

WOLFVISION

**INSTRUCTIONS
BEDIENUNGSANLEITUNG
VZ-8light⁴**



ENGLISH / DEUTSCH

Check out our internet homepage for additional information
www.wolfvision.com/support

Precautions

ENGLISH



WARNING!

Risk of electric shock
Dangerous voltage inside



Please observe the following:

Use this Visualizer only with the correct voltage as shown on the type label !

Do not expose the Visualizer to heat or moisture !

Protect the Visualizer from excessive shocks !

Make sure that sufficient air circulation for cooling the Visualizer is possible (ventilation slots on the lamp housing)!

If there is any abnormality (abnormal noise, smell, smoke etc.) disconnect the Visualizer from mains immediately and contact your Visualizer dealer!

Do not use a damaged power supply / power cord. This may cause short circuits or electrical shocks!

To prevent danger, do not modify the Visualizer or operate without the cover panel firmly in place!

Do not expose the Visualizer to water, metallic objects or any flammable material.

Avoid installing the Visualizer in locations exposed to strong magnetic fields or electrical currents.

Avoid installing the Visualizer in environments where there is radiation. This could cause monitor image distortion or damage the image sensor of the camera.

Do not pull the plug from the power socket with wet hands!

If the Visualizer is not used for a long time, disconnect it from mains!

The external power supply has to be approved by CSA or UL in accordance to CSA 22.2-60950 or UL 1950. The outputs have to be LPS (limited power source) rated!

Precautions for LED light according EN62471:



LED lightning system - Do not stare into beam!

Do not modify the LED lightning system!

Do not view the light beam with optical instruments!

Ne pas regarder dans l'objectif lorsque le visualiseur est en marche!

Approval

Marks on the unit:



Tested to comply with
FCC standards for
home or office use



9902476



FCC information:

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note:

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC rules.

Information to user:

The user manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This product is built according to Directive EMC and to Directive electrical equipment.
Inspections, tests and evaluation are according to UL 60950. CSA 22.22-60950
Inspections, tests and evaluation are according to the CB-Scheme
Inspections, tests and evaluation are according to the PCT-Scheme

Worldwide Patents

US 7,035,011
KR 0576806
RU 2265284

TW I 226969
and others

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In the interest of continuing product improvement, WolfVision reserves the right to change product specifications without notice.

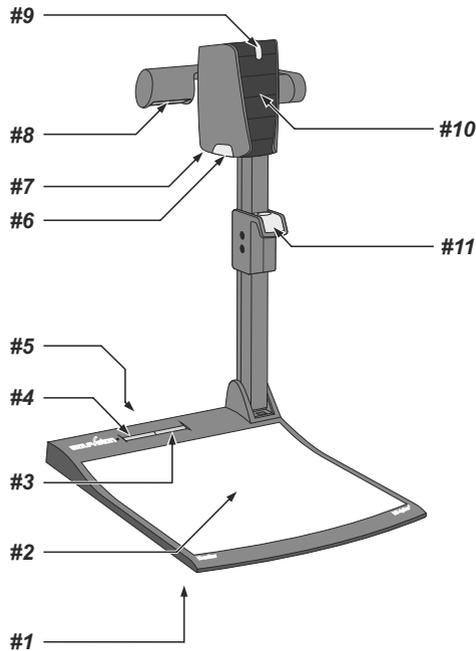
Information in this document may change without notice.

Disclaimer: WolfVision shall not be liable for technical or editorial errors or omissions.

The units are "MADE IN EU/AUSTRIA"

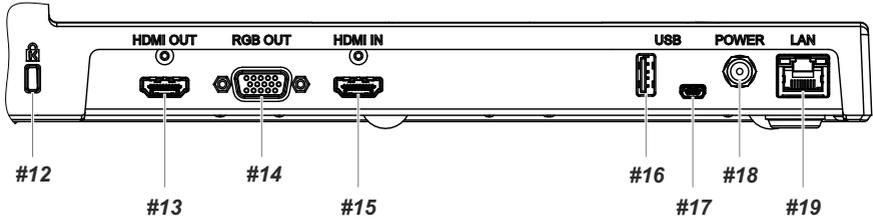
Printed in Austria, October 2012

Components of the Visualizer



- #1 **Alternative anti-theft security** (*found underneath the unit as shown on page 17*)
- #2 **Working surface** (*see page 6*)
- #3 **LIGHT key** (*see page 5*)
- #4 **POWER key and Power indication LED** (*see page 5*)
- #6 **Connectors** (*on the back of the unit as shown on next page*)
- #7 **Close up lens** for camera (*see page 7*)
- #8 **Light source**
- #9 **Zoom wheel** (*see page 5*)
- #10 **Camera keys** (*see page 5*)
- #11 **Pull pad** to lift the arm up/down (*see page 6*)

Connectors (#5)

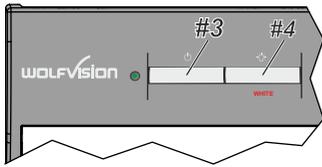


- #12 Slot for **Kensington lock**[®] (see page 17)
- #13 **HDMI OUT**put (see page 12)
- #14 **RGB OUT**put (15pin) (see page 12)
- #15 **HDMI IN**put for external HDMI-signals (see page 13)
- #16 **USB port to Client** (for firmware update only) (see page 16)
- #17 **USB port to Host** (to computer) (see page 10)
- #18 **Power connection** 12V DC
- #19 **LAN port** 10/100 Tbase with PoE+ functionality (see page 11)

Keys on the Visualizer

One of the great features of WolfVision's Portable Desktop Visualizers is that only the most necessary keys are on the unit itself. Therefore anyone can use it without instructions.

Base



#3 LIGHT key

Switches the top light on and off.

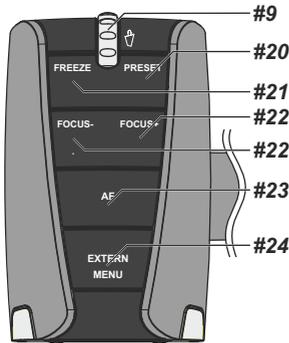
The LIGHT key also works as a ONE PUSH WHITE BALANCE key if pressed for 2 seconds (see page 9).

#4 POWER key

Switches the unit on and off. When switching the unit on the Visualizer automatically runs power-on preset.

Camera Head

Standard mode



#9 ZOOM WHEEL

Turn the wheel down to zoom in (TELE), and up to zoom out (WIDE). The more you turn the ZOOM WHEEL, the faster the zooming works. Using the ZOOM keys (wheel) also switches auto iris on again.

#20 PRESET key / menu: select key - right

For storing the preset, press the PRESET key for more than 2 seconds. For recalling the preset, press the PRESET key quickly (see page 8).

When on-screen menu is activated, it works as select key (see page 14).

#21 FREEZE key / menu: select key - left

Freezes the current image. The FREEZE light indicates if the FREEZE-mode is activated.

When on-screen menu is activated, it works as select key (see page 14).

#22 Manual FOCUS keys / menu: navigation key - up and down

When the Manual FOCUS keys are pressed the Visualizer switches off the autofocus function.

Using the AF-key switches the autofocus function on again (see page 8).

When the on-screen menu is activated, it functions as navigation keys (see page 14).

#23 AUTO FOCUS (AF) key / menu: help key

Switches the auto focus on and off. The AF light indicates if the AF is switched on (see page 8).

When on-screen menu is activated, it functions as Help key. Pressing this key for 2 seconds resets the selected menu item (see page 14).

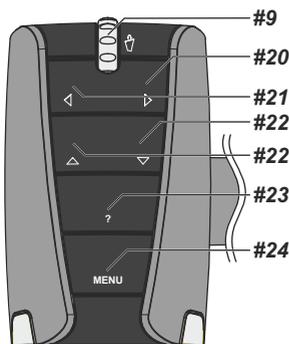
#24 EXTERN key / MENU key

Switches between Visualizer image and external input (for more details - see page 13).

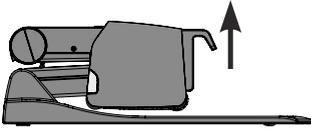
The EXTERN light indicates that a signal from the external input is shown.

Pressing this key for 2 seconds activates the on-screen menu (see page 14).

Menu mode



Setting Up the Visualizer



1. Connect the power pack to the POWER (#18) Alternative PoE+ can be used (see page 11).
2. Connect your display device (projector, monitor, video conferencing unit etc.) to the appropriate output of the Visualizer (#13, #14, #17 or #19).

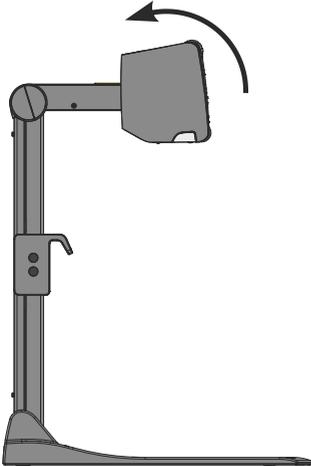
IMPORTANT:

For choosing the right resolution on RGB and HDMI outputs please read the detailed description on page 12!

3. Use the pull pad (#11) only to lift the arm upwards
4. Turn camera head to working position (light cannot be turned).
5. Switch on the Visualizer with the POWER key.

IMPORTANT:

To fold the Visualizer, use pull pad only (#11)!



Power-on preset:

The power-on preset is automatically activated when switching on the unit. The settings are: middle zoom size (approx. image width of 14 cm) autofocus: on, auto iris: on.

As soon as the Power Indication LED stays green illuminated, you can start working with the Visualizer. The behavior of the unit once the power has been supplied or after the POWER key has been pressed can be changed in the unit's on-screen menu (see page 14).

Working Surface

The working surface of the Visualizer (#2) has a special crystalline white color, which is especially designed for perfect reproduction of transparencies.

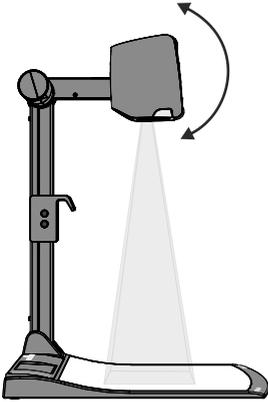
In the following cases, an optional lightbox is recommended:

- If the transparency is very dark
- If the transparency is very wavy and causes reflections
- If the room light causes reflections on a transparency

The optional whiteboard foil can be used for direct annotation with special whiteboard markers. WolfVision offers spare whiteboard foils.

More information on markers and sponge cleaners at www.wolfvision.com/wolf/thirdparty.html

Shooting Area on the Working Surface



Eliminating reflections

In order to eliminate reflections (on high gloss photographs etc.) just move the recorded object or document and rotate the camera head to center the desired pick-up area. It is also possible to turn the camera arm with the light downwards and rotate the camera head to the center of the desired pick-up area to eliminate reflections.

The curvature of the working plate is specially designed to eliminate reflections.

Please note that reflections can also be caused by general room lighting conditions.

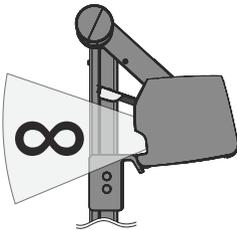
Shooting Area Outside of the Working Surface

Close-up adaptor lens

For shooting an object outside of the working surface, the close up lens (#6) has to be flipped open. It is impossible to remove the lens completely from the unit and therefore it cannot get lost.

When using the Visualizer to again record on the working surface, put the close up lens back to its original position.

The camera can be tilted by 220° (120° to the speaker and 100° to the audience).



Turning the camera arm downwards

In order to enable recordings with illumination outside of the working surface, the camera arm of the Visualizer together with the light source can be turned vertically down.

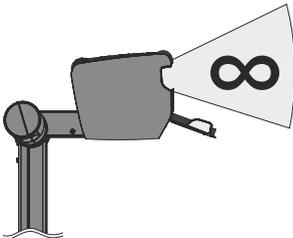


Image Flip

By turning the camera head to record in front of the Visualizer, the image will be automatically turned 180 degrees ("image flip"). This feature is very useful for recording the face of the presenter or objects hanging on the wall behind the unit.

Focusing / Autofocus

Please note that objects with very low contrast (like blank sheets of paper) are difficult to focus. If the autofocus does not work just move the object slightly.

For special applications the autofocus can also be switched off using the on/off switch (#23). The autofocus is also switched off when the manual FOCUS keys (#22) are used.

Optical Zoom / Digital Zoom

Please note that the Visualizer has an **optical 14x zoom**. The digital 2x zoom increases the overall zoom range to a **28x zoom**. The smallest pickup size on the working surface without digital zoom is 29 x 22mm (1.1" x 0.9"). When you zoom in further the digital zoom is automatically activated and the smallest pickup size is **15 x 11mm (0.6" x 0.4")**. However please be aware that when the digital zoom is used, the resolution of the picture is not as good as before. The default setting displays a message on-screen when you are in the digital zoom mode.

Image ratio is affecting the size of pick-up are, it depends on selected output resolution.

You can change the behavior of the Visualizer in the digital zoom mode in the on-screen menu (see page 14).

Auto Exposure

WolfVision Visualizers are equipped with an auto exposure. This means that the brightness of the camera image adjusts automatically.

The standard auto exposure level (Image Brightness) can be set brighter or darker in the unit's on-screen menu. When picking up areas with bright spots, Back Light Compensation can be switched on in the unit's on-screen menu - see page 14 and on-screen help.

Preset Function

The Visualizer offers the possibility to store the current settings as a Preset and recall them by just pressing the PRESET key (#20) on the camera head.

For storing a preset: adjust any function as required and then press the PRESET keys for at least 2 seconds. An on-screen message will inform you when the Preset is stored.

As mentioned above, when presets are stored all current settings such as zoom, focus, iris etc. are also stored. Contrary to this, a user also has the opportunity to assign specific functions such as: "POS/NEG", "NEG/BLUE", "BLACK/WHITE", "WHITE BALANCE", "FREEZE", "LIGHT ON/OFF" etc. to the PRESET key in the on-screen menu of the Visualizer (see page 14).

White Balance Adjustment

IMPORTANT

Correct white balance adjustment is important for exact color reproduction!

Each time the lighting condition changes, the Visualizer's camera must readjust its white balance, in order to optimize the color reproduction. The lighting conditions (color temperature) change, for example, if changing between the Visualizer's light and an external lightbox (bottom light) or if the room light is switched on or off.

The standard setting of the Visualizer is "**Auto Tracking**" white balance. This means that the white balance is continuously adjusted automatically.

For an exact white balance, at least 10% of the recorded image should be white.

For a precise fixed white balance adjustment use the "One Push" white balance. This can be done by pressing the LIGHT key (#3) for 2 seconds. When the white balance is stored an on-screen message appears. Setting a "One Push" white balance switches off the "Auto Tracking" mode (when the unit is switched off and on again the "Auto Tracking" mode will be reactivated).

Normally there is no need for a manual white balance adjustment. However, if the colors on the screen still appear to be wrong, the white balance can be adjusted manually (one-push):

Hints to perform a One-Push white balance:

Top light:

Zoom in on a white object (i.e. a sheet of paper) until there is only white on the screen and press the LIGHT key for 2 seconds.

Lightbox with transparencies (optional):

Turn off the light of the Visualizer and switch on the optional lightbox. Remove everything from the light box, zoom to the smallest picture size until there is only white on the screen and press the LIGHT key for 2 seconds.

Lightbox with x-rays (optional):

Turn off the light of the Visualizer and switch on the optional lightbox. Place an x-ray on the light box, zoom out until the whole x-ray is picked up and press the LIGHT key for 2 seconds.

Please note: False colors can also be due to incorrect color settings of your projector or monitor. It is recommended to adjust the white balance of the Visualizer first and if the results are still not satisfactory, then the monitor or projector should be checked.

*For specialists: The Visualizer can be switched between "**Auto Tracking**", "**One Push**" and "**Manual**" white balance mode in the on-screen menu (see page 14). If you work with negative transparencies and a light box, use a blank (black in the image) part of the negative film for white balance adjustment!*

USB Device Port (to the computer)

The USB device port (#17) can be used for direct connections between the Visualizer and a computer. This way, a Visualizer can be controlled and can be used as a scanner for 3-dimensional objects. Images in JPG, TIFF or BMP format can be taken in a fraction of a second - much faster than with a desktop scanner.

WolfVision's Connectivity Software works under Windows 2000, XP, Vista and 7 (32 and 64-bit) as well as Apple Macintosh. It is fully TWAIN/WIA compatible. This is important when using Visualizers in connection with graphics programs such as Photoshop, or for connecting them to Interactive Whiteboards (Smart Boards).

The fast USB 2.0 port can also output live motion. WolfVision's Connectivity Software can store AVI files and includes a video capture driver. You can view and save the live image from the Visualizer on your computer in almost every modern video editing software.

Please download the latest version of the WolfVision Connectivity Software from:

www.wolfvision.com/support.

Pictures which are stored with the WolfVision Connectivity Software includes EXIF data, if file format JPG or TIFF is used. Included data are:

Manufacturer = WolfVision

Visualizer model (inclusive serial number) = i.e. VZ-8light-4 (01041472)

Firmware version = i.e. V1.00c

Date and time of create = i.e. 2012-10-01 11:06:29 (yyyy-mm-dd hh:mm:ss)

Ethernet / LAN Port

10BASE-T/100Base-TX

The LAN port (#19) makes the Visualizer a part of the internal computer network and it can be used for communication over the Internet, if it is assigned an official (WAN) IP address.

Administrators of a larger number of Visualizers can use the LAN port to control, support and update all of their units from their local desktop PC.

The list of applications for the Visualizers LAN port is constantly increasing. It can be used for controlling, capturing still images, viewing live video streams, firmware updates, adjustments, menu settings and maintenance purposes.

The following protocols are supported: TCP/IP, IGMP, UDP and ARP.

Supported (tested) internet browsers are: Internet Explorer, Netscape Navigator and Mozilla/Firefox.

By default, DHCP is activated to receive all network settings automatically.

Possible image transfer resolution up to FullHD (1080p).

In order to prevent unauthorized users from logging into the Visualizer over the network, it is possible to set administrator and user passwords. The transmission of the passwords over LAN is encrypted with Md5.

The Visualizer offers live motion capture in TCP Singlecast mode.

Technical Background: In TCP Singlecast mode each computer opens a separate connection to the Visualizer, which requires a lot of bandwidth if many clients are connected (max. 64 clients are possible).

Please check the separate description of "Built-In WebServer" on our internet homepage at: **www.wolfvision.com/support** (or on the supplied CD-Rom).

For full functionality JAVA version 7 or higher is necessary.

For full functionality following ports are necessary: 50915, 50913 (by default).

Power over Ethernet plus (PoE+)

The LAN port (#19) of the Visualizer includes Power over Ethernet plus (PoE+) functionality.

Power over Ethernet is a popular way of saving cables and installation costs.

The Visualizer is compatible with PoE+ power injectors or PoE+ switches (according to the IEEE 802.3at™-2009 industry standard). The supplied Voltage (in the range between 36 and 57V) will be added to a CAT-5 (or higher) Ethernet cable and the Visualizer can receive power via the Ethernet/LAN-cable.

When selecting a PoE+ adapter for this Visualizer it is very important that the adapter complies to the IEEE 802.3at™-2009 industry standard. Before this standard was introduced, many incompatible PoE-systems were available on the market. Some of these units with different PoE standards are not compatible with the Visualizer and may have damaging effects! The "power classification" is "High power Class 4 (12.95 to 25.50W)".

More information on PoE-adapters at **www.wolfvision.com/wolf/thirdparty.html**

Room Management Systems

The LAN port (#19) and the USB device port (#17) can be used to control the Visualizer through an external device, such as a room control system that is used to integrate conference rooms.

The complete protocol can be found on our internet website under: **www.wolfvision.com/support**

HDMI / RGB Output

Choosing the Correct Output Mode

The HDMI and RGB outputs (#13 and #14) can output signals in following formats:

- SVGA (4:3 - 800x600 pixels) at 60Hz
- XGA (4:3 - 1024x768 pixels) at 60Hz
- SXGA (5:4 - 1280x1024 pixels) at 60Hz
- UXGA (4:3 - 1600x1200 pixels) at 60Hz
- 720p (16:9 Widescreen HD - 1280x720 pixels) at 60Hz
- **1080p (16:9 Widescreen HD - 1920x1080 pixels) at 60Hz** - native resolution
- WXGA* (16:10 Widescreen - 1280x800 pixels) at 60Hz
- WUXGA (16:10 Widescreen - 1920x1200 pixels) at 60Hz

The "Auto resolution" function is activated by default. In this mode the Visualizer continuously checks which devices are connected to the HDMI (#13) and RGB (#14) output and automatically sets the optimal output mode for the connected devices. Please note that the Visualizer **cannot** check the possible resolution if the connected units or the cables* are not "Plug and Play" compatible. If the Visualizer cannot detect the resolution of the connected device, the output is set to the default of XGA/60Hz.

(*Cables with plug and play compatibility must support DDC).

If you cannot use the "Auto resolution" function, you can select the output mode manually in the on-screen menu of the Visualizer (see page 16).

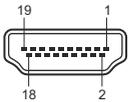
In order to achieve the best picture quality you must set the outputs of the Visualizer to match the native resolution of your display unit (e.g. LCD or DLP projector or monitor).

Important: What matters is the native resolution of the projector or monitor, not the maximum resolution that it can display (in compressed mode). The native resolution is the actual number of pixels of the built-in LCD display or DLP chip of a projector or monitor. Most LCD or DLP projectors can also display higher resolutions than their native resolution, but only in compressed mode and with inferior picture quality.

Do NOT set the output of the Visualizer to a higher standard than the native resolution of your display unit. Follow the instructions in the user manual of the connected units.

Please note, when the aspect ratio does not match the native resolution of the Visualize or display device, black bars on top/bottom or left/right can be shown. Some display devices offer the possibility to zoom-in the image to minimize the black bars. Follow the instructions in the user manual of the connected units.

HDMI Port #13

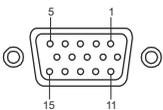


19-pin HDMI connector female (front side, unit)

1 - T.M.D.S. Data2+	8 - T.M.D.S. Data0 Shield	15 - SCL (I ² C Serial Data Line for DDC)
2 - T.M.D.S. Data2 Shield	9 - T.M.D.S. Data0-	16 - SDA (I ² C Data Line for DDC)
3 - T.M.D.S. Data2-	10 - T.M.D.S. Clock+	17 - DDC Ground
4 - T.M.D.S. Data1+	11 - T.M.D.S. Clock Shield	18 - DC+5V (max. 50mA)
5 - T.M.D.S. Data1 Shield	12 - T.M.D.S. Clock	19 - Hot Plug detect
6 - T.M.D.S. Data1-	13 - Reserved	
7 - T.M.D.S. Data0+	14 - Reserved	

CEC (Consumer Electronic Control), ARC (Audio Return Channel) and HEC (HDMI Ethernet Channel) are not supported.

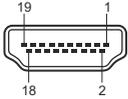
RGB Port #14



15-pin D-Sub HD connector female (front side, unit)

1 - Analog Red video	6 - Red return	11 - N/C Not connected
2 - Analog Green video	7 - Green return	12 - SDA I ² C data
3 - Analog Blue video	8 - Blue return	13 - HSync Horizontal sync
4 - N/C Not connected	9 - DC+5V max. 50mA)	14 - VSync Vertical sync
5 - GND Ground	10 - GND (VSync, DDC)	15 - SCL I ² C clock

HDMI IN - external input



19-pin HDMI
connector female
(front side, unit)

1 - T.M.D.S. Data2+	8 - T.M.D.S. Data0 Shield	15 - SCL (I ² C Serial Data Line for DDC)
2 - T.M.D.S. Data2 Shield	9 - T.M.D.S. Data0-	16 - SDA (I ² C Data Line for DDC)
3 - T.M.D.S. Data2-	10 - T.M.D.S. Clock+	17 - DDC Ground
4 - T.M.D.S. Data1+	11 - T.M.D.S. Clock Shield	18 - DC+5V (max. 50mA)
5 - T.M.D.S. Data1 Shield	12 - T.M.D.S. Clock	19 - Hot Plug detect
6 - T.M.D.S. Data1-	13 - Reserved	
7 - T.M.D.S. Data0+	14 - Reserved	

CEC (Consumer Electronic Control), ARC (Audio Return Channel) and HEC (HDMI Ethernet Channel) are not supported.

A computer can be connected to the **HDMI IN (#15)** of the Visualizer.

By pressing the **EXTERN** key (#24) the Visualizer displays the signal from the external input to the audience. To switch back to the live image of the Visualizer use the **EXTERN** key again.

The Visualizer has a built-in D/A-converter in order to convert the digital HDMI signal to analog RGB signal and output it on the HDMI and RGB.

Preferred resolution is: 1080p (1920x1080@60Hz)

Supported resolutions from VGA (640x480@60Hz) to WUXGA (1920x1200@60Hz) with several resolutions and refresh rates in this range.

Following data are provided:

Plug & Play Monitor VESA DDC

Monitor name: "WolfVision"

Video Input Definition: digital signal

Vertical range limits: 50Hz - 60Hz

Horizontal range limits: 20kHz - 75kHz

Maximum pixel clock: 170MHz

Gamma: 2.2

Preferred resolution: 1080p (1920x1080) @60Hz

HDMI Content Protection - HDCP

The Visualizer does not support HDCP (High-bandwidth Digital Content Protection).

Encrypted signals on the HDMI IN will be blocked and the Visualizer will output just a black image.

The proprietary HDCP technology is used on protected content like Hi-Definition Hollywood movies and Pay-per-view transmissions and will not affect non-protected content.

It is not allowed to bypass the security system by law.

Copyright owner is Digital Millennium Copyright Act (DMCA).

The following chapter is for experienced users only:

ON-SCREEN MENU / ON-SCREEN HELP

For regular use of the WolfVision Visualizer, it is not necessary to go into the Visualizer's menu and change settings. Inexperienced users should not make any adjustments here.

To enter the on-screen menu press the MENU key (#24, *keep it pressed until the menu appears*). Settings of the Visualizer's basic functions and the built-in camera can be made here using the navigation keys on the camera head (#20, #21 and #22).

If more information on a function in the on-screen menu is required, set the cursor in the respective line and press the HELP / ? key (#23). A detailed description of this function appears on the screen.

By pressing the MENU key for 4 seconds the Extra Menu appears. In the Extra Menu, i.e. the zoom wheel can be calibrated. Recalling the Factory Reset will reset all settings including resolution and IP address to the default.

The functions of the on-screen menu are not described in detail in this user manual as the help menu is an integrated part of the Visualizer's software (firmware). The information you see on your screen always belongs to the current Visualizer firmware.

Exposure Settings

The exposure settings will affect the brightness of the image, e.g. Gain, Shutter, Aperture, Image Brightness and Back Light Compensation.

Color Settings

The Color Settings will affect the color reproduction of the camera, e.g. White Balance settings, Color Mode and Positive/Negative.

Hint:

If the picture on your screen appears to be too light or too dark or the color saturation is not correct, the Color Mode can be changed.

For better readability of handwritten texts, the image can be changed to BLUE.

Output Settings

To change the Detail Settings (sharpness) and to change the Output Resolution manually.

Hint:

Use the "Resolution Test" function to change to the selected resolution temporarily for ten seconds. This way the compatibility of the connected display device can be easily checked.

Preset Settings

In the "Preset Control" the Preset keys can be assigned specific functions such as "NEGATIVE/BLUE", "BLACK/WHITE", "LIGHT", etc.. Additionally the default presets can be recalled.

Advanced Settings

In this sub-menu the behaviour when powering on, digital zoom, on-screen menu can be changed.

Settings for Ethernet (LAN), Date/Time and USB stick will also be found in this menu.

Hint:

Change Power-Down Mode to "ECO" or "DEEP" to save power consumption in standby mode.

Open "Device Info" to view details of the unit like currently installed firmware version.

Recall Default Menu Settings

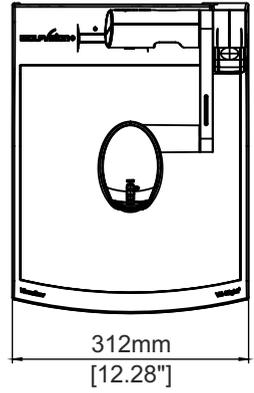
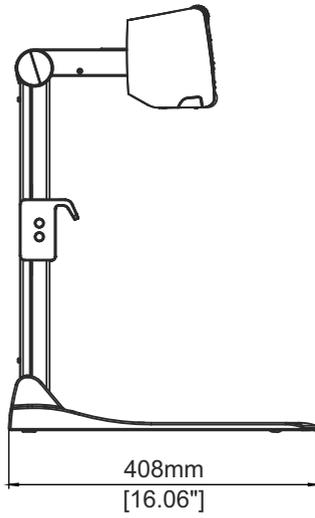
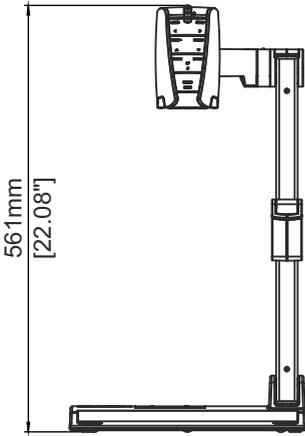
All picture affecting settings can be set back to the factory defaults. All settings which affect the communication with other equipment, e.g. network settings and resolution will not be changed.

Hint:

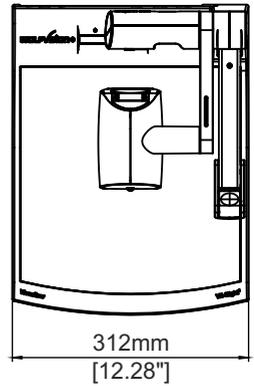
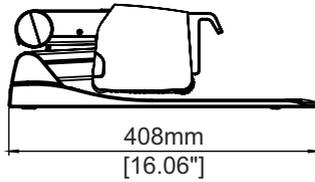
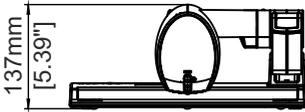
To reset single items, just select the desired line and keep HELP key (#23) pressed for 2 seconds.

Dimensions

working position:



closed:



Technical Specifications are Subject to Change!

MAINTENANCE

Cleaning

Cabinet: Clean the cabinet by gently wiping it with a soft, lint free cloth.

Lenses: Clean the lenses by gently wiping with a soft, lint free cloth (do not use a paper tissue!). Clean by breathing on the lens to create moisture then wipe with a lint free cloth (If need be, use a special optical cleaner only!).

WARNING:

**Never use strong cleaning agents such as acetone or benzene!
These substances can damage the surface and the anti-reflex coating!**

Firmware Upgrades

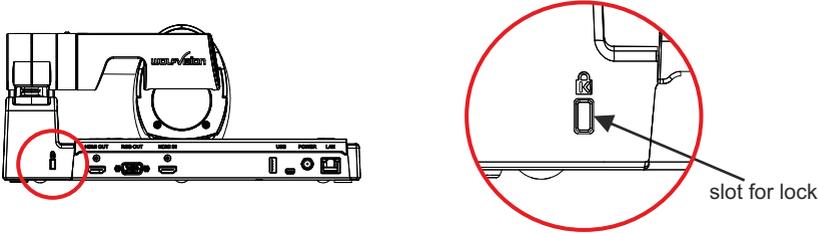
The software (firmware) of your Visualizer (including the on-screen HELP) can easily be upgraded to the latest version. The firmware update can be done via USB, Ethernet (LAN) or USB-stick.

Firmware update files can be downloaded for free at www.wolfvision.com/support. Updates via USB or Ethernet/LAN can be made with the WolfVision Connectivity Software.

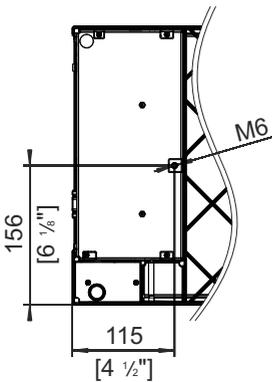
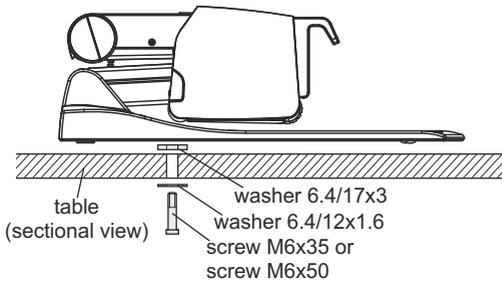
Updates via USB stick needs a prepared USB stick like: file system FAT16 or FAT32, folder in the root named "VZ" by default which includes the firmware file (folder name has to match the listed folder name in the on-screen menu Advanced Settings / USB Settings.)

Anti-theft device 1: T-bar lock

The Visualizer can be fixed with a security cable T-bar lock (Kensington® Lock), so that it **can not be stolen**. Follow the instructions from the cable lock manual.



Anti-theft device 2: table lock bolt



The Visualizer can also be fixed onto a table with the supplied table lock bolt in order to minimize the risk of theft.

Please note that the usable depth of thread is 8mm, do not screw in more than this.

Supplied accessories:

Socket head cap wrench 5mm	(101684)
Screw DIN 912, M6x35 Zn	(101689)
Screw DIN 912, M6x50 Zn	(101690)
Washer DIN 125A 6.4/12x1.6	(101691)
Washer DIN 7349 6.4/17x3	(101692)
Assembly instructions VZ-8 ⁴	(107799)

Technical Data

Camera / Technology (Signal format)	1-CMOS 1/3" Progressive Scan Camera
Pictures per second (as picked up by the camera)	30 frames
Effective Pixel	1920 x 1080 (=2,073,600)
Total pixels of camera sensor	2,073,600
Pixels processed per second (=effective pixels x frames per second)	62,208,000
Color reproduction (sRGB color precision)	very good colors
Native signal output	1080p HD (1920x1080)
Output signals (native/scaled) 4:3 and 5:4	UXGA / SXGA+ / SXGA / SXGA- / XGA / SVGA (4:3 and 5:4)
Output signals (native/scaled) 16:9 and 16:10	1080p HD / 720p HD / WXGA / WUXGA (16:9 and 16:10)
Resolution (measured)	980 lines
Brightness Control / Exposure	automatic and manual (manual in on-screen menu)
White Balance adjustment	automatic and manual
Autofocus (Speed) / Manual Focus	yes (continuously working high speed) / yes
On-screen menu and on-screen help	yes
Upgradeable firmware	yes, via USB, Ethernet/LAN and USB-stick
Lens / Zoom	28x zoom (14x optical + 2x digital), zoom wheel with multiple speed
Max. object height on working surface	120mm (4.7") in tele position, 300mm (11.8") in wide position
Max. pick-up area on working surface (4:3)	300mm x 400mm (11.8" x 15.8")
Min. pick-up area on working surface (4:3)	29mm x 22mm (1.1" x 0.9") / with digital zoom: 15mm x 11mm (0.6" x 0.4")
Max. pick-up area outside of working surface	unlimited
Depth of focus on small object (42 x 33 mm)	7mm (0.3")
Depth of focus on large object (360 x 270 mm)	200mm (7.9")
Tilt range of camera	220° (120° to speaker and 100° to audience)
Light source	Maintenance free high-brightness LED light system (high light output, low power consumption), lamp lifetime 30,000 hours
Connectivity Software for image capture, controlling and firmware updates	included (for 32- and 64-bit Windows and Macintosh, Twain/WIA compatible with Video Capture Driver)
Reflection free area on working surface	whole working surface
Recordings outside of the working surface	yes (to the back and to the front of the unit)
Automatic Image flip	yes (for recordings to the front of the unit)
Intelligent folding system	pneumatic arm, 2-step set up
User programmable presets	1
Special working surface for transparencies	yes
External computer input / Input switch	yes, HDMI (DVI or DisplayPort via optional adaptor or cable)
WolfVision image processing engine	YSOP1
Image memory (built-in memory)	1 image freeze
Alternative Image display	negative image / negative-blue image / black & white image
HDMI output / DVI output	HDMI / DVI-D when using HDMI-DVI adaptor
RGB (=data RGB) output	15-pin D-Sub-plug
USB port / standard	USB 2.0, host and client
Ethernet (LAN) port	yes, IP-addressable, 10/100 Mbps; PoE+ (IEEE 802.3at™-2009 class 4)
LAN web interface	yes
Advanced controlling with professional protocol	yes, via LAN and USB
Dimensions in operation (L x W x H)	408mm x 312mm x 561mm (16.06" x 12.28" x 22.08")
Dimensions folded (L x W x H)	408mm x 312mm x 137mm (16.06" x 12.28" x 5.39")
Weight	5kg (11lbs)
Anti-theft device	yes, T-Lock (Kensington Lock®) and table lock bolt
Voltage input / Power consumption	12VDC or PoE+ / 16W in full operation, 0.5W to 6.6W in standby (adjustable)
Power source	external power pack multi range 100 - 240 VAC
Operating Temperature / Relative Humidity	0°C - 40°C (32°F - 104°F) / 40 - 85%rel (no-condensation)
Warranty	5 years
Made in	Austria (European Union)

Please note: Due to technical improvements all specifications are subject to change!

CODES - Short Keys

One Push White Balance:

Keep the **LIGHT** key (#3) pressed for 2 seconds to perform one push white balance.

Activating the on-screen menu:

Keep the **MENU** key (#24) pressed for 2 seconds to activate the on-screen menu. Use the **FOCUS** keys (#22) to navigate and the **PRESET** key (#20), **FREEZE** key (#21) to select. For the help function, press the **HELP / ?** key (#23).

Resetting the selected menu item:

For resetting only the selected item keep the **HELP / ?** key (#23) pressed for 2 seconds.

Storing Preset 1:

Keep the **PRESET** key (#20) pressed for 2 seconds.

Recalling Preset 1:

Press the **PRESET** key (#20) quickly.

Switch Output Resolution to XGA:

Keep both **FOCUS** keys (#22) pressed for 4 seconds to switch the output resolution to XGA at 60Hz.

CONTACTS

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