

Optimizing the Newbart Zoom HD Camera for image quality and efficiency. Preliminary Guide

This guide is intended to provide concise instructions for obtaining best photo-image quality and operational efficiency. It's highly recommended that new operators review all steps while becoming familiar with the camera and the listed procedures.

The Newbart Zoom HD is very easy to use but procedures differ from other cameras. Adherence to these procedures will result in consistent high quality captures with minimal operator effort.

Please verify that software has been installed and the Camera has been attach to the PC as per instructions located in the user manual.

Starting the Application:

1. Click on **START-->Newbart Zoom HD Camera -> Newbart Zoom HD Camera App** and start the application.
2. The Newbart interface will appear

Taking a Capture:

Live (non-Flash) Capture Mode:

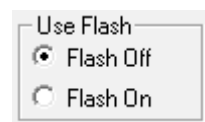
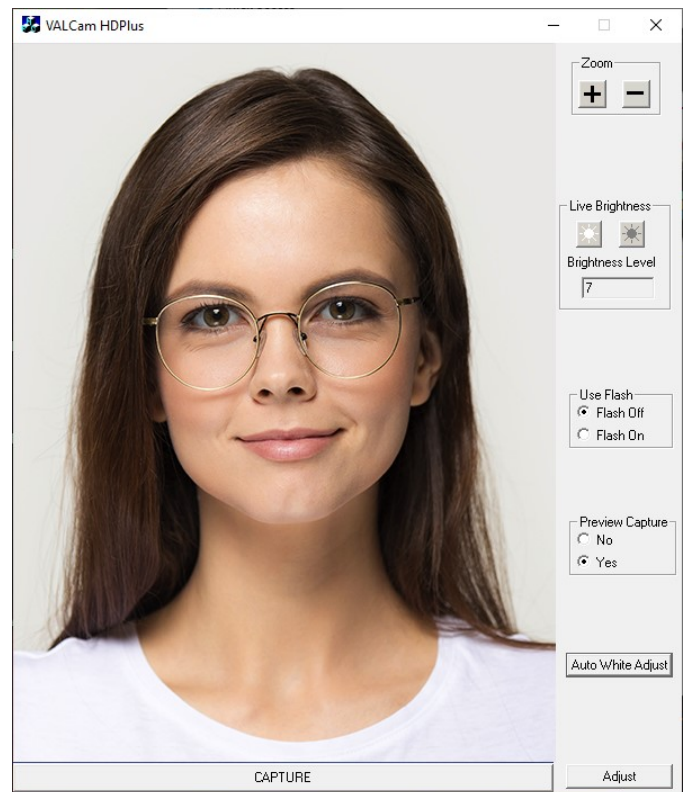
In many environments the “Live Capture” (No Flash) will deliver high quality results. The Newbart Zoom HD Camera has outstanding low light performance and may provide quality captures in environments previously thought to require a flash. We recommend to always try live capture mode when evaluating a new capture location.

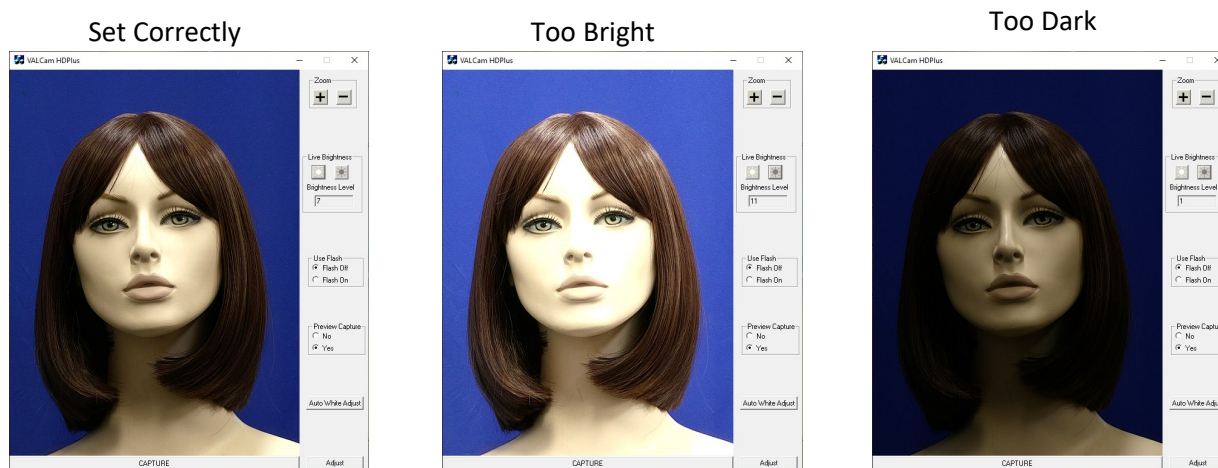
Advantages of Live Capture Mode:

- Preview image will be exactly the same as the captured image (What You See Is What You Get)
- Color Balance and Brightness changes will be viewable immediately in the Live Display

Set the Live Brightness Settings

- Verify that the “Flash Off” radio button is selected.
- Adjust the “Bright Sun” and “Dark Sun” buttons for optimal image illumination
Note: Each click of these buttons will make the image slightly brighter or darker. Click as many times as needed. See examples below.
- If the “Bright Sun” and “Dark Sun” buttons are not working verify that the “Flash Off” radio button is selected in the Use Flash box

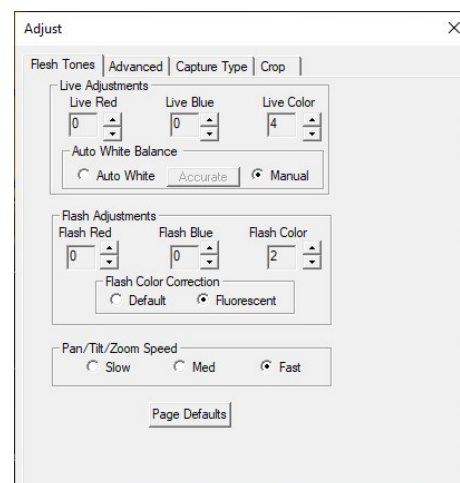




Optimizing Live Color Balance

The live preview/capture color balance can be fine-tuned for a very accurate color balance. When these changes are made the setting are locked and will not change even when the system is powered down.

- Do not use the Red and Blue scroll bars that appear in the main dialogue box after a live capture. These should be kept in the default positions and preferably locked. See section on locking settings later in this document.
- Click the Adjust button.
- Click the Manual radio button
- Adjust the Red control up until the image is too red.
- Adjust the Red control down until the image doesn't have enough red.
- Set Red control mid-way between these settings.
- Repeat these setting with the Blue control.
- Iterate between the Blue and Red controls until the color balance is optimized
- Live Color will adjust the color intensity or saturation of the image. Use of this control might be helpful to compensate for Printer irregularities.
- To reset factory defaults for these settings click the **"Page Default"** button



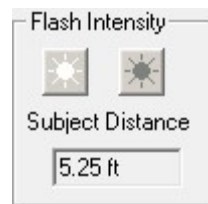
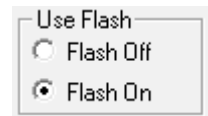
Flash Capture Mode:

"Flash Capture" Mode might be useful in demanding low-light environments. Unlike "Live Capture" Mode the results are not "What You See Is What You Get". The Live Preview and the captured image might differ in color balance and brightness.

The flash capture intensity must be set when the camera is being used for the first time in a new environment.

Setting up the Flash

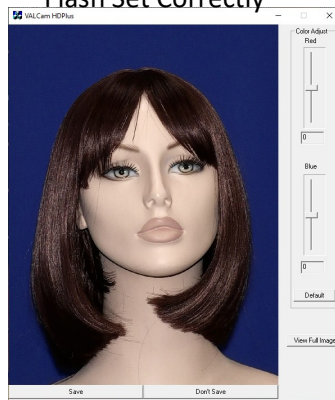
- The flash settings must be adjusted the first time that the flash is used in a new environment, generally this feature will not need to be changed once set
- Click the Flash On radio button in the Main Dialogue box of the application
- Estimate the distance between the subject and the camera
- Use the “Bright Sun” and “Dark Sun” buttons in the Flash Brightness box to set the distance
- Click the “Capture” button
- The captured image might be either too bright or too dark



Flash Too Bright



Flash Set Correctly



Flash Too Dark



- Click the “Don’t Save” button
- Use the Flash Brightness buttons to adjust the intensity of the flash, if the image is too dark click the “Bright Sun” button and vice-versa. Then click the “Capture” button again
- Note: You should leave at least 6 seconds in between taking flash captures for the flash to fully recharge
- Repeat until flash brightness is optimized
- Once the flash is set no adjustments are required between uses as the settings are saved and stored locally

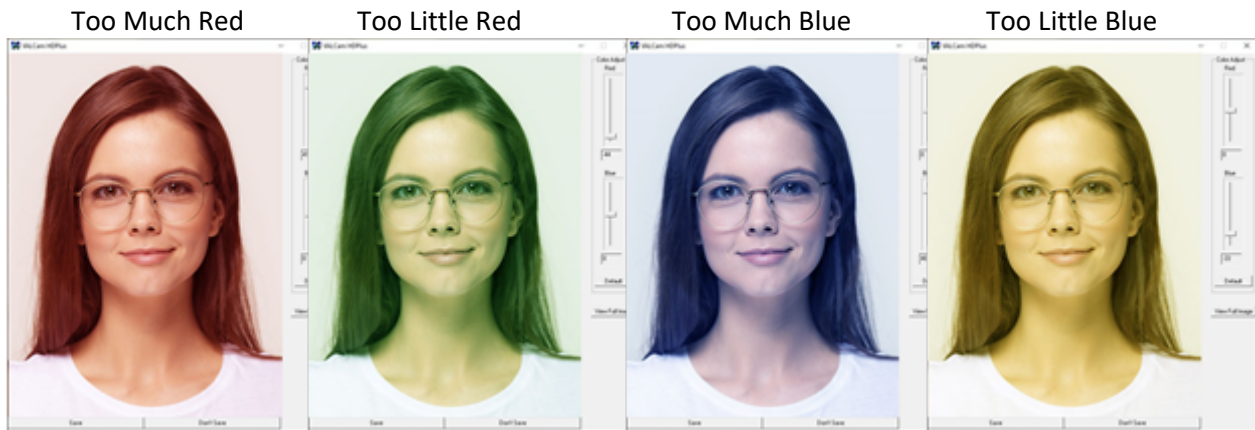
Fine tuning the color balance of a Flash Captured Image

The color balance of the captured image can be easily adjusted in real time if needed. Any color changes will be applied to additional captures without further adjustment. These changes are remembered between sessions and applied after the PC is rebooted.

Immediate Color Adjustment

- Quick color adjustments are available to easily control the color balance of the captured image
- After the capture, the image is displayed with the “Save” and “Don’t Save” buttons
- Red and Blue sliders appears next to the captured image

- To adjust the image increase the “Red” slider until the image appears too Red. Then decrease “Red” until the image appears to be lacking in Red, then place the slider in the middle of that range
- Repeat this procedure with the “Blue” slider
- Iterate this procedure between both color bars until you have optimized the image



Note: Yellow skin tones indicates too little blue, so add blue to correct

- When finished, click the “Save” button
- Color adjustment is complete and the settings will be saved and remembered in between captures and sessions

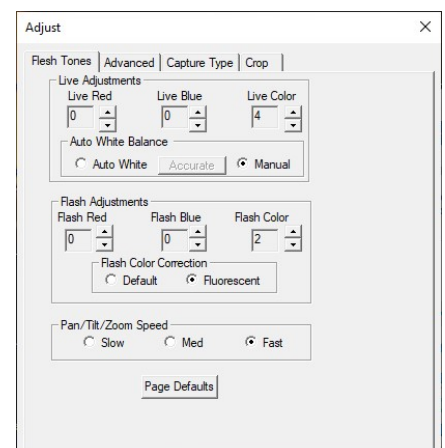
Pre-Capture Color Adjustments

Additional flash color adjustments are available from the “Flesh Tone” tab of the “Adjust” dialogue box. Generally these will not need to be used as the adjustments described above are sufficient.

Keep in mind that these adjustments are not visible in the live preview window and will only be seen after the capture is taken and displayed.

- Click the Adjust button.
- The Flash Red and Flash Blue controls can be adjusted up and down to either add or subtract the colors saturation, but it is highly recommended to use the red and blue sliders discussed in the previous section
- Flash Color up and down buttons will adjust the color intensity or color saturation of the image. Often times card printers might have issues if color intensity is too great. This control is useful for lowering color intensity to compensate for printer irregularities.

Note: A new capture must be taken to view changes made.



Universal Settings:

The following section covers some settings that apply to both Capture Modes.

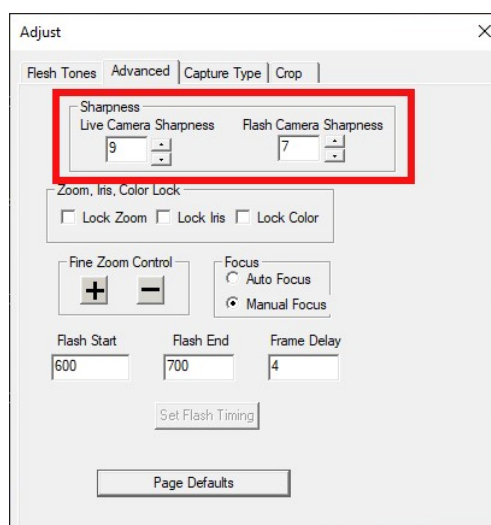
Sharpness Control:

Sharpness or the clarity of detail in a photo is important for capturing texture and definition. Overly sharp images appear harsh or grainy.

Adjusting Sharpness:

1. Click on the “Adjust” Button
2. Select the “Advanced” tab
3. Separate controls exist for Live (non-flash) mode and Flash Capture mode. Each control adjusts the sharpness for its own capture type.
4. For Live Capture- Adjust the Sharpness setting and the results will be immediately viewable in the Live Preview Window

For Flash Capture- Adjust the Sharpness Setting and take a capture the Capture Preview will reflect the settings. Adjust and retake captures as needed to fine tune.



Sharpness Too Low



Sharpness Default



Sharpness Too High



Setting Crop Values:

Cropping is optional but is highly recommended.

Cropping offers a number of advantages:

- Eliminates the need to crop the image in software.
- Previews image exactly as it will appear on the ID badge.

Implemented Cropping

- Click the "Adjust" button on the ISG window. Select the Crop tab. See figure 1.
- Select the Aspect Ratio that corresponds to the photo box on your card design
Note: This is usually 3/4 or 4/5. Do not use the Custom selection unless you have a non-typical need.
- When the crop selection is made the live preview will conform to the selection. See Figures 2 & 3.

Figure 1

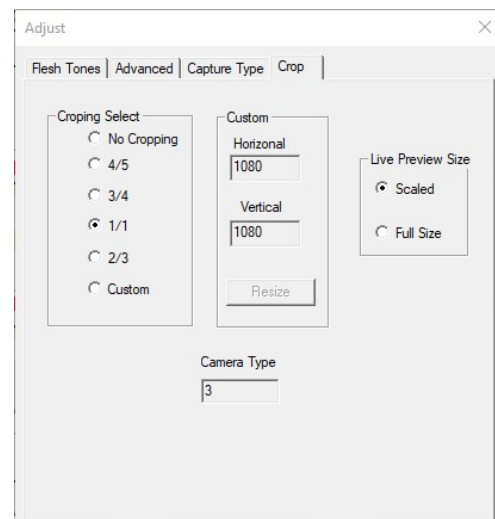


Figure 2: 3/4 Cropping

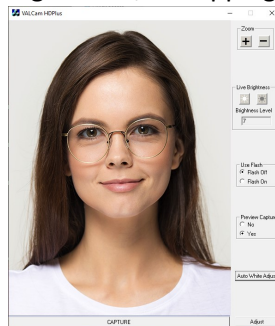
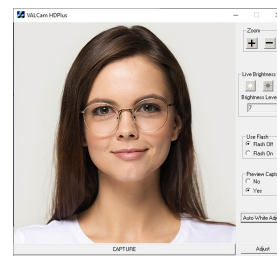


Figure 3: 1/1 Cropping

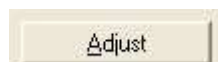


The Newbart Zoom HD Camera allows setting the crop value for both preview and capture. Using this feature the captured image will match the aspect ratio of the picture box on your ID Card design. Most applications will either use 3:4 or 4:5 but any crop value can be selected using the "Custom" Option.

Locking Settings

The Brightness, Zoom, and Color settings can be locked to prevent operators from changing these values from the main user interface. This can prevent operators from changing settings that have previously been optimized by an administrator.

- Click the "Adjust" button



- Once the Adjust box pop up appears click on the “Advance” tab
- Locate the “Lock Zoom”, “Lock Iris”, and “Lock Color” check boxes
- If desired, a password can be set in the registry to force a security check when trying to open the “Adjust” dialog box

