

Auto-exposing ignoring bright pixels

Question:

I want to set my exposure but Auto-expose is thrown off by some extra-bright pixels. How can I ignore those extra-bright pixels?

Answer:

The solution to this involves deciding roughly how much of your image (percentage) may represent these extra-bright pixels. Is it 1%, 0.1%, or perhaps 0.01%.

Then you must know the dynamic range of your camera (for example 4095 for 12 bit cameras).

The journal described below uses variables and autoscaling to calculate the grey value if you ignore the top 0.1% of the pixels. This value could easily be changed.

The journal then increases the exposure time until this calculated value is greater than 2000 (~50% of the maximum for a 12 bit camera).

The exposure time doubles each pass through the loop.

this journal increases the exposure time until 0.1% of the pixels are atleast grey value 2000

```
X= 1: reached_limit = 0
acquire and check value at 0.1%. If it is <2000 then double the exposure
WHILE reached_limit = 0 DO
  acquire an image overwriting a temporary image
  X= 2: Acquire()
  turn on AutoScale
  X= 3: Image.ScaleAutoScale = 1
  set upper autoscale setting to 0.1%
  X= 4: Image.ScalePercentHigh = .1
  get grey value corresponding to that autoscale value
  X= 5: High_Grey_Value = Image.ScaleValueHigh
  if the upper grey value < 2000, double the exposure time, otherwise indicate that the limit was reached
  IF High_Grey_Value < 2000 THEN
    double the exposure
    X= 6: Camera.Digital.Exposure = Camera.Digital.Exposure * 2
    X= 7: reached_limit = 0
  ELSE
    X= 8: reached_limit = 1
  END IF
WEND
```

For further assistance please contact Meta Imaging Series® technical support at 800-635-5577 option 3-2-2 or email support.dtn@moldev.com.