

Levenhuk DTX 350 LCD

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
- RU Инструкция по эксплуатации



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Zoom&Joy

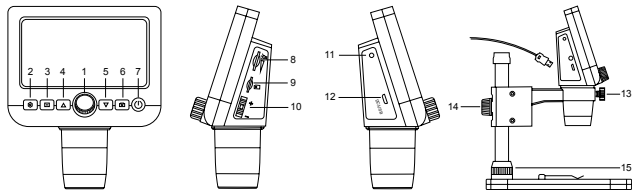
Levenhuk DTX 350 LCD

Digital Microscope

EN

Microscope parts

- | | |
|------------------------|---------------------------|
| 1 Focusing wheel | 11 Charging indicator |
| 2 Setup | 12 DC: charge battery |
| 3 Photo/Video/Playback | USB: output to PC |
| 4 Up | 13 Locking screw |
| 5 Down | 14 Mount arm locking knob |
| 6 Capture | 15 Mount locking ring |
| 7 Power on/off | |
| 8 LED Dimmer | |
| 9 MicroSD slot | |
| 10 Digital zoom button | |



The kit includes: microscope, microscope stand, USB cable, 1GB microSD memory card, software CD, user manual and warranty slip.

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 assembly

Take the microscope and all of the accessories out of the package. Place the stage on a stable surface. Attach the mount locking ring (15) 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 (15). Insert the microscope into the clamp on the mount arm and tighten the locking screw (13). Tighten the locking knob (14) to lock the mount arm in place. To power the microscope connect it to your PC with a USB cable.

PortableCapture software

Insert the installation CD into your CD drive. Double-click **PortableCapture** to install the application and follow the instructions on the screen. The installation CD contains a copy of the user manual, which you can find in the User Manual folder. Connect the microscope to your PC with a USB cable and run the PortableCapture application. A pop-up message will warn you if the microscope is not connected to the PC.

Using the microscope

Focusing adjustment

Place a specimen on the stage and rotate the focusing wheel (1) until the view is focused.

Digital zoom

Push the digital zoom button on the microscope body (10) to zoom in or zoom out.

Capturing an image or recording a video

- 1) Insert a microSD card into the microSD slot (9). Maximum card size is 32GB.
- 2) Turn the Focus wheel (1) to focus the image of your object to its best focus.
- 3) Press the Capture button (6) and the photo will be saved to the microSD card.
- 4) To switch to the video recording mode, press the Photo/Video/Playback button (3). Then, press the Capture button (6) to start video recording. Press the Capture button again to stop video recording.

Playback

- 1) Insert a microSD card into the slot (9).
- 2) Press the Photo/Video/Playback button (3) to switch to playback mode.
- 3) Press the Up (4) and Down buttons (5) to scroll to the previously captured photos and videos.

Deleting files

- 1) Insert a microSD card into the slot (9).
- 2) Press the Photo/Video/Playback button (3) to switch to playback mode.
- 3) Press the Setup button (2) to choose a file to delete.

Mass storage on PC

- 1) Insert a microSD card into the slot (9).
- 2) Connect the microscope to your PC with the USB cable to download images or videos from the card to your computer.

Preview on PC

- 1) Only works with the software installed.
- 2) Remove the microSD card from the slot.
- 3) Connect the microscope to your PC with the USB cable.

Application menu



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 Folder: set a directory for captured images.

Videos Folder: 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.

XY Guide: hide or display a grid on images.

Full screen mode: go full screen.

Capture

Photo: capture an image.

Video: record a video.

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.



Save as



Repeat the last action



Copy to clipboard



Draw



Copy file



Text



Previous image



Measurement



Next image



Calibration



Undo the last action

Calibration

Before calibrating the microscope, turn the grid display on. To do so, select **On** from **Options > XY Guide**. 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 **Straight line** tool. Click the measurements icon, choose the **Straight 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.

Straight line. Press and hold the left mouse button to start drawing a line. Release the left mouse button to complete the line.

Continuous Line. Press and hold the left mouse button and draw a line. Release the left mouse button to complete the segment. You can continue adding more segments to the free-form line.

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. Press and hold the left mouse button to draw a line on the image. Release the left mouse button and draw another line. The application will automatically calculate value of the resulting angle.

Draw and text

PortableCapture 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.

Specifications

LCD display	4.3"
Optics material	optical glass
Megapixels	0.3 (interpolated to 8M, 5M, 3M, 1.3M)
Magnification	20–600x
Photo	*.jpg
Video	*.avi
Focusing	manual, 5–80mm
Speed	30fps
Illumination	8-LED system with brightness adjustment
Stage	with clips and a measuring scale
Body material	plastic
Power source	5V DC-in via USB cable or built-in Li-ion battery: 3.7V, 2500mAh work time: 7 hours; charging time: 5 hours
Software	image and video processing software with measurement function
Software language	English, German, French, Spanish, Russian, Italian, Portuguese, Polish, Dutch, Japanese, Korean, Chinese
Ability to connect additional equipment	support of microSD cards with capacity up to 32GB (1GB microSD card included in the kit) connect to PC via USB cable (included)
Operating temperature range	0...+45 °C / 32... 113 °F

Levenhuk reserves the right to modify or discontinue any product without prior notice.

System requirements

Operating system: Windows 7/8/10, Mac 10.12 and above
CPU: at least P4 1.8GHz or above, RAM: 512MB, Video card: 64MB
Interface: USB 2.0, CD drive

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. White LEDs are very bright; do not look at them as this may cause permanent damage to your vision. Take necessary precautions when using the device with children or others who have not read or who do not fully understand these instructions. 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. After unpacking your microscope and before using it for the first time check for integrity and durability of every component and connection. 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 apply excessive pressure when adjusting focus. Do not overtighten the locking screws. Protect

the device from sudden impact and excessive mechanical force. 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. 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. Do not submerge. Be careful during your observations, always replace the dust cover after you are finished with observations to protect the device from dust and stains. To avoid data loss or equipment damage, always close the application first, and then disconnect the microscope from your PC. Wait until the illumination goes off completely, and disconnect the microscope. **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

Utilize used batteries as prescribed by your country laws. Never attempt to recharge primary batteries as this may cause leakage, fire, or explosion. Never short-circuit batteries as this may lead to high temperatures, leakage, or explosion. Never heat batteries in order to revive them. Remember to switch off devices after use. Keep batteries out of the reach of children, to avoid risk of ingestion, suffocation, or poisoning.

Levenhuk International Lifetime Warranty

All Levenhuk telescopes, microscopes, binoculars and other optical products, except for accessories, carry a lifetime warranty against defects in materials and workmanship.

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 date of retail purchase. The warranty entitles you to free repair or replacement of the Levenhuk product in any country where a Levenhuk office is located if all warranty conditions are met. For further details please visit our web site:

www.levenhuk.com/warranty/

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