

TEK-SCOPE PLUS User Manual



INDEX

System information	3
Assembly	3
Use with a monitor	3
- Remote control	4
- Remote control pairing	5
- TEK-SCOPE live streaming	5
- 4D LENS	5
Use with a PC	5
- TEK-SCOPE software	5
- Toolbar	6
- Draw Mode Toolbar	6
- Setting menu	7
- System set up	8
- Measuring	8
- Calibration	8
- Ethernet	8
Optional accessories	9
- TEK-TILT-PLUS	9
- TEK-XY	9
Technical facts	10
Safety information	10
Warranty	10
Contact	10

SYSTEM INFORMATION

TEK-SCOPE PLUS is a standalone high definition optical inspection system.

The camera system has the following functions:

- Auto Focus On/Off
- Adjustable focus
- Digital Zoom ON/OFF
- LED lighting with adjustable brightness
- Monitor connection via DisplayPort / HDMI port
- Direct image Storage on USB memory stick
- PC Connection Software via micro USB / USB port
- Measurement & drawing capabilities

TEK-SCOPE can be connected to any monitor with a DisplayPort / HDMI port.

When used with a computer you can install the included TEK-SCOPE PLUS Software and make measurement, drawing and much more.

ASSEMBLY

TEK-SCOPE PLUS package includes the following items:

- Inspection system unit
- Remote control
- Power Supply
- Monitor Cable (DisplayPort-HDMI) - Computer cable (USB – USB mini)
- TEK-SCOPE PLUS Software and manual on USB memory stick
- 3D lens

1. Use with a monitor:

Place the camera unit on the desired stable location.

Connect the monitor to the camera unit by the monitor cable.

Connect the power supply to a power outlet.

Connect the power supply to the camera unit with the DC cable.

Connect USB memory stick to save pictures (not videos).

Connect Ethernet cable to share the screen simultaneously with other people.

You can now start the system by pressing the button on the top of the camera unit.

If needed, turn the LED lamp on/off by using the red button on the back of the unit.

2. Use with a PC:

Connect your computer with the USB cable (USB mini for TEK-SCOPE PLUS, USB for computer).



Install the TEK-SCOPE PLUS PC software. You can now start the device by pressing the button on the top of the camera unit and then open the installed software.

If needed, turn the LED lamp on/off by using the red button on the back of the unit.

Remote control

Use the remote control when the device is connected to the monitor.



- Z+ Zoom in (+)
- Z- Zoom out (-)
- Increase brightness 
- Decrease brightness 

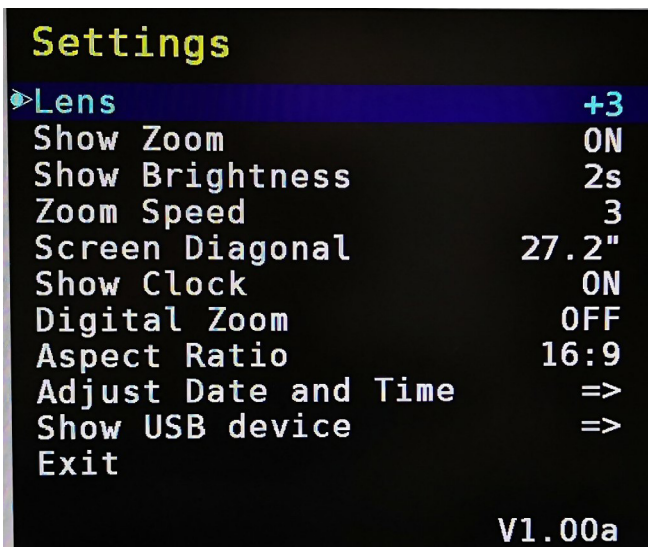
Press **FUNC** shortly and autofocus will go off / on. When autofocus is off, ◀ & ▶ will adjust focus manually.

OK changes magnification to wide angle and shows an artificial white cross. Press **OK** again to exit and go back to previous magnification.

Press **MODE** to change between color and greyscale.

Press **MODE** for 5-8 seconds and the screen will be saved as image in the USB memory stick.

Press **FUNC** for 5-8 seconds and the menu will appear with more choices.



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: how fast the system will zoom.

SCREEN DIAGONAL: set your monitor diagonal dimension.*

SHOW CLOCK: show date and time on the screen.

DIGITAL ZOOM : turn Digital Zoom on / off, default off

ASPECT RATIO : set aspect ratio, default 16:9

ADJUST DATE / TIME: set time and date.

SHOW USB DEVICE: free space on the memory stick.

***IMPORTANT:** exactly set your monitor diagonal before start working to obtain a correct magnification value

Remote control pairing

Hold the remote control on the back of the TEK-SCOPE PLUS while the power is on, then press the OK button on the remote control for 5 seconds. When a red light start flashing, the pairing procedure is complete.

Note: The remote control inside the package is paired by the Factory. Changing batteries or using remote with more than one device may require additional pairing.



TEK-SCOPE live streaming

Live streaming on TEK-SCOPE PLUS is only possible with a unique connection to a Monitor or to a PC.

The Device cannot work properly if connected to a PC and a Monitor at the same time.

4D LENS

If you are using a Tilt table or any higher object, you should replace the lens to a +4 lens.

You can do it using the removal tool. Clean the lens before using the system to avoid fingerprints etc. Notice that you also need to change the lens settings in the TEK-SCOPE PLUS menu.

Press **FUNC** button on the remote for 5-8 seconds to get into the menu.

Lens – Change to **+4** or **+3** by using the ◀ ▶ buttons on the remote.

2. USE WITH A PC

TEK-SCOPE PLUS software

Operating System required: Windows 10 (only).

Ethernet connection and cable: yes

INSTALLATION

Copy and Paste the TEK-SCOPE PLUS Software folder on your desktop

To install TEK-SCOPE PLUS select “Ideal-Tek_1.0.96.0_x64.appxbundle”

To check the software is work properly you should connect TEK-SCOPE PLUS to the power supply and to the computer using USB cable, start the device and then launch the app.



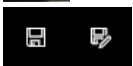









Authorize the app to connect to computer microphone and camera.

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.

After installing the Software, you can access TEK-SCOPE PLUS functions:











Toolbar










	Zoom in / out
	Record video (microphone requested)
	Save, Save as images
	Lock - Unlock autofocus
	Adjust manual focus
	Show Crosshair
	Freeze /Unfreeze image
	Color / Greyscale
	Digital Zoom ON / OFF
	Draw mode (measurements, image comparison, etc.)
	Setting menu
	Full screen image

Draw Mode Toolbar



	Draw a rectangle. No measure values
	Draw a circle. Diameter value. 3 points circle
	Draw vertical or horizontal line with measure value
	Draw oblique line with measure value and angle degree from horizontal base
	Dots to mark images
	Insert text
	Free drawing
	Undo last action
	Save image with information
	Open a saved image to make live comparison

-  Full screen (Default)
-  Compare Live image with stored images (horizontally and vertically)
-  Overlay, compare live image and stored image
-  Zoom IN on the editing image
-  Calibration: use calibration to get more accurate values
-  Settings
-  Go back to live image

SETTING menu



Lens: +3 or +4 depending on what you select, it doesn't follow the settings in the menu of Live image

Unit: mm or Inch

Number of Digits: how many digits are showed after the decimal

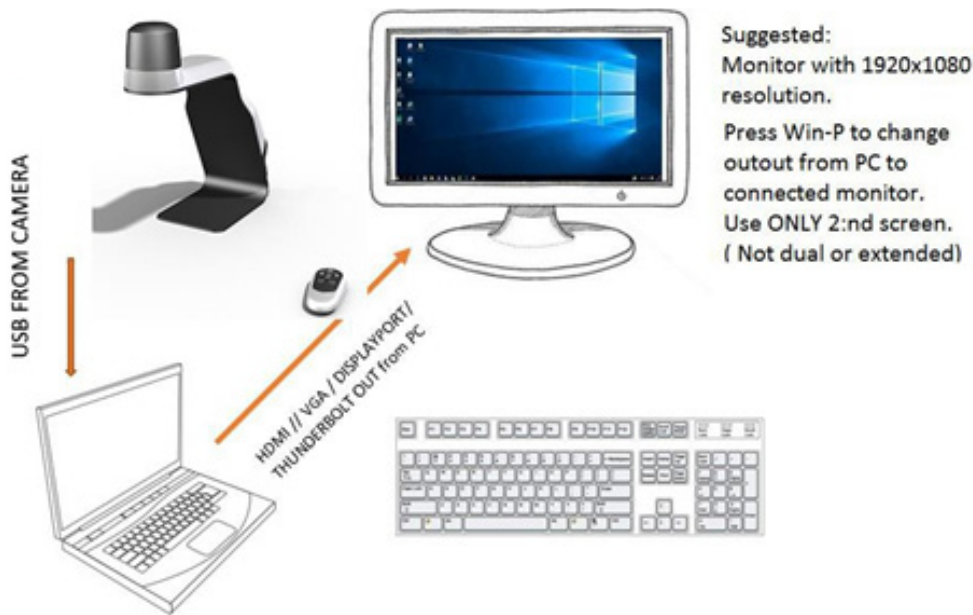
Mouse wheel zoom: scroll wheel mouse to zoom IN and OUT in live mode

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

System set up

Example of system setup when TEK-SCOPE PLUS Software is used:



DO NOT CONNECT THE DEVICE BOTH TO A MONITOR AND PC TOGETHER.

If the computer and the monitor are used together, like extended or dual, the algorithm for magnification/measuring will be effected.

With the following screens sizes: 20”(1600x900); 22”(1920x1080); 22”(1680x1050); 24”(1920x1080); 24”(1920x1200) measuring will have a tolerance of 1-2% without calibration.

Measuring

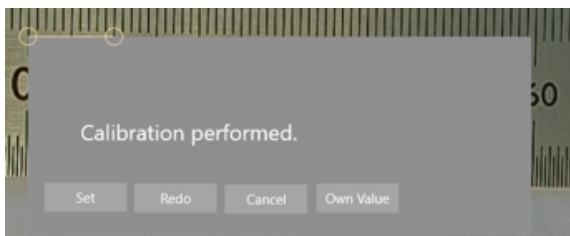
Put your object under the camera. Choose the magnification by the software buttons.

Notice: using the remote control, the Zoom factor will be not updated and measuring will be wrong.

DO NOT USE REMOT CONTROL WHEN CONNECTED TO THE PC BUT USE THE SOFTWARE TOOLBAR.

Press the draw button. Press LB (Left button) on your mouse, select the horizontal or vertical button and click the starting point. Then go to the second measuring point and press LB on your mouse. The measure value will appear on the screen.

Calibration



If you need a more accurate measuring, the calibration should be done.

Put a ruler horizontally on the subject you wish to measure. Verify that your magnification is the one you want, select the drawing mode, and select “calibration” button. Draw an horizontal line and set your “own value” in mm, then press “set”.

ETHERNET

Connect 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 in Google Chrome browser on every device connected to the same network domain to show a live picture.

IMPORTANT: Edge & Firefox browsers are currently not supported by this unit.

OPTIONAL ACCESSORIES



TEK-TILT_PLUS 360° Inspection Table

Maneuverable tilting table provides perfect object alignment. The table plate is covered with an ESD-safe material. The 4D lens is included to replace standard TEK-SCOPE PLUs lens.

Diameter: 220 mm; Height: 60 mm



TEK-XY Inspection table

Portable XY ESD safe table for easy control of magnified object.

Horizontal Movement: 190mm; Vertical Movement 235 mm; Table Dimension: 420x410 mm; Weight= 4.5 kg

TECHNICAL FACTS

Magnification 27" monitor: 46x optical (bigger monitor size results in increased optical magnification)
up to 460x digital (92x recommended)

Autofocus and manual focus

Free working distance under camera : 310mm

Resolution: FHD on monitor, 1920 x 1080

On screen magnification rate

Sensor: 1.2/8"

Store image on USB stick

Ethernet connection

Wireless Remote control

Frame rate: 60 Hz

Output: DisplayPort / USB

LED light: 12 V, built-in

Weight: 4,5 Kg

SAFETY INFORMATION

Never connect the product if it has been exposed to moisture.

Avoid pinching power cord.

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

Use TEK-SCOPE PLUS only on stable work surface, with at least 45 cm depth.

If normal functions can't be reset after troubleshooting, turn power off and contact your local supplier.

WARRANTY

1 year warranty for manufacturing defects.

CONTACT

Ideal-tek SA

via Motta 4

6828, Balerna - Switzerland

phone: 0041 91 683 3229

email: info@ideal-tek.com

www.ideal-tek.com