular optometrists, who mostly dispense glasses, low vision optometrists are familiar with the whole range of devices that can be used to enhance the vision of persons with visual impairments. A referral to a low vision specialist can be obtained from an ophthalmologist or from the local office of the State vocational rehabilitation agency or state agency serving persons who are blind or visually impaired. In most States, applicants for vocational rehabilitation services can obtain a free low vision examination as part of their evaluation.

Assistive technology specialists are people trained to guide individuals in choosing assistive technology options. Some State rehabilitation agencies have their own assistive technology specialists. Moreover, every State has an assistive technology project funded by the National Institute on Disability and Rehabilitation Research (NIDRR), U.S. Department of Education. Contact information for each of the 56 State and territorial assistive technology projects is available on the RESNA (Rehabilitation Engineering Society of North America) Technical Assistance Project Web site at <http://www.resna.org/taproject>, or from ABLEDATA.

An important consideration is the **purpose of the video magnifier**. Will it be used for hobbies and crafts, reading mail, looking at photographs, school work, or on-the-job tasks? Different features may be appropriate for different tasks. Any specialist who is consulted should be told what the magnifier will be used for.

Hands-on experience should also be a part of the decision to purchase a video magnifier. Many State assistive technology programs have adaptive equipment demonstration centers where consumers can try products. The Alliance for Technology Access (<http://www.ataccess.org/>) has

a national network of resource centers that offer consumers the opportunity to use a variety of assistive products including some video magnifiers. Many manufacturers and distributors can provide in-home product demonstrations. Even when a third party payer such as a vocational rehabilitation program is purchasing the product, a demonstration can usually be arranged.

Consumers interested in finding a portable model should be aware that **portability** is relative, and they should examine the features of models advertised as portable to see if the models fit their particular needs. A camera mouse can be moved from one location to another, but it can only be used where there is a television or other display. Some desktop systems with flat panel displays are lightweight and are therefore called portable, but they may not be easy to set up in remote locations such as a store. Battery-powered single-unit handheld models and video telescopes can be used in a store or even outdoors, but battery life may be limited, and overnight recharging may be necessary when their rechargeable batteries run low.

Service contracts and warranties are critical issues because video magnifiers can be expensive to repair. Many manufacturers offer warranties ranging from one to five years, and some also offer extended warranties at an additional cost. Most of the larger manufacturers have local or regional dealers who provide service and technical assistance to consumers, and most companies provide technical assistance through a toll-free number and/or e-mail.

Finally, many consumers with degenerative eye conditions worry that their eyesight will deteriorate so much that the video magnifier they purchase will become unusable. In response to this concern, some manufacturers have a policy of buying back video magnifiers they sell if this happens within a certain period of time and a professional certifies it.

Video Magnifier Rentals and Used Equipment

Some State assistive technology projects have assistive technology lending or rental programs, or programs to bring together persons interested in selling and buying used equipment. If interested, call your State project for more information.

The ***Braille Forum***, published by the American Council of the Blind (ACB), and the ***Braille Monitor***, published by the National Federation of the Blind (NFB), both provide space for individuals interested in buying and selling used assistive technology products. Ads may be placed and read in the “High Tech Swap Shop” feature of the ***Braille Forum*** and the “Monitor Miniatures” feature of the ***Braille Monitor***.

Manufacturers

The following companies sell their own brands of video magnifiers. Many offer a range of models with a variety of features. For each manufacturer, we have included full contact information (including street address, telephone [voice unless otherwise noted] and fax numbers, e-mail address, and web address) and a brief list of the brands sold. When available, we have included the manufacturer's suggested retail price or the U.S. distributor's price for each brand as of January 2004.

This list includes all the video magnifier manufacturers and products in the ABLEDATA product database as of January 2004. For an updated list of products, go to the ABLEDATA product database at **<http://www.abledata.com>**.

Prices are subject to change and may vary depending on options selected.

Ash Technologies Ltd.

B5, M7 Business Park

Naas, County Kildare, Ireland

Telephone: 011-353-45-8822-12

Fax: 011-353-45-8822-14

E-mail: hugh@ashtech.ie

Website: <http://www.ashtech.ie>

Products (distributed in the U.S. by Freedom Vision):

- **Andromeda** (stand-alone desktop model with 15-inch TFT display), \$3995
- **Liberty Color** (handheld color model with 7-inch TFT display), \$2495
- **Liberty Solo** (handheld color model with 12-inch TFT display and VGA output for computer), \$3995
- **Prisma** (TV-linked compact desktop model with optional VGA adapter for computer connection), from \$995 to \$1245
- **Prisma Vision** (desktop model with 7-inch TFT display)
- **TVi Color** (TV-linked handheld model), \$499

Audio Visual Mart

P.O. Box 23020

New Orleans, LA 70183 USA

Telephone: 504-733-1500

Fax: 504-733-1662

E-mail: info@av-mart.com

Web site: <http://www.av-mart.com>

Products:

- **Powervision** (stand-alone desktop model)
- **Powervision Portable** (camera-mouse model with height-adjustable 6.9-inch flat panel display)

Baum Retec AG

Schloss Langenzell

D-69257 Wiesenbach, Germany

Telephone: 011-49-6223-4909-0

Fax: 011-49-6223-4909-99

E-mail: info@baum.de

Web site: <http://www.baum.de>

Products:

- **Visio PC** (desktop model with 15- or 18-inch TFT flat screen display and optional computer link and distance viewing camera)

Betacom

450 Matheson Blvd. East, Unit 67

Mississauga, Ontario L4Z 1R5 Canada

Telephone: 905-568-9977; 800-353-1107 toll free

Fax: 905-568-9925

E-mail: infous@betacom.com

Web site: <http://www.betacom.com>

Products:

- **VisAble Image** (stand-alone desktop color model with 15- or 17-inch flat screen), from \$1695 to \$2495
- **VisAble Pod** (dual handheld/desktop model with desktop mount for VisAble Video Telescope), \$1000
- **VisAble Video Telescope**, \$1995

Beyond Sight, Inc.

5650 South Windermere Street

Littleton, CO 80120 USA

Telephone: 303-795-6455

Fax: 303-795-6425

E-mail: bsistore@beyondsight.com

Web site: <http://www.beyondsight.com>

Products:

- **Visionary** series (stand-alone desktop models), from \$1795 to \$3095
- **Visionary PC** series (computer-linked desktop models), from \$2095 to \$3095

Clarity

6409 Alisal Street

Pleasanton, CA 94566 USA

Telephone: 800-575-1456 toll free

Fax: 925-484-3801

E-mail: clarity@clarityusa.com

Web site: <http://www.clarityusa.com>

Products:

- **Clarity Classmate** (model with rotating autofocus camera that can be directed at a blackboard or a desktop), \$2445
- **Clarity Flex** series (desktop models that can be connected to a television, personal computer, laptop, liquid crystal display, or head-mounted glasses), from \$1795 to \$2295
- **Deskmate** (desktop model with rotating autofocus camera and 15-inch LCD monitor), \$2595
- **Discovery In-Line** series (stand-alone desktop models), from \$1595 to \$2495
- **Minimate** (TV-linked desktop model with rotating autofocus camera), \$2295
- **Mobilemate** (model with rotating autofocus camera mounted on wheeled desk), \$3995
- **Travelmate** (model with rotating autofocus camera that can be mounted on a flex arm or rolling stand), \$2595

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- **TravelViewer** (portable model with small rolling stand with no X/Y table), \$2045
 - **TravelViewer-To-Go** (same as TravelViewer, plus goggles-style display), \$2845

D & B Electronics, Inc.

19283 Flat Iron Road

Valley Lee, MD 20692 USA

Telephone: 301-994-1598; 888-535-2628 toll free

Fax: 301-994-2085

E-mail: ezc@dbmarine.com

Web site: <http://www.dbmarine.com>

Products:

- **EEZEE Reader** (TV-linked handheld model), \$299

Dazor Manufacturing Corporation

4483 Duncan Avenue

St. Louis, MO 63110USA

Telephone: 800-345-9103 toll free

Fax: 314-652-2069

E-mail: info@dazor.com

Web site: <http://www.dazor.com>

Products:

- **SpeckFinder** (stand-alone desktop/work station model with a flat screen mounted on a flexible arm)

Enhanced Vision Systems, Inc.

17911 Sampson Lane

Huntington Beach, CA 92467 USA

Telephone: 714-374-1829; 800-811-3161 toll free

Fax: 714-374-1821

E-mail: info@enhancedvision.com

Web site: <http://www.enhancedvision.com>

Products:

- **Flipper** (TV-linked model with rotating camera and optional desktop stand), \$1395
- **Flipper Panel** (rotating camera model with 7-inch TFT display), \$2395
- **Flipperport** (rotating camera model with goggle display), \$2395
- **Jordy** (head-mounted model with goggle display and optional desk top stand and TV connection), from \$2795 to \$3095
- **Max Digital Magnifier** (TV-linked handheld model), from \$349 to \$449
- **Max Panel** (handheld model with 7-inch TFT display), \$1495
- **MaxPort** (handheld model with goggle display), from \$1495 to \$1595
- **Merlin** (stand-alone desktop model with computer link and voice activation options), \$1995

Eschenbach Optik of America, Inc.

904 Ethan Allen Highway

Ridgefield, CT 06877 USA

Telephone: 203-438-7471; 800-396-3886 toll free

Fax: 203-431-4718

Web site: <http://www.eschenbach.com>

Products:

- **ELG Television Reader** (TV-linked desktop model)

Independent Living Aids Inc

200 Robbins Lane

Jericho, NY 11753 USA

Telephone: 516-937-1848; 800-537-2118 toll free

Fax: 516-937-3906

E-mail: can-do@independentliving.com

Web site: <http://www.independentliving.com>

Products:

- **The Clue** (20-inch stand-alone color desktop model), from \$1995 to \$2795

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- **The Detective** (14-inch stand-alone B&W desktop model), from \$1495 to \$2095
 - **The Solution** (TV or computer-linked desktop model), from \$1695 to \$2395

Innoventions, Inc.

5921 S. Middlefield Rd., Suite 102

Littleton, CO 80123-2877 USA

Telephone: 303-797-6554; 800-854-6554 toll free

Fax: 303-727-4940

E-mail: magnicam@magnicam.com

Web site: <http://www.magnicam.com>

Products:

- **Magni-Cam** and **Triad Color Magni-Cam** (handheld models with either a TV connection, a flat panel display, or a head-mounted display), from \$695 to \$2195
- **Primer Electronic Magnifier** (TV-linked handheld model), \$295

Keeler Instruments Inc.

456 Lawrence Parkway, 2 Parkway Industrial Area

Broomall, PA 19008 USA

Telephone: 610-353-4350; 800-523-5620 toll free

Fax: 610-353-7814

E-mail: keeler@keelerusa.com

Web site: <http://www.keelerusa.com>

Products:

- **Nu-Vision Head-Mounted Video Magnifier**

Low Vision Centers of Indiana/Low Vision Center of Fort Wayne

6208-B Constitution Drive

Fort Wayne, IN 46804 USA

Telephone: 260-432-0575

E-mail: fortwayne@eyeassociates.com

Web site: <http://www.eyeassociates.com>

Products:

- **Eye Can See Machine** (TV-linked handheld model), from \$895 to \$1050
- **PVA Personal Vision Assistant** (TV-linked desktop model with mirror attachment for camera to allow the user to view his or her own face)

Low Vision International

Verkstadsgatan 5

352 46 Vaxjo, Sweden

Telephone: 011-46-470-727700

Fax: 011-46-470-727725

Web site: <http://www.lvi.se>

Products (distributed in the U.S. by Sighted Electronics):

- **MagniLink Collibri** series (computer-linked color desktop models), from \$2695 to \$2995
- **MagniLink Penguin** (stand-alone B&W desktop model), \$1895
- **MagniLink Seagull** series (stand-alone color desktop models), from \$3100 to \$3200

The Magnifying Center/Low Vision Aids, Inc.

10086 W. McNab Road

Tamarak, FL 33321 USA

Telephone: 954-722-1580; 800-364-1608 toll free

Fax: 954-726-5892

E-mail: mail@magnifyingcenter.com

Web site: <http://www.magnifyingcenter.com>

Products:

- **Magnifying America Elite** (stand-alone desktop model)
- **Magnifying America Patriot** series (stand-alone desktop models)
- **Magnifying America Patriot Flex** (desktop model with camera mounted on flexible arm)
- **Magnifying America Patriot Palm** (TV-linked handheld model)

MagniSight, Inc.

3360 Adobe Court

Colorado Springs, CO 80907 USA

Telephone: 719-578-8893; 800-753-4767 toll free

Fax: 719-578-9887

E-mail: sales@magnisight.com

Web site: <http://www.magnisight.com>

Products:

- **Explorer** series (stand-alone and computer-linked desktop models), from \$1495 to \$3095

Optelec U.S. Inc.

6 Lyberty Way

Westford, MA 01886 USA

Telephone: 978-392-0707; or 800-828-1056 toll free

E-mail: info@optelec.com

Web site: <http://www.optelec.com>

Products:

- **Clearview** series (stand-alone, TV-linked, and computer-linked desktop models), from \$1895 to \$3295
- **Comfort Stand** (wheeled mobility stand for CCTV)
- **HandiView Video Magnifier** (TV-linked handheld model combined with stand magnifier with two-power optical lens), \$695
- **Traveller** (portable desktop model with flat panel screen), \$1895

OVAC, Inc.

67-555 E. Palm Canyon Drive, Unit C-103

Cathedral City, CA 92234 USA

Telephone: 800-325-4488 toll free

Fax: 760-321-9711

E-mail: info@ovac.com

Web site: <http://www.ovac.com>

Products:

- **Color-Eye** and **Golden-Eye** (TV-linked handheld models), from \$295 to \$395
- **Flex-Eye** (TV-linked desktop model with flex-arm camera mount), from \$1195 to \$1495
- **ZACC** series (TV-linked desktop models with zoom lens), from \$1495 to \$1945

Premier Assistive Technology

12800 Escanaba Drive, Suite D

Dewitt, MI 48820 USA

Telephone: 517-668-8188

Fax: 517-668-2417

E-mail: info@readingmadeeasy.com

Web site: <http://www.premier-programming.com>

Products:

- **Scan and View** (software to allow a computer and scanner to function as a CCTV), \$89.95

Pulse Data Humanware

175 Mason Circle

Concord, CA 94520 USA

Telephone: 925-680-7100; 800-722-3393 toll free

Fax: 925-681-4630

E-mail: info@humanware.com

Web site: <http://www.humanware.com>

Products:

- **Pocket Viewer** (single-unit handheld model), \$895
- **Smartview2** series (stand-alone or computer-linked desktop models), from \$1795 to \$3495

REHAN Electronics Ltd.

Industrial Estate, Courtown Road

Gorey, County Wexford, Ireland

Telephone: 011-353-55-22013

Fax: 011-353-55-20732

E-mail: sales@rehan.org

Web site: <http://www.rehan.org>

Products (distributed in the U.S. by Access Ingenuity):

- **Affinity** series (stand-alone or TV-linked desktop models)
- **Ergo** series (stand-alone desktop models, mounted to wheeled desks for use in classrooms, libraries, and other locations)

Reinecker Reha-Technik GmbH

Sandwiesenstrasse 19

D-64665 Alsbach-Hahnlein, Germany

Telephone: 011-49-6257-93110

Fax: 011-49-6257-2561

E-mail: info@reineckerreha.de

Web site: <http://www.reineckerreha.de>

Products:

- **Maxlupe Color** (handheld model with built-in TFT screen)
- **Videomatic EC-Autofocus** (stand-alone color desktop model)
- **Videomatic LUPO** (handheld camera unit with desktop TFT monitor and option of linking to computer)
- **Videomatic MD** (stand-alone black and white desktop model)
- **Videomatic S1-VGA** (computer-linked desktop model)
- **Videomatic Semi-S1** (computer-linked desktop model with single camera that swivels for either close or distant viewing)
- **Videomatic UNO** (stand-alone desktop model with TFT monitor and two cameras, for close and distance viewing)

S. Walters, Inc.

30423 Canwood Street, Suite 115

Agoura Hills, CA, 91301 USA

Telephone: 818-706-2202 voice, 800-992-5837 toll free

Fax: 818-706-2206; 888-549-1843 toll free

E-mail: walterslv@cs.com

Web site: <http://www.walterslowvision>

Products:

- **Seewell Reading Enhancer** (TV-connected handheld model)

See-More Vision Aiding Products

P.O. Box 3413

Farmingdale, NY 11735 USA

Telephone: *Professional and wholesale customers only*, 631-752-0689 or 800-428-6673 toll free; retail customers should call the distributor, Maxi-Aids

Web site: <http://www.seemorevision.com>

Products:

- **Reizen Vision series** (stand-alone desktop models with side monitor), from \$1595 to \$2595
- **See-More Autovision series** (handheld models with 7-inch or 9-inch B&W flat panel display), from \$995 to \$1295
- **See-More Simplicity series** (stand-alone desktop models with in-line monitor), from \$1595 to \$2595
- **See-More Vision Enhancer** (TV-connected portable desktop model), \$695

Tagarno of America, Inc.

615 Otis Drive

Dover, DE 19901 USA

Telephone: 302-734-9630; 800-441-8439 toll free

Fax: 302-764-9654

E-mail: info@tagarno.com

Web site: <http://www.tagarno.com>

Products:

- **Gemini** (computer-linked desktop model)
- **Mini-CCD** (stand-alone desktop model)
- **School CCD** (computer-linked desktop model with two cameras, one focused on the reading table and one on a distant object such as a blackboard)

Telesensory Corporation

520 Almanor Avenue

Sunnyvale, CA 94085 USA

Telephone: 408-616-8700; 800-804-8004 toll free

Fax: 408-616-8720

E-mail: info@telesensory.com

Web site: <http://www.telesensory.com>

Products:

- **Aladdin** series (computer-linked or stand-alone desktop models), from \$1395 to \$3295
- **Atlas** series (computer or television-linked desktop models), call for pricing
- **Atlas 710** (desktop model with 17-inch flat panel monitor), \$2995
- **Hand-held Camera** (TV-linked handheld model), \$595
- **Mini-Viewer** (handheld model with built-in flat panel display), \$1795
- **Olympia** (handheld model with built-in LCD screen and TV connection option), \$2495
- **Visio** (handheld model that links to computer or 12-inch TFT screen), \$3195

Tieman Group

Koddeweg 39 – 41

3194 DH Hoogvliet RT, The Netherlands

Telephone: 011-31-1023-13555

Fax: 011-31-1023-13590

E-mail: info@tiemangroup.com

Web site: <http://www.tiemangroup.com>

Products (distributed in the U.S. by Optelec):

- **Twinkle** series (computer-linked or stand-alone desktop models, sold in the U.S. under the Clearview name)

VideoEye Corporation

10211 West Emerald

Boise, ID 83704 USA

Telephone: 208-323-9577; 800-416-0758 toll free

Fax: 208-377-1528

E-mail: sales@videoeyecorp.com

Web site: <http://www.videoeye.net>

Products:

- **VideoEye** series (stand-alone desktop models with camera mounted on articulating arm and Sony Wega flat screen, LCD, or Sharp flat TV monitor)

Vision Technology Inc.

8501 Delport Drive

St. Louis, MO 63114-5905 USA

Telephone: 314-890-8300; 800-560-7226 toll free

Fax: 314-890-8383

E-mail: vti@vtil.com

Web site: <http://www.visiontechnology.com>

Products:

- **Black and White Auto Focus 1200** series (stand-alone or computer-linked desktop models), from \$1795 to \$2095
- **Color Auto Focus 2000** series (stand-alone or computer-linked desktop models), from \$2195 to \$2370
- **In-Sight Color Auto-Focus** (stand-alone desktop models), from \$1795 to \$1995
- **LINK** (device for linking Vision Technology stand-alone model to an SVGA computer, with foot pedal switch), \$400
- **MousCam** (TV-linked handheld model), \$995
- **VGA 6000 Color Auto Focus** (computer-linked desktop model, compatible with VGA, SVGA, and XGA computers), \$3245

Selected U.S. Distributors and Dealers

In addition to the manufacturers listed above, the following dealers and distributors sell video magnifiers. The brands sold by each distributor or dealer are listed after their contact information.

Access Ingenuity LLC

3635 Montgomery Drive

Santa Rosa, CA 95405 USA

Telephone: 707-579-4380; 877-579-4380 toll free

Fax: 707-579-4273

E-mail: access@accessingenuity.com

Web site: <http://www.accessingenuity.com>

- Sells and distributes products from **REHAN Electronics**.

American Printing House for the Blind

P.O. Box 6085

Louisville, KY 40206-0085 USA

Telephone: 502-895-2405; 800-223-1839 toll free

Fax: 502-899-2274

E-mail: info@aph.org

Web site: <http://www.aph.org>

- Sells products from **Innoventions**.

Assistive Technologies Inc.

1415 N. Eagle Street

Naperville, IL 60563 USA

Telephone: 800-244-4906 toll free

Fax: 630-527-0111

E-mail: dond@assistivetechologies.com

Web site: <http://www.assistivetechologies.com>

- Sells products from **OVAC**.

A.T. Kratter & Company

12062 Valley View Street, Suite 109

Garden Grove, CA 92845-1739 USA

Telephone: 714-799-3000

Fax: 714-799-3100

E-mail: info@atkratter.com

Web site: <http://www.atkratter.com>

- Sells products from **Ash Technologies, Clarity, Enhanced Vision Systems, Low Vision International, MagniSight, and REHAN Electronics.**

Audio Visual Mart

P.O. Box 23020

New Orleans, LA 70183 USA

Telephone: 504-733-1500

Fax: 504-733-1662

E-mail: info@av-mart.com

Web site: <http://www.av-mart.com>

- In addition to its own **Powervision** models, Audio Visual Mart sells products from **Betacom, Enhanced Vision Systems, Keeler Instruments, and Pulse Data Humanware.**

Bartimaeus Group

1481 Chain Bridge Road, Suite 100

McLean, VA 22101 USA

Telephone: 703-442-5023

Fax: 703-734-8381

E-mail: adapt2c@bartsite.com

Web site: <http://www.bartsite.com>

- Sells products from **Ash Technologies, Clarity, Enhanced Vision Systems, Magnisight, and OVAC.**

Beyond Sight, Inc.

5650 South Windermere Street

Littleton, CO 80120 USA

Telephone: 303-795-6455

Fax: 303-795-6425

E-mail: bsistore@beyondsight.com

Web site: <http://www.beyondsight.com>

- In addition to its own **Visionary** and **Visionary PC** models, Beyond Sight sells products from **Enhanced Vision Systems**, **MagniSight**, **Optelec**, and **Telesensory**.

C Tech

2 North Williams Street

Pearl River, NY 10965 USA

Telephone: 845-735-7907

E-mail: info@lowvisionproducts.com

Web site: <http://www.lowvisionproducts.com>

- Sells products from **Ash Technologies**, **Betacom**, **Enhanced Vision Systems**, and **Optelec**.

EnableMart

400 Columbia Street, Suite 100

Vancouver, WA 98660-3413 USA

Telephone: 360-695-4155; 888-640-1999 toll free

Fax: 360-695-4133

E-mail: sales@enablemart.com

Web site: <http://www.enablemart.com>

- Sells products from **Ash Technologies**, **Betacom**, **Clarity**, **Enhanced Vision Systems**, and **Pulse Data Humanware**.

EVAS - Electronic Vision Access Solutions

39 Canal Street, P.O. Box 371

Westerly, RI 02891 USA

Telephone: 401-596-3155; 800-872-3827 toll free; 401-596-3500 TTY

Fax: 401-596-3979

E-mail: contact@evas.com

Web site: <http://www.evas.com>

- Sells products from **Clarity, Enhanced Vision Systems, Magni-Sight, Pulse Data Humanware, and Telesensory.**

Florida Reading and Vision Technology

P.O. Box 519

Ft. Lauderdale, FL 33302 USA

Telephone: 800-981-5119 toll free

Fax: 954-462-4647

E-mail: sales@floridareading.com

Web site: <http://www.floridareading.com>

- Sells products from **Ash Technologies, Betacom, and Pulse Data Humanware.**

Freedom Vision

615 Tami Way

Mountain View, CA 94041 USA

Telephone: 650-961-6541; 800-961-1334 toll free

Fax: 650-968-4740

E-mail: info@freedomvision.net

Web site: <http://www.freedomvision.net>

- Sells and distributes products from **Ash Technologies.**

Independent Living Aids Inc.

200 Robbins Lane

Jericho, NY 11753 USA

Telephone: 516-937-1848; 800-537-2118 toll free

Fax: 516-937-3906

E-mail: can-do@independentliving.com

Web site: <http://www.independentliving.com>

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- In addition to its own **Can-Do** models (**The Detective**, **The Clue**, and **The Solution**), Independent Living Aids sells products from **Ash Technologies**, **Betacom**, **Enhanced Vision Systems**, **Innovations**, **Low Vision International**, and **Telesensory**.

Keyboard Alternatives & Vision Solutions

537 College Avenue

Santa Rosa, CA 95404 USA

Telephone: 707-544-8000; 800-953-9262 toll free

Fax: 707-522-1343

E-mail: keyalt@keyalt.com

Web site: <http://www.keyalt.com>

- Sells products from **Betacom**, **Clarity**, **Enhanced Vision Systems**, **MagniSight**, and **REHAN Electronics**.

Lighthouse International

111 East 59th Street

New York, NY 10022-1202 USA

Telephone: 212-821-9200; 800-829-0500 toll free; 212-821-9713 TT

Fax: 212-821-9707

E-mail: info@lighthouse.org

Web site: <http://www.lighthouse.org>

- Sells products from **Ash Technologies**, **Enhanced Vision Systems**, **Optelec**, **Pulse Data Humanware** (under the name **Lighthouse Personal Reader**), and **Telesensory**.

LS&S, LLC

PO Box 673

Northbrook, IL 60065 USA

Telephone: 847-498-9777; 800-468-4789 toll free; 866-317-8533 TT

Fax: 847-498-1482

E-mail: info@lssproducts.com

Web site: <http://www.lssproducts.com>

- Sells products from **Betacom**, **Dazor**, **Enhanced Vision Systems**, **MagniSight**, and **OVAC**.

The Magnifying Center/Low Vision Aids, Inc.

10086 W. McNab Road

Tamarak, FL 33321 USA

Telephone: 954-722-1580; 800-364-1608 toll free

Fax: 954-726-5892

E-mail: mail@magnifyingcenter.com

Web site: <http://www.magnifyingcenter.com>

- In addition to its own **Magnifying America** models, The Magnifying Center sells products from **Vision Technology Inc.**

Maxi-Aids

42 Executive Boulevard, PO Box 3209

Farmingdale, NY 11735 USA

Telephone: 516-752-0521; 800-522-6294 toll free; 516-752-0738 TT

Fax: 516-752-0689

E-mail: sales@maxiaids.com

Web site: <http://www.maxiaids.com>

- Sells products from **See-More Vision Aiding Products.**

Mons International, Inc.

6595 Roswell Rd. #224

Atlanta, GA 30328 USA

Telephone: 770-551-8455; 800-541-7903 toll free

E-mail: sales@magnifiers.com

Web site: <http://www.magnifiers.com>.

- Sells products from **Clarity, Enhanced Vision Systems, and MagniSight.**

NanoPac, Inc.

4823 South Sheridan Road, Suite 302

Tulsa, OK 74145 USA

Telephone: 918-665-0329; 800-580-6086 toll free; 918-665-2310 TT

Fax: 918-665-0361

E-mail: info@nanopac.com

Web site: <http://www.nanopac.com>

-
- Sells products from **Enhanced Vision Systems, Optelec, and Pulse Data Humanware.**

Rocky Mountain Low Vision

1338 S. Foothill # 165

Salt Lake City, UT 84108 USA

Telephone: 877-656-1021 toll free

E-mail: rmlv@magnified.com

Web site: <http://www.magnified.com>

- Sells products from **Ash Technologies, Enhanced Vision Systems, and Pulse Data Humanware.**

Sighted Electronics

69 Woodland Avenue

Westwood, NJ 07675 USA

Telephone: 800-666-4883 toll free

Fax: 201-666-0159

E-mail: sales@sighted.com

Web site: <http://www.sighted.com>

- Imports and distributes products from **Low Vision International.**

Technologies for the Visually Impaired

9 Nolan Court

Hauppauge, NY 11788 USA

Telephone: 631-724-4479

Fax: 631-724-4479

E-mail: contact@tvi-web.com

Web site: <http://www.tvi-web.com>

- Sells products from **Low Vision International, MagniLink, and See-More Vision Aiding Products.**

Woodlake Technologies

650 W. Lake Street, Suite 320

Chicago, IL 60661 USA

Telephone: 312-655-9200; 800-253-4391 toll free; 312-655-8614 TT

Fax: 312-655-8615

E-mail: info@woodlaketechnologies.com

Web site: <http://www.woodlaketechnologies.com>

- Sells products from **Ash Technologies, Clarity, Enhanced Vision Systems, Optelec, and Telesensory.**

The records in the ABLEDATA database are provided for information purposes only. Neither the U.S. Department of Education nor Macro International Inc. have examined, reviewed, or tested any product, device, or information contained in ABLEDATA. The Department and Macro International Inc. make no endorsement, representation, or warranty express or implied as to any products, device, or information set forth in ABLEDATA.

For an updated list of Web links to manufacturers and distributors, go to the Blind and Low Vision Resource Center on the ABLEDATA web site, <http://www.abledata.com>.

Product Evaluations

The following articles discuss several different video magnifier models, and may be useful in selecting a magnifier. The views stated in each article are those of the individual authors and do not reflect the opinions of ABLEDATA or the U.S. Department of Education.

Uslan, Mark M. and Chan, Gary. "Optelec's ClearView 700 Video Magnifier for Use with Computers." *Access World*, Vol. 1, No. 2 (March 2000), pp.14-22.

Uslan, Mark M., Hsu, Chen-Yung, and Chan, Gary. "Is Technology Improving? Revisiting Four Video Magnifiers." *Access World*, Vol. 1, No. 6 (November 2000), pp. 14-22. Product evaluation of Optelec's Clear View 700, Vision Technology's Freedom Machine, Pulse Data Humanware's SmartView Xtra, and Clarity's Classmate and Travelmate.

Uslan, Mark and Presley, Ike. "Portable Video Magnifiers in Museums: Product Evaluations of Betacom's VisAble Video Telescope, Enhanced Vision System's Jordy, and Clarity Solution's MobileMate." *Access World*, Vol. 3, No. 2 (March 2002), pp. 33-42.

Other Publications

Gardner, Norman. "When to Stop Relying on Low Vision and Low-Vision Aids." *Braille Monitor*, Vol. 43, No. 3 (March 2000). Retrieved November 7, 2003 from <http://www.nfb.org/bm/bm00/bm0003/bm000310.htm>.

Peck, Alec F. and Uslan, Mark. "How Closed-Circuit Television Users Develop Computer Vision Syndrome." *Access World*, Vol. 2, No. 4 (September 2001), pp. 33-40.

Trapp, Greg. "Funding Closed Circuit Televisions Through Medical Insurance." *Braille Monitor*, Vol. 40, No. 11 (November 1997). Retrieved November 7, 2003 from <http://www.nfb.org/bm/bm97/Bm971108.htm>.

Uslan, Mark M. and Peck, Alec F. "CCTV Users Report Symptoms of Computer Vision Syndrome." *Access World*, Vol. 1, No. 5 (September 2000), pp. 13-18.

For an updated list of publications on video magnifiers and low vision products, go to the AT Library or the Blind and Low Vision Resource Center at the ABLEDATA website, <http://www.abledata.com>.

Resources

The following organizations provide general information on issues relating to blindness and low vision, as well as information on video magnifiers and other assistive technology.

American Council of the Blind (ACB)

1155 15th Street, NW, Suite 1004

Washington, DC 20005 USA

Telephone: 202-467-5081 voice, 800-424-8666 toll free

Fax: 202-467-5085

E-mail: info@acb.org

Web site: <http://www.acb.org>

The American Council of the Blind is a membership organization of blind and visually impaired people, with 51 State and regional affiliates and 20 national special interest and professional affiliates. ACB's monthly magazine, *The Braille Forum*, includes articles on assistive technology products for people with low vision, and its online radio station, ACB Radio, features "Main Menu, The Technology Show," with two hours each week of technology news, interviews, reviews, and hints. Programs are archived on the ACB Web site.

American Foundation for the Blind (AFB)

11 Penn Plaza, Suite 300

New York, NY 10001 USA

Telephone: 212-620-2000 or 800-232-5463 toll free

Web site: <http://www.afb.org>

The American Foundation for the Blind is a nonprofit organization focused on research and public education. AFB publishes books, pamphlets, periodicals, bibliographies, and videos on topics relating to blindness and visual impairment. Some of these publications appear in its online Information Center. The AFB Technology Center tests and evaluates video magnifiers and other products for use by individuals with low vision. AFB product evaluations are published in its bimonthly publication, *Access World*.

Center for the Partially Sighted

12301 Wilshire Boulevard, Suite 600

Los Angeles, CA 90025 USA

Telephone: 310-458-3501

Fax: 310-458-8179

E-mail: info@low-vision.org

Web site: <http://www.low-vision.org>

The Center for the Partially Sighted is a nonprofit organization devoted exclusively to helping people of all ages with significant vision loss enhance their remaining sight so they can function independently. Its low vision optometric services include low vision examinations, design and prescription of low vision devices, and training in the use of low vision aids.

Council of Citizens with Low Vision International (CCLVI)

1155 15th Street NW, Suite 1004

Washington, DC 20005 USA

Telephone: 800-733-2258.

Web site: <http://www.cclvi.org>.

This advocacy and self-help organization, affiliated with the American Council of the Blind, publishes a quarterly magazine, *Vision Access*, which often contains articles describing new video magnifier products. CCLVI also sponsors Project Insight, a low vision mentoring program linking people who are beginning to lose their eyesight with experienced CCLVI members.

Lighthouse International

111 East 59th Street

New York, NY 10022-1202 USA

Telephone: 212-821-9200; 800-829-0500 toll free; 212-821-9713 TT

Fax: 212-821-9707

E-mail: info@lighthouse.org

Web site: <http://www.lighthouse.org>

Lighthouse International is a nonprofit organization that provides a wide range of resources and services for people with visual impair-

ments, including vision rehabilitation services, education, research, and advocacy.

Minnesota Laboratory for Low-Vision Research

University of Minnesota

N28 Elliott Hall

75 East River Road

Minneapolis, MN 55455 USA

Telephone: 612-625-4516

Fax: 612-626-2079

E-mail: lowvision@gandalf.psych.umn.edu

Web site: <http://gandalf.psych.umn.edu/~gellab>

The Minnesota Laboratory for Low-Vision Research is dedicated to understanding reading difficulties and other important visual problems encountered by people with low vision. Its Web site provides information on current research projects.

National Eye Institute (NEI)

2020 Vision Place

Bethesda, MD 20892-3655 USA

Telephone: 301-496-5248

Web site: <http://www.nei.nih.gov>

The National Eye Institute (NEI) is part of the National Institutes of Health (NIH). NEI conducts research on eye and vision disorders, supports training of eye researchers, and conducts public and professional education programs, including its current Low Vision Education Program. It offers free publications in Spanish and English on many topics related to eye health.

National Federation of the Blind (NFB)

1800 Johnson Street

Baltimore, MD 21230 USA

Telephone: 410-659-9314

E-mail: nfb@nfb.org

Web site: <http://www.nfb.org>

The National Federation of the Blind is a membership organization of blind persons, with affiliates in all 50 States plus Washington D.C. and Puerto Rico, and over 700 local chapters. The NFB's monthly magazine, *Braille Monitor*, includes articles on assistive technology for blind and visually impaired persons.

Sensory Access Foundation (SAF)

1142 West Evelyn Avenue
Sunnyvale, CA 94086 USA
Telephone: 408-245-7330
Fax: 408-245-3762
Web site: <http://www.sensoryaccess.com>

SAF is a nonprofit organization providing technology-related services to enhance the employability of persons who have visual impairments. Its on-line publication, *Access Review*, presents the results of research into the use of access technology in education, training, and employment for individuals who are blind or visually impaired.

Smith-Kettlewell Rehabilitation Engineering Research Center

Smith-Kettlewell Eye Research Institute
2318 Fillmore Street
San Francisco, CA 94115 USA
Telephone: 415-345-2000
Fax: 415-345-8455
E-mail: rearc@ski.org
Web site: <http://www.ski.org/Rehab>

The Smith-Kettlewell Rehabilitation Engineering Research Center, funded by the National Institute on Disability and Rehabilitation Research (NIDRR), develops sensory aids which either enhance the use of residual vision or substitute auditory and/or tactile information for missing visual input. The aids are designed for use by individuals who are blind, visually impaired, or deaf blind. The Center also acts as a national information resource on sensory aids technology, providing a Compendium of Technology for Blind and Visually Impaired Persons on its Web site.

Vision World Wide

5707 Brockton Drive, #302

Indianapolis, IN 46220-5481 USA

Telephone: 317-254-1332 or 800-431-1739 toll free

Fax: 317-251-6588

E-mail: info@visionww.org

Web site: <http://www.visionww.org>

Vision World Wide is a nonprofit organization providing information and services to individuals with vision loss, their families, and professionals. Its quarterly journal, Vision Enhancement, provides news and information relating to assistive technology, consumer protection, medical research, and books and publications on vision loss.

For an updated listing of resources for people who are blind or have low vision, go to the Blind and Low Vision Resource Center at the ABLEDATA Web site, <http://www.abledata.com>.

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ABLEDATA

8630 Fenton Street, Suite 930

Silver Spring, MD 20910 USA

Telephone: 800-227-0216 toll free in the U.S.;

301-608-8998 local call in the Washington, D.C. area.

TT: 301-608-8912; Fax: 301-608-8958.

All ABLEDATA publications and the ABLEDATA database of assistive technology are available on our Web site, <http://www.abledata.com>.

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