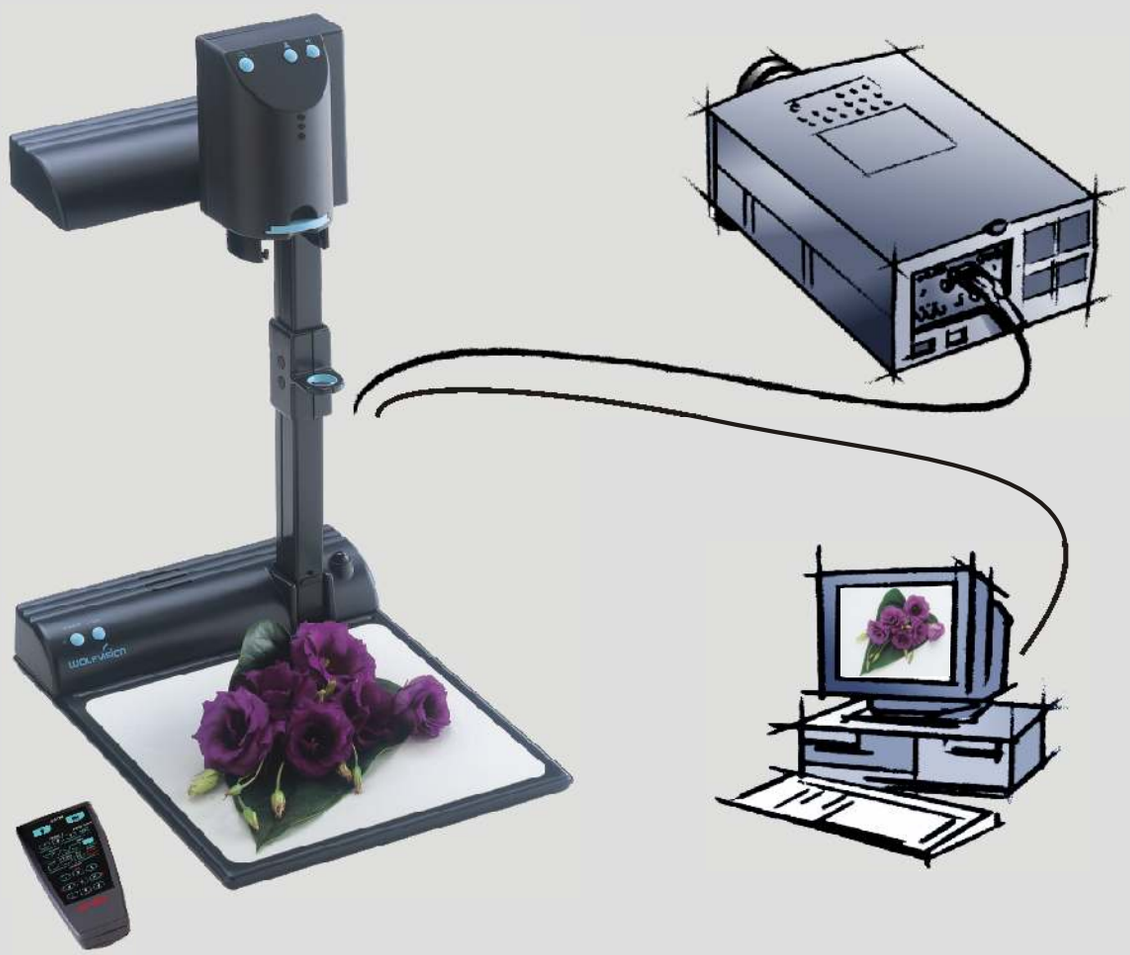
Portable Series

VZ-8plus

Progressive Scan

WOLFVISION®

Visualizer



Unique folding system / Set up in seconds

WolfVision's portable Visualizers can be set up in seconds. A gentle tug lifts the arm and light into working position, then turn the camera head to the desired viewing angle.

Just as easily, it folds back into its compact size with just one pull on the center ring, to be neatly stored during or after a presentation.

Easy to carry

The Visualizer alone weighs only 4.5kg (10lbs). Together with its carrying case and power pack it is still only 7.3kg (16lbs).

The VZ-8plus comes in high quality carrying cases, with inside pockets for all the needed accessories and an expandable side pocket for a small LCD-projector or notebook.

Slide drawer

Slides can be picked up in exceptional quality without an external bottom light by just putting them into the slide drawer on the camera head of the VZ-8plus.

Continuous autofocus

The VZ-8plus is the only Progressive Scan Visualizer with a continuously working autofocus. This eliminates the need to press any focus keys. For special objects a manual focus is also available.

Easy to use - Only 5 buttons on the unit

It is very important for a smooth presentation that a Visualizer is extremely easy to use. A speaker does not want to deal with a lot of confusing and unnecessary functions during his presentation.

That is why there are **only 5 buttons** on the unit itself. **Anyone can work with it without instructions.**

Special light system

The camera head can be rotated 130 degrees.

No blinding the audience or the speaker
The light of WolfVision's portable Visualizers is focused directly onto the working surface. Due to the special lamp housing, neither the audience nor the speaker will be blinded in a darkened room.

Minimum stray light
WolfVision Visualizers are perfect for large screen projection with a data projector. There is almost no disturbing stray light from the unit to the projection screen.

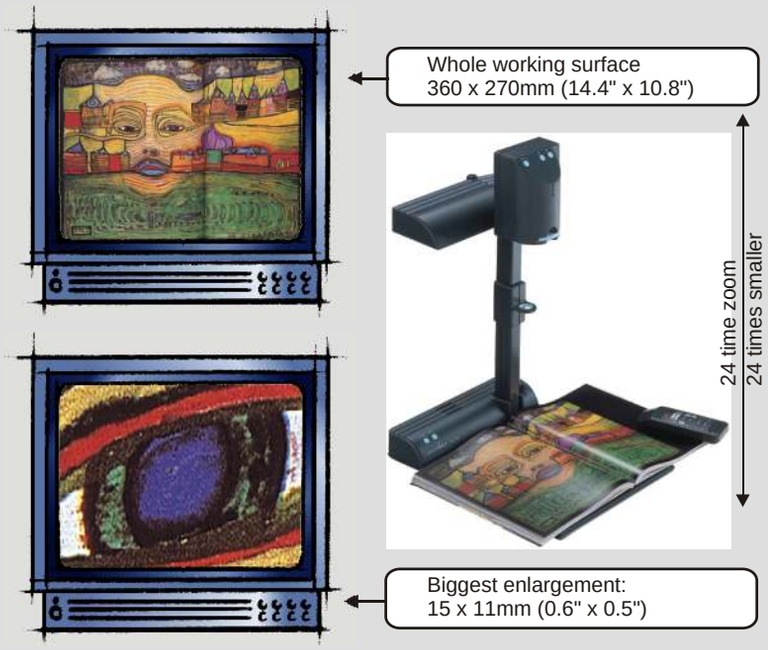
Light swing (illumination in front of the unit)
The light of the portable Visualizers can be turned around at an angle of up to 250 degrees. Thus, objects in front of the unit can be illuminated as perfectly as items on the working surface.

Recordings in front of the unit

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.), the camera head and the light of the portable Visualizers can be turned to accommodate them.

In this way a Visualizer can be used like a video camera on a tripod, for recording people, large graphics, pictures or charts in a room.

24x zoom (12x optical and 2x digital)



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** (360 x 270mm / 14.4" x 10.8") and **as small as a stamp** (30 x 22mm / 1.2" x 0.9") in full size to fill the screen.

For enlarging even smaller objects down to 15 x 11mm (0.6" x 0.5") the VZ-8plus also offer a **2x digital zoom**. This allows for enlarging objects **like a very small coin**.

Of course 2 times digital zoom means double the size and half the resolution. Up to 2 times the quality of a digital zoom is acceptable. More digital zoom would result in an inferior pixel structure. In order to avoid this WolfVision invested in a large range **optical** zoom.

Special surface for transparencies

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".

Remote controlling

There are 3 possibilities to remote control the VZ-8plus:

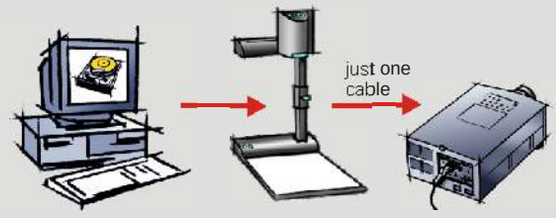
- With the supplied **infrared remote control**
- Through the **RS-232 port** (e.g. with a remote control system for the whole room or a video conferencing system)
- Through the **USB port** with the supplied WolfVision USB software

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.

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

Computer input (loop-through)



A computer can be connected to the **RGBHV input** (15-pin D-Sub-plug) of the Visualizer. With the **Ext/Int switch** a user can switch between the Visualizer image and computer image to be displayed to the audience.

Only one 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 output / 3-D scanning in just 2 seconds

The **USB** output of the VZ-8plus can be used to transfer still pictures from a Visualizer to a computer and save them in JPG, TIF or BMP format. In this way the Visualizers can be used as a **3-D scanner for a computer**. No additional hardware is required for this. It only takes **2 seconds** until images are loaded onto the computer. This is much faster than with any desktop scanner. In addition, the Visualizer can also be controlled through the USB software. The software works under Windows 98, ME, 2000 and XP and is fully **Twain compatible**. Updates can be downloaded from WolfVision's internet homepage.

The USB-connection is perfect for transferring **still pictures**. **Live images** can also be transferred onto a computer very easily using a standard PAL/NTSC video digitalisation card (grabber card).

9 Picture memory

With WolfVision's Progressive Scan Visualizers 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.

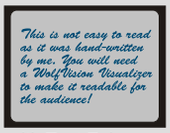
By pressing the **"All" key**, a split image with all 9 pictures of the memory can be displayed, enabling easy selection.

The 9 pictures in the memory can also be downloaded to a PC via **USB**.

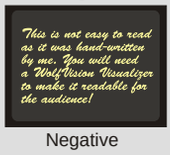
The VZ-8plus is equipped with a **battery backup**, so pictures remain in the memory for 1-4 weeks even when the power is disconnected.

Text Enhancer / Negative / Negative-blue

Original



with Text Enhancer



Negative

Negative/Blue

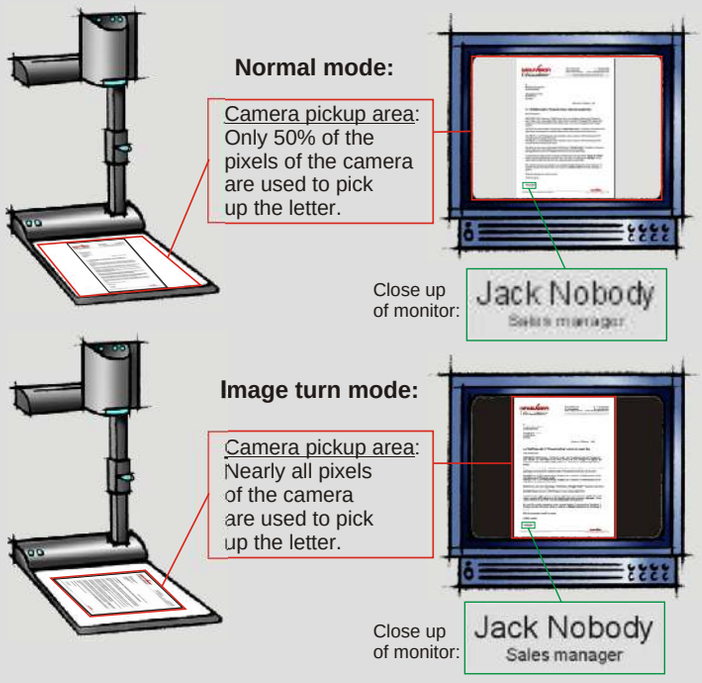
The VZ-8plus offers many possibilities to improve the readability of text.

By pressing the "**Text Enhancer**" button, the outstanding contrast of the picture is improved even more. The colors are just a little bit 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**.

"Image turn" mode for higher resolution



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 unique "**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.

From VZ-8 to VZ-8plus - The "plus" stands for <u>improved picture quality</u>!

The VZ-8 was one of WolfVision's most popular and innovative new Visualizer models. It has set new standards in features and picture quality for portable Visualizers. Nevertheless, WolfVision's engineers have continued improving many technical details of this unit even more.

The result is visible to everyone:

A greatly improved picture quality which sets new standards in the market!

A lot of great improvements (like **contrast, iris** etc.) could be achieved through **software updates.** They can also be applied to the previous model VZ-8 through firmware updates.

Other improvements are only available to owners of the new VZ-8plus, because they are based on great new **hardware** developments, like:

- **New Progressive Scan lens** (A special joint venture development between WolfVision and a leading lens manufacturer. The first lens especially designed for a Progressive Scan camera with a real optical 12 times zoom! The image is extremely sharp, even in the corners of the picture! The color reproduction is outstanding)

- **New camera** (with improved color processing, improved digital zoom and a continuous autofocus)

"Progressive Scan" with High Resolution

Until recently all Visualizers were equipped with PAL or NTSC video cameras.

Modern **data projectors** provide the ability to display higher resolution images using its "data" input instead of its "video" input. This is where "Progressive scan" cameras come in. They output a "data" signal with more resolution than PAL/NTSC "video" could provide.

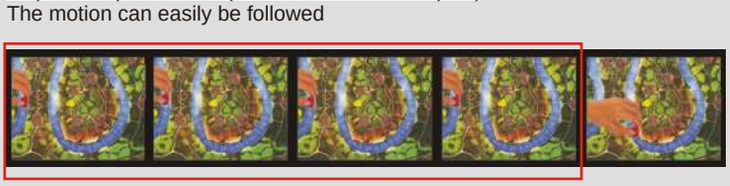
Especially the **vertical resolution** is no longer limited to 400 lines from top to bottom (PAL standard) or 350 lines (NTSC standard).

WolfVision's Progressive Scan Visualizers can output the image in either **SXGA, XGA** or **SVGA** mode (at 75 or 60Hz), on **RGBHV** (D-Sub) and **DVI** outputs.

In addition the original Progressive Scan signal is also output converted into **PAL** or **NTSC** video (switchable).

Live-Image (20 pictures per second)

<u>20 pictures per second (like WolfVision's VZ-8plus)</u>:
The motion can easily be followed



<u>7.5 or 15 pictures per second (like other manufacturer's units)</u>:
Pictures are output a couple of times. Motion is hard to follow.

"Motion" used to be the weakness of Progressive Scan cameras. Until recently they could only pick up 15, 7.5 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.

It is very important for a professional presentation that **motion** can be shown in good quality and without any image disturbance. WolfVision uses newly developed Progressive Scan CCDs which can pick up **20 pictures per second** for the VZ-8plus. As a result, motion looks almost as good as with PAL/NTSC video cameras. But the resolution is much higher!

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.

Some examples of new "**software features**" which can also be applied to older VZ-8 units:

- greatly improved contrast and auto iris
- automatic power off function
- auto resolution feature
- improved USB support
- enhanced on-screen help menu

WolfVision's engineers are constantly working on new improvements and features to keep the units already sold up to date with the latest technology!

Technical data:

Camera	1-CCD 1/3" Progressive Scan Camera
Output signals	SXGA (1280x1024 pixel) / XGA (1024x768 pixel) / SVGA (800x600 pixel) (switchable), PAL/NTSC (switchable), USB, DVI
Pictures per second (as picked up by the camera)	20 frames (=full pictures)
Horizontal resolution	640 lines (with perfect edge focus)
Vertical resolution (measured with testcard somewhere in the picture)	640 lines (820 lines in Image Turn mode)
Image Turn mode (for increased resolution when picking up complete portrait pages)	yes (for large pages up to US-legal size)
Effective Pixel (=pixels actually used for the image information)	810,000
Total pixels of CCD:	840,000
Color reproduction	very good colors
Vertical image-frequency	Prog.Scan: 75 Hz or 60 Hz (switchable), PAL: 50Hz, NTSC: 60Hz
Horizontal image-frequency	15.7 and 37.3 - 80 kHz
Signal format	non-interlaced and interlaced
Iris	automatic and manual
White balance adjustment	automatic and manual
Autofocus	yes
Manual focus	yes
Text enhancement function (in color)	yes
On screen menu, On screen help and Menu reset function	yes
Upgradeable firmware (through software downloads from internet)	yes
Lens / Zoom	24 x zoom (12 x optical + 2 x digital)
Max object height on working surface	150mm (6") in tele position, 370mm (15") in wide position
Max. pick-up area on working surface	Length: 270mm (10.8"), Width: 360mm (14.4")
Max. pick-up area on working surface in Image Turn mode	Length: 360mm (14.4"), Width: 270mm (10.8")
Min. pick-up area on working surface (in full resolution, with optical zoom)	32 x 24 mm (1.2" x 0.9")
Min. pick-up area on working surface (with digital zoom)	16 x 12 mm (0.6" x 0.5")
Max. object outside of working surface	unlimited
Depth of focus on small object (42 x 33 mm)	18mm (0.7")
Depth of focus on large object (360 x 270 mm)	200mm (8")
Disturbing stray light	almost none
Blinding of audience or speaker	none
Light source	high frequency fluorescent lamp
USB software for image capture and controlling	included (for Windows 98/2000/ME/XP), twain compatible
Time for still image capture through USB software	2 seconds
Reflection free area on working surface	360 x 230mm (17.3"x 9.2")
Quick recordings outside of the working surface possible	yes
Intelligent folding system	yes - pneumatic arm
User programmable presets	3 (plus 8 fixed presets trough RS232)
Special working surface for transparencies	yes
Slidedrawer	yes
Computer input / Input switch	yes (15-pin D-Sub plug)
Image memory	9 pictures (with a battery backup if power supply is disconnected)
"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 outputs (converted Progressive Scan signals)	1x S-Video (Y/C) 4-pin plug and 1x Composite Video (RCA-plug)
RGBHV (=data RGB) output (for SXGA, XGA and SVGA signals)	15-pin D-Sub-plug
DVI output (for SXGA, XGA and SVGA signals)	DVI-I (digital and analog)
USB port	yes
RS232 port and serial protocol with position setting and status report	9-pin Sub-D plug
Weight / Portability	4.5 kg (10 lbs), portable
Infrared remote control	included
Power (external power pack on portable units)	multi range 100-240 V weight: 0.3kg (0.6lbs)
Carrying case	included (soft case with side pocket for projector or notebook)
Made in	Austria (European Union)

Specifications and availability subject to change !

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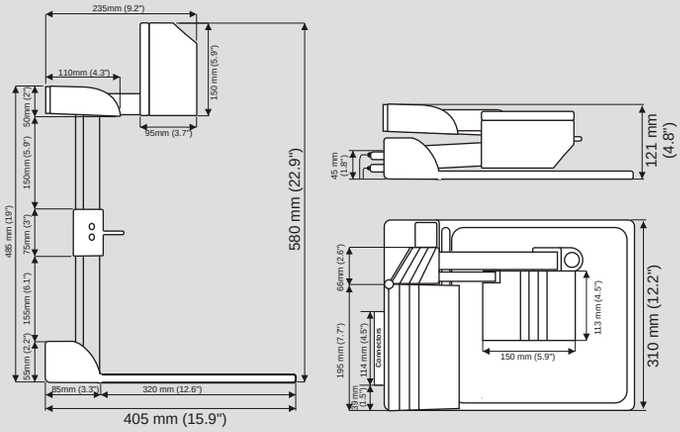
Optional Accessory:

Lightbox LB-7K (for x-rays)

The Lightbox LB-7K fits onto the working surface of WolfVision's portable Visualizers. The illuminated area is very large: 300 x 200mm (12" x 8"). 12V power is provided from the Visualizers.

Please note that an external lightbox is NOT necessary for transparencies as they can be picked up in much better quality on the special working surface of WolfVision's Visualizers. However, it is recommended for very dark transparent objects like x-rays.

Your WolfVision dealer:



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

WOLFVISION Visualizer

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