DT1017

LCD Digital Microscope

Microscope Description:

I. Application

DT1017 of bio-microscope has modern frame and can fit 45°inclined monocular, binocular, trinocular head on it. Double layer mechanical stage with adjustable long handle and coaxial coarse/fine focus knob make the operation easily. It is also provided with high quality achromatic objectives, wide field eyepieces and LED lamp adjustable brightness, which guarantee the best image. It is widely used for examination, teaching demonstration, bacteioscopy and cytoscopy in colleges and university, medical and health establishments, research institutes and department of forestry and agriculture and so on.

II. Specification of Standard Accessories

1. Objectives

Category	Magnification	Numerical aperture	Working distance
Achromatic Objectives	4X	0.10	37.5
	10X	0.25	7.316
	40X	0.65	0.632
	100X(oil)	1.25	0.198

2. Eyepieces

Designation	Magnification	Diameter Of The Field Of View	Focal Length
Wide Field	10X	18MM	24.94MM
Wide Field	16X (Optional)	11MM	15.58MM

3. Total magnification

4. Mechanical tube length: 160mm

Objectives / Eyepieces / Total magnification	4X	10X	40X	100X
10X	40X	100X	400X	1000X
16X (optional)	64X	160X	640X	1600X

5. Objective to primary image distance: 195mm

6. Stage size: 140mm X 132mm, moving range: 75 X 45mm

7. ABBE condenser, N.A. =1.25 with iris diaphragm

8. Coarse/fine focal range: 20mm

9. Illumination: 3W LED with adjustable brightness

10. Net weight: 6 kg

11. Measurement (including viewing head): 262mm(L) X 204mm(W) X 389mm(H)

III. Structure (showed as diagram)

DT1017 microscope is composed of nine main component parts:

1. Stand: It's the base bearing total weight of microscope, which built in illumination system, electronic parts and connecting control.

2. Rise and fall support: It connects with stage, arm and condenser. Stage and condenser can move vertically through it for proper operation.

3. Arm: It's the central part connecting the frame and every main component part. It's provided with coaxial coarse/fine focus system, with tension adjustable knob and limited stopper. It guarantees the stage rise and down smoothly.

4. Viewing head: It can fit on 45°inclined monocular, binocular, or trinocular head.

5. Eyepieces: Using WF10X or WF16X (optional) wide field eyepiece.

6. Nosepiece: It guarantees comfortable and precise rotation by quadruple revolving nosepiece.

7. Objective: 4X, 10X, 40(S) and 100X(S, Oil) high-quality achromatic objectives make the imaging clearly.

8. Stage: Using double layer mechanical stage, it can be operated much easily by coaxial knob in low position.

9. Condenser: ABBE condenser N.A =1.25 with iris diaphragm.

IV. Operation Instruction

1. Insert the eyepieces into the eyepiece tube, and screw objectives into the nosepiece in sequence of different magnification from low to high. Then put the specimen on the stage and secure it in the position with tablet and move it to the center of stage.

2. Turn on the power switch and adjust the brightness from dark to bright slowly. After working, you must adjust the brightness to a little dark before you tune it off.

3. Observe the specimen from lower magnification objective firstly and move the

specimen to the center of view field, then rotate higher magnification objective. You may use the fine focusing knob to obtain the clear image. When 100X (S, Oil) objective is used , you should fill up with cedar wood oil (without bubble) between the front of objective and the specimen surface. After working, it should be wiped with a few xylene immediately.

4. In order to obtain bright and clear image, the illumination must be adjusted .When different objective is chosen, you should adjust the iris diaphragm of the condenser and different brightness of the light.

5. When the lamp needs to replace, you should shut off the power switch and replace it after the lamp is cool. NOTE: The contact must be firmed, and the filament center should be adjusted.

V. Maintenance

1. Exam the connection of every component parts is firm when opening the package and installing the microscope. Be careful, not overexert to break the instrument.

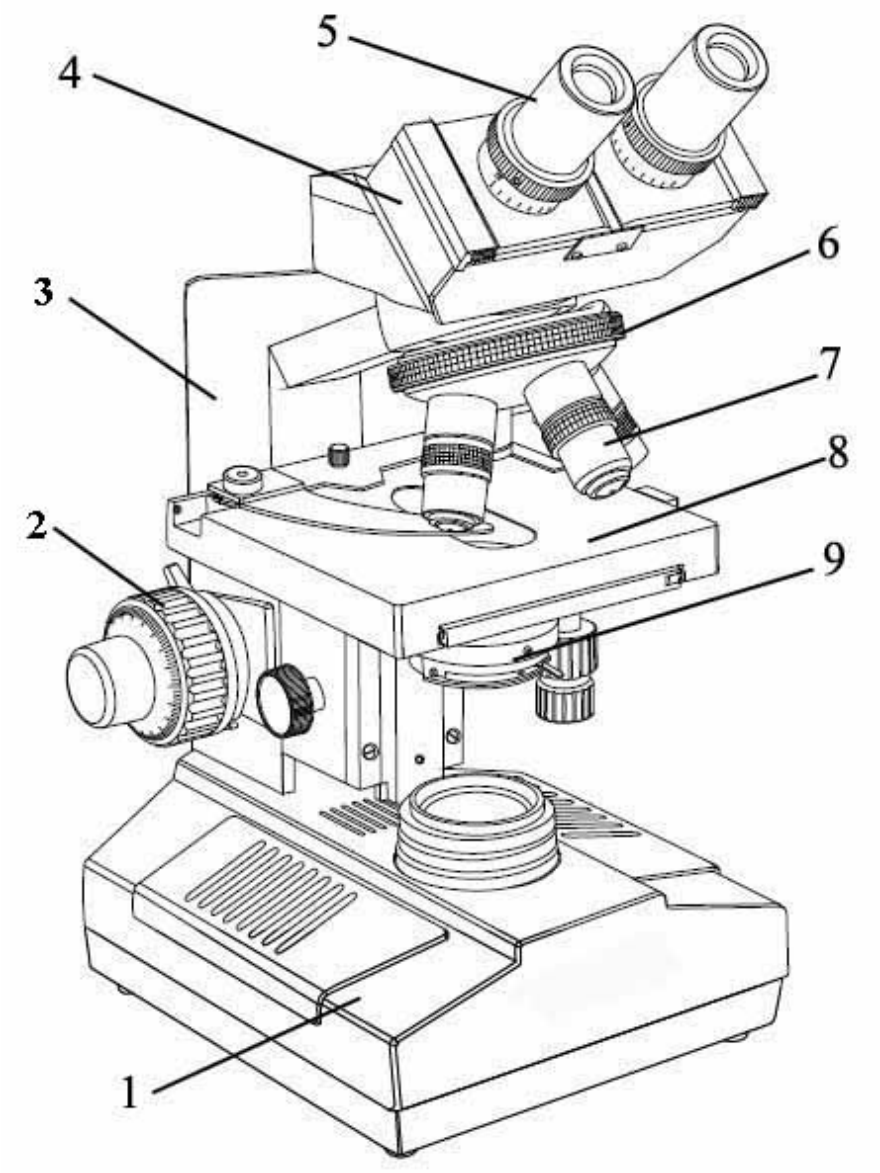
2. Operate correctly, and put the dust cover on the microscope after work to prevent from the dust and oil strain.

3. Don’t dismantle the instrument rashly besides the replaceable lest the correct position should be breached.

4. Keep the instrument in dry and cool place and away from the pollution and corrosion.

5. Please send the instrument to the special repair shop if it goes out of order.

6. When the objectives and eyepieces won’t be used for a long time, please place them into a dry box , and put the dust cover onto the microscope.



DT1017 Biological Microscope

1-STAND 2- RISE AND FALL SUPPORT 3- ARM 4-BINOCULAR HEAD

5-EYEPIECE 6-NOSEPIECE 7-OBJECTIVE 8-STAGE 9-CONDENSER

VI. Standard Outfit of DT1017 Biological Microscope

Objective	4X, 10X, 40(S), 100X(S, Oil)	●
Eyepiece	WF10X	●
	WF16X	optional
Viewing Head	Sliding Trinocular Head	●
Nosepiece	Quadruple	●
Stage	Double Layer Mechanical Stage	●
Illumination	3WLED or 6V / 20W Halogen Lamp	●
Condenser	Abbe Condenser N.A=1.25	●

VII. Full Set of the Instrument

1. Main Body of DT1017 Microscope 1 PC
2. Viewing head 1 PC
3. Objectives: 4X, 10X, 40X(S), 100X(S,O) 1 PC of each
4. Eyepiece WF 10X 1 PAIR
5. 3W LED or 6V/20W halogen lamp 1 PC
6. Fuse BGX1-20 (1.0 A) 1 PC
7. Green filter 1 PC
8. Ceda wood oil 1 BOTTLE
9. Operational manual 1 COPY
10. Power cable 1 PC
11. Dust cover 1 PC
12. Desiccant 1 PACKET
13. Eyepiece WF 16X OPTIONAL
14. Plain-concave mirror OPTIONAL
15. Yellow & blue filter OPTIONAL
16. Wooden box OPTIONAL

LCD Full HD Screen + HDMI/USB Digital Camera:

I. Introduction

Microscope HD Digital Display and Storage System is customized for the development of microscopes, used for microsection and other observed objects collection, display, storage integration equipment. Pictures and video of the collected objects can be retained. Including the acquisition side: HD HDMI camera (1920*1080); Display terminal: HD LCD screen.

The system is designed for medical and industrial fields of new product; image restoration effect is good, structured.

Through the 2MP (1080p) high-speed transmission camera, the high-speed camera used at the acquisition end has no dragging and delay, which brings the user a sense of lightness and pleasure, and perfectly presents the picture under the microscope objective on the system's own screen.

The data acquisition terminal and the screen terminal are connected by HDMI transmission, and can be connected to the large-screen display device according to the actual demand.

With clear and accurate positioning of the center cross line.

There are 3 ways to use this camera:

--HDMI To Screen,

Connect Camera To LCD Screen By HDMI Cable, With TF Card Inserted, User Can View Image On LCD Screen, Take Photo / Video To TF Card By Remote Controller.

--TF Card To Computer

Connect Camera To Computer By USB Cable, With TF Card Inserted, User Can Read /Copy Content From TF Card To Computer

--USB To Computer

Connect Camera To Computer By USB Cable, Remove TF Card, Switch Off LCD Screen, User Can View Real Time Image From Computer Software, Take Photo/Video To Computer At 1920*1080, Measure Length, Angle In Software.

The Software For PC Windows System Support English/Arabic Language.

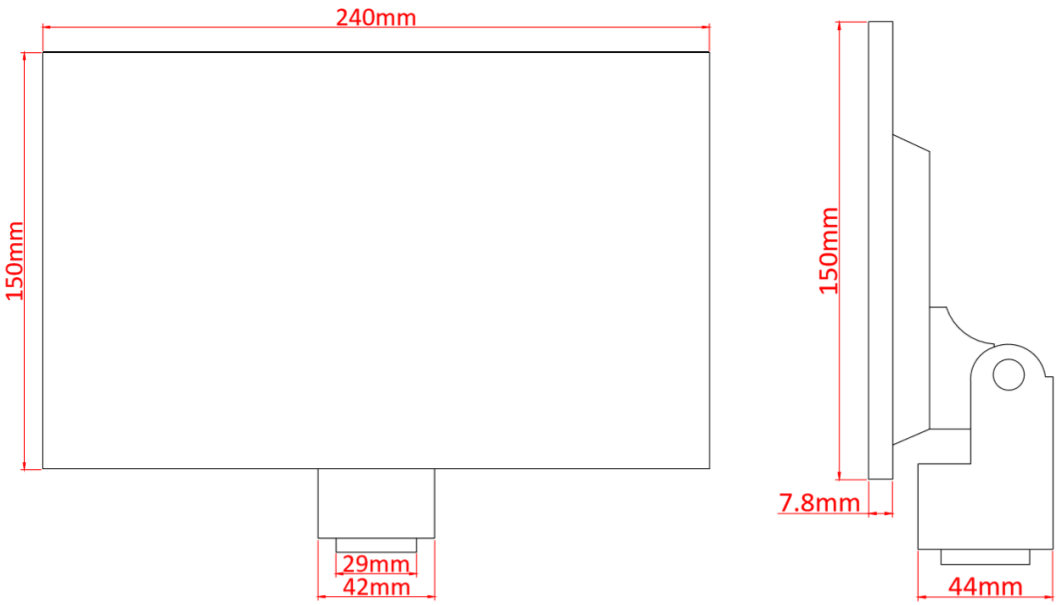
II. Standard

Product Model	EC-HX202
Product Name	Microscope HD Digital Display and Storage System
Screen Size	10.1" (1080P)
Sensor	1 / 2.86"Color CMOS
Pixel Size	2.75μm * 2.75μm
Max Resolution	1920 x 1080
Definition	FULL HD
White Balance	Manual Operation
Memory Card	TF Class10
Photo/Video	Support
Cross Hair	Support
Menu	Brightness, Contrast, Saturation, RGB, Language Settings
Interface	HDMI / USB2.0
Power	DV-5V
Operating Temperature	-10+50℃
Operating Humidity	10% ~ 90%

III. Application Scenarios

Biological Recognition	Portrait detection, Fingerprint, Palmprint recognition, Iris detection, etc
Defect Elimination	Test the quality of the products
Accurate Measurement	Area measurement, Three - coordinate measurement, Three - dimensional scanning, Stereo vision measurement, etc
Tracking Identification	Qr code, Commodity code, etc
Medical Research	Pathological imaging, Microscopic imaging, Specimen collection, etc

IV. Structure



4.1 Front view & Side view

4.2 Control Panel

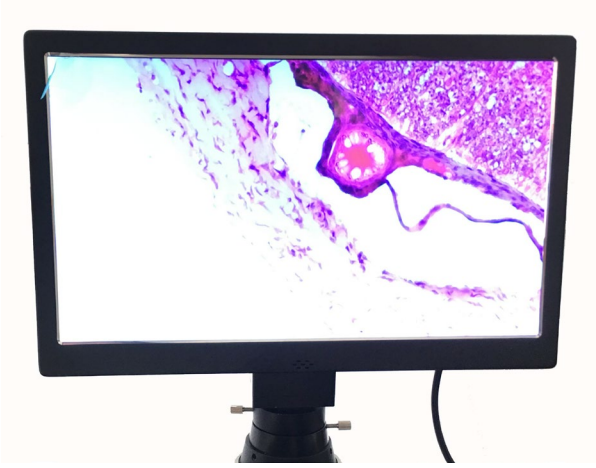
Control Panel with product configuration can control operation:

Take photos, record videos, view photos/videos, return to preview state, manual white balance, And through the menu, adjust brightness, contrast, saturation, RGB color, language Settings and other functions.

Unsatisfactory photos / videos can be deleted.

Adjustable cross hair function.

VI. Pictures



Front

Back

1. USB Interface description

6.1 When the computer is connected to USB, the all-in-one machine can be used as an external U-disk, and the computer terminal can directly read the files in the TF card.

6.2 The card reader can only be connected to the computer. The TF card cannot be inserted into the card reader.

2. Interface Description

The camera interface

The screen interface

3. Wire connection instructions

Pad's HDMI connected with Camera's HDMI

4. Packing List

Pad&Camera, Control Panel, 16G TF card, miniHDMI cable, Card Reader, Power supply, Product manual.