

Technical Note

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Vertex[®] Chemcam Option Setup Instructions

T/N 1998-0477 Rev 1 12/02

Overview

The Vertex Chemcam option (p/n 1295-0230) provides a means to observe and capture images of the stains on the Chemcassette[®] tape. It consists of a small video camera located between the Chemcassette take-up reel and the optics head. The Vertex records images of the stains in either AutoPicture mode or by a Chemcam live capture. The Chemcam field of view is only wide enough to capture four points on one picture.

When this option is installed on the Vertex Analyzer, occasionally you may be required to setup the camera, should the analyzer be replaced, or adding additional analyzers, or the analyzer is re-installed into another slot or serviced.

Please follow the instructions below. If you are having trouble with any of the steps, please contact your Zellweger Service Representative.

Chemcam set-up/naming

 **Caution:** To avoid software conflicts, it is recommended to shutdown the Vertex HMI prior to conducting this procedure.

Note: Stopping the project in step 1 does **NOT** stop the Vertex Analyzers from monitoring for gases. Though, this will cause Faults on the system and **WILL** activate the assigned fault relays.

1. Close the project by Main Screen...**PROJECT...STOP PROJECT**
2. Close the *RSVIEW32* program by clicking **File...Exit RSVIEW32** or by clicking on the **X** located on the upper right corner of the screen.

Chemcam set-up/naming (continued)

3. Install new or replacement Vertex Chemcam Analyzer, but do not plug in the USB cable.
4. Power-up the Vertex Analyzer.
5. Activate on screen keyboard.
6. Press **CTRL** then **ESC** to activate the task bar.
7. Plug in the USB cable to the newly installed Vertex Chemcam Analyzer (ie. Az 1-1).
8. Press **START...PROGRAMS...MULTICAM UTILITIES...MULTICAM WIZARD**.

Note: Only work on one Analyzer at a time.

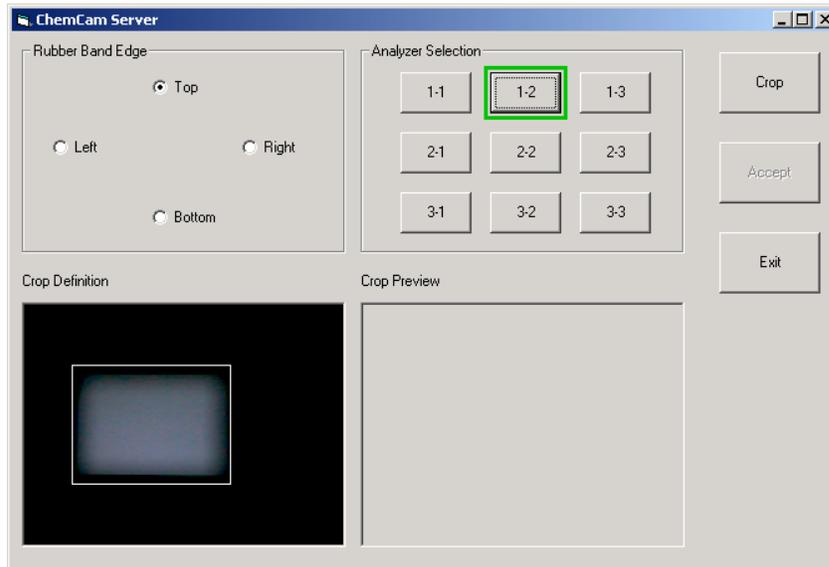
9. Press **REFRESH LIST**.
10. If this is a replacement analyzer, then select the camera name associated with that slot from the drop down list box (i.e., Az 1-1), and press **REMOVE OLD CAMERA**.
11. Select the "Un-Named USB cam #" camera from the drop down list box, and press **CHANGE CAMERA NAME**.
12. Enter the appropriate name in the form of Az <tier>-<slot>. (ie. Az 1-1)
13. Repeat steps 7 though 12, skipping step 8 for additional cameras.
14. After all cameras are named, close the Wizard.

Software configuration

1. Activate the task bar by pressing **CTRL**, then **ESC**.
2. Press **START...PROGRAMS...MULTICAM UTILITIES...MULTICAM VIDCAP**.
3. Press **OPTIONS** on the menu and select a camera.
4. Press **OPTIONS...VIDEO FORMAT**.
5. Select 640 x 480 and 24-bit color.
6. Press **OPTIONS...VIDEO SOURCE**.
7. In the new window that pops up, press the **MORE** button.
8. Set these parameters:
 - a. Image sharpness-----100%
 - b. Image brightness-----20%
 - c. Image color-----50%
 - d. Adjust Brightness Control--50%
 - e. Auto Gain Mode-----AGC OFF
 - f. Shutter speed-----1/32
 - g. Manual Gain Control-----20%
 - h. Auto WB tracking-----unchecked
 - i. Color Level-----50%
 - j. Red balance-----100%
 - k. Blue balance-----20%
 - l. Quality vs. Frame rate-----High quality
 - m. Backlight compensation-----0%
 - n. Gamma-----2.20
 - o. LED-----un-checked
 - p. 60Hz-----checked
 - q. Freeze-----un-checked
 - r. Negative-----un-checked
 - s. Mirror-----un-checked
 - t. Flip-----un-checked
9. Press **CLOSE** and **OK**.
10. Select another camera from the **OPTIONS** menu and repeat steps 3 through 9.
11. Close the **VIDCAP** window.

Cropping the picture

1. Press **START...PROGRAMS...VERTEX...CHEMCAM SERVER**.
2. Select a Chemcam Analyzer in the “Analyzer Selection” area.
3. In the “Rubber Band Edge” area, select an edge to crop.



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4. Click in the “Crop Definition” area to position the select edge of the cropping region.
5. Continue steps 3 and 4 until the entire cropping region is satisfactorily defined.
6. Press the **CROP** button to see a preview of the resulting cropped image.
7. When satisfied with the result, press **ACCEPT**, and then **OK**.
8. Repeat for all analyzers.
9. **EXIT** the Chemcam Server utility.
10. Restart the project by pressing **CTRL** then **ESC** to activate the task bar.
11. Press **START...PROGRAMS...VERTEX...VERTEX HMI**.
12. Reset any faults that have occurred.

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