

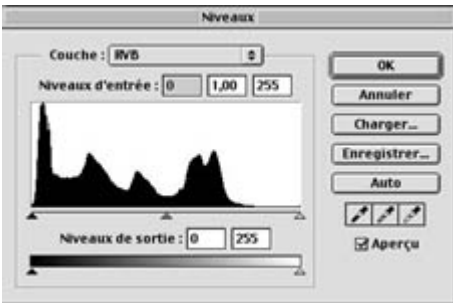
# Exposure

CCD, just like slides films, are very sensitive to the over-exposure. The rules of exposure are thus the same ones: It is necessary to preserve high lights. When a slide film is used one under exposes slightly (manually). With digital (pro), for the same reason, one acts with the recording of the data by "compressing" the image curve. What results a little dark and weakly contrasted images, but where all data was preserved. These images require a post processing. It is one of the differences between a pro or amateur camera:

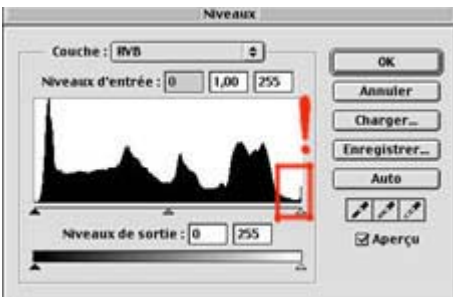
	ADVANTAGES	DOWN SIDE
AMATEUR CAMERA	images "finalized" in the camera "ready to print"	impossible to correct if the image is over-exposed, too contrasted, or too sharpened
PRO CAMERA	The images have all their potential	images require a post processing but we can also configure the camera to deliver finalized images

The default setting of tone compensation (Auto mode) of D100, is parameterized by Nikon in manner to preserve high light

This produced an image which seems under exposed (curve below),

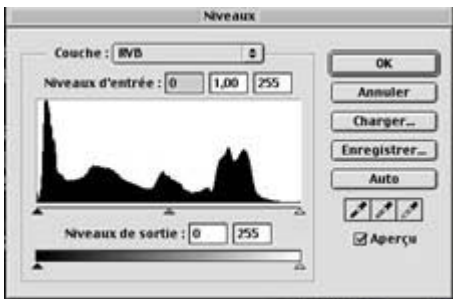


..... What one is tempted to correct by an exposure compensation (+ 0.7 EV for example below),



In fact "Auto" mode of the tone comp. menu does not act on the exposure (speed and diaphragm settings remain identical in all modes of tone compensation) but on the contrast / luminosity curve. A correction of exposure of erroneous +0.7EV results in a

risk of over-exposure of high lights (see curve above). In fact, rather than to under-expose the image, which would make lose information in low lights, the easy way of Nikon is to compress the low / mid tones, (selective compression of dynamics) by preserving the most critical information: high lights. The good method to recover a balanced image is a selective decompression:



One decompress the medium/low part of the curve, which makes it possible to recover a good balance of the image.

In this case high light is not overexposed

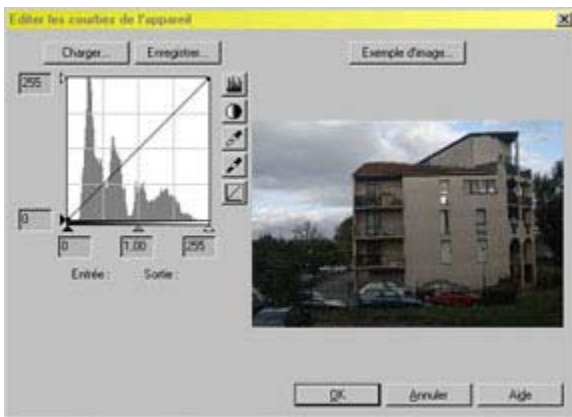
If you wish to load this curve in your D100, you will obtain images "ready to print" without post processing:

# CREATE A CUSTOM CURVE

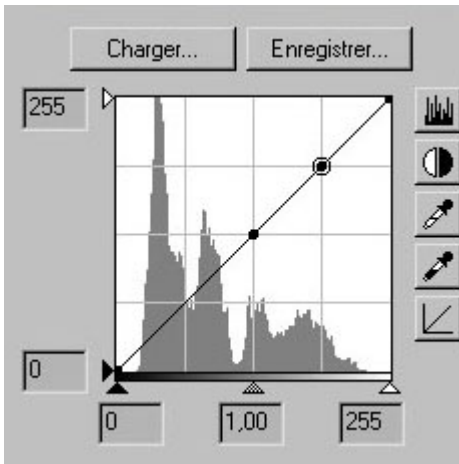
Connect D100 to the PC (Under Mac OS, this procedure is usable after update from Nikon Capture 3 to Nikon Capture 3.5 and D100 to Firmware 2.0 (Free)  
Open Nikon Control.



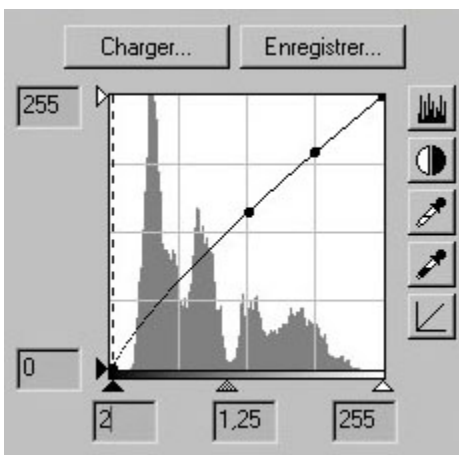
Select "image processing" and under "tone comp." select "user defined custom" Then click the "Edit" button



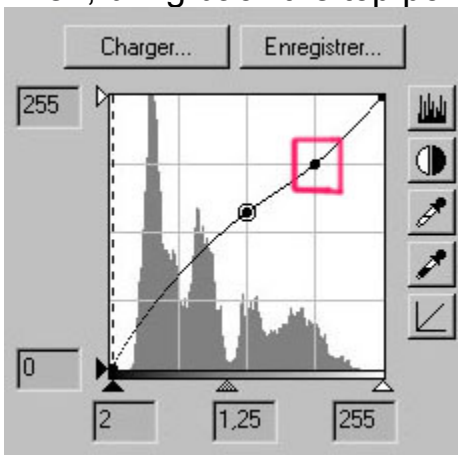
Place 2 points at the places indicated on the curve below



Write down the values below in the boxes



Then, bring back the top point exactly to the intersection of the lines like below:



Click OK

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## CONGRATULATIONS!

You have edited and just loaded in your D100 a custom curve. (You can also record it in your computer in the folder "curves" of the Nikon Capture folder.) To use it: in your D100, under "tone comp." menu, select "custom"

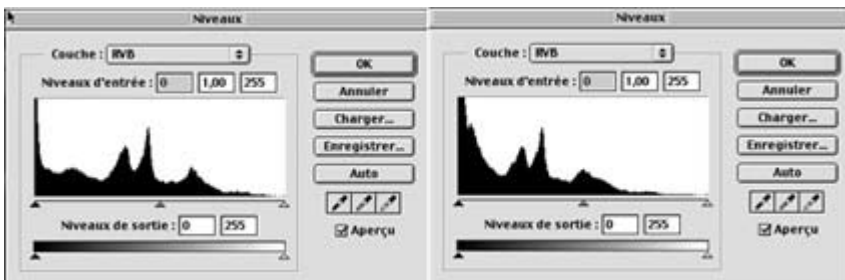
Image with custom curve (0,6sec f7,1)



Tone compensation "auto" (0,6 sec f 7,1)



These images are to consider difference of brightness/contrast obtained with these two modes, with same parameters of exposure (0,6 sec / f7,1)



You can notice on curves that high lights were not touched. Only dark/ middle tones were "decompressed"

# USE OF TONE COMPENSATION

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After having edited and loaded a custom curve in your D100, you will have 2 choices of use:

## **1/ "I will not have time to work over again my images, they will be directly printed":**

In this case select "custom" in "tone compensation".

But then, it is advised to parameterize D100 for visualization of the image with twinkling zones over-exposed which will make it possible to correct, so from time to time, a zone proves over-exposed.

\* To program this option in D100: in CSM 2 select "activated". Then, by viewing any image, click 6 times on the right on the pad to thus select the option "flickering of the zones over-exposed" after each shoot, the image will appear on the screen for checking, and will disappear as soon as you touch the release, a flickering announcing an over-exposed zone, with you to judge if the zone is significant and then deserves to take again the image by correcting the exposure (a sun reflection in water or on a brilliant surface does not pose obviously a problem)

## **2 / "I will have time to optimize my images":**

In this case select "automatic" or "normal" in "tone compensation ". Thus the images will be recorded with a maximum of preserved information, therefore little contrasted and dark, and will thus require a post processing

# ANOTHER CUSTOM CURVE

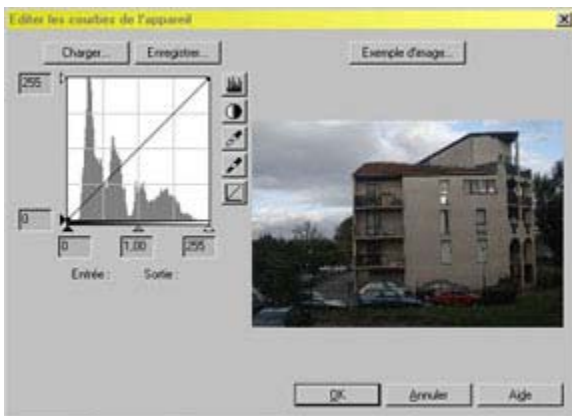
This curve gives a result even nearer to reality. But, in digital, more is realistic more there is risk of over-exposure of high-lights.

It is thus advisable to program its D100 for a screen display automatic after each photo, and flickering of over-exposed zones. If you note a problem, it will be enough for you to remake the image with a light correction of exposure. (In certain cases, digital or film, it is impossible to obtain an image balanced without over-expose certain zones: very luminous sky + dark zones in the same image for example)

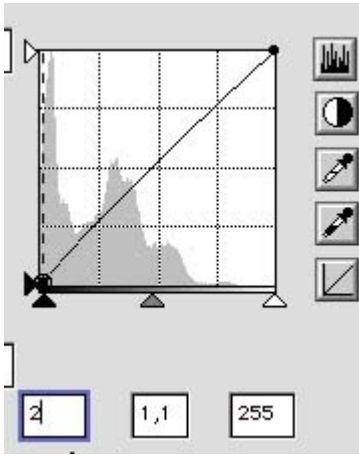
Connect D100 to PC  
Open Nikon Control.



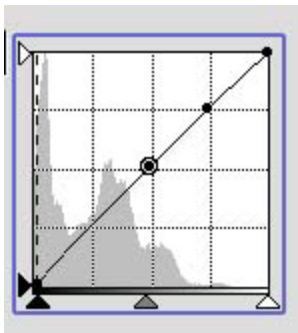
Select "image processing" and under "tone comp." select "user defined custom" Then click the "Edit" button



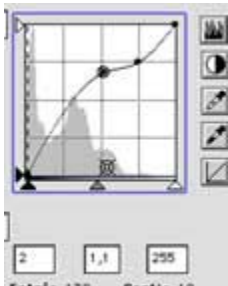
Write down the values below in the boxes



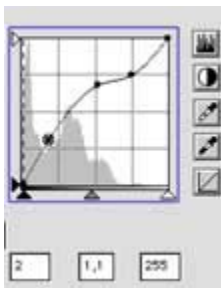
Place two points exactly at the places indicated (without making move the line)



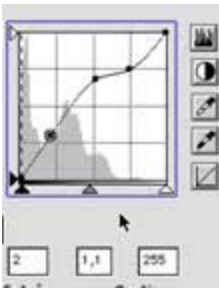
Move the central point exactly at the place indicated.



Place a third point exactly at the place indicated



Position it exactly like below

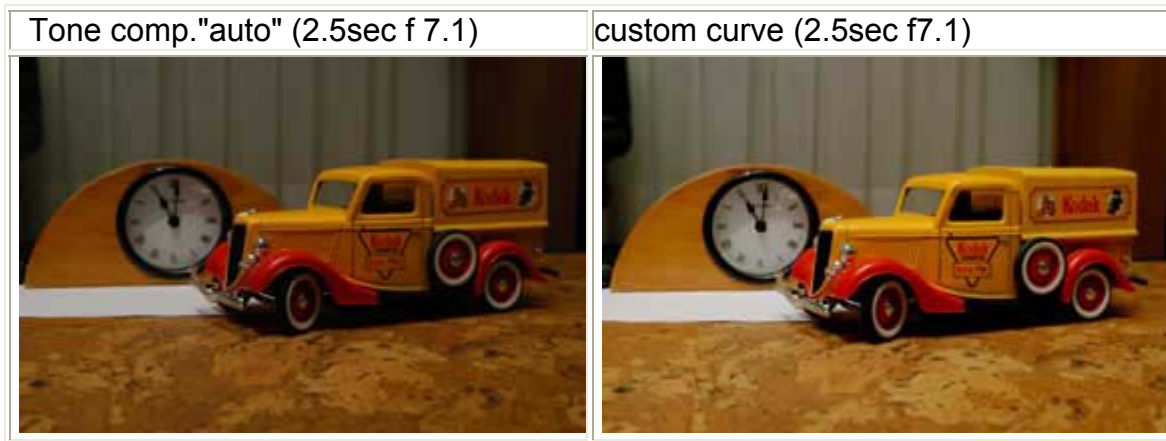


Click OK

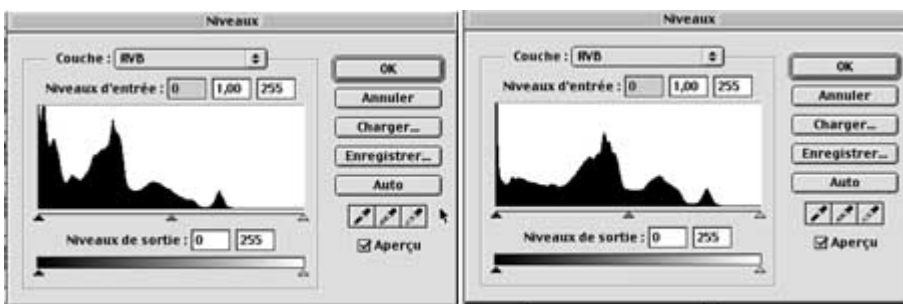
CONGRATULATIONS!

You have edited and just loaded in your D100 a custom curve. (You can also record it in your computer in the folder "curves" of the Nikon Capture folder.) To use it: in your D100, under "tone comp." menu, select "custom"

This curve is very strong! Use it in gray weather, weak contrast subjects. Or interiors without flash as examples below.



These images are to consider difference of luminosité/contraste obtained with these two modes, with the same parameters of exposure (2.5sec / f7.1)



You can notice on the curves that high lights were not touched. Only dark/ middle tones were "decompressed"