



SFED-01 USB Handheld Optical Fiber End Face Microscope

User Manual



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1. Overview

The SFED-01 USB handheld optical fiber end face microscope adopts high-precision optical path design and high-speed digital image processing to carry out 200/250 times magnification imaging of the measured end face, which is especially suitable for fine inspection of stains, scratches, dents and other end face conditions. No need to drive, connect with the computer through USB, the detection image is stored in the computer. Stylish appearance, lightweight and portable.

The USB handheld optical fiber end face microscope can inspect various types of fiber end faces, such as optical device ports, optical jumpers, optical modules, optical devices, male end faces of pigtails, female end faces in deep holes of optical adapters, etc.

Key Features

- FC/SC/ST/E2000/LC/MU/MPO compatible
- Support operation with computer and OTDR
- 200/250x magnification
- Suitable for DWDM, SDH, SONET equipment and various optical fiber transmission racks, optical switches, optical distribution boxes, etc.
- Built-in digital sensor, through the USB port connected to the computer to detect optical fiber end face, easy to do the image analysis
- No need to drive, plug in the USB port to work, support for USB1.1 and USB2.0 interfaces
- Pre-center positioning, image centered, clear, uniform spot.
- Strong compatibility, support for driver-free installation of windows and other systems.

2. Structure Instructions

- **Handle**

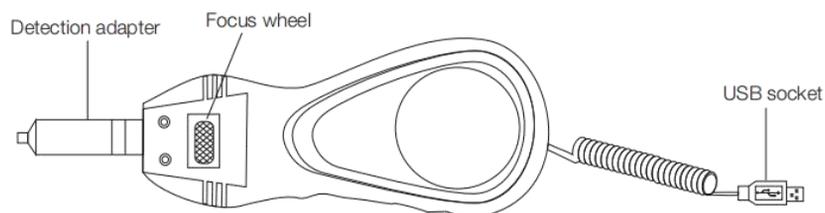


Fig.1 200X Image magnification

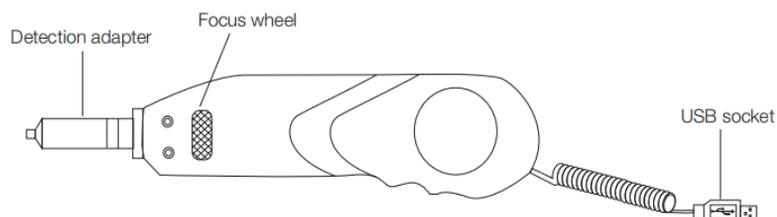


Fig.2 250X Image magnification

➤ **Detection adapter**



Fig.3 Adapters

3. Operation Instructions

3.1 Handle operation instruction

(1) Adjust the focus wheel

Rotate the focus wheel left and right to achieve the best clear image.

(2) Detect the adapter

Before installation, please select the suitable adapter that matches the test end surface. When installing, please pay attention to the coaxiality of the adapter head and the handle. Screw the adapter head to the thread of the handle head, as shown in Fig.4.

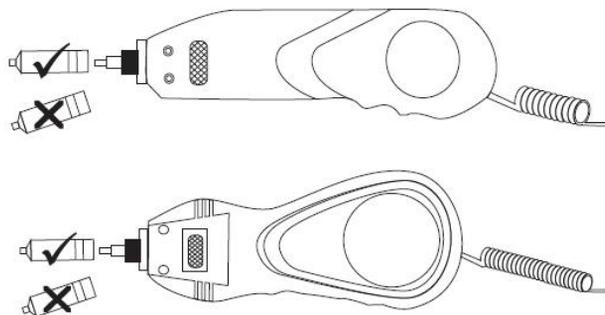


Fig.4 Correct operation

When testing, please ensure a tight and stable connection between the connector under test and the adapter.

(3) Connect the handle to the OTDR or computer

Through the USB interface, connect the microscope handle to one OTDR or computer, as shown in the Fig.5 and Fig.6.



Fig.5 Connect with OTDR

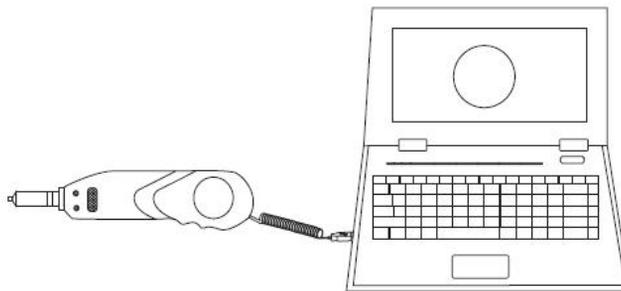


Fig.6 Connect with computer

When connect with an OTDR, click the “OFD” icon, then you can see the fiber end picture on the screen.

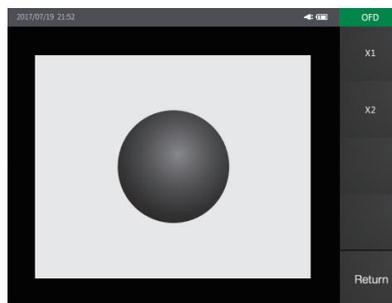


Fig.7 OFD function diagram of the OTDR

3.2 AMCAP software instruction

AMCAP software is a PC Camera application software developed by Microsoft, free of installation.

(1) Start the software

Copy the "AMCAP.EXE" file to any directory on the computer and double-click the application to start AMCAP., as shown in Fig.8.

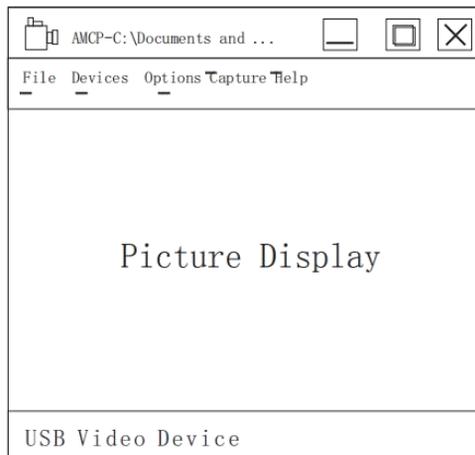


Fig.8 Start the AMCAP

(2) Start the USB image device

➤ Select "Devices" "USB Video Device" WinXP system. It is displayed as "Fiber Microscope" under WIN7 system. As shown in Fig.9.

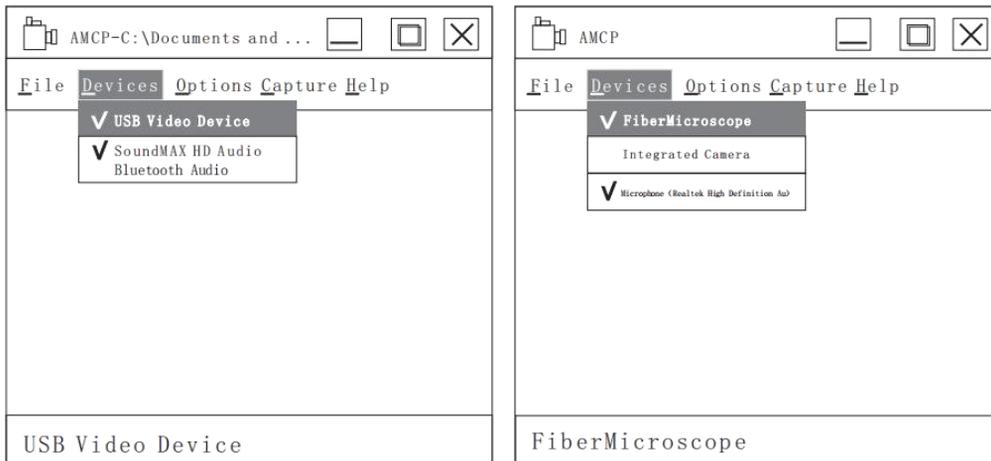


Fig.9 WinXP and Win7 system

- When multiple video devices exist in the computer at the same time, be sure to follow the steps above to select the specified video device.
- Select "Options" "Preview", as shown in Fig.10.
- At this time, the USB image device is successfully started, and the image can be seen in the image display area.

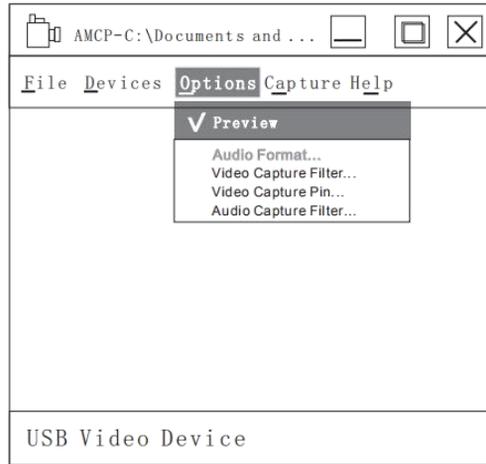


Fig.10 Start the “Preview”

(3) Set image display parameters

- This parameter setting can adjust the brightness, contrast, saturation and sharpness of the image.
- Select “Options” and “Video Capture Filter”, as shown in Fig.11.

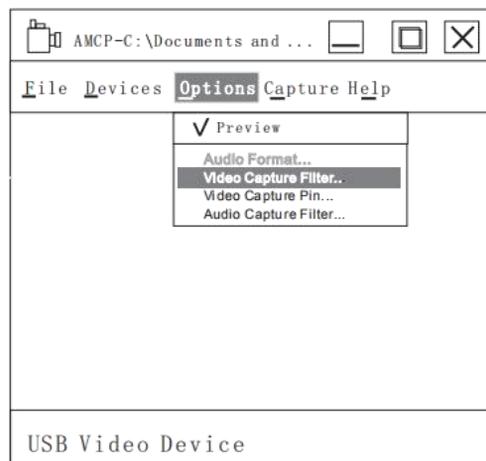


Fig.11 Video capture filter

- You can adjust the brightness, contrast, saturation and sharpness of the image in the “ProcAmp” column of the video.
- Adjustment method: select the button corresponding to the parameter to be adjusted by the mouse, and drag to the left or right. The corresponding parameter value is displayed in the right column. After selecting the parameter value, click “Apply”.
- To abandon the current parameter adjustment, click “Cancel” directly.
- This parameter adjustment can only be applied to the current use. When the USB video device is unplugged, it will become invalid and restore the default value.

(4) Set image resolution

- There are two resolutions to choose from: 320 * 240 (default), 640 * 480
- Select "Options" "Video Capture Pin", as shown in Fig.12.



Fig.12 Video capture pin

- Select the resolution in the "Output Size" option and click "Apply".
- To abandon the current resolution adjustment, click "Cancel" directly.
- This resolution parameter adjustment can only be applied to the current use. When the USB video device is unplugged, it will become invalid and restore the default value.

4. Technical Specifications

Focusing Style	Manual
Magnification	200/250
Resolution	0.5um
Dimensions (WxHxD)	119mm*56mm*33mm / 155mm*44mm*40mm
Weight	187g / 224g

5. Ordering Information

Standard Package

Testing handle	1 pc
Adapters	2.5mm-PC-M: 1 pc; 1.25mm-PC-M: 1 pc SC-PC-F: 1 pc; LC-PC-F: 1 pc