AVEN

Tools for Advancing Innovation™

Aven
MANUAL
SharpVue Plus
SharpVue XT

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System information

SharpVue Plus and SharpVue XT are both standalone high definition optical inspection systems.

The camera system has functions such as: Autofocus On/Off, Possibility to Change focus when Autofocus is off, Artificial Cross, built in LED lighting, Save Image/Video directly to your PC with the software, Digital zoom on/off. (No led lighting in SHARPVUE XT).

Both systems can store image without a PC direct to memory stick.

It is possible to choose any monitor that has a DisplayPort or use an adaptor.

When used with a computer you can just install the included Aven Software and make measurement, drawing and much more.

Systems and Accessories

This manual is valid for the following systems:

SharpVue Plus 30x. part number: 26700-136. Has a 30x optical zoom camera and a 3D lens

SharpVue XT 30x. part number: 26700-137. Has a 30x optical zoom camera and a 3D lens

Continue to next page for accessories...

360 Tilt Table have part number: 26700-135-TTB. For a perfect angle of the object you are working with under your system, try our stabile and easy maneuverable tilt table. The table plate is covered with an ESD secure material that prevents static damage to the object you are working on and helps you keep it in place.

With the tilt table, a 4D lens gives you different options due to height of object.

Diameter: 9 in | Height: 57 mm | Weight: 2.3 lbs

360 Tilt Table With Riser have part number 26700-135-TTBV2. For a perfect angle of the object you are working with under your system, try our stabile and easy maneuverable tilt table. The table plate is covered with an ESD secure material that prevents static damage to the object you are working on and helps you keep it in place. Includes a metal height adjustment base.
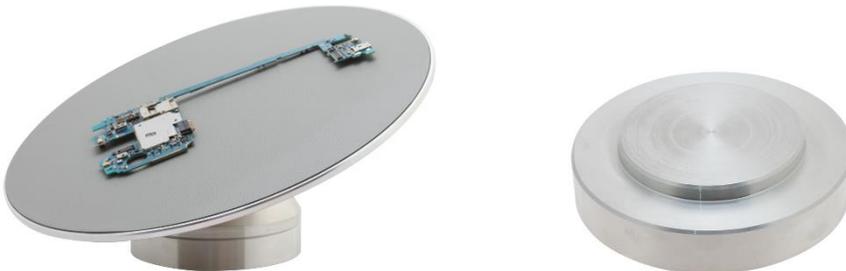
Diameter: 9 in | Riser Height: 16 mm | Total Height: 73 mm | Weight: 2.3 lbs

X-Y Gliding Stage have part number: 26700-135-XYTB. A Steady X-Y Gliding Stage for easy control of the magnified object. This X-Y Gliding Stage is small and easy to move. The table plate is covered with an ESD-secure material that prevents static damage to the object you are working with. Size: Horizontal Movement: 190.mm Vertical Movement 235 mm Table Dimension: 420x410 mm. Weight=5kg

Unpacking and assembly

The system is delivered with the following items:

Inspection system

Remote control

Power Supply

Monitor Cable (Displayport)

PC cable (USB – USB mini)

Aven Software on a USB memory stick

Place the camera unit on proper location. Place the X-Y Gliding Stage or tilt table if you prefer to use one. Connect the monitor cable from the monitor to the camera unit. Connect the power cable from you power supply. You are now ready to start.
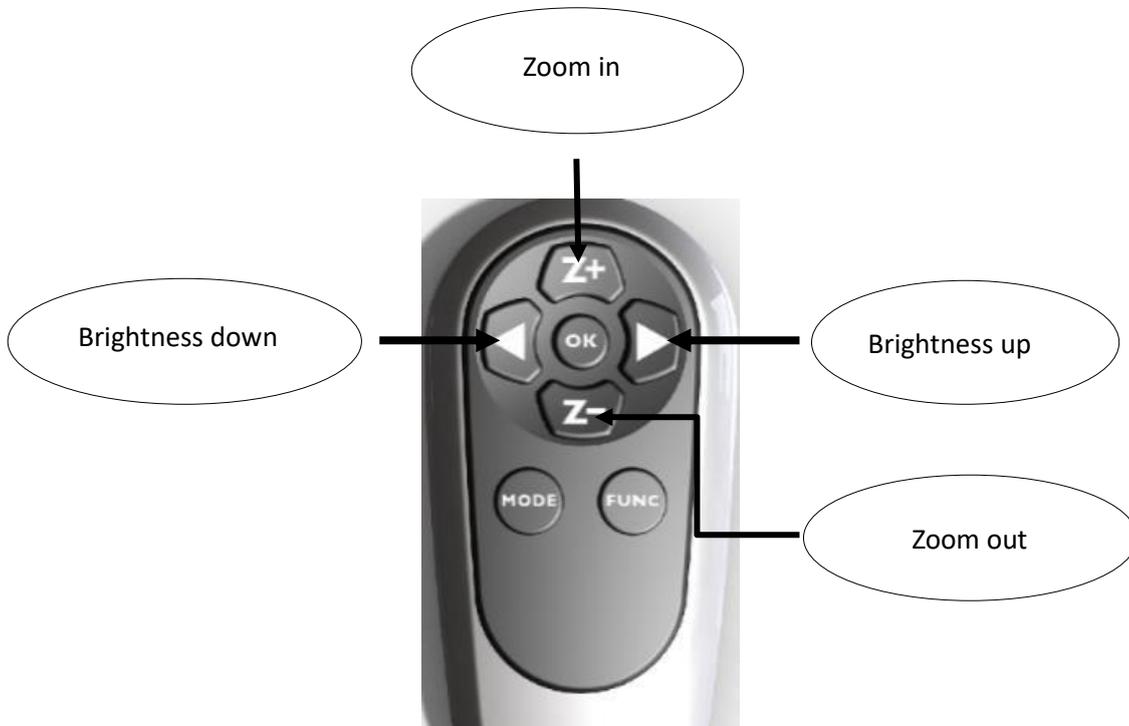**If you wish to use a computer**. Connect your computer with the USB cable (USB mini to SharpVue Plus/SharpVue XT, USB to computer). You need to install the included Aven software from the USB memory stick. Read more under Software Page 8.

Picture of the Connectors.

You can now start the system by pressing the button at the top of the camera unit or backside on the SharpVue XT, you can also turn the LED lamp on/off with the button on the back of the SharpVue Plus.

Remote Control

Z+ Zoom in. **Z -** Zoom out. ▷ Increase brightness. ◁ Decrease brightness. Press **Func** short and autofocus will go off / on. When autofocus is off, ◁ & ▷ will change functions to adjust focus as a manual focus. **OK** change magnification to wide and show an artificial cross. Next press on **OK** the magnification goes back to previous magnification. A quick press to **Mode** camera will change between color and greyscale.

A longer press on the **Mode** button stores pictures to the memory stick if its inserted.

A long Press to the Func button and you will get the menu to be shown.

Settings	
Lens	+3
Show Zoom	2s
Show Brightness	2s
Zoom Speed	3
Screen Diagonal	24"
Show Clock	ON
Digital Zoom	OFF
Aspect Ratio	16:9
Adjust Date and Time	=>
Show USB device	=>
Exit	
10.66.13.11	V1.00a

Menu:
Lens: Your choice of lens, default is +3.
Show Zoom: How long the OSD ZOOM info will last on the screen.
Show Brightness: How long the OSD Brightness info will last on the screen
Zoom Speed: Controls how fast the system will zoom.
Screen Diagonal: Set this after your monitor.
Show clock: OSD for date and time on the screen.
Digital Zoom: Default off, can set the Digital zoom to On.
Aspect ratio: Default 16:9, can change to 16:10
Adjust date / time: Set time and date.
Show USB device: Gives information about the amount of free space left on the memory stick.
Digital Zoom: Turn Digital Zoom on / off, Off is default.
If your system is connected to Ethernet, the IP address will be showed on the bottom of this menu.

Pair the remote to the System.

If you need to change battery in the remote you need to pair the remote to the system. Hold the remote on the back of the System while the power is on then press the OK button on the remote for 5 seconds. When the light on the remote starts flashing red – the remote is paired.

On screen magnification display
If you are using the "Show Zoom", notice that you should choose what Lens and what monitor you are using to get the values correct.

Safety information

Never connect the product with power if it has been exposed to water, rain or other liquids. Contact your supplier before using the product.

Place the power cord in such a way that no pinching occurs.

If the product is moved from cold too warm, condensation may occur. Wait about 30 minutes before using the product.

When placing the product choose a stable table with at least 45 cm depth.

If no normal function can be set after troubleshooting, turn power off and contact your local supplier.
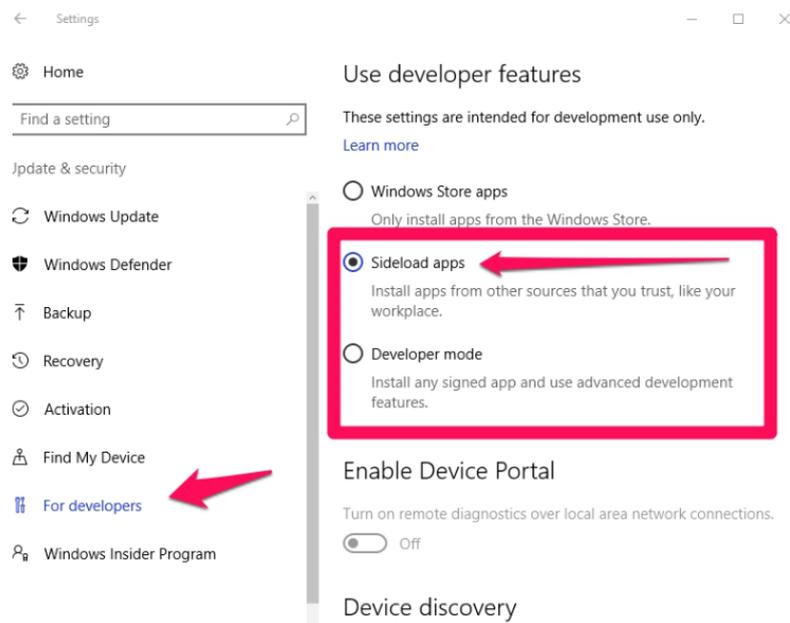
Warranty

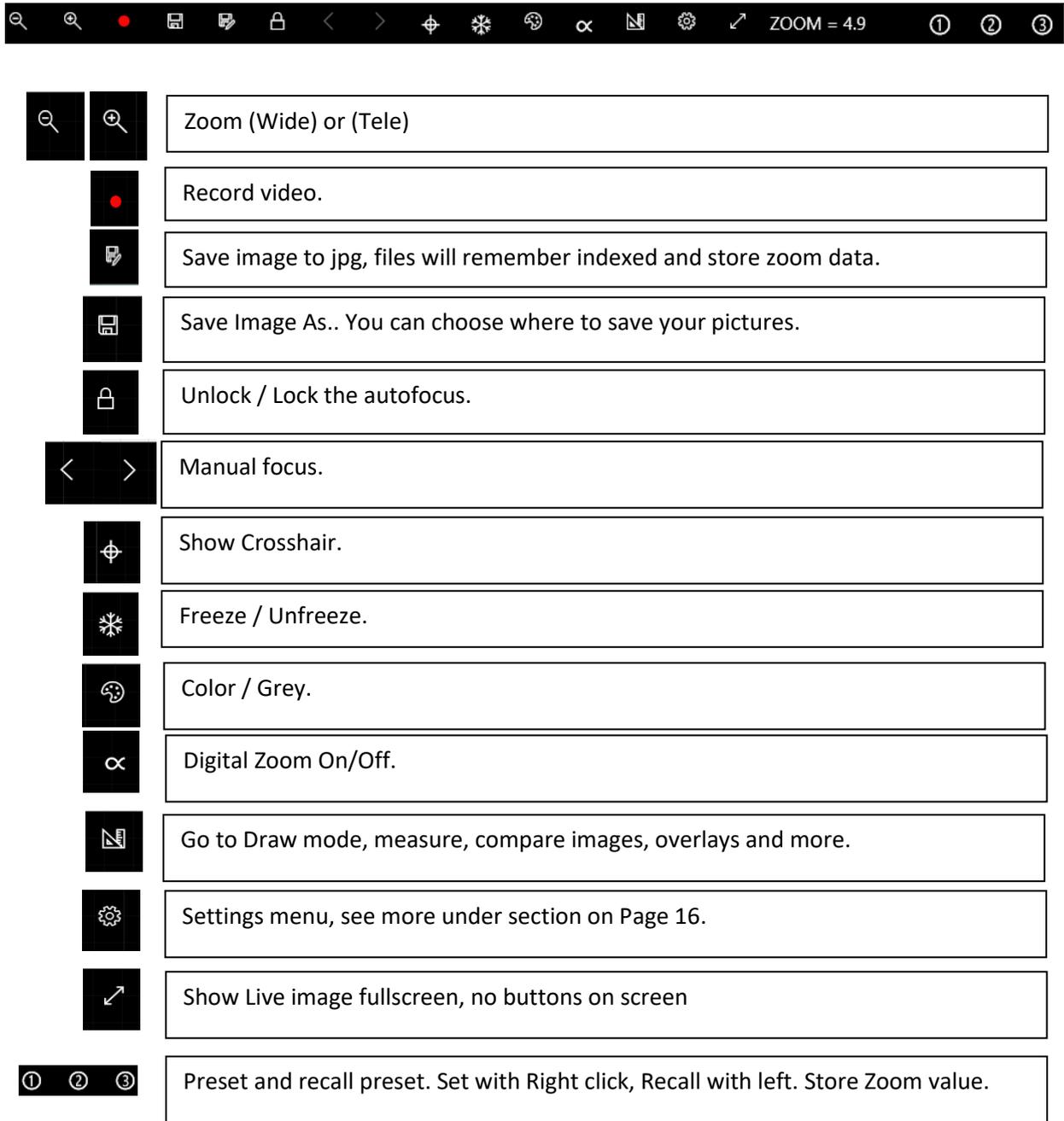2 years warranty for factory faults.

Aven Software.

Installation: SharpVue Software only works on Windows 10. We recommend that your PC has 1920x1080 as minimum resolution, if you use the PC with an external monitor, don't use Extended or dual mode unless the resolution on both Displays are the same.

Click on the SharpVue Appxbundle file, accept the Camera, Mic, folder request.

You can now start the SharpVue application. If a previous version been installed, we recommend that it uninstalled before a new one is installed. On some Windows 10 PC's it can be necessary to set the settings to Allow sideload apps.

Toolbar *(Live picture)*

	Description
Zoom icons	Zoom (Wide) or (Tele)
●	Record video.
Save icon	Save image to jpg, files will remember indexed and store zoom data.
💾	Save Image As.. You can choose where to save your pictures.
🔒	Unlock / Lock the autofocus.
‹ ›	Manual focus.
⊕	Show Crosshair.
❄	Freeze / Unfreeze.
palette	Color / Grey.
∝	Digital Zoom On/Off.
draw icon	Go to Draw mode, measure, compare images, overlays and more.
⚙	Settings menu, see more under section on Page 16.
↗	Show Live image fullscreen, no buttons on screen
① ② ③	Preset and recall preset. Set with Right click, Recall with left. Store Zoom value.

Toolbar (Draw mode)

Icon	Description
□	Draw a rectangle. No measure values
O	Draw a Circle, with measure value. 3 clicks will measure the circle
—	Draw line only vertical, with measure value.
|	Draw line only horizontally, with measure value.
∡	Draw line free Horizontal / vertical with measure value and angle from horizontal base.
::	Mark image with dots.
T	Insert Text. See more on page 13
🗑	Cancel , marked with a Index (#) for what action to cancel .
💾	Save image with information.
📄	Open a golden image to use a comparison, will reload zoom data if used.
◻	Full screen, (Default)
⊟	Compare Live image with a stored image (golden) horizontal.
◫	Compare Live image with a stored image (golden) Vertically.
▧	Compare live image vs stored golden sample, images will swap, swap time adjustable.
🔍	Zoom, zoom in the editable image, see more section page 14.

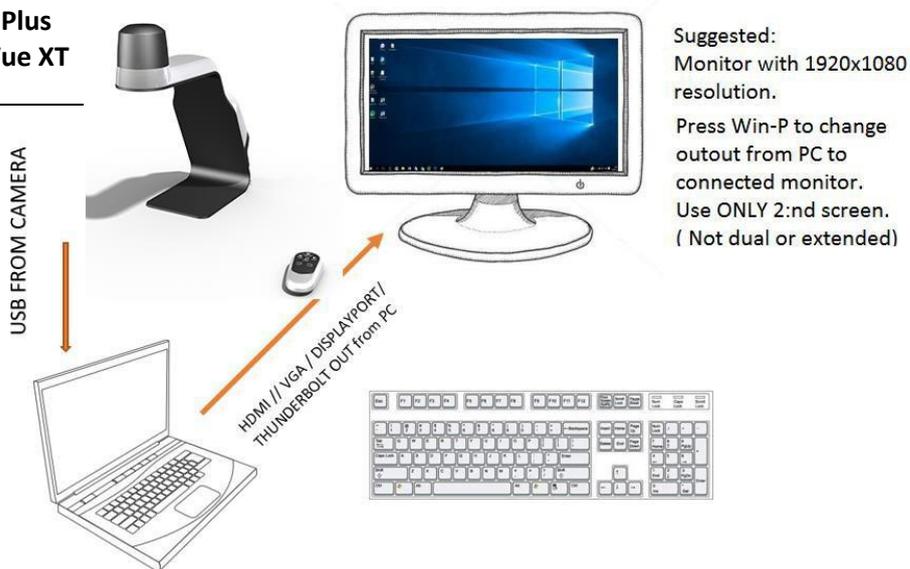|	
🔧	Calibration: Use calibration to get more accurate values. See section page 13.
⚙️	Settings: Change Editing color, mm/inch and more
🎥	Live: Go back to live image.

System set up

Example of system setup when the system Software is used:

SharpVue Plus Or SharpVue XT

USB FROM CAMERA

HDMI // VGA / DISPLAYPORT/ THUNDERBOLT OUT from PC

Suggested:
Monitor with 1920x1080 resolution.

Press Win-P to change outout from PC to connected monitor.
Use ONLY 2:nd screen.
(Not dual or extended)

Measuring

Put your object under the camera.

Zoom to preferable magnification with the software. (Notice, if the remote is used, no updates in Zoom factor will occur in the software and will else calculate wrong when measuring.)
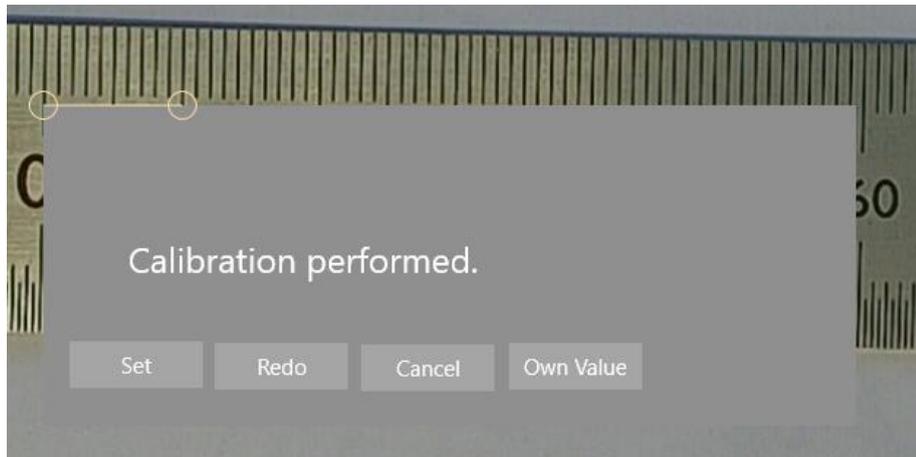
Press the draw button. Press LB (Left button) on your mouse and make the start point, then go to your next measuring point and release the button the measure value will occur on the screen.

Text: Press T and go to the location where you want to insert the text, press LB and write the text. To either move or Edit the text, Press T, go to the text and when it changed from "fixed" to "editable" one can Edit the text or move it by press Left button and move the text frame, Press T again to exit edit/move mode of text.

Calibration

Press the Calibration button: A message will notify you if you should be within the 10 mm or 1 mm range, or 0,39" if inch is chosen from the settings menu.
Press left button, move the mouse, release, a menu will appear.

Choose SET if you are pleased with your calibration, redo if you would like to do it again, cancel if you want to skip this part.
Own value, press the button and insert the value that you already know. It will follow the inch or mm from the settings menu.
You can also use the Zoom function when you are doing your calibration.

Example of the zoom function

Image information:
When your images are stored, it also stores information about the actual zoom value.
And will be used when you use the function load an image in Drawmode.

Ethernet:
If you have connected an Ethernet cable to your system and your network will give the system an IP address, this address can be found either in the menu OSD or under settings in the software.

This address can be used into an IPAD / Tablet or a PC with Chrome to show a live picture. Edge, Firefox don't work at this moment. If you would like to see a live image from the system when you are outside your local network, contact your network administrator.

INFO about the Settings menu.

Lens: 3 or 4 depending of what your choice, notice this don't follow the settings in the menu from remote.

Unit: mm or Inch

Number of Digits: How many digits that are showed after the decimal

Mouse wheel zoom: Be able to zoom from the scroll wheel on the mouse, in live mode

Zoom value / rotation:
How much the zoom moves vs. the scroll wheel.

Editing Colors:
Change the color of text and drawings in the Draw Mode.

Path Image and Path Video
Choose the location where images and Video are stored. Default is \pictures and \Video

Image Name:
Name of the image and video that are stored, name will include an index.

If a PC is connected with an external monitor use it as "only external" not with extended or dual, the algorithm for magnification // measuring will be affected.

Aven technology has done testing and verify the following monitor

sizes:
24" (1920x1080) 16:9, 27" (1920x1080)16:9, 24" (1920x1200),16:10.

	SharpVue Plus	SharpVue XT
Camera optic	30x	30x
Camera Digital	12x	12x
Sensor	1.2/8"	1.2/8"
Active pixels	2,13 million effective pixels	2,13 million effective pixels
Resolution Monitor	1920x1080	1920x1080
Resolution PC	1920x1080	1920x1080
Store images to memory Stick	Yes	Yes
Ethernet connection	Yes	Yes
Software included	Yes	Yes
Free space under camera	Fixed 315 mm	90-420 mm
Movement	Fixed	X, Y , Z
		Y = 330mm
		Z= 210 mm
Light	Led	None
Remote included	Yes	Yes
Weight	4.5 Kg	8 kg

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