



PixelPro™ 3.0 User Manual

To ensure proper use of this instrument as well as to avoid injury while operating instrument, understanding this manual completely before use is highly recommended.

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Section 1: Introduction

Congratulations on the purchase of your LABOMED® camera! The camera you have purchased was designed and tailored with our users at front of mind. Your camera possesses some of the most advanced image processing technology available, like dual FPGA processing with 3D noise reduction, and high dynamic range with a highly favorable signal-to-noise ratio to ensure your image is rich in detail and free of unwanted artifacts.

To ensure optimum performance, we recommend that you review this manual thoroughly before operating your camera.

Section 2: Getting Started

Your camera will arrive with the following contents:

1. Camera
2. USB 3.0 cable
3. 12V/2A power cable (Vega camera only)
4. HDMI cable (Vega camera only)
5. SD card 16GB (Vega camera only)
6. USB mouse for camera (Vega camera only)

In the event you have purchased our **Atlas** camera, your system will be equipped with a USB 3.0 interface. Simply plug the USB into your PC to power up and use your camera.

In the event you have purchased our **Vega** camera, please refer to the following information to acquaint yourself with the camera interface options:

Power:

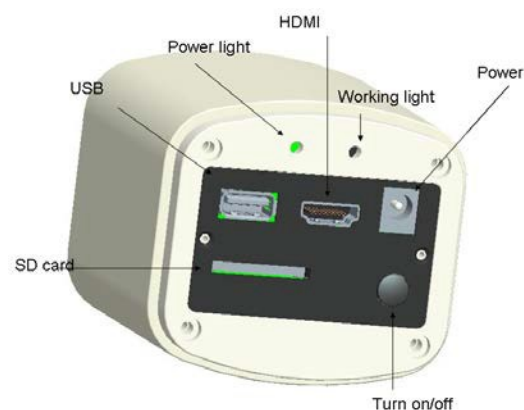
Please use the provided 12V/2A power supply to power camera. Look to LED indicator for power prompts. LED indicator glowing red indicates camera is OFF.

USB:

Should you desire to control camera parameters directly using only an HDMI source, connect the USB mouse provided directly to your camera.

To use our PixelPro™ image capture software, simply connect the USB cable provided to your PC/MAC and follow software or installation prompts needed in the event.

Note: software installation is not HDMI operation is all that is desired.



HDMI:

Use the HDMI cable provided to connect your camera to an HD monitor. Ensure that your camera is turned "ON" for HDMI streaming.

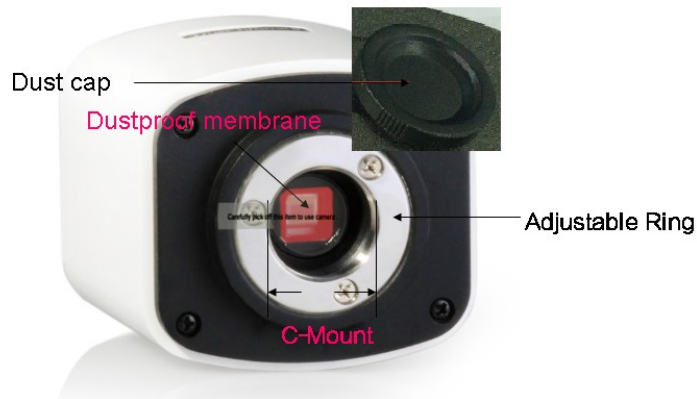
SD card:

Make sure SD card is inserted in order to start capturing and saving images. For the most reliable data transfer, we recommend using no less than class 10 (high speed) SD cards such as the one provided.

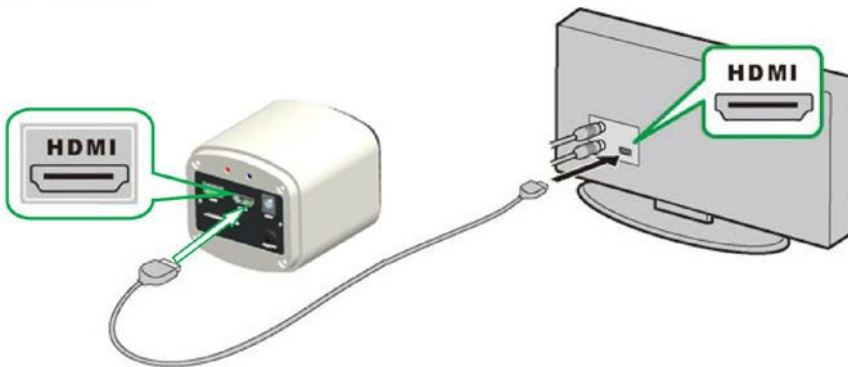
Sensor protector:

IMPORTANT: Remove dustproof membrane covering sensor before operating your camera. This membrane is to ensure your camera is received in the most ideal condition.

If camera is not in use and is removed from your microscope, we recommend securing the dust cap at all times.



Section 3: Operating camera through HDMI (Vega only)

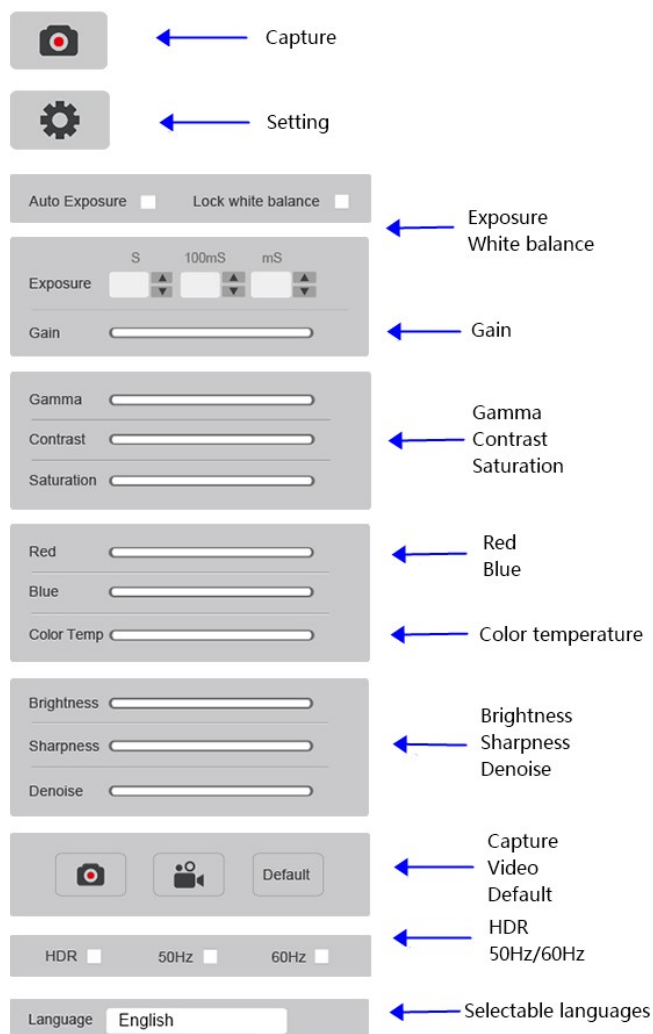
Connecting camera:

- Connect your camera to an AC inlet using the 12V/2A power supply provided. Connect the HDMI cable provided to an HD monitor. Push the ON/OFF button until the LED indicator glows blue.
- Connect the USB mouse to the USB port on camera. Move cursor to populate control features and parameter settings by scrolling to the left hand side and right hand side respectively.
- Insert the SD card. Capture images or videos to the SD card.

Capturing, settings, and controlling camera parameters:

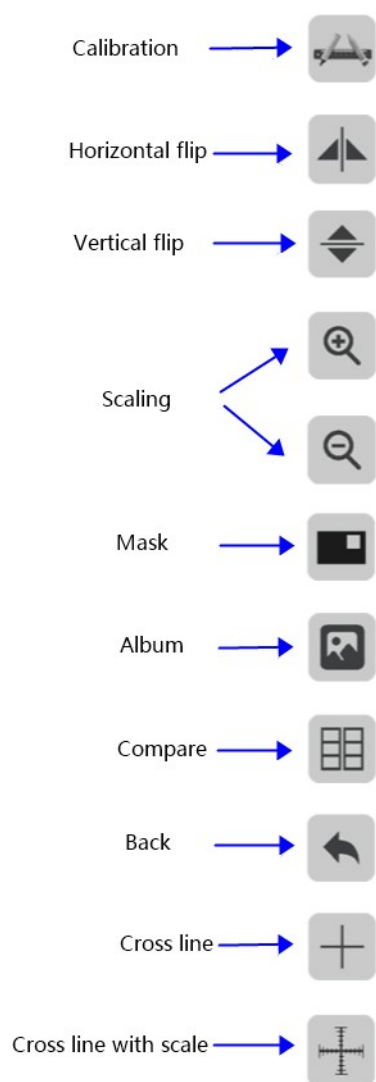
Move cursor to the left of the screen to populate CAPTURE and SETTINGS icons. Click SETTINGS to populate parameter settings. See Figure 1 below for illustration of all features.

Figure 1.

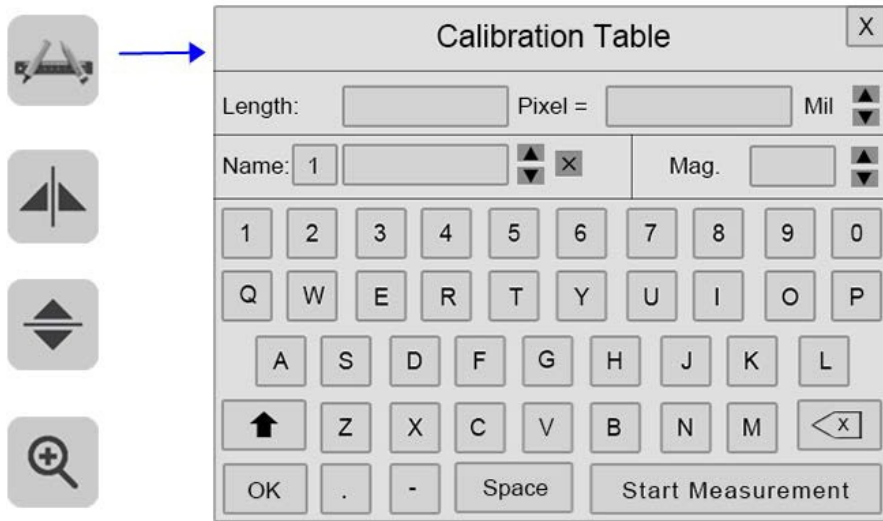


Calibration and measurement features:

Move cursor to right hand side of the screen to populate calibration and measurement features.



How to perform calibration and measurement features in HDMI-only mode:




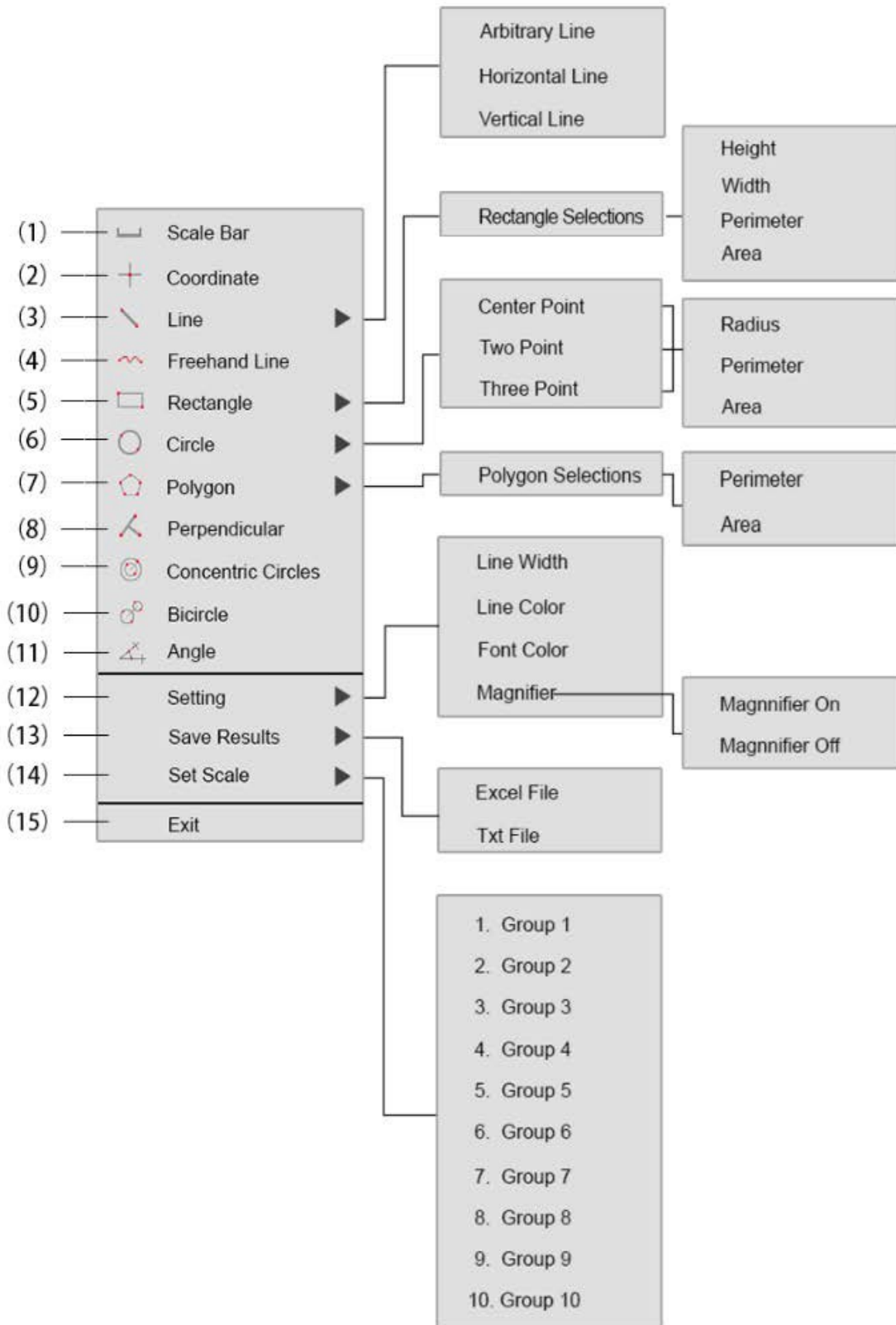
1. Click on the calibration icon  to access calibration table.
2. Live image should be of a calibration slide or any specimen with known dimensions. Draw a line to of the reference length of your slide and enter the “length” value in the appropriate cell. Five unit options are available as follows: MIL, CM, MM, UM and INCH.
3. Select the objective magnification in the “Mag.” cell.
4. Enter a name for the newly created calibration file in the “Name” cell. Multiple calibrations may be added.
5. Select “OK” to complete the calibration.
6. Select “Start Measurement” in order to proceed with measurement tasks.
7. Right-click anywhere on the live image to pull up the measurement menu.

Diagram of all measurement options and report settings:



Description of all measurement options and report settings:

1	Scale Bar	Will enable/disable scale bar on live image
2	Coordinate	Obtain coordinates of selected points
3	Line	Horizontal and vertical line measurement
4	Freehand Line	Draw any line/shape as desired
5	Rectangle	Measure rectangle perimeter and area. Selectable to show height, width, perimeter, or area
6	Circle	Center Point: Use center point and point on the circle to draw a circle Two Point: Draw a circle according to the diameter. Three Point: Use 3 points on the circle to draw a circle. Selectable to show radius, perimeter or area
7	Polygon	Measure polygon perimeter and area. Selectable to show perimeter or area
8	Perpendicular	Measure the perpendicular length
9	Concentric circles	Provides diameters of two concentric circles
10	Bicircle	Provides distance between center points of two circles
11	Angle	Angle measurement
12	Setting	Set measurement line width, color and font color. Magnifier On/off will enable/disable magnifier tool. When switching magnifier on, the area which cursor is scrolled over will be zoomed in and a magnified window will populate
13	Save Results	Select to export the measurement results to excel or text file. The exported results will be saved in the <i>SD card/MEASURE folder</i>
14	Set Scale	Allows creation of 10 selectable calibration groups in calibration table
15	Exit	Exit from measurement mode

Note: All the measurements on the live image will be removed when exiting measurement mode. Make sure to save all images before exiting, or measurements will be lost.

Section 4: Operating Camera with USB

- 1) Use USB cable to connect camera to PC/Mac.
- 2) Connect your camera to an AC inlet using the 12V/2A power supply provided. Connect the HDMI cable provided to an HD monitor. Push the ON/OFF button until the LED indicator glows blue.
- 3) Install *PixelPro™* software to adjust parameters and acquire images through PC/Mac.

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ISO 9001
File No. A9020

Printed in U.S.A.