

Tips for Shooting Without Coarsening Dark Areas of an Image

Preface

To reproduce sharp images, the DETAIL function (refer to Issue 01) is used. However, DETAIL can also cause black or dark areas of an image to coarsen. For example, as shown in the “Before Setting” image, the cockles of the leather and the texture of the metal are reproduced sharply, but the dark areas of the background and the bottom of the image look coarsened. This phenomenon occurs because

noise in dark areas of the image is also emphasized by the DETAIL function. In such situations, adjusting the camera so the DETAIL process is not applied to low luminance signal levels, reduces the coarseness in the black or dark areas of the image.



Before setting



After setting

Features of Sony Cameras

Sony video cameras have a LEVEL DEPEND function, which effectively reduces the coarseness in black or dark areas of an image. This function prevents signals below a certain video level, including noise, from being enhanced. For example, as shown in the “After Setting” image, the background and the bottom of the image do not look coarse, while the cockles of the leather and the texture of the metal are reproduced sharply by the DETAIL function.

The LEVEL DEPEND function is also effective for preventing noise in dark areas of an image from being emphasized when camera gain is raised to shoot at night or in low-light conditions.

Major Sony cameras with the LEVEL DEPEND adjustment function

HDW-900 series, HDW-750/730 series
DVW-970 series, PDW-530/510 series
DSR-450/400 series, MSW-970 series

Camera Settings

To adjust LEVEL DEPEND, use the DETAIL 1 page of the PAINT menu.

1 Open DETAIL 1 of the PAINT menu.

00●CONTENTS	TOP
01.SW STATUS	
02.WHITE	
03.BLACK/FLARE	
04.GAMMA	
05.BLACK GAMMA	
06.KNEE	
→07.DETAIL 1	
08.DETAIL 2	
09.DETAIL 3	
10.SKIN DETAIL	

2 Set LEVEL DEPEND to ON (default).

P070DETAIL 1	
DETAIL	ON
APERTURE	ON
DETAIL LEVEL	0
APERTURE LEVEL	0
DTL H/V RATIO	0
CRISPENING	0
→LEVEL DEPEND	ON
LEVEL DEPEND LVL	0
DETAIL FREQUENCY	0

3 Adjust LEVEL DEPEND LVL in the range of -99 to +99.

P070DETAIL 1	
DETAIL	ON
APERTURE	ON
DETAIL LEVEL	0
APERTURE LEVEL	0
DTL H/V RATIO	0
CRISPENING	0
LEVEL DEPEND	ON
→LEVEL DEPEND LVL	99
DETAIL FREQUENCY	0

Setting the LEVEL DEPEND LVL to a positive (+) value widens the luminance range in which the coarseness of the image is reduced, and setting it to a negative (-) value narrows the range.

In the case shown in the “After setting” image, the level was set to “+99.”

The example shown is with the DSR-450WSL.

The results of this adjustment may differ from the sample image, depending on the camera model and the lighting conditions, even if the same setting value is used.

For additional information, refer to the Operating Instructions for your camera.

Technical Information

What is LEVEL DEPEND?

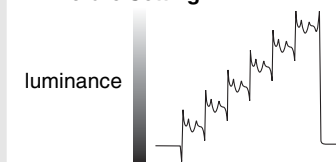
The LEVEL DEPEND function reduces the coarseness of black or dark areas of an image by preventing the noise in such areas from being emphasized by the DETAIL process.

While the CRISPENING function prevents the entire image from being coarsened (refer to Issue 03), the LEVEL DEPEND function prevents this for signals only below a certain video level.

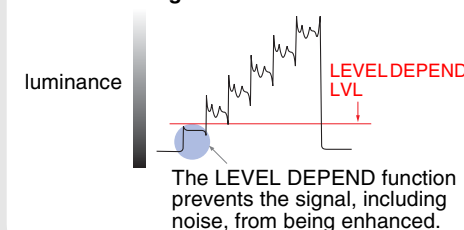
Adjusting LEVEL DEPEND LVL allows you to select the video level threshold for which detail signals should not be added to the image. Setting LEVEL DEPEND LVL to a positive (+) value widens the range in which the coarseness of dark image areas is reduced. However, it must be noted that selecting a value too high can also cause picture edges of the entire image to blur. For this reason, LEVEL DEPEND LVL should be adjusted with care using a video monitor. In summary, LEVEL DEPEND is an effective function when noise in dark image areas is

Status of Detail Signals

Before Setting LEVEL DEPEND



After Setting LEVEL DEPEND



emphasized by the DETAIL process, when noise increases due to camera gain-up, and so on.