CALIFONE®

CM1-USB
Microscope

User Manual

Table of Contents

CALIFONE®

CM1-USB Microscope

Thank you for purchasing the Califone® CM1-USB Microscope.

We encourage you to visit our website www.califone.com to register your product for its warranty coverage, to sign up to receive our newsletter, download our catalog, and learn more about the complete line of Califone® audio visual products, including portable and installed wireless PA systems, multimedia players and recorders, headphones and headsets, computer peripheral equipment, visual presentation products and language learning materials.

califone.com

1

1. IMPORTANT SAFETY INSTRUCTIONS

Before using this product, read the instruction manual for important safety information. Please retain this manual for future reference and warranty information.

Troubleshooting & Servicing
Do not attempt to service or repair the device yourself. Refer all servicing to qualified service personnel. Do not attempt to modify the device in any way. Doing so could invalidate your warranty.

Moisture and heat sources
Do not use this apparatus near water (for example, sinks, baths, pools) or expose it to rain, moisture, dripping or splashing liquids. Do not expose the unit to high temperatures, high humidity or direct sunlight.

Cleaning
When cleaning the device, please use a soft, dry cloth. Never use benzene, paint-thinner, or other chemicals on the device.

Location
Place the device in stable location, so it will not fall causing damage to the device or bodily harm.

Intended use
The product may only be used with the original parts intended for it. The product may only be used in closed and dry rooms. The intended use includes adherence to the specified installation instructions. The manufacturer accepts no liability for damage arising due to improper use.

WARNING: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

IMPORTANT
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
The unit's circuitry may cause interference to nearby radios. To prevent interference, either switch the unit off or move away from the affected radio.
NOTE: This equipment has been tested and found to comply within the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / TV technician for help.

NOTE: Shielded cables may be required to be used with this unit to ensure compliance with the Class B FCC limits.
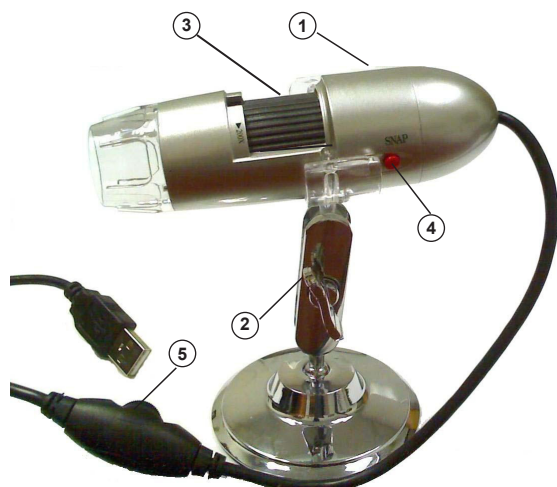
2. PACKAGE CONTENTS

The following materials are included.
*   CM1-USB Microscope
*   Microscope Stand
*   Installation CD
*   User Manual

Unpacking the Unit
Inspect the unit once the packaging has been opened for any damage that occurred during shipping and contact us immediately. Please keep the packing material for further use.

3. PART NAMES AND FUNCTIONS

1. CM1-USB Microscope
2. Microscope Stand
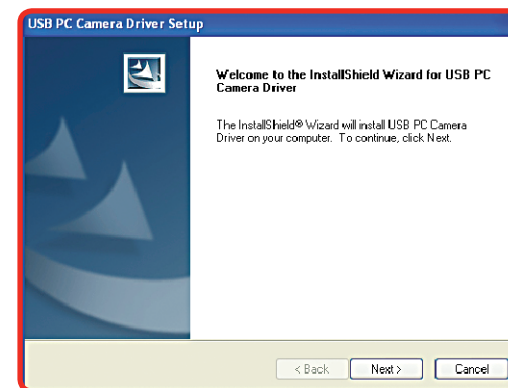3. Focus Wheel
4. Capture Button
5. Light Adjustment
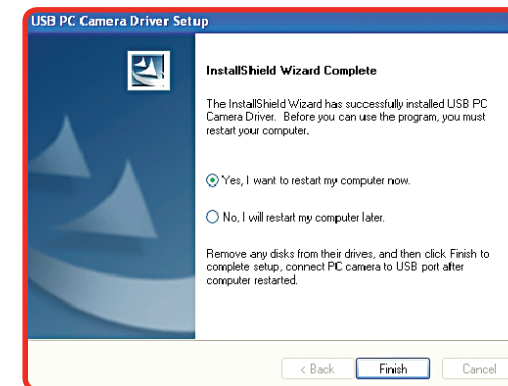
4. SETUP AND INSTALLATION

1. Insert the driver/
    application disc into
    the CD-ROM drive.
    The installer screen
    will automatically open.
    Click the button with the
    name of your computer
    operating system to install
    the appropriate software.

2. Click Next.

3. Click Finish.

4. Once the installation is finished, restart your computer or manually restart. Once restarted, then plug the microscope into the USB port on your PC. The system may perform some additional operations to complete the installation. Please allow the system to continue the installation and click finish when done. You may be prompted whether to "Continue or Stop" the installation. Please click the "Continue" button.
5. When installation is completed, you will find the shortcut to launch the program in Start Menu->Programs->"Califone CM1-USB Microscope"->"Califone CM1-USB Microscope".

5. BASIC OPERATION

NOTE: Avoid touching the lens with fingers or sharp objects which could damage the lens. Use a soft, clean cloth for cleaning. Avoid dropping the microscope. Severe shock to the microscope can cause damage to the lens or electronics.

5.1 Viewing and Focusing Images
• Click the "Califone CM1-USB Microscope" shortcut and the image from the microscope will be displayed in real-time. If the image is not displayed and you have another device such as a webcam, you may need to select the "Devices" menu and change the input.
• Adjust the wheel to manually focus.

5.2 Light Setting
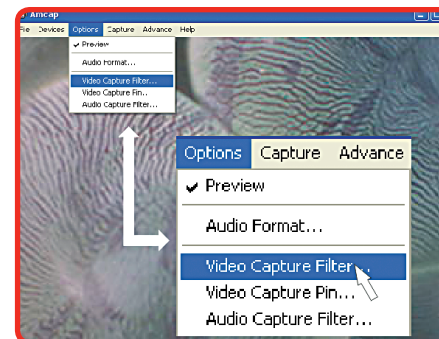Scroll the light adjustment to the desired setting.

5.3 Capturing Images
• Press the button on the microscope to take a snapshot of the image.
• The snapshot will display on the PC screen.
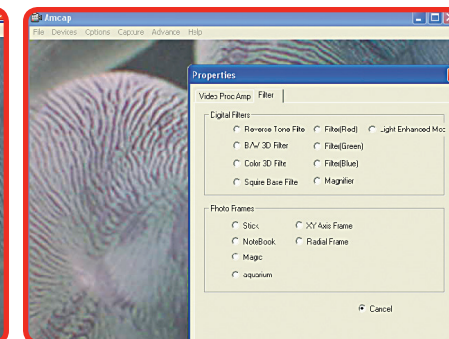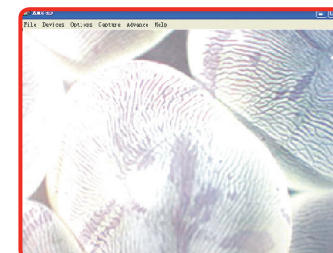• Adjust capture settings and filters

5.4 Displaying Images
Click the "Califone CM1-USB Microscope" shortcut and the image from the microscope will be displayed in real-time. If the image is not displayed and you have another device such as a webcam, you may need to select the "Devices" menu and change the input.
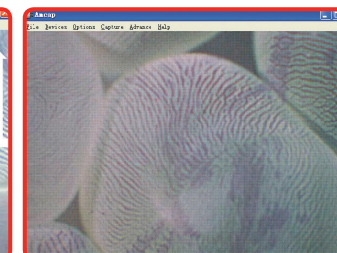
A: Select Video Capture Pin   B: Choose the desired resolution

5.5 Filtering Images
Different microscope filters can be used to highlight various features of the captured image.
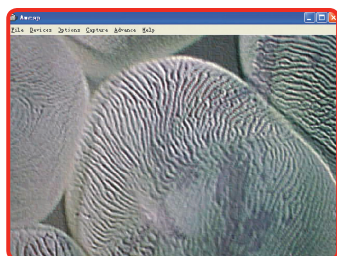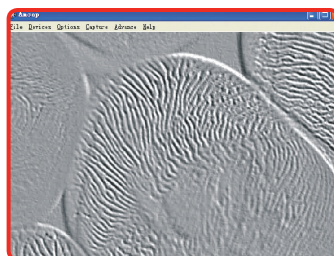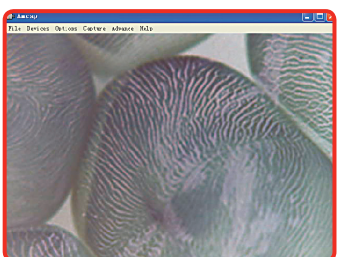
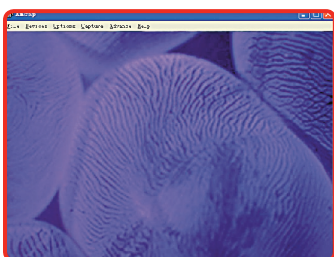Light Enhanced Moc   Square Bace Filter
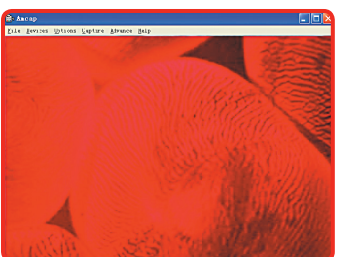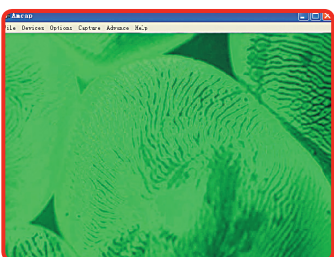
Color 3D Filter
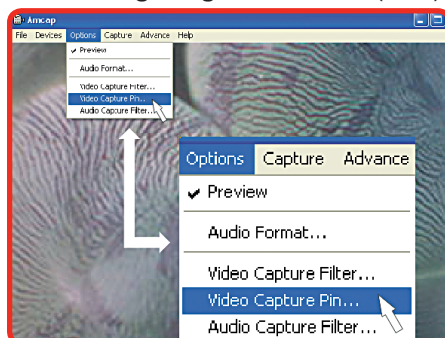

B/W 3D Filter

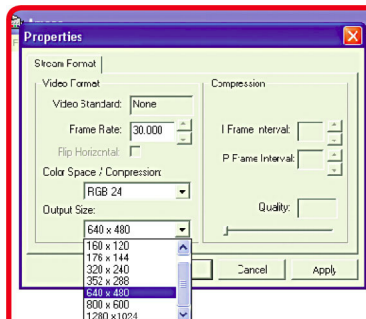Reverse Tone Fitler

Filter (Blue)

Filter (Red)

Filter (Green)

5.6 Selecting Image Resolution (Size)

A: Select Video Capture Pin

B: Choose the desired resolution

6. SPECIFICATIONS & FEATURES

General

Operating System Compatibility	Windows 2000/XP/Vista/Windows 7 32-bit & 64-bit
Sensor	1.3 MegaPixel Color CMOS
Lens	F2.4 2P M12 Lens
USB Cable Length	4 ft
Focus Range	Manual Focus from 50 mm-Infinite
Image Resolution Settings	1280x1024, 800x600, 640x480, 352x288, 320x240, 160x120
Color Resolution	24-bit
Frame Rate	Max:30 f/s Under 600 Lux Brightness
Flicker Control	50 Hz/60 Hz Option
Video Capture Format	AVI
Capture Driver Compatibility	TWAIN / VFW / Direct Show AP (Driver)
USB Compatibility	USB1.1 & USB2.0
Snap Shot Capability	Software and Hardware
Transmission Rate	320x240 30F/s, 640x480 15F/s
Signal/Noise Ratio	> 48dB (30F/s 220LUX)
Dynamic Range	> 72dB
Built-in Image Compression	• Automatic brightness adjustment with integrated bright white LEDs for lighting the subject • Automatic color compensation

Minimum System requirements

- IBM PC or compatible PC or laptop with USB port
- Pentium 700MHz
- Windows 2000/XP/Vista/Windows 7 Operating Systems
- 20MB free HD space
- CD-ROM drive
- 32MB RAM
- VGA card w/ DirectX support

7. WARRANTY

Califone warrants this product to be free from defective material and workmanship for one year from the purchase date. Our "Project Intercept" Customer Satisfaction program will replace defective parts and repair malfunctioning equipment under this warranty when the defect occurs under normal use.

All Damage Claims Must Be Made With the Freight Carrier

Notify the freight carrier immediately if you observe any damage to the shipping carton or product. Repack the unit in the carton and await inspection by the carrier's claim agent. Notify your dealer of the pending freight claim.

Returning Your Unit for Service or Repairs

Should your unit require service, contact our Customer Service Department online at califone.com/techsupport or via email warranty@califone.com or by phone at 800-722-0500 / 818-407-2400 to first obtain an RA (Return Authorization) number before returning it to Califone. The unit must be returned to our factory via prepaid transportation only after the factory issues an RA number, which must be clearly written on the outside of the box.

Califone® International, Inc.
1145 Arroyo Avenue, #A
San Fernando, CA 91340 USA
Toll Free 800.722.0500 | Toll Free Fax 877.402.2248
International Customers call 818.407.2400 or Fax 818.407.2405
califone.com

Califone CM1-USB Rev 02 0410