

VALCam Laptop Documentation

Introduction

Thank you for purchasing the **VALCam Laptop**, the first image acquisition system designed specifically for photo-ID and visual database applications for laptop computers. All camera controls (pan, tilt, zoom and exposure level) are available from the mouse or keyboard. Manual positioning of the camera is eliminated for increased operator efficiency.

In addition to hands free control, the **VALCam Laptop** uses **Video Associates Lab's** technology. A high intensity light is automatically fired with each capture. The **VALCam** will automatically adjust for perfect captures. Software adjustments are provided for exposure, color intensity, and flesh tone control. High quality captures with perfect skin tones can be obtained effortlessly in any environment, even dark rooms!



Video Associates Labs, Inc.
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Features Include:

- **Mouse or Keyboard control of pan, tilt, zoom and exposure in Pan/Tilt/Zoom camera and zoom in the Zoom camera.**
- **Uses optical pan, tilt, zoom for highest resolution.**
- **Adjustable external light exposure via software control. Perfect captures, even in dark rooms**
- **Hassle free integration of strobe lamp**
- **Includes 32 Bit Twain Driver. Optional Software Developers Kit available.**
- **Will work in all major Windows photo ID and imaging applications.**
- **High-resolution single chip CCD array (796x494).**
- **Auto Focus, S-video output.**
- **Available in both NTSC and PAL video standards.**
- **Kits include Pan/Tilt/Zoom or Zoom only camera, VideoVue PCMCIA capture card, Flash, software drivers and cables.**

Quick start instructions for hardware and software installation are provided. A trouble-shooting guide will help resolve installation and operational problems. The **Imaging Hints and Tips** section will help the end user achieve high quality captures.

If technical support is needed please contact:

Video Associates Labs
Phone: 800-331-0547
Fax: 512-491-7619
Email: support@val.com

Parts List

6500-686 VALCam Laptop Pro with CamLite

High resolution S-video camera with pan/tilt/zoom
VideoVue PCMCIA capture card with software
S-video to PCMCIA cable
CamLite external power transformer
Lamp with trigger cable
9 pin male to 9 pin female D-sub cable (RS 232)
Multi-cable wiring harness
9 pin to 25-pin adapter
110v power cord
Universal mounting bracket for lamp
Instruction Manual

6500-688 VALCam Laptop Zoom with CamLite

High resolution S-video zoom camera
VideoVue PCMCIA capture card with software
S-video to PCMCIA cable
CamLite external power transformer
Lamp with trigger cable
9 pin male to 9 pin female D-sub cable (RS 232)
Multi-cable
9 pin to 25-pin adapter
110v power cord
Instruction Manual

Hardware installation

NOTE: These instructions cover both the Pan/Tilt/Zoom and Zoom only camera. Follow the directions that are appropriate for your system.

NOTE: All cable connectors and matching receptacles have been color coded for easy installation

1. Locate the **PCMCIA** card and the **RCA to S-video cable**. Connect the **Black RCA** male connector to the **Y1** female receptacle on the PCMCIA card. Connect the **RED RCA** male connector to the **C1** female receptacle on the PCMCIA card.
2. Make sure the computer is powered off and insert the **PCMCIA card** with the attached cable into a PCMCIA slot on the laptop computer.
3. Locate the **CamLite** external box.
 - a. Attach the S-video end of the black PCMCIA to S-video cable with the **gray** color code to the S-video receptacle on the **CamLite** external box.
DO NOT FORCE
 - b. Connect the male end of the 9 pin to 9 pin cable to the matching **RS 232** receptacle on the black box.
 - d. Connect the female end of this cable to an available **Com** port on your computer.
 - e. Attach the AC power cable to the **CamLite** external box.
 - f. Locate the multi-cable camera wiring harness and attach the 25-pin multi connector to the matching receptacle on the **CamLite** black box.

4. Pan/Tilt/Zoom Camera connections

- a. Attach the **flash-mounting bracket** to the screw hole bottom of the camera. Tighten the bracket knob to secure the bracket to the camera body. Verify that the flash shoe lies behind the camera body and not to the side.
- b. Attach your tripod-mounting block (quick release plate) to the screw hole on the **flash-mounting bracket**.
- c. Attach the complete unit to the tripod.
- d. Attach the **Lamp** to the hot shoe connector on the **flash-mounting bracket**.
- e. Locate the camera **multi-cable** camera wiring harness. Connect the **brown** S-video connector on the **multi-cable** to the matching S-video connector on the Pan/Tilt **camera**. Verify the cable connector is properly oriented and gently insert connector. **DO NOT FORCE THE CONNECTION.**
- f. Connect the **red** Visca connector to the matching **red** Visca connector on the **Pro camera**.
- g. Connect the **yellow** DC connector on the **multi-cable** to the **yellow** matching DC connector on the **Pro camera**.
- h. Connect the white lamp **unit** cable connector to the matching white connector on the **multi-cable**.

Zoom camera connections

- a. Attach your tripod mounting block to the bottom of the **camera** and attach to tripod
- b. Attach the **flash unit** to the hot shoe connector on the top of the **Zoom camera**.
- c. Attach the white connector on the **Lamp unit** to the matching connector on the **Zoom camera**.

- d. Locate the **multi-cable** and attach the **brown/black** 25 pin D-sub connector to the matching connector on the Zoom camera.
5. Attach the AC power cable for the external box to a power source. Verify that the power switch on the **Pan/Tilt** camera is in the on position. Verify that the power indicators on the **external box** and the **Pan/Tilt** and **Zoom or Zoom** only camera are illuminated.

The **VALCam Laptop** hardware is now installed.

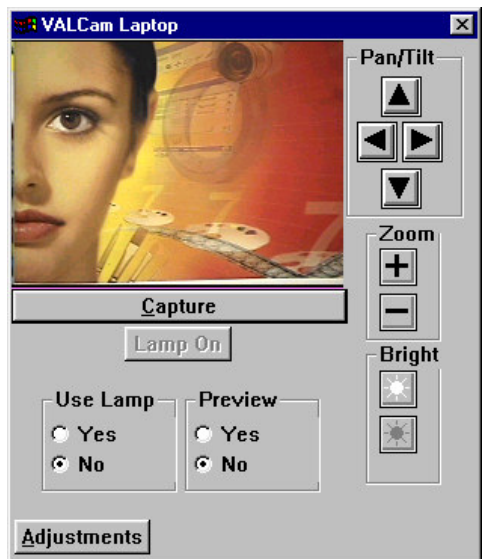
Software Installation.

1. Verifying that the hardware is properly installed and the **PCMCIA** card is inserted in a **PCMCIA** slot
2. Power the computer and start windows.
3. The machine will find the new hardware and request a location for hardware drivers. Insert the supplied floppy for your operating system and indicate that the new drivers are located on the floppy (**a: drive**). Drivers for **Win 2000, XP and 98SE** are provided. Be sure to use the floppy that matches your operating system.
4. After the drivers are installed reboot the computer and restart Windows. Insert the floppy disk, select **Start, Run,** and select "**Setup.exe**" from the floppy. This will install the **ValCam LT Zoom 32 bit Twain** driver.







NOTE: Contact Video Associates for Win 95, 98FE and NT drivers.

Verify operation

1. Click Start->**Programs**->**VALCam Laptop**->**VALCam Laptop.exe**.
2. The **ValCAM Laptop** dialog box will appear. If this dialog does not appear refer to the troubleshooting section.





Controlling Pan/Tilt/Zoom

1. Place the mouse over the  button and hold down the left mouse button. The camera will tilt up. When the mouse button is released, camera motion will stop. The , ,  buttons works in a similar fashion. (**Pan/Tilt/Zoom camera only**)
2. Use the \uparrow , \downarrow , \leftarrow , \rightarrow keys to control pan/tilt operation. Hold down keys to initiate action and release keys to stop action. (**Pan/Tilt/Zoom camera only**)
3. Place the mouse over the  button and hold down the left mouse button. The camera will zoom in. When the mouse button is released, zooming will stop. The  button works the same way to zoom out.
4. Press the + key next to the numeric keypad. The camera will zoom in. Release the + key and the camera will stop zooming. To zoom out press the - key next to the numeric keypad. Release the - key to stop the action.

Capturing and Viewing an Image

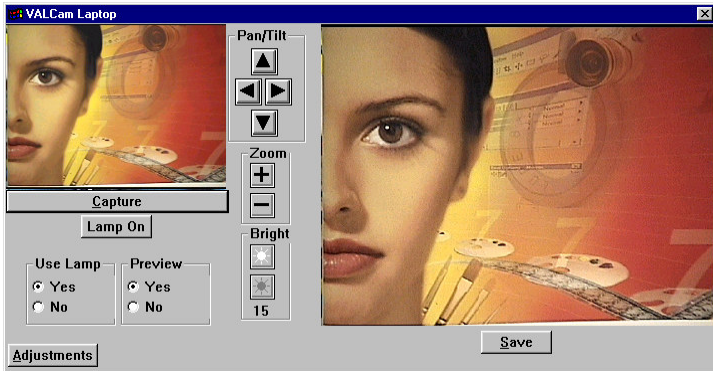
1. Verify that the **Use Lamp Yes** button is enabled.
Verify that the **Preview Yes** radio button is enabled.





2. Using the Zoom and Pan/Tilt controls(**only on PTZ camera**), frame the subject. Zoom in as tight to subject as image composition will allow.
3. Click the **Lamp On** button and verify that the **Lamp** comes on. If the live preview image is too dark click the  brighter button 1 or more times. If the image is too bright click the  darker button 1 or more times. Each time these buttons are pressed the **iris level** is adjusted up or down. The **Iris Level** value is saved to an **INI** file and will always be remembered when the **Capture** or **Lamp On** buttons are clicked.

NOTE: The lamp will automatically shut off in about 45 seconds. Click the Lamp On button twice to turn the lamp back on.

4. Click the **Capture** button. The captured image will appear in the dialog box
Click the capture button again and note that the lamp will automatically turn on and turn off. You do not have to turn the lamp on prior to taking a capture.



5. Select the **Use Lamp No** radio button. Adjust the Brighter  and Darker  buttons to set the exposure. Click the **Capture** button to take a capture without the lamp

NOTE: All settings are saved to the Portable.ini file and will be remembered between sessions.

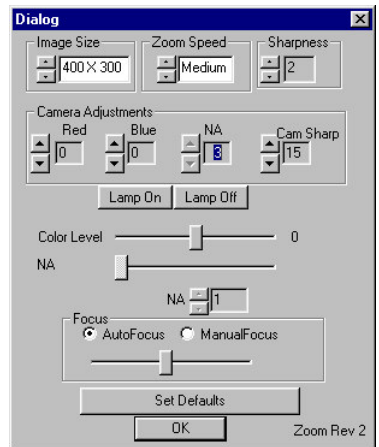
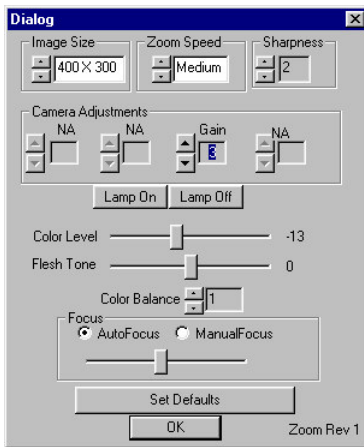
Adjusting Camera and Capture Parameters

All camera and capture adjustments are applied through the **Adjust** dialog box. Separate settings can be applied for both **lamp** and **non-lamp** captures. All settings are stored in an **INI** file and are remembered between sessions.

The **Adjust** dialog box can be **password** protected if desired. This allows only managers and administrators access to the **Adjust** dialog box.

Opening the Adjustment dialog box

Click the **Adjustment** button on the main dialog





Note: All current and previous hardware versions of *Video Associates Labs* are supported. If you are using an earlier version of our camera, the dialog box on the left will appear. The dialog box on the right supports all current cameras.

Note: The NA designator indicates all unsupported camera functions.

Using the Adjustment Controls

1. If the lamp is not on, click the **Lamp On** button.

NOTE: The lamp will automatically turn off in about 45 seconds. If this occurs, click the Lamp On button again.

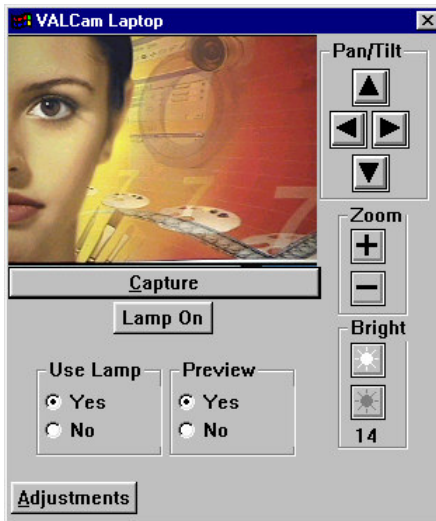
2. Zoom in as tight to the subject as your image composition will allow.
3. Use the Brighter/Darker buttons  ,  in the main window to adjust the exposure level.
4. Adjust the **Red** and **Blue** spin controls for proper skin tones (**Only available on current hardware**)
If the image is yellow increase **Blue** and decrease **Red**
If the image is green increase **Blue** and increase **Red**
5. Adjust the **Cam Sharp** control for the desired sharpness
A **value between 6 and 9** is recommended. If the value is too high the image will look edgy and over enhanced. If the value is too low the image will look soft and unfocused.
6. Adjust the **Color** scroll bar for the proper color intensity. If the color intensity is too high the card printer might distort the color rendition. Usually a value between **-30 and 0** will produce good results
7. Adjust the **Flesh Tone** scroll control (**Only available on older cameras**) for proper color balance. In conjunction with this control adjust the **Color Balance** spin control to optimize the



final setting.

8. Adjust the **Gain** spin control if you are in a very dark room and/or the subject is more than 5 feet from the camera. In most cases a **value of 3** will give good results. This control can also be used to make fine adjustments in exposure settings.
9. Adjust the **Image Size** control to set the resolution of the captured image. The default is 400x300 but 640x480 should also be tried.
10. Adjust the **Sharpness control** to set post capture image processing. A value of 2 is the default.
11. Click the **Restore Defaults** button to restore settings to factory defaults. If desired the Default settings can be customized by the administrator
12. Close the **Adjust Dialog** box.

Taking a Capture with the Twain Driver

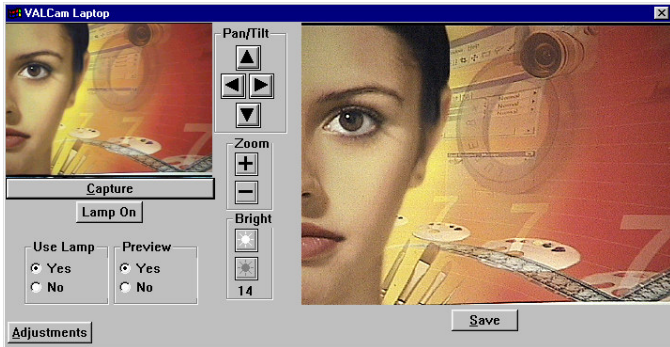
1. Open your application and select the **VALCam Laptop** twain driver
2. Acquire an image through your application. The **VALCam** laptop dialog box will appear



3. Verify that the **Use Lamp On** and **Preview Yes** radio buttons are enabled.
4. Click the **Lamp On** button. The lamp will come on. Adjust the **Iris** controls,   for proper exposure.

NOTE: The lamp will go off after 40 seconds. Double click the Lamp On button to turn the lamp back on.



5. Click the **Capture** button or press the 'C' key and the image will be displayed in the window. If the image is acceptable, click the **Save** button or press the 'S' key to send the image to your application. If the image is not acceptable click the **Capture** button to take another capture. All image settings will be saved to the **Portable.ini** file and remembered sessions.



NOTE: The 'C' and 'S' are short keys for capturing the image

6. Once the settings are optimized, the **Capture** button can be clicked without clicking the **Preview** check box or clicking the **Lamp On** button.

Taking a Capture without using the Lamp

1. Make sure that the **Use Lamp Off** radio button is enabled.
2. Adjust exposure using the brighter  and darker  buttons. Note that the preview window exposure will change immediately.
3. Click the **Adjustments** button to open the Adjust Dialog box. Verify the Lamp is off and adjust settings

to optimize the image

4. Click the **Capture** button

Setting an Administrators Password

1. Locate and double click on the Portable.INI file located in the Windows folder or sub folder
2. The file will open in Notepad. Scroll down and locate the **Password=None** entry.
3. Modify this entry with a password of your choice
Example: **Password=007**
4. Restart the **VALCam** application and click the **Adjust** button



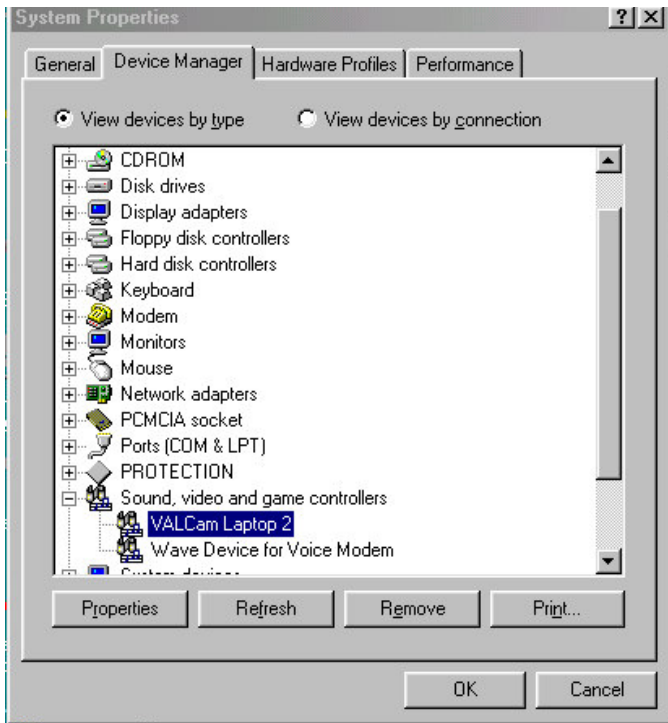
5. You will be prompted to enter your password
Enter **007** to open the Adjust Dialog box.

Trouble Shooting

- 1..**“Camera Not Found”** dialog box displayed when trying to start the application.
 - a. Verify that all cable and camera connections conform to the instructions in the **Hardware installation** section
 - b. Verify that the software has been installed according to directions
 - c. Verify that the external power box and camera have their green LED illuminated
 - d. Run the **Black Box Tester** utility under Programs->VALCam Laptop
 - e. Verify that the Com port is enabled in the BIOS and that another application is not using the Com port. Some applications can grab the COM port during boot up. In this case an available COM port may not be available for the **VALCam** application. In most cases these applications can be disabled from starting during boot up releasing the Com port for the **VALCam**.

2. I receive a slew of error messages when trying to start the application.

In **Win95/Win98SE/ME/2000** check **Device Manager** to verify that the hardware is properly installed. There should be an entry for **Video Associates Labs** in the **Sound Video Game Controller** section. Verify that there are no error indicators next to the **Video Associates Labs** section.



3. The application runs fine when started on its own, but cannot make it run from my application.

- a. Verify that you have selected the **VALCam** as the twain source for your application. Consult the your application instructions for selecting a Twain source if you do not know how this is done.
- b. Verify that the file **Twain_32.dll** is in your Windows directory.