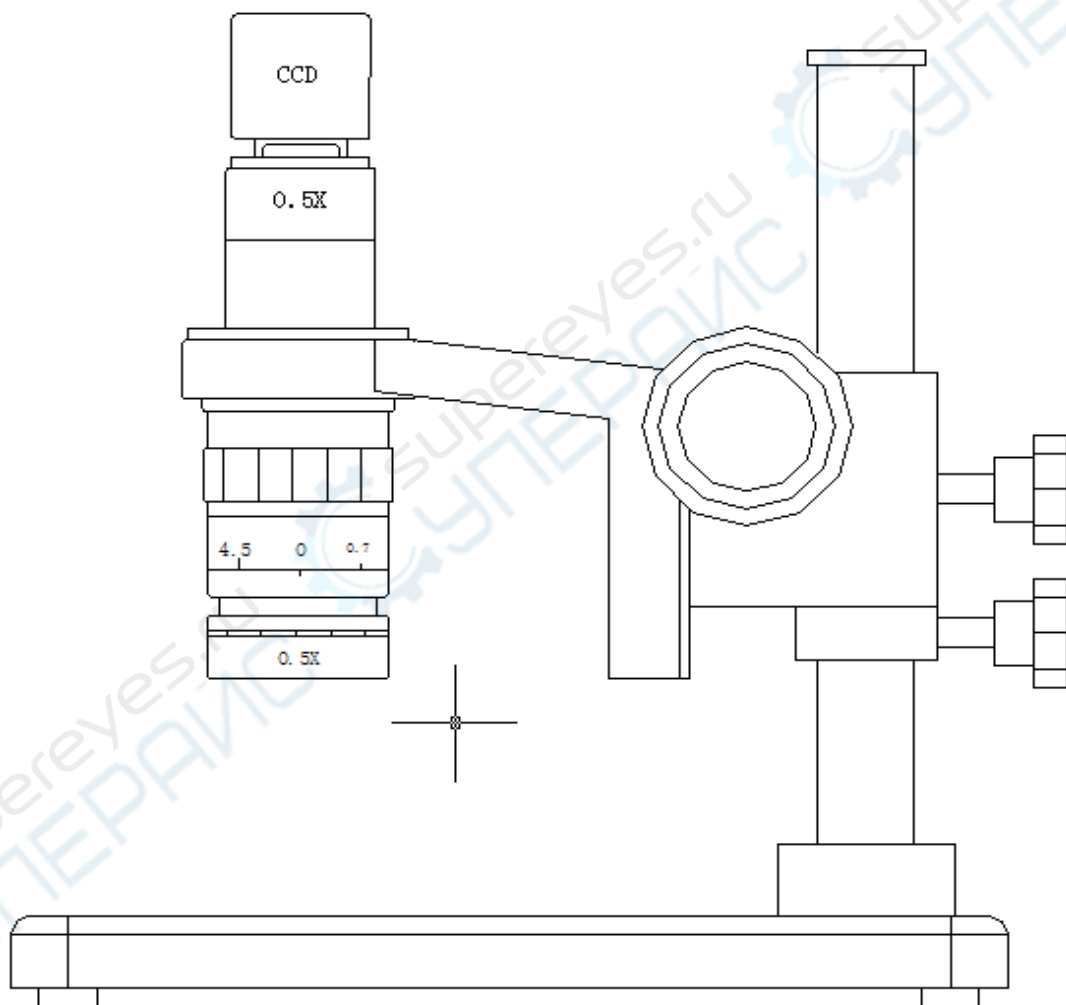


TELEVISION MICROSCOPE

10 Series

Operation Instruction



Please read this operation instruction
before you use microscope

CATALOGUE

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Attention

1. be sure not to disassemble

Random to disassemble can easily lead the instrument broken, Please do not random to disassemble any parts except this operation instruction mentioned can disassemble of parts. If find the instrument out-of-order, Please ask professional person to repair or direct to contact supplier.

2. Inspect the voltage

1) Microscope base marked rated input voltage values. Pay attention to match the local service voltage. If the microscope use under un-nominal voltage, will be serious damage.

2) Power supply socket should earthing fine.

3. prevent burn and fire

1) during illumination, the bulb will be very hot. Be careful that do not touch your skin. to avoid burn.

2) change the bulb should after cooling

3) to avoid fire, inflammable do not close to bulb.

4. change the bulb

1) to avoid electric shock and damage the instrument, before change the bulb, should pull out the attaching plug.

2) only use specified halogen and fluorescence lamp tube.

3) should wear gloves or use protective jacket mantle the bulb, Your hand do not touch the glass of bulb. After changing the bulb, use the clean cloth to dip in straight alcohol, then wipe off the fingerprint and splodge that showed on bulb. Otherwise bulbs can be easily broken and reduce the lightness.

5、 carry and place

1)should turn off power switch before carry the microscope

2)working environment requirement:

room temperature: $0^{\circ}\text{C}\sim 40^{\circ}\text{C}$

maximum relative humidity: 85%

3)when use the microscope should avoid under sunlight perpendicular incidence

4)avoid the microscope put on dust environment, If disuse, should coat on dust cover.

5)the microscope should placed in no vibrative place.

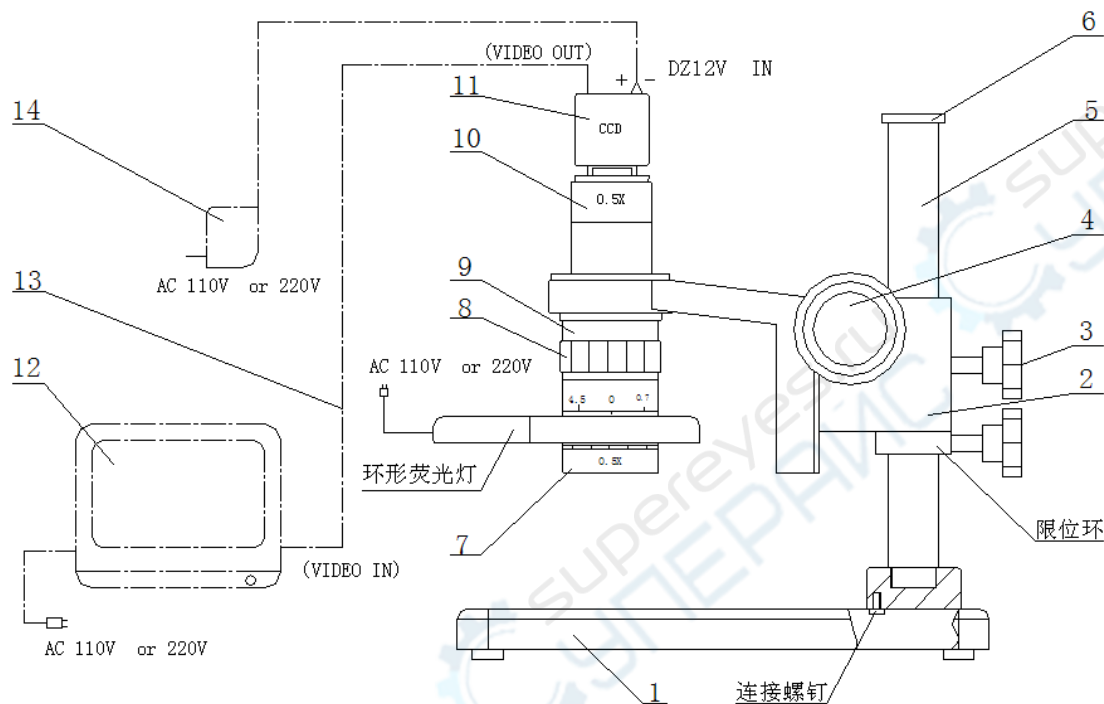
一、 brief:

二、 10 series of television microscope is a zoom stereo microscope,adopt unique achromatism and large depth of field technician,clear image ,strong stereoscopic impression and long working distance,wide of visual field and so on.Matching high definition of colours CCD and television.Designed with 0.5X,2X Series of additional objective and 0.35X,0.5X,1X Series of camera eyepiece.According user different situation requirement,specially designed many kinds of illuminator device.can according the observed sample choose up & down double halogen bulb;up halogen bulb,down fluorescence bulb.ring fluorescence lamp;fiber optic cold light source,LED coaxial illumination etc.Also can optional X.Y Moving stage,image analysis device to analyse the picture.Pillar stand base,boom stand base can option.

三、 usage

10 series of microscope widely use for micro-electronics、 mould、 power metallurgy、 precision machinery、 jewelry、 horologe、 decorations、 fingerprint identify、 ticket recognize the false、 print、 fiber optic、 maintain the mobile、 archaeology、 living beings、 anatomy、 teaching etc. Especially for observe the surface microstructure of large objective. (many boom stand base can option)

三、 structure (check below view) :



- (1) stand base (2) focus arm (3) hand wheel (4) focusing hand wheel (5) pillar (6) pillar cover
- (7) additional objective (can optional) (8) rotating sleeve (9) main objective (10) camera eyepiece (11) CCD camera (can optional) (12) colour television or monitor (can optional) (13) signal line (optional)
- (14) CCD power adapter (can optional)

四、 main specifications :

1. main optical parameter

Television microscope magnification、 working distance、 dia of viewing field of object space; Effective for television image magnification. parts is : additional objective, main objective, camera eyepiece and CCD camera, television (display). Front 3 parts form optical magnifying glass, back 2 parts form digital magnification. The largest Optical magnification 30X, Total magnification is 1776X (1/3" CCD, 14" monitor) largest working distance 320mm, dia of viewing field of object space: 90.7mm, As XDC-0745 (ZOOM RATIO: 6.5) 0.7X-1.5X for example:

a. total magnification = optical magnification × digital magnification

optical magnification=zoom main objective (0.7X ~ 4.5X) × Camera eyepiece magnification×additional objective(ref sheet 1)

digital magnification:relative with CCD camera specification and television(monitor)specification. (ref sheet 2)

b. working distance:only relative with objective and additional objective magnification. (ref sheet1)

c. dia of viewing field object space=CCD camera diagonal size of target surface/optical magnification.

Optical magnification

Sheet 1 :

Additional objective	Camera eyepiece			Working distance (mm)
	0.35X	0.5X	1X	
0.5X	0.12~0.19X	0.18~1.13X	0.35~2.25X	180
No additional eyepiece	0.25~1.58X	0.35~2.25X	0.70~4.50X	95
2X	0.49~3.15X	0.70~4.5X	1.40~9.00X	32

Digital magnification

Sheet 2 :

CCDcamera specification	television (display) specification					
	14"	15"	17"	21"	25"	29"
1 / 3"	59.2X	63.5X	72.0X	88.5X	105.8X	122.8X
1 / 2"	44.5X	47.6X	54.0X	66.7X	79.4X	92.1X
2 / 3"	32.3X	34.6X	39.3X	48.5X	57.7X	67.0X

CCD camera diagonal size of target surface

表三 :

CCDcamera specification	1 / 3"	1 / 2"	2 / 3"
CCD camera diagonal size of target surface	6mm	8mm	11mm

2. hand wheel focus range:65mm Drawtube size: ϕ 50mm, up to ϕ 25mm pillar centre distance 140mm

3. lift range (ϕ 25mm pillar) : 178mm (XDS-10A lift range:265mm)

4、illumination : input voltage: 110V / 60HZ or 220V / 50H

output: oblique incidence illuminator 12V10W with halogen lamp.

Transillumination:5W energy saving fluorescencet lamp(according user

