

Levenhuk DTX 90

Digital Microscope



EN	User Manual
BG	Ръководство за потребителя
CZ	Návod k použití
DE	Bedienungsanleitung
ES	Guía del usuario
HU	Használati útmutató
IT	Guida all'utilizzo
PL	Instrukcja obsługi
PT	Manual do usuário
RU	Инструкция по эксплуатации
TR	Kullanım kılavuzu

300x
ZOOOOM

5 MEGA
PIXELS



ILLUMINATION



levenhuk
Zoom&Joy

Levenhuk DTX 90

Digital Microscope

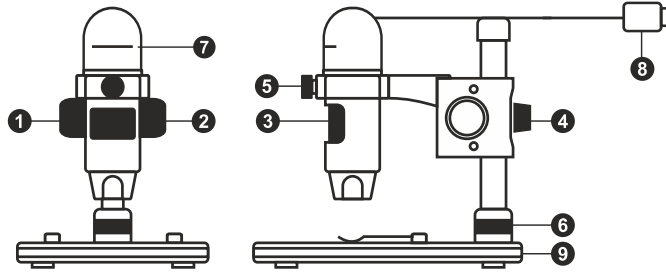
EN

Never, under any circumstances, look directly at the Sun, another bright source of light or at a laser through this device, as this may cause PERMANENT RETINAL DAMAGE and may lead to BLINDNESS.

Microscope parts

- 1 Coarse focus knob
- 2 Focus lock knob
- 3 Fine focus knob
- 4 Mount arm locking knob
- 5 Locking screw
- 6 Mount locking ring
- 7 Brightness adjustment wheel
- 8 USB cable
- 9 Stage

The kit includes: microscope, mount, Levenhuk DTX installation CD, user guide, calibration scale.



Microscope assembly

Take the microscope and all accessories out of the package. Place the stage on a stable surface. Attach the mount locking ring (6) to the metal tube of the mount. Insert the metal tube into the opening on the stage and lock it in place with the ring (6). Insert the microscope into the clamp on the mount arm and tighten the locking screw (5). Tighten the locking knob (4) to lock the mount arm in place. Place a specimen on the stage and use the coarse focus knob (1) to focus your view. Use the fine focus knob (3) for maximum precision and sharpness. Upon focusing your view, tighten the focus lock knob (2) to lock the results.

MicroCapture Pro software

Insert the installation CD into your CD drive. The Main Menu window will be displayed. Click the **Install MicroCapture Pro** to install the application and follow the instructions on screen. The installation CD contains a copy of this User Guide, which you can read by clicking the corresponding entry in the Main Menu. Connect the microscope to your PC with a USB cable and run the MicroCapture Pro application. A pop-up message will warn you if the microscope is not connected to the PC.



Capture an image



Start and stop video recording



Sequence capture (you can set the time to begin capturing images or videos, interval between them, video duration and the number of images or videos to be captured)



Full screen mode. To exit full screen mode, press **Escape** on your keyboard or double-click anywhere on the screen

File

Photos Directory: set a directory for captured images.

Videos Directory: set a directory for recorded videos.

Options

Resolution: set image resolution.

Date/Time: hide or display date and time of capture during preview.

Language: change the language of the user interface.

Crossing: hide or display a grid on images.

Full screen mode: go full screen.

Capture

Photo: capture an image.

Video: record a video.



Save as



Copy to clipboard



Copy file



Previous image



Next image



Undo the last action



Repeat the last action



Draw



Text



Measurement



Calibration

Capturing an image

Click the corresponding icon on the toolbar or select **Photo** from the **Capture** menu.

Recording a video

Click the corresponding icon on the toolbar or select **Video** from the **Capture** menu.

Sequence capture

Click the corresponding icon on the toolbar. A dialog window will appear where you can set a number of parameters for sequence capture. Click the **Photo** radio button to set the time to begin capturing images, interval between them and the total number of images. Click the **Video** radio button to set the time to begin recording videos, their duration, interval between them and the total number of clips.

Calibrating

Before calibrating the microscope, turn the grid display on. To do so, select **on** from **Options > Crossing**. By default, the grid is visible. Place the calibration scale on the stage and focus your view. Make sure that the vertical axis of the grid is parallel to scale divisions and capture an image. Double-click the image thumbnail to open it in a separate window.

Click the corresponding icon on the toolbar to begin calibration. Using your mouse, choose two points on the image (you have to know the actual distance between these two points). Once you choose the second point, a dialog window will open, where you have to enter the known distance in the **Actual dimension** field. The application will automatically calculate the magnification of the image. Click **OK** to close the dialog window. The calculated magnification will be displayed in the **Magnification** field.

Note: chosen points should form a horizontal line.

You can check calibration results by measuring the same distance with the **Any Angle Line** tool. Click the measurements icon, choose the **Any Angle Line** tool and draw a similar line on the image. If the measured distance is equal to the actual distance, calibration has been successful.

Recalibration

The calibration process has to be repeated if the magnification or focus has been changed during observations.

Click the corresponding icon on the toolbar again and select **Reset picture magnification** from **Reset magnification**. Repeat the calibration process, as described above. Change the magnification and capture a few images. Double-click one of the thumbnails to open the resulting image in a preview window. Click the calibration icon on the toolbar and select **Set picture magnification** from **Set magnification**. Enter the current magnification in the dialog window that appears and click **OK**.

If you want to use the same magnification when capturing images in the future, click the calibration icon on the toolbar and select **Set capture magnification** from **Set magnification**.

Measurements

It is recommended to calibrate the system before proceeding with measurements,

Any Angle Line. Press and hold the left mouse button to start drawing a line. Release the left mouse button to complete the line.

Continuous Line. Use this tool to draw a curve on the image and measure its length.

Radius Circle. Draw a straight line on the image. The application will automatically calculate the radius, as well as circumference and area of the corresponding circle.

Diameter Circle. Draw a straight line on the image. The application will automatically calculate the diameter, as well as circumference and area of the corresponding circle.

Three Points Angle. Place three points on the image with your mouse. The application will automatically calculate the angle value.

Draw and text

MicroCapture Pro allows you to add drawings and textboxes to your images. Open an image in a preview window and click the **Pencil** icon on the toolbar. Select one of the tools from the drop-down menu and draw something on the image. By clicking the **TT** icon on the toolbar, you can edit font type and color to be used in textboxes.

Working with the application for Mac OS users

Browse to the **mac** folder on the installation CD and copy **MicroCapture Pro** file to the desktop. Use a USB cable to connect the microscope to your computer. Run the MicroCapture Pro application by double-clicking its icon.

A magnified image of the observed specimen may be seen in the main window of the application. From the **Options** menu, select **Preview Size** to set the image resolution. Keep in mind that the preview window cannot be resized (standard resolution is 640x480). The image resolution is shown in the bottom left corner of the preview window.

From the **Options** menu, select **Date/Time** to display or hide the date and time of capture during preview.

Click the corresponding icon on the toolbar or select **Photo** from the **Capture** menu to capture an image. An image thumbnail will appear on the right side of the main window. Click the corresponding icon on the toolbar or select **Video** from the **Capture** menu to start recording a video. A video thumbnail will appear on the right side of the main window.

Note: during recording, the camcorder icon on the toolbar will turn red. Click the icon again to stop recording.

Image and video thumbnails are displayed on the right side of the main window of the application. Double-click an image thumbnail to open it in a separate preview window. Editing images with MicroCapture Pro application is similar to working with other applications in Mac OS.

Care and maintenance

Never, under any circumstances, look directly at the Sun, another bright source of light or at a laser through this device, as this may cause PERMANENT RETINAL DAMAGE and may lead to BLINDNESS. Take necessary precautions when using the device with children or others who have not read or who do not fully understand these instructions. After unpacking your microscope and before using it for the first time check for integrity and durability of every component and connection. Do not try to disassemble the device on your own for any reason. For repairs and cleaning of any kind, please contact your local specialized service center. Protect the device from sudden impact and excessive mechanical force. Do not apply excessive pressure when adjusting focus. Do not overtighten the locking screws. Do not touch the optical surfaces with your fingers. To clean the device exterior, use only special cleaning wipes and special optics cleaning tools from Levenhuk. Do not use any corrosive or acetone-based fluids to clean the optics. Abrasive particles, such as sand, should not be wiped off lenses, but instead blown off or brushed away with a soft brush. Do not use the device for lengthy periods of time, or leave it unattended in direct sunlight. Keep the device away from water and high humidity. Be careful during your observations, always replace the dust cover after you are finished with observations to protect the device from dust and stains. If you are not using your microscope for extended periods of time, store the objective lenses and eyepieces separately from the microscope. Store the device in a dry, cool place away from hazardous acids and other chemicals, away from heaters, open fire and other sources of high temperatures. When using the microscope, try not to use it near flammable materials or substances (benzene, paper, cardboard, plastic, etc.), as the base may heat up during use, and might become a fire hazard. Always unplug the microscope from a power source before opening the base or changing the illumination lamp. Regardless of the lamp type (halogen or incandescent), give it some time to cool down before trying to change it, and always change it to a lamp of the same type. Always use the power supply with the proper voltage, i.e. indicated in the specifications of your new microscope. Plugging the instrument into a different power outlet may damage the electric circuitry of the microscope, burn out the lamp, or even cause a short circuit. Children should use the device under adult supervision only. Seek medical advice immediately if a small part or a battery is swallowed.

Battery safety instructions

Always purchase the correct size and grade of battery most suitable for the intended use. Always replace the whole set of batteries at one time; taking care not to mix old and new ones, or batteries of different types. Clean the battery contacts and also those of the device prior to battery installation. Make sure the batteries are installed correctly with regard to polarity (+ and -). Remove batteries from equipment that is not to be used for an extended period of time. Remove used batteries promptly. Never short-circuit batteries as this may lead to high temperatures, leakage, or explosion. Never heat batteries in order to revive them. Do not disassemble batteries. Remember to switch off devices after use. Keep batteries out of the reach of children, to avoid risk of ingestion, suffocation, or poisoning. Utilize used batteries as prescribed by your country's laws.

Specifications

Image sensor	5 Mpx
Magnification	10–300x
Available image resolutions	2592x1944, 2048x1536, 1600x1200, 1280x960
Available video resolutions	2592x1944 (15fps); 2320x1744 (15fps); 2048x1536 (20fps); 1920x1080 (25fps); 1280x1024 (30fps)
Photo/video format	*.jpeg/*.avi
Focusing	Manual, 0–150mm
Illumination	8-LED system with variable brightness
Power source	USB 2.0 cable
Software language	English, German, Spanish, Russian, Italian, French, Portuguese, Dutch, Polish, Japanese, Korean, Chinese
Microscope dimensions	110mm x 33mm
Mount dimensions	12mm x 118mm x 165mm

The manufacturer reserves the right to make changes to the product range and specifications without prior notice.

System requirements

Operating system: Windows 7/8/10, Mac 10.12 and above
CPU: at least P4 1.8 GHz, RAM: 512 MB, interface: USB 2.0

Levenhuk International Lifetime Warranty

All Levenhuk telescopes, microscopes, binoculars, and other optical products, except for their accessories, carry a **lifetime warranty** against defects in materials and workmanship. A lifetime warranty is a guarantee on the lifetime of the product on the market. All Levenhuk accessories are warranted to be free of defects in materials and workmanship for **six months** from the purchase date. The warranty entitles you to the free repair or replacement of the Levenhuk product in any country where a Levenhuk office is located if all the warranty conditions are met.

For further details, please visit: www.levenhuk.com/warranty

If warranty problems arise, or if you need assistance in using your product, contact the local Levenhuk branch.