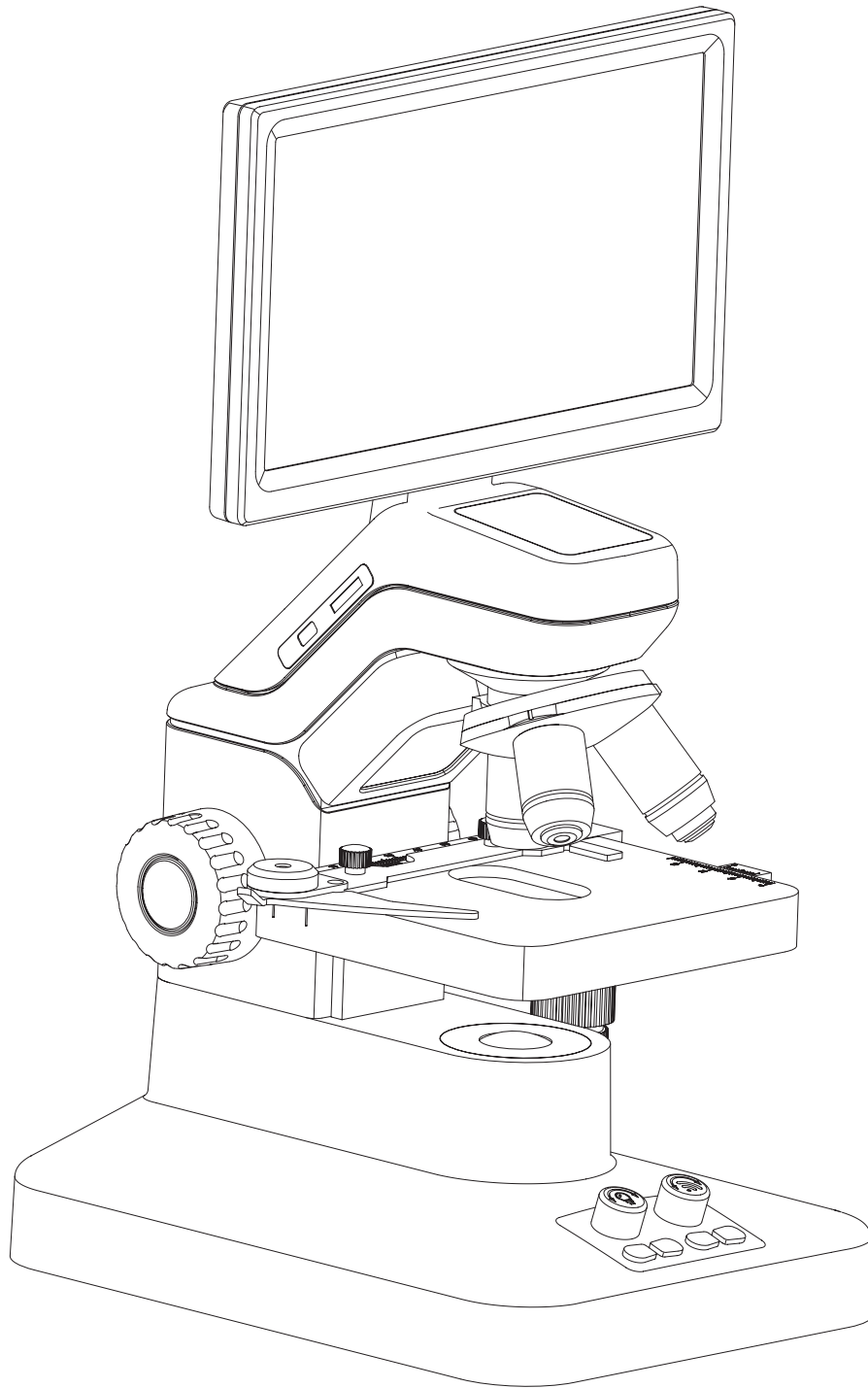


AmScope DM Series

DM300HD



Thank you for purchasing the **AmScope DM300HD Full HD Digital Microscope**.

Please read this manual carefully before using this product to ensure correct and safe use.

- The content of this manual is subject to change without notice.
- The appearance of the product can differ from the models described in this manual.
- Some optional components described in this manual may not be included in your purchase.

This manual will provide information pertaining to the setup, operation, and maintenance of the DM300HD digital microscope. Please familiarize yourself with the necessary precautions and procedures prior to operating this instrument. Certain features and specifications are subject to change.

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Handle with care

- This product is a precision optical instrument. Delicate handling is required.
- Avoid subjecting it to sudden shocks and impacts.
- Impacts – even small ones – can affect the precision of the instrument.

Handling the LED

Note: The LED illumination system is not designed to be user-serviced. Contact AmScope for any concerns or service requirements.

- Despite being energy-efficient, the LED illumination system emits heat. Avoid touching the field lens or lamp-housing.

Dirt on the lenses

- Dirt on or inside the optical components such as the digital display or objective lenses will negatively affect the image quality of your instrument.
- Always try to prevent your microscope from getting dirty by using the dust cover, avoid leaving fingerprints on the lenses and clean the outer surface of the lens regularly.
- Cleaning optical components is a delicate matter. Please read the cleaning instructions in this manual carefully.

Environment, storage and use

- This product is a precision instrument and it should be used in a proper environment for optimal use.
- Install your product indoors on a stable, vibration free and level surface.
- Do not place the product in direct sunlight.
- The ambient temperature should be between 5°C and 40°C (41°F and 104°F), and maximum humidity is 80% at 31°C, decreasing linearly to 50% at 40°C. This product in a hot, humid location may result in the formation of mold or condensation on lenses, impairing performance or causing malfunctions.
- Never use undue force when turning the knobs.
- Make sure that the microscope system can dissipate its heat.
- Keep the microscope approximately 15cm away from walls and obstructions.
- Never turn the microscope on when the dust cover is in place or when items are placed on the microscope.
- Keep away from flammable fluids, fabric etc.

Disconnect power

- Always disconnect your microscope from power before doing any maintenance, cleaning, assembling or replacing LEDs to prevent electric shocks.

Battery

WARNING

- Handling: Always use caution and care to avoid damaging the battery.
- Charging: Always charge on a flat non-flammable surface.
- Storage: Store batteries in a cool and dry location preferably inside the equipment.
- Exposure: Do NOT expose the battery to high temperatures or liquids.
- In case of smoke or FIRE: Stop using and unplug the device. If safe to do so, move the device away from anything flammable. Move a safe distance away from the device and contact emergency services.

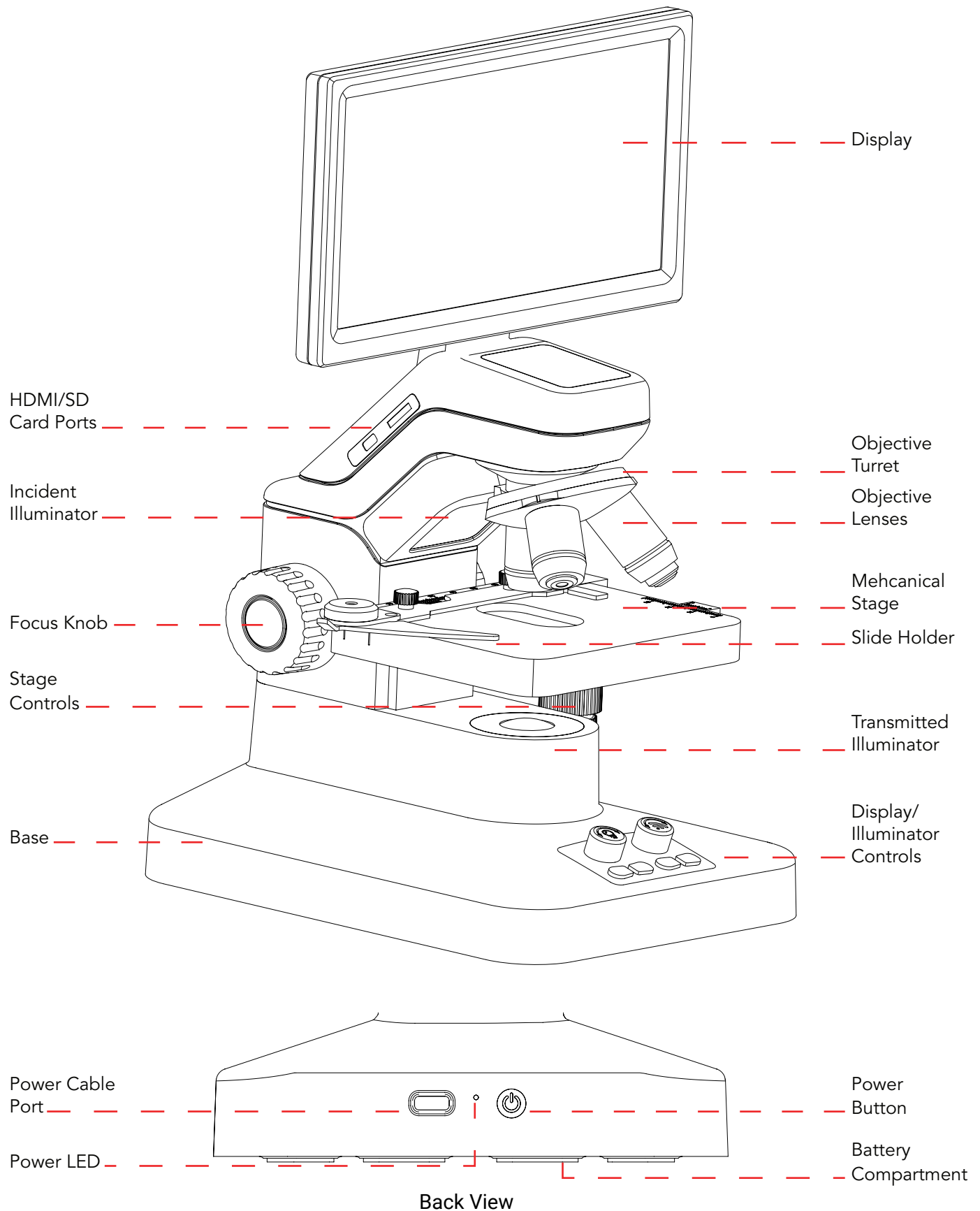
Avoid wet conditions

- Do not use in wet conditions. Exposing the electrical system to water or other fluids may result in damage to the instrument and personal injury.

Moving

- Lift the digital microscope by holding the arm in combination with the base of the microscope to ensure it is well supported.
- Avoid lifting or carrying the microscope by other parts such as focusing knobs, the stage, or screen.

The names of the several parts are indicated in the picture:



1.1 Out of the Box

The DM300HD microscope arrives completely assembled and almost ready to use right out of the box. Remove the inner packaging from within the box and position so that the packaging prevents the accessories from falling out when opened. Additional components in the packaging include a main power adapter cable to power the digital microscope, a 32GB SD card to store images and videos, a rechargeable battery for portable, cable-free use, and a carrying bag to store the microscope and all of its accessories.

Packing List:

- 1x DM300HD Microscope
- 1x USB Power Adapter
- 1x USB-C Cable
- 1x HDMI Cable
- 1x Carrying/Storage Case
- 1x 32GB microSD Card
- 1x 18650 Rechargeable Battery

1.2 The Objective Lenses

The microscope is equipped with four objective lenses which are mounted on a rotating turret. Should the lenses be removed for transport, they are mounted and unmounted by rotating each lens clockwise or counter-clockwise respectively. The lenses are typically mounted in order from 4X to 100X, but can be interchanged as desired.



2.1 Power

Install the rechargeable battery by opening the compartment on the bottom of the microscope making sure that the polarity is correct. Plug the included power adapter into an outlet and the USB-C cable into the adapter and the back of the microscope to begin charging. The indicator LED between the USB port and the power button will display different colors depending on the status. While charging, the LED will be red. While ON and charging, the LED will be a combination of green and red. While ON and not charging, the LED will be green. Battery level can be checked by turning on the microscope while unplugged and looking at the battery icon in the top right corner of the screen. It is recommended to fully charge the battery before first use. While plugged in, the microscope can operate without the battery.



2.2 Controls



Press to open menu, press again to close. If in a selected menu option, press again to return to the main menu.



Press to switch between top and bottom lights. Rotate to control intensity.



Multiple uses; while in live-viewing mode, rotate for digital zoom or press to bring up instructions. While in the menu or album, rotate to move between options and press to select.



Press to capture an image.



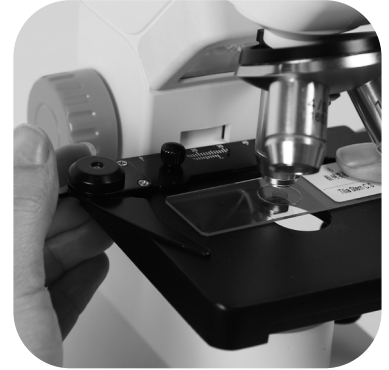
Press to begin video recording. Press again to stop recording.



Press to navigate to the album. While a photo or video is selected, press the menu button to delete or lock.

2.3 Mounting a specimen

This microscope is designed to view translucent specimens mounted primarily on 3" x 1" glass slides. A metal template with caliper is attached to the top of the stage. A prepared slide can be placed on the stage by pushing the caliper lever outward to open the caliper, then sliding the slide in place so the long edge is flush against the back edge of the template. Gently releasing the caliper will secure the slide in place.



2.4 Illumination



The microscope's illumination will automatically light when powered on. To change between the Top (incident) and Bottom (transmitted) illuminator, press down on the lightbulb button on the control panel at the front of the microscope. The intensity of both lights can be adjusted by rotating the lightbulb button left (lower) and right (higher).



2.5 Locating the specimen, and focusing

With the specimen mounted on the stage, and the illuminator turned on, use the stage's X-Y control knobs under the right side of the stage to adjust the position of the specimen. The larger knob will move the specimen forward and backward, while the smaller knob will move the specimen left and right. Sliding the specimen towards the front of the microscope will result in the viewed image moving in the opposite direction. Use the knobs until the specimen appears to be centered under the objective lens. This will be the starting point.



Observation should typically begin at the lowest magnification. This provides the broadest view of the specimen. Rotate the objective turret to set the lowest magnification lens in place.

Gradually adjust the focus knob to raise the stage until an image begins to form on the screen. Make further adjustments to the stage position to center the area of interest, then slowly adjust the focus knob until details can be seen clearly. To increase magnification, rotate the objective turret to use the lens with the next highest magnification. Adjust the stage position and focus as needed.

You can further hone in on the specimen by utilizing the digital zoom which can be increased or decreased by rotating the Right knob on the control panel up to a maximum of 20X.

Video Resolution

Changes the resolution of recorded video. Options include:

- FHD 1920 x 1080
- HD 1280 x 720

Photo Resolution

Changes the resolution of captured images. Options include:

- 8M 3856 x 2160
- 5M 3040 x 1712
- 2M 1920 x 1080

Exposure

Changes the amount of time used to capture an image. This value can be increased or decreased by 1/3 stop increments. Increasing exposure by 1 full stop doubles the amount of light collected, and decreasing by 1 full stop halves the amount of light collected.

Brightness

Adjusts the image brightness on a scale of 0 to 100

Contrast

Adjusts the image contrast on a scale of 0 to 100

Sharpness

Adjusts the image sharpness on a scale of 0 to 100

White Balance

Manually adjust the image white balance using Red, Green, and Blue channels

Quality

Changes the quality of saved images. Higher quality images have larger file sizes. Options include:

- High Quality
- Standard
- Economic

Color Filter

Display the on-screen image in Color, Black & White, or with a Sepia filter

ISO

Changes the gain applied to the image being captured. Increasing the value can increase brightness without needing to increase the Exposure, but will introduce image noise. Values range from 100 to 1600.

Auto Power Off

Set the amount of time before the instrument will power off when not being used. Values include Off, 1 Minute, 2 Minutes, 3 Minutes, 5 Minutes, and 10 Minutes.

Language

Sets the display language.

Power Frequency

Sets the power frequency to correspond with the power source being used. Values include 50Hz and 60Hz.

Scaleplate

Displays an overlay consisting of a crosshair reticle and measurement conversion information which allow you to measure on-screen objects. Select the value corresponding with the objective lens currently being used to display the relevant conversion.

Image rotation

The on-screen image can be flipped horizontally, vertically, or both.

Format

If a MicroSD card is inserted, this function will format the card using FAT32.

Default Settings

Restores the instrument's default settings

Version

Displays the current software version

Objective Lens	4X
	10X
	40X
	100X
Display	7" HD IPS Monitor
Sensor	CMOS
Pixels	2MP
Sensor Size	1/2.8"
Pixel Size	2.0um x2.0um
Frame Rate	25-30 FPS
Compatibility	HDMI, PC
Optical System	Finite conjugate
Objective Turret	Quadruple nosepiece
Focusing System	Coarse focus
Digital Zoom	Up to 20X
Stage Design	Double-layer with caliper
Stage Dimensions	95.5mm x 104.5mm
Illumination	Variable-intensity LED, Top 0.06W, Bottom 0.75W
Power	5V/2A, 100-240VAC 50/60Hz wide-band
Battery	Rechargeable Li-Ion 18650, 3.7V/2000MAH

If you have a question concerning your AmScope Microscope, contact AmScope Customer Service at:

Email: info@amscope.com

Telephone: 1-888-950-2888 (toll free) / 949-333-0001.

Fax: 949-271-4795

In the event that your microscope requires returns or exchange, write or call the AmScope Customer Service first, before returning the microscope, provide a detailed description of the problem, as well as your name, address, and daytime telephone number. The great majority of service issues can be resolved by telephone, avoiding the return of the microscope. If factory service is required, you will be assigned a Return Merchandise Authorization (RMA) number prior to the return.

[illegible]



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www.amscope.com