

SOP of the surface profile measuring microscope

[Keyence VF-7500]

Preparation

1. make sure the laser intensity and the light intensity is minimum
2. switch the key to power on
3. put the object on the stage
4. make sure the lens won't touch with the object before rotating the lens table
5. make sure the lens won't touch with the object before adjusting the height of the stage to focus
6. adjust the stage height to get enough space for the object
7. rotate the lens table to select the lens
8. open the laser shutter

[Profile]

Function: measure surface profiles

Steps:

1. go to system menu and select "Profile"
2. push "LENS" to select the correct lens mode
3. adjust the observing position of the object to make it under the laser scanning line
4. tune the light intensity and the stage height to get a clear view of the object
5. push "DISPLAY" 2 times to switch to the image without lines
6. increase the laser intensity to see it project on the object form the monitor
7. push "DISPLAY" 1 time to return to the image with lines
8. push "LASER MONITOR" to observe the laser intensity
9. tune the laser intensity to get the highest level saturation
10. Push "MEASURE"
11. Setup parameters for the Pitch and the Z-dist
12. push the joystick
13. adjust stage up or down
14. push "PUSH ENTER" to start measuring
15. move the lines to measure the dimensions of the profile
16. push "ZOOM-" or "ZOOM+" to zoom the profile
17. push "SMOOTH" to make profile more smooth

[Thickness]

Function: measure a thickness at any point of transparent objects

Steps:

1. go to system menu and select "Thickness"
2. push "LENS" to select the correct lens mode
3. tune the light intensity and the stage height to get a clear view of the object
4. adjust the observing point of the object to make it under the pointer
5. push "DISPLAY" 2 times to switch to the image without lines
6. increase the laser intensity to see it project on the object form the monitor
7. push "DISPLAY" 1 time to return to the image with lines
8. push "LASER MONITOR" to observe the laser intensity
9. tune the laser intensity to get the highest level saturation
10. Push "MEASURE"
11. Setup parameters for the Pitch and the Z-dist
12. push "PUSH ENTER"
13. adjust the stage by using the joystick
14. adjust the pointer by using the joystick
15. push "PUSH ENTER" to start measuring
16. move the lines to measure the distance between the two peaks
17. push "ZOOM-" or "ZOOM+" to zoom the profile
18. push "SMOOTH" to make profile more smooth

[Thickness2]

Function: measure the thickness and profile of transparent objects

Steps:

1. go to system menu and select "Thickness"
2. push "LENS" to select the correct lens mode
3. tune the light intensity and the stage height to get a clear view of the object
4. adjust the observing point of the object to make it under the pointer
5. push "DISPLAY" 2 times to switch to the image without lines
6. increase the laser intensity to see it project on the object form the monitor
7. push "DISPLAY" 1 time to return to the image with lines
8. push "LASER MONITOR" to observe the laser intensity
9. tune the laser intensity to get the highest level saturation
10. Push "MEASURE"

11. Setup parameters for the Pitch and the Z-dist
12. push "PUSH ENTER"
13. Parameter set [thickness]
14. adjust the parameter by using the joystick
15. push "PUSH ENTER" to start measuring
16. move the lines to measure the distance between the inner profile and the outer profile
17. push "ZOOM-" or "ZOOM+" to zoom the profile
18. push "SMOOTH" to make profile more smooth

Take the picture

Step 1: Prepare

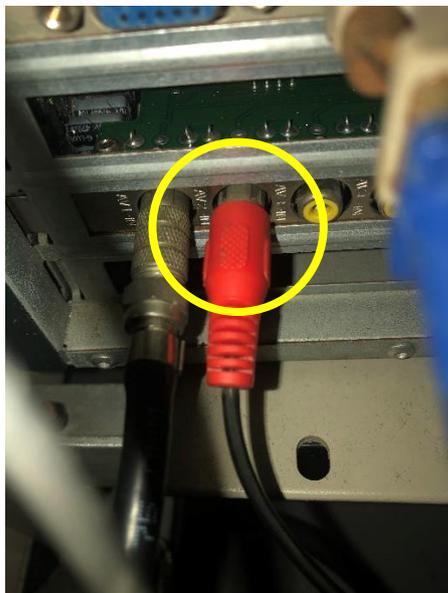
- Software: AMCap and PC Screen Capture



- Hardware: Fusion 878A Card

Step 2: Connect hardware

- Follow the picture below



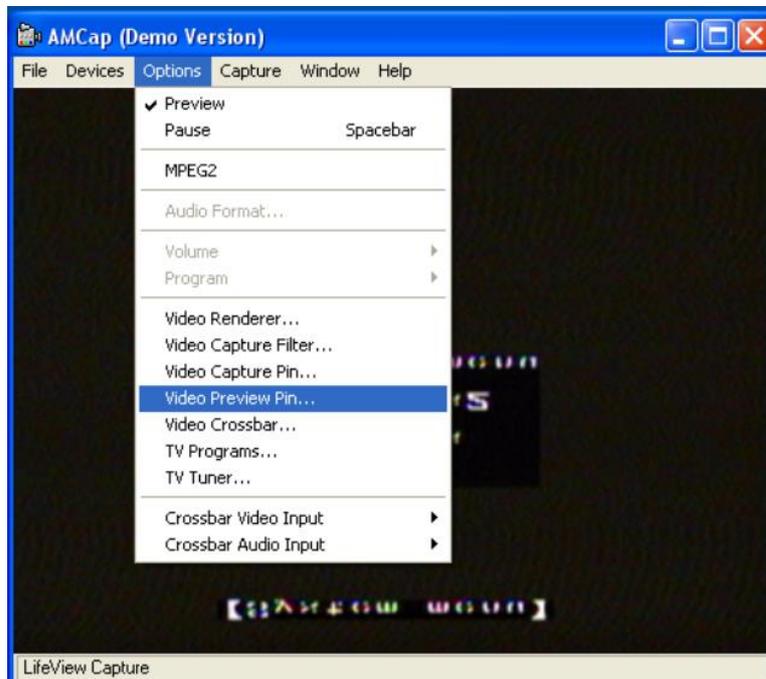
Computer



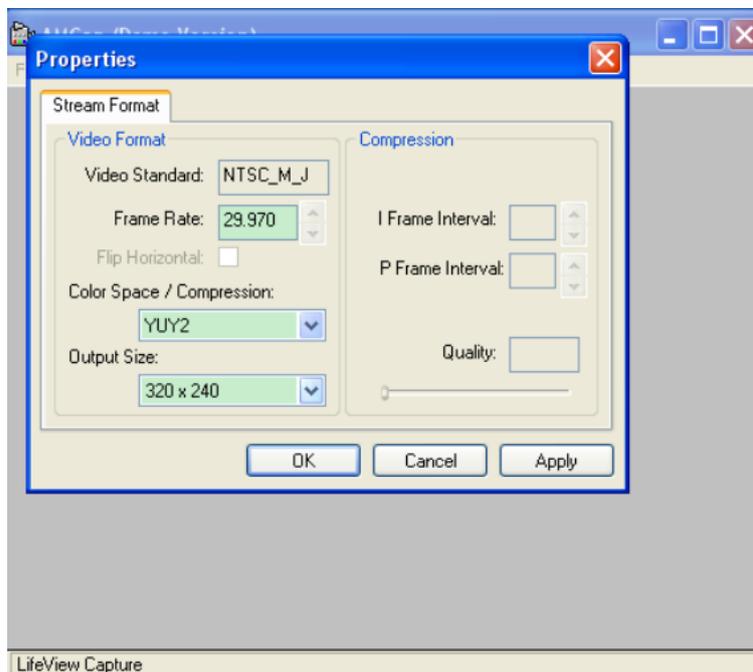
VK-7500

Step 3: Change the signal resolution

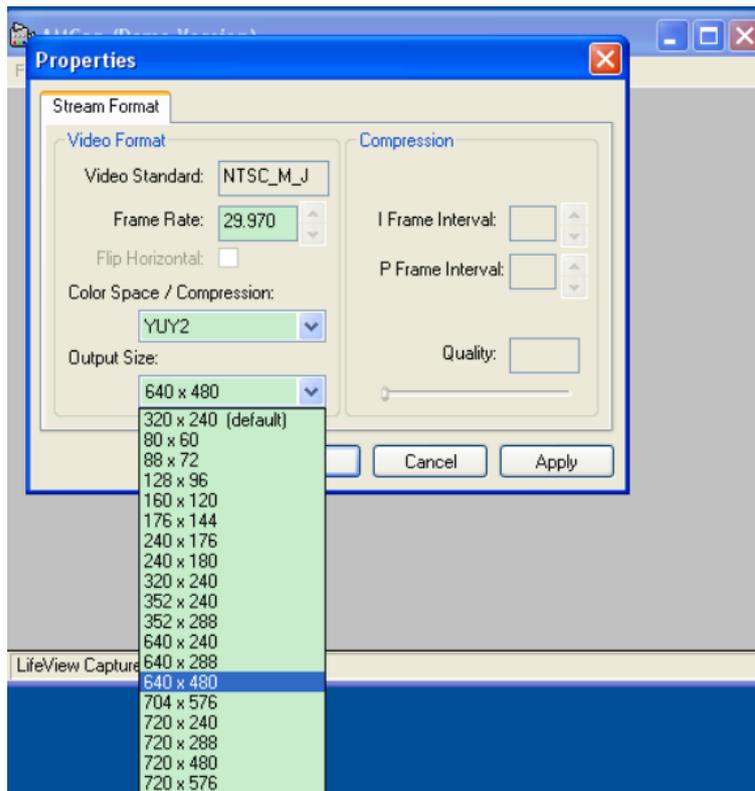
- Open software "AMCap"
- Go to **Options** → **Video Preview Pin...**



- Click left mouse **Output Size:**



- Choose **640 x 480**



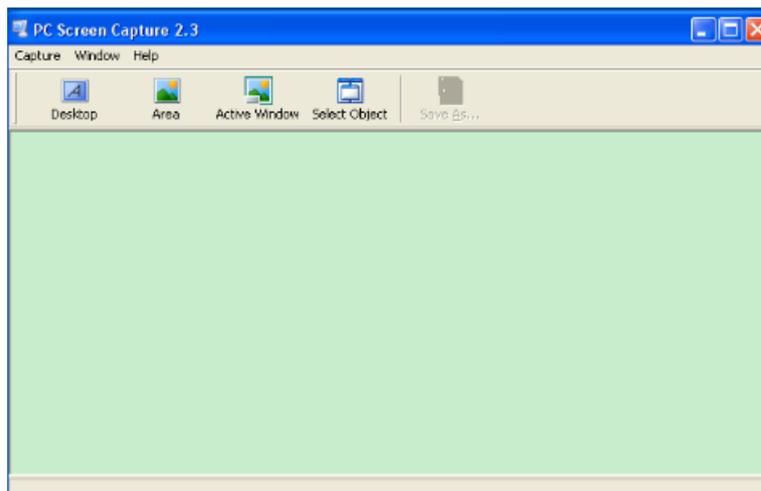
- Click **OK** button

Step 4: Flip View

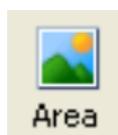
- Go to **Window** → **Flip View** → **Flip**

Step 5: Capture the picture

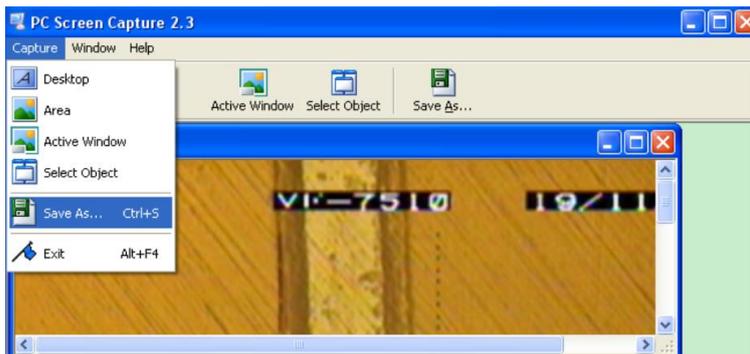
- Open software “PC Screen Capture”



- Choose icon **Area** (PC Screen Capture)



- Click & hold the left mouse and drag the area you want to capture the image.
- Go to **Capture** → **Save As...**



- Type the file name into **File name**
- And click **Save** button

