UM5-CAM

User's Guide

USB MICROSCOPE

Version 1.4A

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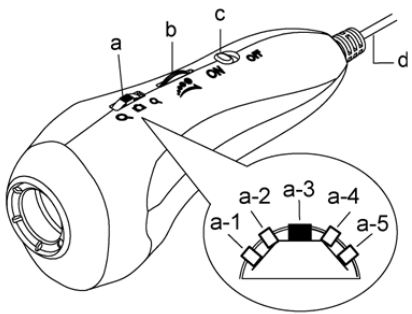
1. Product Introduction

1.1 Packing Content

Object	Quantity	Object	Quantity
USB Digital Microscope	1	User's Guide	1
Installation CD	1	Supporter	1
Calibrator	1		

1.2 USB Microscope Functions Introduction:



a. Five-Section Switch (hereafter '5-Switch': Press down the switch to take picture and turn forward/backward for zooming in and zooming out.

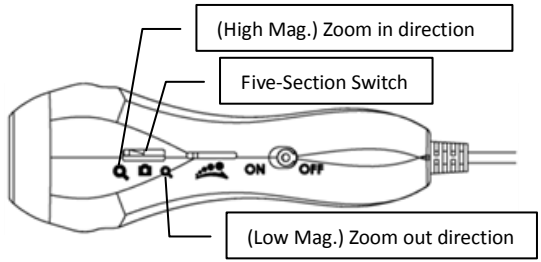
(a-1) Turn the switch forward to a-1 position is for quick focusing (zooming in).
(a-2) Slightly tuning the switch forward to a-2 position for slow focusing.
(a-3) Press down the switch for photography.
(a-4) Slightly tuning backward the switch to a-4 position for slowly zooming out the image.
(a-5) Turn backward the switch to the end (a-5 position) is for quickly zooming out.

b. Light Control Wheel: : Adjust LED brightness. Turn forward to decrease brightness; on the contrary, turn backward to increase brightness.
c. Auto-Focus (hereafter 'AF') button: Slide to **ON** position means to switch on Auto-Focus function. Slide to **OFF** position means to switch off Auto-Focus function.
d. USB Port: It is USB2.0 port. Please connect it with PC USB Port.

1.3 USB Microscope Operation:

a. Focus

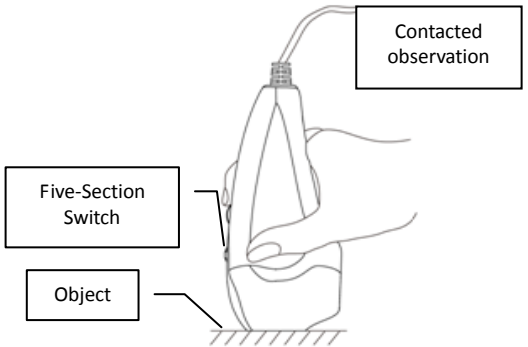
There are different focus points. When turn forward the 5-Swtich can get higher magnification on the tiny object, and turn backward can get lower magnification on the tiny object. For long-shot, it is same webcam function; thus, it doesn't have magnifier function.



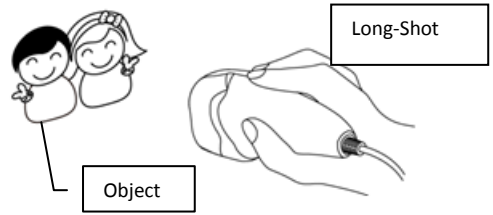
(1) Autofocus: The focus functions are Single AF and Continuous AF. Single AF means to the device only focus one time by itself. If the object moves, the image will become blurry. On the contrary, Continuous AF means the device will re-focus if the object moves again. Please refer to below instruction for operating the Five-Section-Switch when AF is ON:
(a-1) Turn the 5-Switch forward to the end (a-1 position), it will do Single AF for higher magnification.
(a-2) Slightly turn the 5-Swtich forward to a-2 position; it will do Single AF for low magnification.
(a-3) Press down the dial to photography.
(a-4) Slightly turn the 5-Swtich backward to a-4 position, it is to Switch the current focusing way
(a-5) Turn the 5-Switch backward to the end (a-5 position), it will do Single AF of long-shot.

(2) Manual Focus: Push AF button to “OFF” position. Then Focus can down manually. Slightly turn forward for higher magnification; slightly turn backward for lower magnification. Please refer to [Section 1.2 item(1)].

b. Photography for contacted-observation: Horizontally put the lens onto the observed object. There are 2 focus points under contact observation, one is at lower magnification (hereafter (L mag.)); the other is higher magnification (hereafter (H mag.))

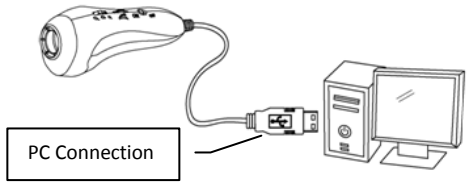


c. Long Shot: For long shot and preview of Non-contact observation. To turn the 5-Switch backward to L. mag direction , till find clear image as long-shot focusing is done. The magnification will vary per the distance between the object and device. It can also apply as a webcam



1.4 USB Cable

The USB cable is already connected with the device; thus, please do not try to remove the USB cable from the device. The other USB joint is to connect with PC. Note: Please do not use any USB extension cable.



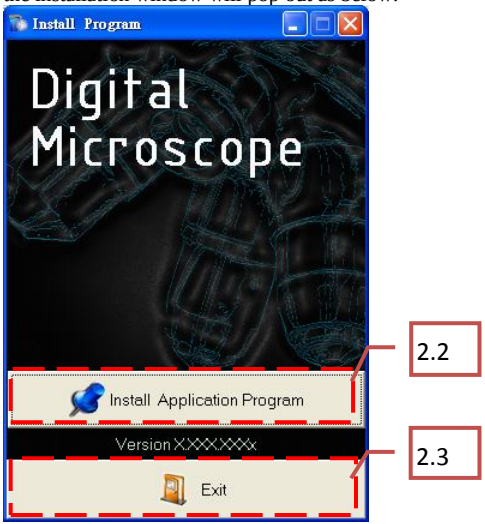
2. Installation

For detailed program installation, please refer to the Installation Manual set in the Installation CD (User's Manual \ English \ Microscope installation manual.pdf) Programs shall be installed according to the following 3 steps:

Note: This device does not need to install the driver.

2.1 Insert Installation CD

Insert Installation CD provided together with the product into the CD-ROM. The CD will be run by computer automatically, and the installation window will pop out as below:



If the computer does not pop out installation window, please open the Installation CD folder and select "Autorun.exe". See Autorun image:

If the Installation CD provided together with the product is missing or unknown damaged, please visit http://www.vitiny.com to download installation files.

2.2 Install Application Program

Please click "Install Application Program" button.

2.3 Exit Installation Program

After installing Application Program, please click "Exit" button to quit program installation.

3. Application Program

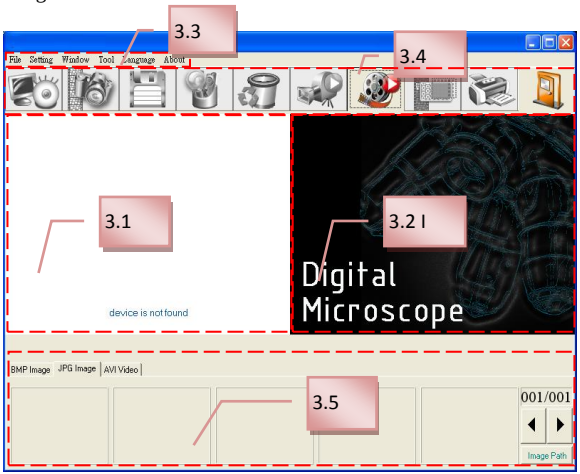
Operation Instruction of Application Program is divided into 6 parts which primary about AP operation. For detailed instructions, please refer to the Operation manual set in the Installation CD (User's Manual \ English \Microscope Application Program Operates Manual.pdf).

3.1 Video Preview Window

After connecting to microscope camera, the window will show preview images. As well as video plays, image reviews, and special function modules will shown in this same window.

3.2 Image Preview Window

The window is applied to display shot images, edit and process images.



3.3 Main Menu

The Main Menu of the Application Program contains the following selections:

(1) File： open, save and print files.

(2) Setting：includes input device, image quality, video information formats, sources and compression, as well as automatic storage, etc.

(3) Window：you can adjust sizes of video information windows and switch to the single window model.

(4) Tool：open saved file location, default file path, time lapse, convert video to image, convert image to video..etc functions….

(5) Language：five languages including Chinese in complex and simple forms, English, Japanese and Germany are available for selection.

(6) About：to show the version, copyright and other relevant information about the Application Program.

3.4 Main Button

Main Button contains more general functions as follows:

(1) Connect / Disconnect ：button of connecting and disconnecting to microscope camera. Video image will be displayed in Video Preview Window after connection.

(2) Snapshot ：press the button to capture image from Video Preview Window. The captured image will be displayed in Images Preview Window.

(3) Save Image ：store images in Images Preview Window

(4) Editor Image / Exit Editor ：to enter or quit Image Edition function. After entering, tools of image edition are listed below Images Preview Window as follows:

(5) Delete Image : Pressing delete Icon will delete image.

(6) Video Record / Stop Record : to record or stop recording video. Recorded video will be displayed in Video Preview Window. You can set compressed coding way by clicking and selecting “Setting->Video Compression” in the Main Menu. The user is suggested install DivX encoder to achieve better compression results and quality.

(7) Play Video / Stop Play : to play or stop playing video. Video of played files will be displayed in Video Preview Window. Playing tools are listed below the preview window as follows:

(8) Image Process / Exit Image Process : image processing include reversed video, grey scale, black and white, edge detection and other basic functions. After entering Image Processing model, tools will be displayed below Images Preview Window as follows:

(9) Print Image : print images displayed in Images Preview Window.

(10) Exit : close the Application Program.

3.5 Files List

Files List is primarily applied to list all current files contained in folders. Select BMP, JPG or AVI to view saved images/videos.

3.6 Special Functional Modules

Start and connect Application Program, the toolbars of Special Function Modules will show below the Video Preview Window; which includes: comparison, aming mode, image control, measurement and far distance control mode. See below:

(1) Comparison mode : observe similarity of compared images through overlapping and half-half comparison. Before using the model, please load the image for application of other functions. For tools of comparison model, please refer to the following image:

(2) Aiming mode : This mode provides 4 different aiming aids, which are cross, scope, rectangle and circular to aim at shot objects as an auxiliary function. Please refer to the following image for tools of the mode.

(3) Video control mode : you can take the device by your left or right hand, adjust image direction of yourself or object, as well as adjusting contrast, brightness and exposure rate of the image. Please refer to the following image for tools of Image Control Model.

(4) Measurment mode : the mode can be used as rulers and compasses. Further, the model can measure in the dynamic

(real-time image) or static (loaded images or frozen image) images, as well as providing various measuring tools. Please refer to the following image for tools of Measurement Model.

(5) Device control mode : This mode is to control the device from AP directly without operate function button on the device. From the AP control, users allow to photography, zoom in/out image, and brightness control…etc.

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