

# Portable Metallurgical Microscope

## Model: FM-BJX / FM-BJX-B

### Instruction Manual



**FM-BJX**



**FM-BJX-B**

This manual is written for portable metallurgical microscope BJX series. To ensure the safety, obtain optimum performance and to familiarize you fully with the use of this microscope, it is recommended strongly that you study this manual thoroughly before using the microscope and retain this manual in an easily accessible place near the work desk for future reference.

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# 1. Introduction

BJX portable metallurgical microscope is convenient for on-site materials structure identification of various metal and alloy which cannot be identified by making samples. It can be widely used in the metallurgical Laboratories for the metal materials analysis, materials processing identification and the metallographic structure analysis. It also can be used for jade, porcelain, bronze surface tissue structure observation and analysis.

BJX series use LED vertical illumination, it is portable, convenient to use and safety. Optional magnetic base is available, convenient for observation of large pipes and equipment.



This illumination can be used continuously for twenty hours after a charge, long working time, save energy, temperature rise is small, there is not much heat, safe to use.

Digital cameras can be used with this microscope to facilitate the acquisition, preservation and image analysis.

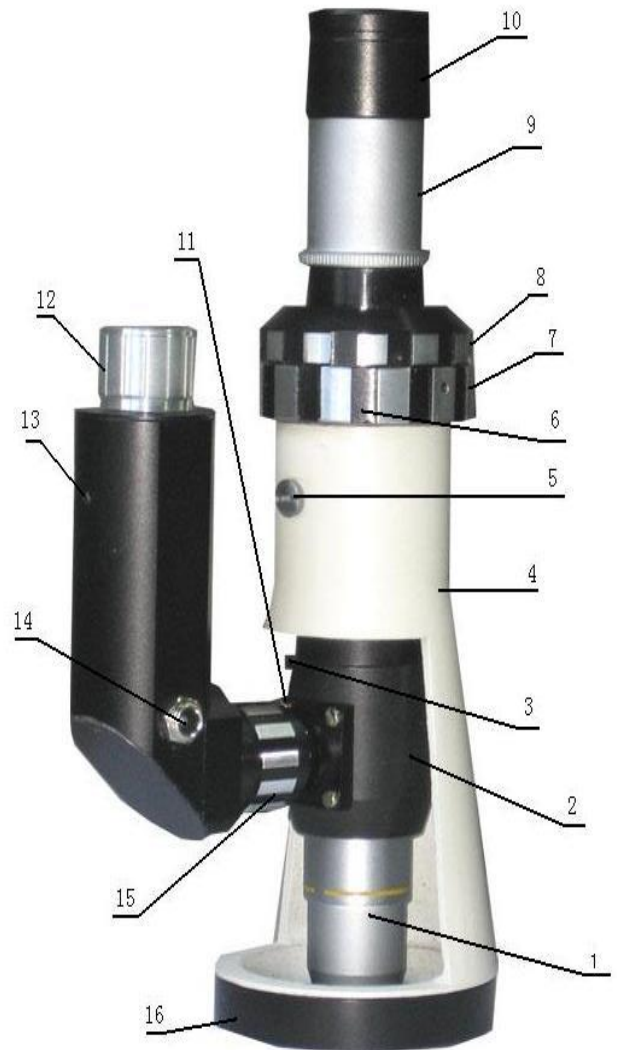


## 2. Specification

Parameter	
Optical system	Finite Optical system
Eyepiece	Plan Eyepiece WF10/18mm
Objective	Plan finite metallurgical objective 10X/0.25 ( W.D.=7.3mm ) 40X/0.65 ( W.D.=0.45mm )
Maganification	100X-400X
Focusing	Coarse& Fine adjustment , focusing range 25mm
Illuminator	LED vertical lighting , DC4.2V
Meansurement	750g , 230mm×110mm×70mm

### 3. Structure

- (1) Objective
- (2) Objective base
- (3) Polarizer slot
- (4) Microscope Body
- (5) Focus stop screw
- (6) Coarse limit screw
- (7) Coarse adjustment knob
- (8) Fine adjustment knob
- (9) Eyepiece tube
- (10) Eyepiece
- (11) Analyzer Slot
- (12) Illumination switch
- (13) Power indicator.
- (14)Recharge input port
- (15) Illumination connector
- (16) Microscope Base



## 4. Operation

According to the diagram shows, plug the eyepiece 10# into the eyepiece tube 9#, screw object lens 1# into the lens holder 2#. When install the objective, users can remove the microscope base 16#. Then place the treated metallographic specimen in the microscope base and adjust the focus knob to start observation, please turn on the power switch 12#, brightness can be adjusted freely according to needs.

When use the magnetic base, please remove the 16# microscope base. Then put the adaptor into the magic base then screw it tighten. At last, screw the microscope on the magnetic base.



Then you can use the magnetic base to attach the microscope on a pipe or large equipment. You can change the screw on the magnetic base to make the magnetic base work or not.

The instrument adopts DC 3.6V lighting power, LED lamp, compact structure, safe and convenient.

The microscope can work for five days after one time electric charge, there is an indicator light for charging, red light indicates charging status, green light means power is sufficient, the charging time is about 2 to 3 hours.(the general charging time cannot be more than 8 hours)

The electrical part of the microscope is safe, reliable and seldom has failure. If the indicating light cannot on, the LED illumination also cannot work even after charging. Please remove the electrical part from the microscope and send it back to the manufacturer for repairing. Please do not t repair by yourself to prevent accidents.

## 5. Maintenance

(1) After using of eyepiece and the objective lens, please use absorbent cotton or wiping paper with a small amount of mixed ether and alcohol (3:1) to gently wipe the surface dust and dirt.

(2) To prevent dust effects the microscope imaging quality, please use a plastic bag to cover the microscope when it is not in use.

(3) Please avoid the microscope to contact with acid, alkaline gas, the microscope also should not be placed in damp, cold and hot environment so as not to affect the optical body quality and the service life of electrical parts.

(4) The lubricant oil in the microscope is special, generally do not have to add, after long-term use, the oil may dry and no lubrication. In order to guarantee the quality and precision of the instrument, please send to the microscope back to the factory for repairing or contact the manufacturer.

## 6. Packing list

Item	Description	Quantity	Note
1	10X Eyepiece	1	
2	10X Objective	1	
3	40X Objective	1	
4	Illuminator	1	Installed on the microscope
5	Charger	1	
6	User Manual	1	

## 7. Optioinal Accessary

1. Micrometer
2. Electronic eyepiece
3. Polarizer and analysis
4. Magic stage ( BJX-B)
5. CCD Adapter
6. Objective 20X/50X/60X/80X/100X
7. 5.6" monitor