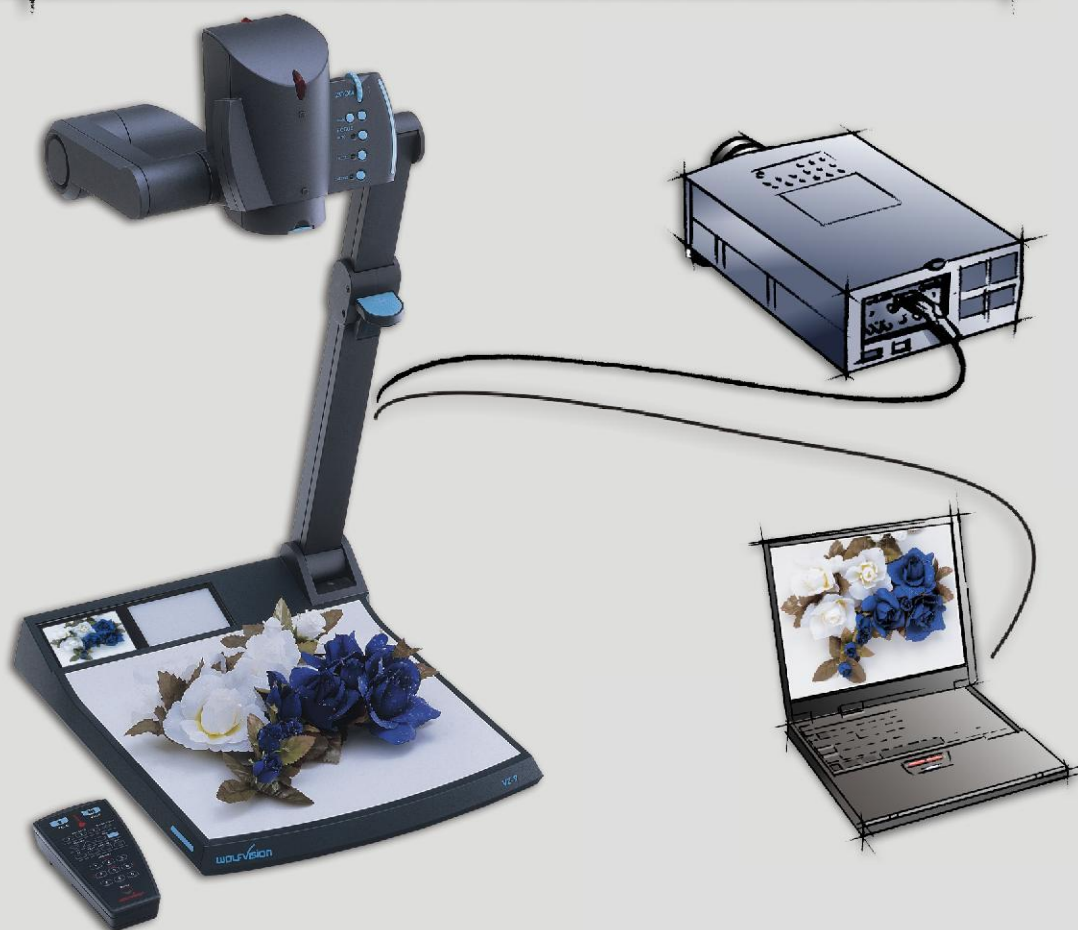Portable Series

VZ-9
Progressive Scan

WOLFVISION®
Visualizer

VZ-9 - the Perfectionist

The VZ-9 is WolfVision's latest addition to the portable Visualizer series. It comes in a completely new housing and with many new and unique features. It's WolfVision's new **"Flagship" of the Portable Visualizer series**.

The VZ-9 even tops the model VZ-8plus, which up to now was seen as the "perfect Visualizer". However, WolfVision's engineers can improve anything. They constantly redefine the word "perfect" and make "perfect" Visualizers "even more perfect".

Despite the large number of features, the VZ-9 is still very easy to use, even for unexperienced users.

Built-in LCD Monitor

The VZ-9 has a **built-in LCD monitor** on the left upper corner of the slightly oblique working surface. This is the perfect place for a monitor as the presenter always sees it from almost every angle.

The built-in monitor makes **positioning of objects** very easy and there is no need for an additional control monitor on the table.

1-Step Set-up

The VZ-9 can be **set up in 1 second**. With just one simple pull, the arm comes up and camera and light automatically move into the working position.

Just as easily, it folds back into its compact size, to be neatly stored during or after a presentation.

48x Zoom (12x Optical and 4x Digital)

Max. wide postition:
370 x 276mm (14.6" x 10.9")

48 time zoom
48 times smaller

Biggest enlargement:
8 x 6mm (0.3" x 0.25")

A large optical zoom range is one of the most important features of a Visualizer. It is absolutely necessary that objects in every size can be picked up in **full resolution**.

WolfVision's **optical 12 times zoom** offers the possibility to pick up objects as large as an open book (370 x 276mm / 14.6" x 10.9") and as small as a stamp (33 x 25mm / 1.3" x 1") in full size to fill the screen.

For enlarging even smaller objects down to 8 x 6 mm (0.3" x 0.25") the Visualizers also offer 4x digital zoom. This allows for enlarging objects like a very small coin.

Due to the large range optical zoom, it is not even necessary to use much of the digital zoom, so in most cases you can work with full resolution.

Recordings in Front or Behind the Unit, with Turntable

When objects are too big to be placed on the working surface or need to be shown from the side (like glasses of liquids etc.), just tilt the camera head and the light of the Visualizer and pick-up objects **behind** the unit. That's what all WolfVision Visualizers can do.

But the VZ-9 makes recording outside of the working surface even more comfortable as it is **mounted on a turntable**. In this way a Visualizer can be used just like a **camera on a tripod**. Even **horizontal pan shots** are possible.
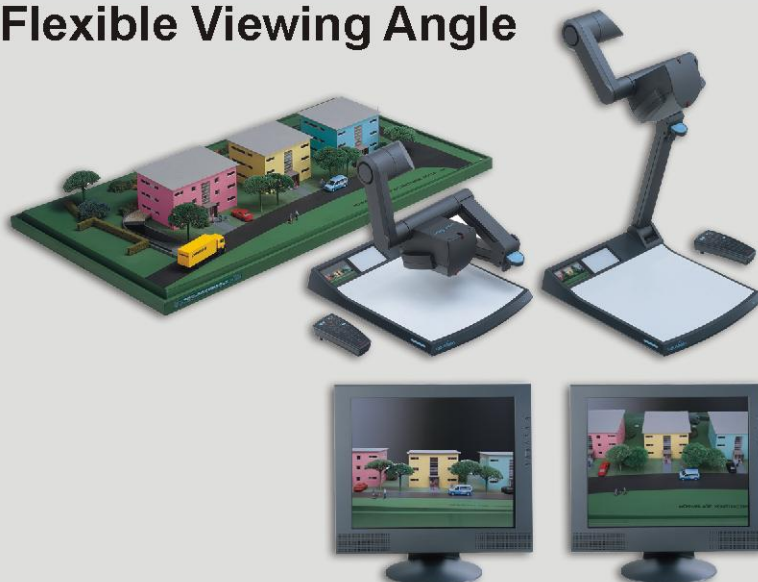
Image Flip

The VZ-9 can not only record objects **behind** the unit. The camera head can also be turned to record **in front of** the unit.

This is perfect for **showing a speaker** or **charts on a wall behind the speaker** on a large screen during a presentation. When the camera of the Visualizer is turned to record in front of the unit, the image is **automatically turned around 180 degrees ("image flip")**, because originally such recordings would be upside down.

With the **turntable** of the VZ-9 it is very comfortable to follow a speaker or pick up charts on the wall during a presentation. It's just like a camera on tripod!
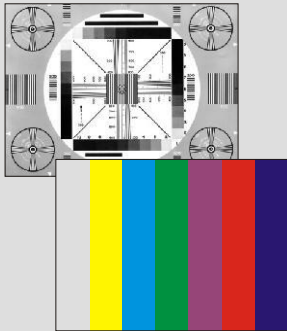
Flexible Viewing Angle

Another very comfortable new feature for recordings outside of the working surface is the **flexible viewing angle** of the VZ-9.

Sometimes a lower viewing angle than the one from the normal working position would be required. In such cases just fold the arm of the VZ-9 down as much as required.

The arm remains in this position, to **shoot objects from every angle**.

State of the Art Picture Quality:
Progressive Scan with 30 Pictures per Second

The key elements for the outstanding picture quality of the VZ-9 are:

- WolfVision's Progressive Scan Lens (The image is extremely sharp, even in the corners of the picture.)

- WolfVision's Progressive Scan Camera (Resolution, color reproduction and digital zoom are outstanding.)

- WolfVision's Intelligent Electronics

The VZ9 outputs a native **XGA** signal on **RGB-** (D-Sub/VGA-plug) and digital **DVI** outputs. The output mode can also be switched to **SXGA** or **SVGA** mode (at 85, 75 or 60Hz) and the original Progressive Scan signal is also output converted into **PAL** or **NTSC** video (switchable) on s-video (Y/C) output.

In 2005 WolfVision added Widescreen Support to the Firmware of the VZ-9.

The native 4:3 XGA image of the VZ-9 can also be output in the following additional 16:9 and 16:10 Widescreen formats: **HD/HDTV 720p** at 50 and 60 Hz, **HD/HDTV 1080p** at 50 and 60 Hz, **WXGA** and **WSXGA+**. All Widescreen projectors, monitors or plasma displays on the market can display at least one of these standards. **If new standards come up in the future, WolfVision will be there with Firmware Updates!**

Auto resolution: The Visualizer recognizes units connected to the DVI and RGB output and automatically selects the perfect output mode.

connectors of VZ-9 - any output you need

"Motion" used to be the weakness of Progressive Scan cameras. Until recently they could only pick up 15 or less pictures per second. A low number of pictures per second often resulted in a disturbing strobe effect on the screen, whenever something was moved in the picture or when adjusting zoom or iris.

WolfVision's Progressive Scan Visualizers could always pick up at least 20 pictures per second, which is very important to show motion in good quality.

Now WolfVision has improved the technical standards for Progressive Scan cameras even more. The VZ-9 can pick up **30 pictures (frames) per second**. There is almost no difference in the smoothness of motion between the picture of the VZ-9 and the picture of a Visualizer with a PAL/NTSC video camera, but the resolution is much higher!

New Light System with Flexible Spot Light

The new light system of the VZ-9 is almost a "**light projector**". It is equipped with a custom made diffuser lens to assure a very even lighting without a hot spot. The light can be turned around vertically at an angle of 270 degrees. So it is possible to **illuminate almost everywhere** on and outside of the working surface.

Due to the special lamp housing and the **new glare protection**, **neither the audience nor the speaker will be blinded** in a darkened room. Furthermore, there is **no disturbing stray light** from the VZ-9 to the projection screen.

For capturing objects at a larger distance to the unit, the **close-up lens** of the VZ-9 can be hinged away from the camera. It **can not get lost**, because it remains attached to the unit.
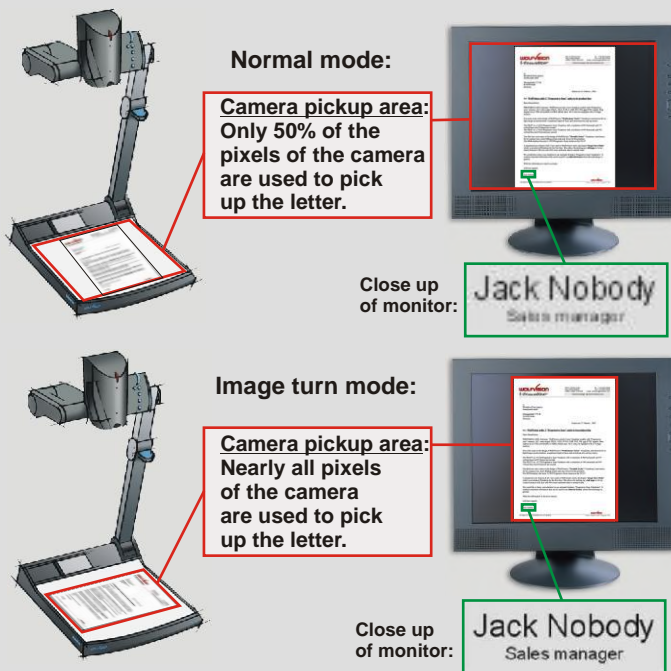
Easy to Use: Zoom Wheel / Continuous Autofocus

For a smooth presentation, it is very important that a Visualizer is extremely easy to use.

Less experienced users only need to use the **zoom wheel** on top of the camera head (or the zoom keys on the remote control). Everything else (focus, iris etc.) is adjusted automatically by the VZ-9. The zoom wheel offers the possibility to zoom with **individual speed**.

The **continuously working autofocus** recognizes all objects very quickly and precisely. As a result, a presenter never needs to worry about focusing. For special objects a manual focus is also available.

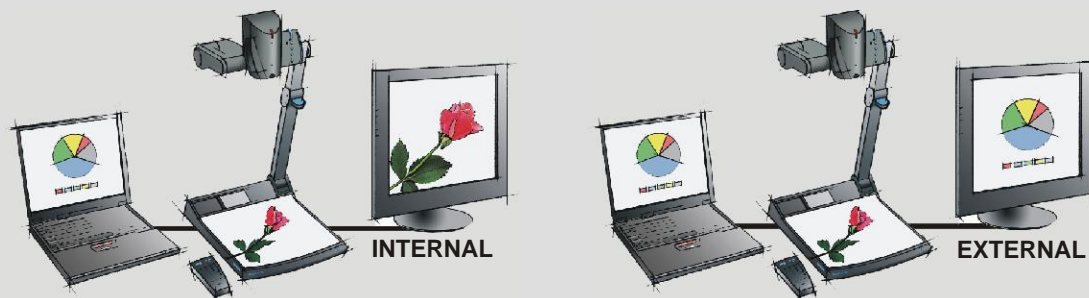# "Image Turn" Mode for Higher Resolution

Normal mode:

<u>Camera pickup area:</u>
**Only 50% of the
pixels of the camera
are used to pick
up the letter.**

**Close up
of monitor:**

Jack Nobody
Sales manager

Image turn mode:

<u>Camera pickup area:</u>
**Nearly all pixels
of the camera
are used to pick
up the letter.**

**Close up
of monitor:**

Jack Nobody
Sales manager

Picking up a complete vertical (portrait) letter or A4 page has always been a critical issue for a Visualizer, because the image is always picked up in a horizontal (landscape) format. As a result, only 50% of the camera pixels could be used to pick up the vertical (portrait) document.

WolfVision's "**Image Turn**" mode solves this problem. The user places the document on the working surface horizontally and zooms in on it completely. In doing so, approximately 90% of the camera's effective pixels are used to pick up the document. WolfVision's state of the art electronics turn the image at an angle of 90 degrees and output it in a vertical format with **40% higher resolution**. The margins left and right are blacked out.

In this mode the resolution of a **complete** vertical (portrait) document is much better. Even **8-point** characters are readable now.

Another advantage of the image turn mode is that very long vertical pages (like **US legal format**) can be picked up completely.
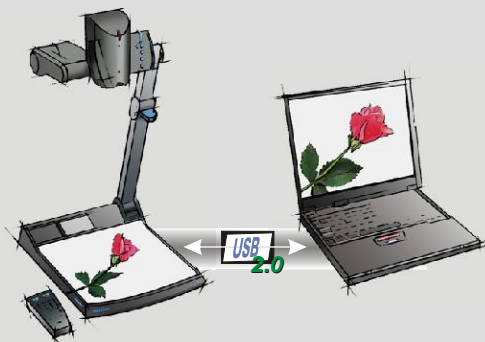
Computer Input (Internal/External Switch) / Digital Scaler

INTERNAL

EXTERNAL

A computer can be connected to the RGB input (15-pin D-Sub/VGA-plug) of the Visualizer. With the **Ext/Int switch**, a user can switch between the Visualizer image and computer image to be output by the Visualizer's **RGB, DVI and Video output**. The VZ-9 has a **built-in Digital Scaler** which converts the RGB signal from the external input for all outputs.

The advantage of using the Ext/Int switch is that **only one RGB- or DVI cable** to the display unit (projector, monitor, video conferencing system etc.) is required and **no separate remote control** has to be used for switching between the two image sources.

USB 2.0 port / Twain Compatible 3-D Scanning

USB
2.0

The USB output of the Visualizer can be used to transfer images from a Visualizer to a computer and save them in JPG, TIF or BMP format. This way the Visualizers can be used as a **3-D scanner** for a computer.

The VZ-9 is equipped with a fast **USB 2.0 port**. This allows for uploading images onto a PC **in a fraction of a second.** Connecting slower computers with the older USB 1.1 standard is also no problem. It still only takes a small fraction of the time a desktop scanner requires to scan an image.

WolfVision's USB software works under Windows 98, ME, 2000 and XP and is fully **Twain compatible**. This is important for using the Visualizer in connection with popular graphic programs like Photoshop or for connecting them to Smart Boards.

The fast USB 2.0 port of the VZ-9 can also output **live motion**.

Special Surface for Transparencies / Reflection Free Working Surface
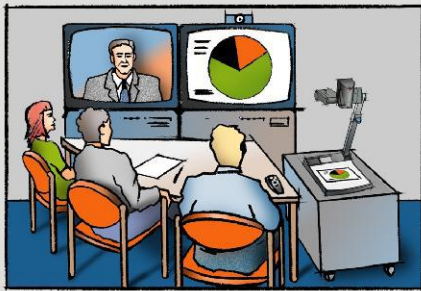
All WolfVision Visualizers have a special **crystalline white working surface** for perfect reproduction of transparencies. The quality of a transparency on this surface is even better than with a bottom light, because there is more contrast and the colors are not "washed out".

The **whole working surface has the same even color**, providing a perfect background for transparencies and other objects.

For x-rays or oversized slides, external lightboxes are available.

Due to the clever design of the new housing, the whole working surface is **completely reflection free**. In the upper part the working surface, where the light is normally reflected into the camera, the surface is slightly curved, so that reflections are not possible on any part of the working surface.

Optimized for Video Conferencing

WolfVision's camera electronics produce a very **strong and stable picture**, which is very important when a Visualizer is used as a document camera for videoconferencing systems. The **even lighting**, **smooth auto iris** and **perfect focus** are very important features, enabling video conferencing systems to digitize and transfer the picture from a WolfVision Visualizer much **faster** than pictures from other document cameras.

Furthermore there is no blinding **stray light** from a WolfVision Visualizer, which could disturb the auto iris of the room camera.

Due to features like **"turntable"** and "**Image Flip**" the VZ-9 also works perfect as an **additional room camera** of a videoconferencing system

Of course these features are equally important for live image presentations with a data projector and for other Visualizer applications.
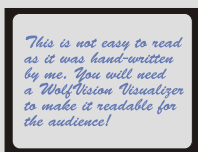
9 Picture Memory

With the VZ-9 a user has the opportunity to **store 9 images** and recall them by just pressing one of the numerical keys on the infrared remote control.
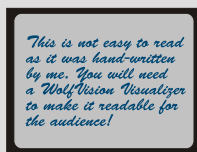
By pressing the "All" key, a **split image with all 9 pictures** of the memory can be displayed, enabling easy selection. The 9 pictures in the memory can also be downloaded to a PC via USB.

The VZ-9 is equipped with a **battery backup**, so pictures remain in the memory for 1-4 weeks even when the power is disconnected.
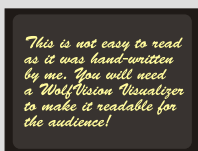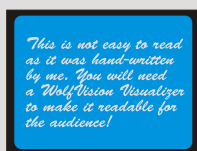
Text Enhancer / Negative / Negative-Blue

Original

with Text Enhancer

Negative

Negative/Blue

The VZ-9 offers many possibilities to improve the readability of text.

By pressing the "**Text Enhance**r" button, the outstanding contrast of the picture is improved even more. The colors are just slightly darker than before.

Sometimes dark text on a bright background may be easier to read if the Visualizer is switched to "**Negative**" or "**Negative/Blue**".

For special applications (like analysing x-rays), the image can also be switched to **Black and White**.

Firmware Updates Via Internet

WolfVision's Visualizers are the only units on the market that offer an upgradeable firmware. This allows for new features and technical improvements to be added at no cost!

Downloading firmware updates from the internet and up-loading them onto the Visualizer is very easy. On the VZ-9 the user can choose 3 different connections between Visualizer and computer for updating the firmware: **Serial (RS232)**, **USB** or **Ethernet (LAN)**.

WolfVision's engineers are constantly working on new improvements and features to **keep your units up to date with the technology of tomorrow**!

Lightfield for Slides

The VZ-9 has a built-in **lightfield for slides**. It is situated on top of the working surface, just beside the LCD-monitor.

Ethernet (LAN) Port

The VZ-9 is equipped with an **Ethernet (LAN)** port (10/100 Mbps). It is IP-addressable, so that it can be integrated into a computer network and controlled from any computer in the network.

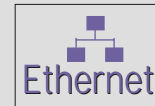It can even be controlled over the internet, if it is assigned an official (WAN) IP-address.

Infrared Remote Control / Additional Features

The VZ-9 is supplied with a remote control. In addition to the features described on the other pages of this brochure, the remote control also offers:

- **Manual focus**
- **Auto focus on/off**
- **Manual iris**
- **3 user programmable Presets**
- **Laser Pointer**
- **Easy navigation for On-Screen Menu and On-Screen Help**
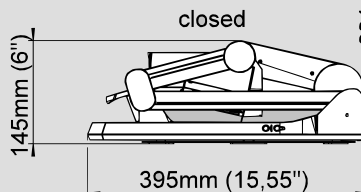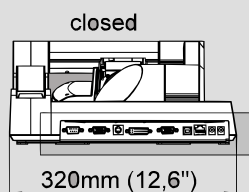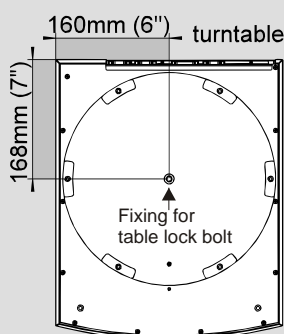
External Controlling

The VZ-9 offers **4** different possibilities to control the unit from external devices, such as a remote control system for the whole room, a video conferencing system or a computer:
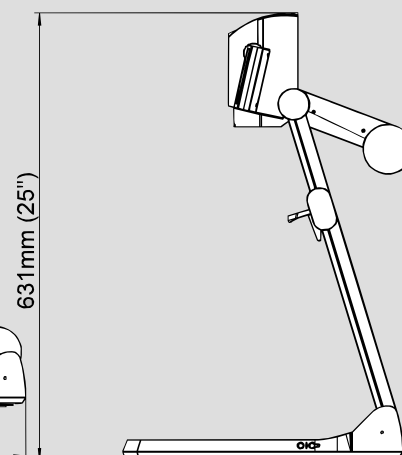
- **Serial (RS232)**
- **USB**
- **Ethernet (LAN)**
- **Infrared**

Table Lock Bolt

The VZ-9 can be fixed onto a table with the supplied Table Lock Bolt, so that it **can not be stolen**. The fixing for the bolt is in the middle of the turntable.

Dimensions:

160mm (6") turntable
168mm (7")
Fixing for table lock bolt

closed
320mm (12,6")

closed
145mm (6")
395mm (15,55")

631mm (25")

Technical Data VZ-9

Technology / Camera	1-CCD 1/3" Progressive Scan camera
Pictures per second (as picked up by the camera)	30 frames (=full pictures)
Resolution (measured)	640 lines
Resolution in Image Turn Mode	820 lines
Image Turn mode (for increased resolution when pi cking up complete portrait pages) plus image rotation 90, 180 and 270 degrees	yes (for large pages up to US-legal size with increased resolution)
Total pixels of CCD	850,000
Native signal output (4:3)	XGA (1024x768)
Converted output signals (4:3)	SXGA (1280x1024), SVGA (800x600), PAL/NTSC
Converted Widescreen output signals (16:9 and 16:10)	HD/HDTV 720p and 1080p at 50/60Hz, WXGA, WSXGA+
Vertical image-frequency	Progressive Scan: 85, 75 or 60 Hz (switchable), PAL: 50 Hz, NTSC: 60 Hz
Signal format	non-interlaced and interlaced
Iris	automatic and manual
White balance adjustment	automatic and manual
Autofocus	yes (continuously working or one-push)
Manual focus	yes
Built-in LCD preview monitor	70 x 45mm (2.7" x 1.8")
Text enhancement function (in color)	yes
Live to Freeze comparison (on two monitors or screens with just one Visualizer)	yes (RGB and DVI output can output different signals. One can output a live image and the other one a "freeze" image)
On screen menu and on-screen help	yes
Upgradeable firmware (through software downloads from internet)	through serial (RS232), USB or Ethernet (LAN) port
Lens / Zoom	48 x zoom (12 x optical + 4 x digital), individual speed zoom wheel
Max object height on working surface	230mm (9.6") in tele position, 370mm (15") in wide position
Max. pick-up area on working surface	Length: 283mm (11.1"), Width: 384mm (15.1")
Max. pick-up area on working surface in Image Turn mode	Length: 384mm (15.1"), Width: 283mm (11.1")
Min. pick-up area on working surface (in full resolution, with optical zoom)	33 x 25 mm (1.3" x 1")
Min. pick-up area on working surface (with digital zoom)	8 x 6 mm (0.3" x 0.25")
Max. pick-up area outside of working surface	unlimited
Depth of focus on small object (42 x 33 mm)	10mm (0.4")
Depth of focus on large object (360 x 270 mm)	260mm (10.2")
Disturbing stray light or blinding of audience or speaker	none
Light source	halogen spot light with diffuser lens and glare protection, vertical rotation 270 degrees, lamp lifetime 4500 hours 35W, 12V
USB software for image capture and controlling	included, for Windows 98/2000/ME/XP, Twain compatible, allows for scanning images in a fraction of a second, for still images and motion
Reflection free area on working surface	whole working surface, 320 x 300mm (12.6" x 11.8")
Recordings outside of the working surface	yes (behind and in front of the unit)
Image flip	yes (for recordings in front of the unit)
Turntable mounted (with table lock bolt, to attach the unit to a table)	yes (for horizontal pan shots outside of the working surface)
Intelligent folding system	articulated arm, 1-step set up
User programmable presets	3 (plus 8 fixed presets trough RS232)
Special working surface for transparencies	yes, 320 x 300mm (2.6" x 11.8")
Slide pick-up	through integrated slide lightfield
Computer input / Input switch	yes (RGB 15-pin D-Sub/VGA plug)
Built-in digital Scaler for the computer input	yes (processes the signal for RGB-, DVI- and Video output)
Image memory	9 pictures (with battery backup, for loss of power)
"Show all" function	yes (displays all 9 pictures of current memory as one split image)
Alternative Image display:	negative image / negative-blue image / black and white image
PAL / NTSC video output	S-video (Y/C) converted Progressive Scan, 4-pin plug
RGB output	15-pin D-Sub/VGA-plug
DVI output (HDMI compatible)	DVI-D (digital)
USB port / standard	USB 2.0 (also compatible with USB 1.1)
Ethernet (LAN) port	yes, IP-addressable, 10/100 Mbps
RS232 port and serial protocol with position setting and status report	9-pin Sub-D plug
12V output	for external lightbox
Dimensions in operation (L x W x H)	395mm x 320mm x 631mm (15.6" x 12.6" x 24.9")
Dimensions folded (L x W x H)	395mm x 320mm x 145mm (15.6" x 12.6" x 5.7")
Weight / Portability	5.1 kg (11 lbs), portable
Infrared remote control	yes (with laserpointer)
Power (external power pack on portable units)	multi range 100-240 V, weight: 0.3kg (0.6lbs)
Carrying case	included (soft case)
Patent numbers / patent pending	DE 202 03 785.1, PCT/EP03/01654, PCT/EPEP03/01653
Made in	Austria (European Union)
Warranty	3 years

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Your WolfVision dealer:

Specifications and availability subject to change !

More information on
our Internet Homepage:
www.wolfvision.com

WOLFVISION®
Visualizer