

TNIR Additional camera Function Manual

1. Introduction

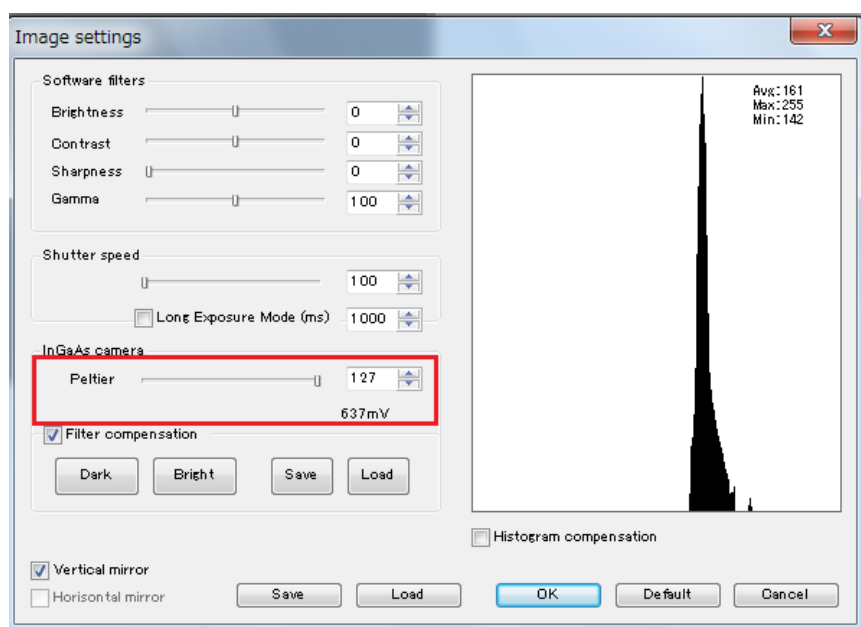
This manual explains how to operate the additional functions for the TNIR cameras on ArtMeasure software (Ver.1.3.3.3).

Please refer to the manual of the standard version ArtMeasure for other functions.

2. Peltier Control: Filter settings > Peltier

With ARTCAM-031TNIR, it is possible to cool the sensor and reduce the noise by regulating the voltage applied to the Peltier element of the sensor.

***This function is not available for ARTCAM-008TNIR.**



How to do Peltier Control

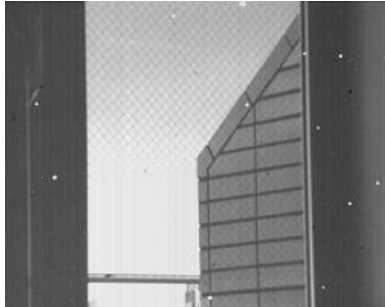
- ① Click "Filter settings"
- ② Adjust the Peltier with the slider bar, or enter a number in the edit box.

Output voltage from the temperature sensor is shown under the edit box.

(Each time temperature of a sensor decreases by 10K, output voltage increases by 14.8mV.)

3. Filter compensation: Filter settings > Filter compensation

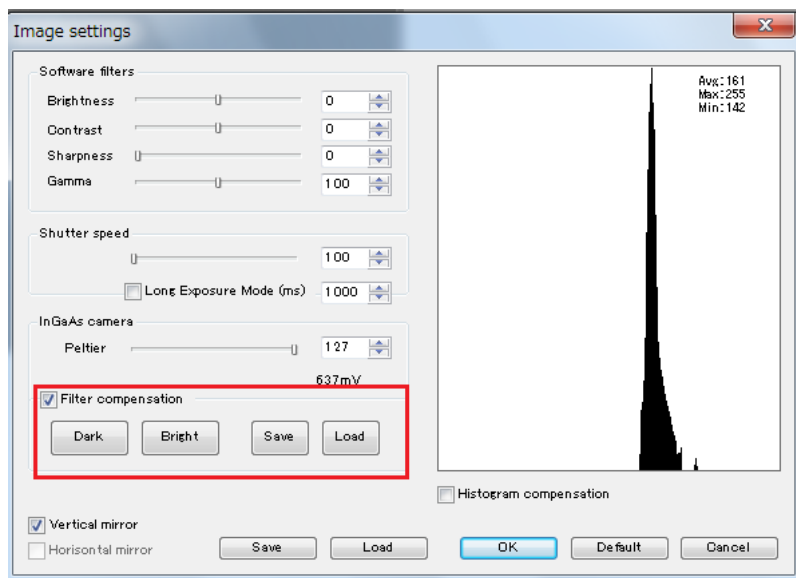
Please perform Filter Compensation before you start detect. Filter Compensation is recommended to reduce the noise.



Without Filter compensation



With Filter compensation



How to perform Filter compensation

- ① Put on the lens cap and shield the light completely (the camera image completely in dark), and click "Dark"
- ② Remove the camera lens and face the light closely. (the camera image should be snow-white), and click "Bright"
- ③ Check "Filter compensation" box and click ok.

You can also click "Save" to save the current correction filter.

Or load previously saved correction filter by clicking "Load".

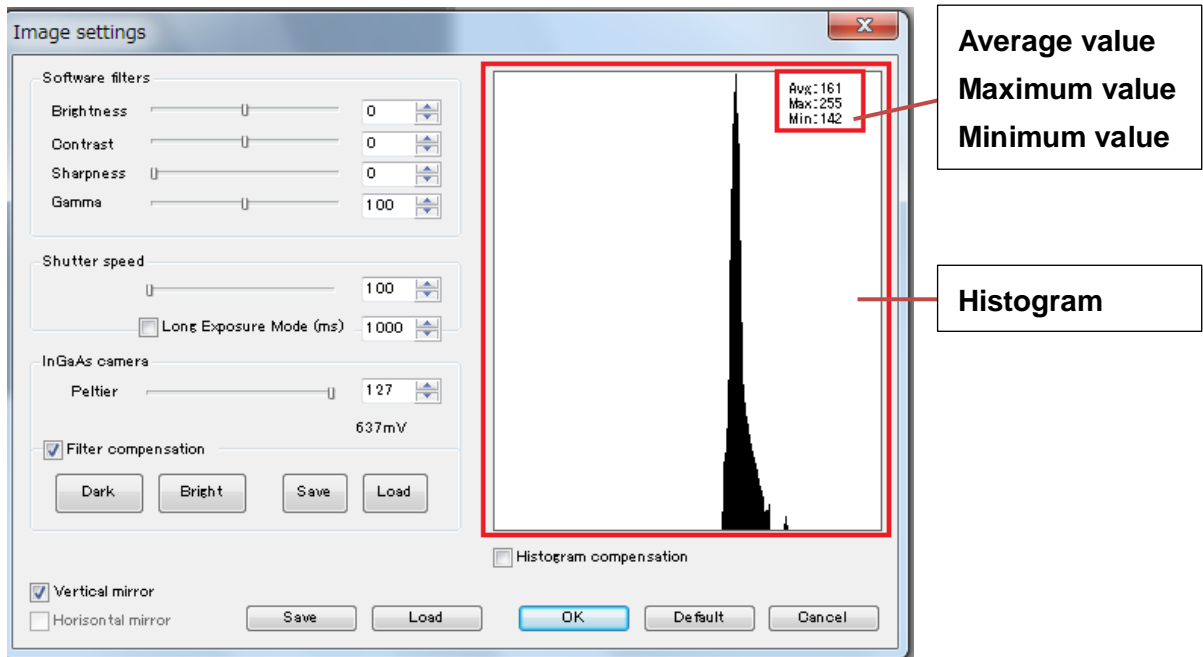
*After ending software, with a saved mask applied, the mask is applied also at a start-up next time.

Note: Please avoid to name 「Default.msk」 as mask file. It will be overwritten on the original mask file we provided. Please rename the mask file when you save it.

4. Histogram compensation: Filter settings > Histogram compensation

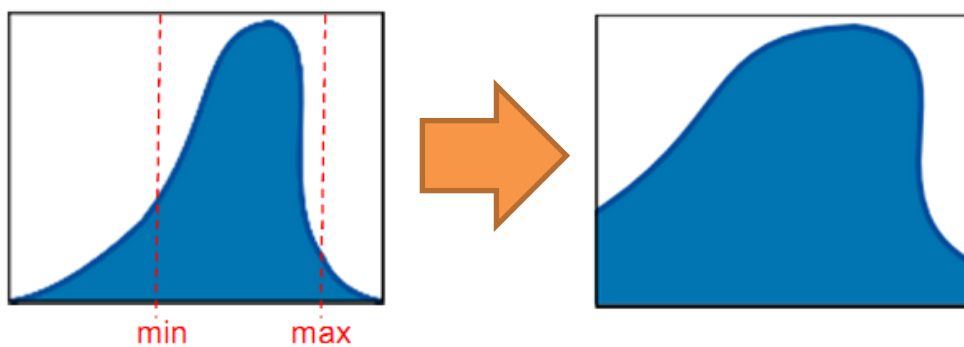
The histogram shows the luminosity of all pixels of the image.

The average, maximum, and the minimum value of luminosity are displayed on the upper right of a histogram.

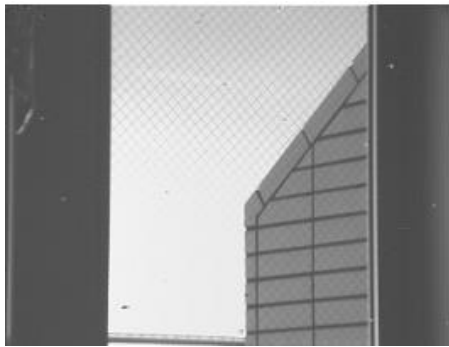


When the color space is a 16-bit monochrome, it is possible to apply a histogram correction, can be used to extend the brightness of the specific range of 0 to 16 bits. (008TNIR 14-bit, 031TNIR 12-bit)

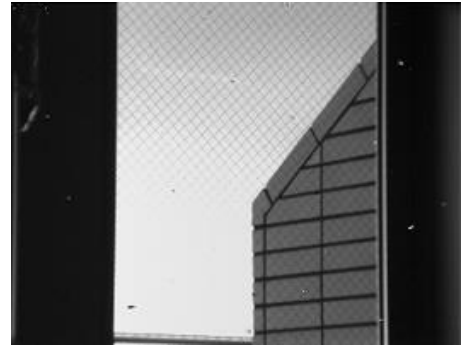
Please note that the histogram correction is not available for 8-bit monochrome.



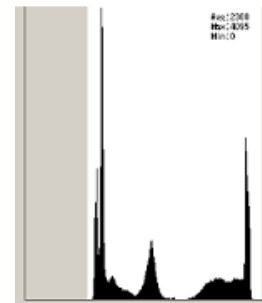
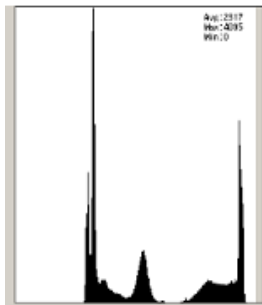
It is possible to improve the contrast of the image by applying histogram compensation



Without Histogram correction



With Histogram correction



How to perform Histogram compensation

- ① Check in the "Histogram compensation" box.
- ② Drag the right edge or the left edge of the histogram, then an area in gray color will appear.
- ③ The changing portions of white and gray boundary line is a max and min value of correction.

You can Drag Left/Right to adjust Min and Max of correction.

5. Recording Function

This function allows users to save videos in ATI format.



How to perform Recording

- ① Click "Recording" and start to record.
- ② Clicking "Recording" again ceases recording function.
- ③ Recorded files are saved in the "Image" folder in the same folder where the ArtMeasure.exe is.

*The file name is automatically generated based on the timestamp.