



# USB Handheld Video Microscope

## Operation Manual

# SAFETY SUMMARY

Personnel concerned with the operation of this instrument must thoroughly understand and follow the safety guidelines below. The manufacturer assumes no liability for the operator's failure to observe these guidelines.

## **Warning – Laser Radiation** Hazard

Operators must always remember that laser radiation at or above 1mW has the potential to cause serious damage to the human eye.

Never look into the open end of an optical fiber where high level of laser radiation may be present.

## **Warning - Explosive Atmospheres**

To avoid explosion, do not operate this instrument in the presence of flammable gases or fumes.

## **Caution**

Operators should not operate this instrument with any of its covers removed, nor should they allow anyone else to do so.

Do not attempt to carry out any unauthorized service to this instrument. Always return the instrument to an authorized service centre for repair to ensure that safety features are maintained.

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## Overview

Reliability and performance of a fiber optic link largely depends on the quality of interconnects. Contaminated connectors can cause the mating surfaces to separate leading to high insertion loss and back-reflection. Furthermore, some dirt particles can even scratch or dig into the glass causing permanent damage to the end-face of the connector. Therefore, inspection of fiber optic connectors should be performed whenever a connection is to be made.

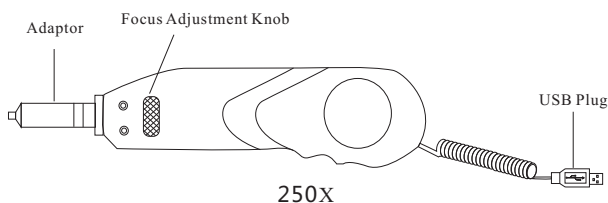
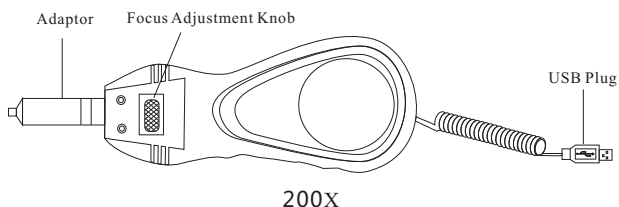
It is a usb handheld microscope specifically designed for fiber optic connector end face inspection.



## **Features**

- FC/SC/ST/E2000/LC/MU/MPO compatible
- Up to 200X/250x overall magnification
- Support USB1.1 and USB2.0 interface
- Support Windows system
- PC plug-and-play

# Decription



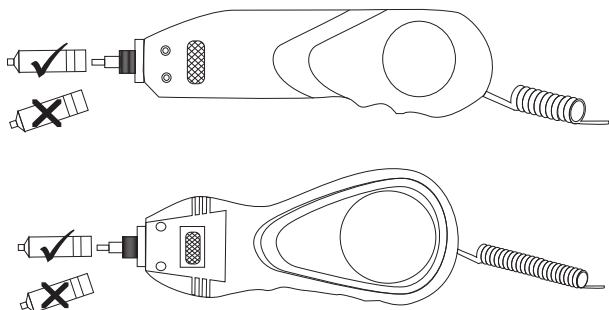
## Operation

### 1.1 Focus adjustment

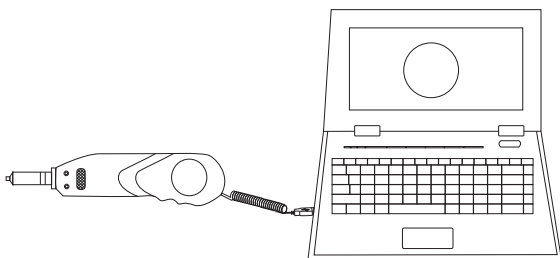
Gently rotate the focus adjustment knob to bring the image into focus. Do not overturn the knob or damage to the optical system may occur.

### 1.2 Adaptor bits

Always install adaptor bits gently and co-axially to avoid damage to the precision mechanism.



## 1.3 Probe connection



### Instruction for AMCAP software

This is an operation instruction and will teach you how to use AMCAP software in computer. AMCAP is an application software, made by Microsoft company and free of installation.

#### 1. startup AMCAP

1.1 Copy AMCAP.EXE file to any direction of computer, double click this application program file could be startup the AMCAP. like picture 1.

#### 2. Initialize USB video device

2.1 Go through “Devices”  $\Rightarrow$  “USB Video Device” (winXP system, like picture 2); (for Win7 operation system, it will display “FiberMicroscope”, like picture 3).

2.2 If there are some other video devices connected simultaneously, please select the right video device as above instruction.

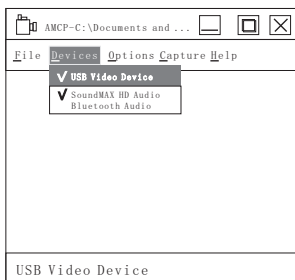
2.3 Select “Options”  $\Rightarrow$  “Preview”, like picture 4.

2.4 If the USB video device has been initialized successfully, you will found image in the window.

amcap.exe

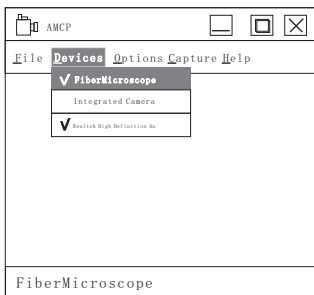


picture 1

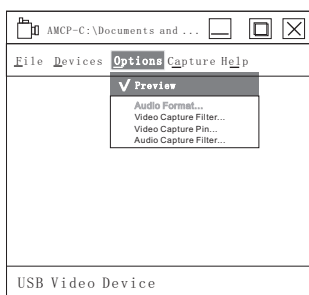


picture 2. WinXP system






Picture 3. Win7 system

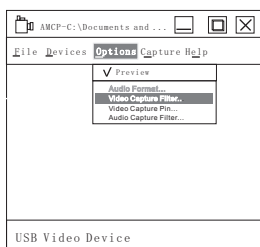


Picture 4. Initialize Preview

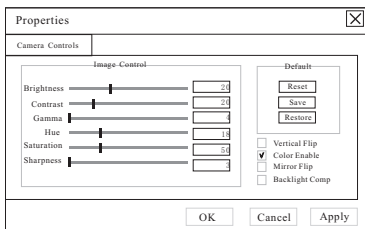
### 3. Display setting

The setting function could be used to optimize the brightness, contrast, saturation and definition.

- 3.1 Select “Options” ⇨ “Video Capture Filter...” like picture 5.
- 3.2 In label of “Camera Controls”, user could adjust the setting of brightness, contrast, saturation and sharpness, like picture 6.
- 3.3 Method: click the block , drag it left or right, the corresponding value shows on the right. After finishing setting, click  button, the adjustment will be applied.
- 3.4 For cancel the adjustment, please just click  button.
- 3.5 The adjustment could only be applied and valid for the moment. Once the USB video device has been plug off, the previous adjustment will be invalid, and device will recover the default setting.



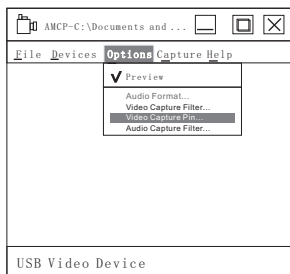
Picture 5



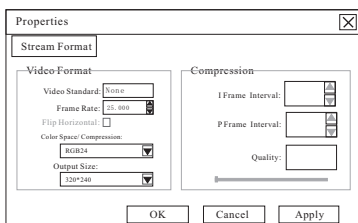
Picture 6

### 4. Video resolution setting

- 4.1 Two kind of resolution could be selected: 320\*240(default), 640\*480
- 4.2 Select “Options” ⇨ “Video Capture Pin...”, like picture 7.
- 4.3 “Output Size” is used to select resolution, click  for applying, like picture 8.
- 4.4 For cancel the adjustment, click  button.
- 4.5 The resolution setting could only be applied and valid for the moment. Once the USB video device has been plug off, the previous setting will be invalid, and device will recover the default setting.



Picture 7



Picture 8

## Specifications

Main frame	
Display	3.5" TFT-LCD, 320 x 240 pixels
Dimensions	170mm x 100mm x 40mm
Weigh(including battery)	200g
Power Supply	Replaceable battery or universal input 5V DC adapter
Battery	Rechargeable Li-Ion, 3.7V / 1450mAh
Battery life	> 3 hours (continuous)
Charger/AC adapter	US, EU, UK and Australian versions available
Image / Video Storage	8GB SD card
Operating Temperature	-20°C to 50°C
Storage Temperature	-30°C to 70°C

Inspection Probe	
Magnification	400X (9" monitor); 250x (3.5" monitor)
Detection Limit	0.5µm
Focus Control	Manual , in-probe
Principle	Bright field reflected light microscopy
Dimensions	180mm x 40mm x 30mm
Weight	200g

Standard Accessories	
Inspection Probe	x 1
Main frame	x 1
AC power adapter/battery charger	x 1
Rechargeable battery pack	x 1
2.5mm tip for PC male connectors	x 1
1.25mm tip for PC male connectors	x 1
Tip for SC / FC PC female connectors	x 1
Tip for LC PC female connectors	x 1
Tip box	x 1
User Manual	x 1
Carrying case	x 1

Optional Accessories	
2.5mm tip for APC male connectors	
1.25mm tip for APC male connectors	
Tip for SC APC female connectors	
Tip for FC APC female connectors	
Tip for LC APC female connectors	
AV-USB 2.0 Converter	

## WARRANTY

This product is guaranteed against any material or manufacturing defects for one year from the date of purchase.

This warranty does not apply to defects or malfunctions caused by damage resulting from misuse or abuse of this product.

