

BVM-2000N

Measuring camera instructions

The choice of calibration method Round calibration or line calibration

operating system The choice of language Simple / Traditional / English

Multiple choice Prior to measurement, the software's multiple selection must be consistent with the microscope

Selection of measurement

Automatic edge search key M is manual selection A is automatic edge search - choose to use automatic edge search when product boundaries are clear

Measurement Toolbar Choose to use your own measurement tools

Measurement information selection Such as font size,

Image freeze If the use environment has jitter, use this function to measure

Delete measurement data

Camera parameter settings

Store measurement data

Take a photo - take a photo

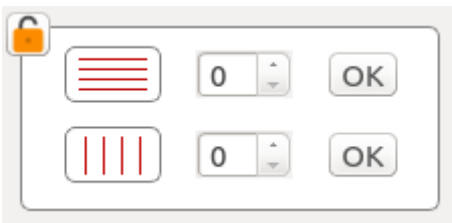
View stored photos U disk is needed

Operation interface

- * Brightness adjustment ◐ Contrast adjustment
- R** Red adjustment **G** Green Adjustment **B** Blue Adjustment
- SE** Edge Enhancement **HDR** Wide dynamic

2、Features

1) Camera Image Adjustment Settings: Drag the mouse to set the settings by clicking on the sliders, or click the sliders to set them with the mouse wheel.



2) Horizontal or vertical lines increase the setting: After setting the

Image freeze

Camera parameter settings

Take a photo - take a photo

View stored photos U disk is needed

SE 20

HDR 1

0 OK

0 OK

+

AE

WB

50

60

number of lines, click the ok button behind to generate a corresponding number of lines on the image. Place the mouse on a line and the mouse arrow will change to a hand shape to move the line to the corresponding position; near the position, the mouse wheel can be used to make fine adjustments.

The adjustment of the line attribute can be achieved by right-clicking the mouse on the line and the line attribute setting window will appear. The color and thickness of the line can be changed. Each line will have the coordinate position of the line, and the distance between the two lines can be set by calculation.

Center Cross Line Setting: Click this button to display the setting window, which can change the thickness and color of the crosshairs.



Auto exposure setting: Press this button to adjust the current brightness value. If you select the bottom left square, you can automatically set the exposure in real time.



White balance setting: Please put a white paper or other white object under the lens first, then press this key, the system will automatically perform white balance until it is complete. If you select the bottom left square, you can achieve a full automatic white balance setting.



Camera button: Press this button to save the current image. If no USB flash drive is inserted at this time, the image will remain in the camera's memory. If the camera is inserted into a USB flash drive, it will be saved to the USB flash drive.



Photo Reading: Pressing this key will bring up the saved image for viewing.



Image comparison: After pressing this key, firstly a picture to be compared is taken from the captured picture. The system will place the picture on the right side of the screen and adjust the real-time picture to the left of the screen. You can use the mouse to adjust the position of the two pictures for comparison.



Mirror button: Mirror the image.



Image up and down adjustment button: can adjust the image up and down.



Color and black and white image conversion: The image can be selected in color or black and white.

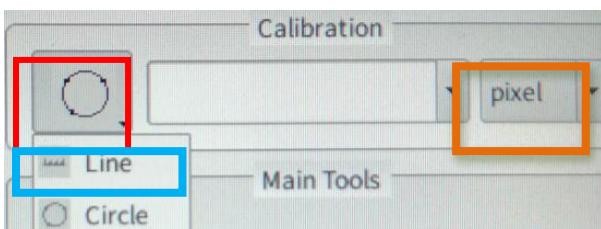


Freeze Button: Press this button to freeze the current motion picture. Press again to resume the motion picture.



Electric frequency selection: can choose according to the current market electric frequency, can avoid the screen rolling.

1. Lens calibration

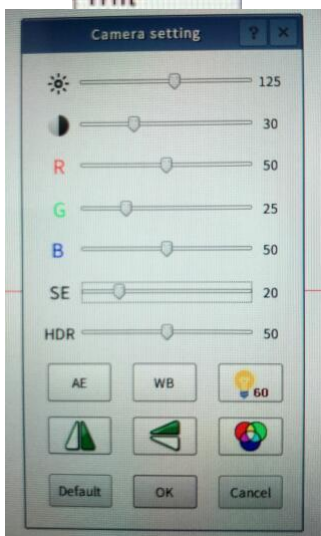
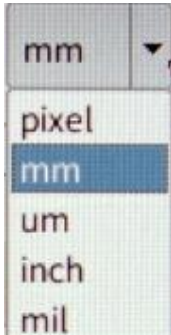


Press the round calibration icon on the top right corner, you can choose line or triangle calibration. Use line formed by 2 points for line for calibration, and use circle formed by 3 points for calibration. You can choose the correct way per the calibration type.

For example: If triangle circle is selected, put the circle calibration card under the lens, then adjust

the image and choose any 3 points from the circle outer edge. Check and confirm if the new circle is coincided with the original one, re-get the new circle until satisfied. Input the current lens multiplying power, calibration circle actual size and etc to the dialog box. Then the current calibration information will be appeared.

Size transform: User can use the unit by size transform drop down key of “calibration” dialog box.



2. Tool attribution

Adjust the camera attribution and select the parameter button. Then you can set to the current image.



Get the point by manual/auto. For manual, just move the mouse to the point where you want to get. For auto, system will get 20 pixels around the mouse automatically. Auto way will be more accurate but it will be error if there will be 2 or more edges around.

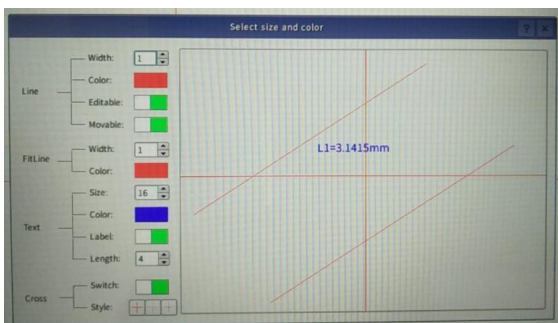


Image information selection. Dialog box will be appeared on the screen after press, user can set width or color of the image, as well as label font size, color and label on/off and length etc after measurement.



Image pause button. You can use this pause button caused by shake, press again to start again.



Cancel key. Cancel all segment and data on current image. But the data on right part will be kept.

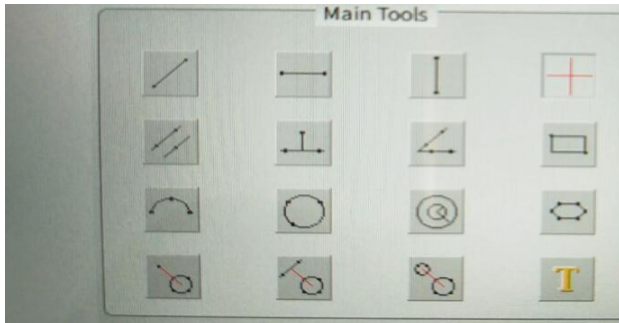
Measurement data save. Save all measured data into SD card. You can use excel for review.

Image save. Save current image and measured data as image data, formats are BMP or JPEG.




Image preview. You can preview or playback all images












3. Measure tools



Following are the measure methods:

-  Line formed by connecting 2 points---- Select 2 points to get 1 line.
-  point to line----Get the distance from top point to bottom line.
-  Parallel line -----Get a line from 2 points, lines, and system will measure the distance

then get 1 point from other line, it will be 2 parallel lines automatically

-  Angle-----Get 1 line from 2 points, then get another line from 2 points, system will measure inner angle automatically
-  Rectangle -----Get 2 points, system will draw out a rectangle automatically
-  Polygon -----Get points from each line and system will draw out a polygon automatically. Press right-hand button for last point then the polygon will be closed. Note: max. 10 points can be get.
-  Radian ----Get a radian by 3 points.
-  Circle---- Get a circle by 3 points.
-  Point to the center of circle-----Get 1 point, and get 1 circle from 3 points, system will measure the distance between the first point and center of circle.
-  Line to circle-----Get 1 line from 2 points, and get 1 circle from 3 points, system will measure the distance between the line and center of circle.
-  Circle center distance ----- Get 2 circles by 3 points, system will measure the distance between 2 circles.
-  concentric circles----- Get 1 circle from 3 points, and get another circle by drag the mouse to edge of the 2nd circle to get the circle, system will measure the distance between the line and center of circle. The 2 circles share the same center, system will measure the distance between 2 circles.



서울특별시 영등포구 선유로 33 길 15 703(양평동 3 가, 에이스테크노타워)

02-2636-0009(대)

FAX: 02-2636-4753

giltron@naver.com

www.gilwoo.co.kr