Pentax/Metz Flash Experiments

version 0.2, March 15, 2009 Tom Vijlbrief (tomtor at xs4all.nl)

Index

1. Introduction

I've had a Metz58 flash for a year and received a Pentax 540FGZ recently.

I wanted to test various combinations of these flashes, see the effect of contrast control, etc.

First some remarks not related to the flash behavior:

I like both units, the bodies of both feel sturdy. I would perhaps rate the feel of the 540 flash head higher than the Metz. On the other hand the 540 has a battery cover which feels fragile, I operate it with care. Also the control sliders of the 540 feel less solid, but not in such a way that I feel that they are likely to malfunction.

Completely subjective: the 540 has slightly better looks.

2. Setup

Pentax K10D with firmware 1.30 and DA35 Macro (not shown, used to take the images)
Metz 58
Pentax 540
Philips P36 CTLS with optical slave
2 Manfrotto light stands
1 Benbo Mini Trekker
1 friendly and very patient subject

3. Testing 540 optical slave mode

The 540 can be set to slave mode 2 in which it operates as a dumb optical slave. To my surprise it was rather smart, it ignores the PTTL preflash from the popup! In the following image the P36CTLS with optical slave did also fire, but that is not visible because it fired on the preflash.

4. Pentax 540 Normal PTTL flash operation and HSS

The following images were taken at F11 and with the dog about 1 meter away:

1/180:

1/500 HSS:

1/250 HSS:

Conclusion: The 540 is way to dark without compensation, the HSS images are even slightly darker.

The dog is partly white (but certainly not snow white) and white doors are situated to the right, both factors might lead to underexposure, but not as much as is visible here.

Note that the results are much better with the dog slightly further away (1.5 meters), see the end of this document.

5. Metz 58 Normal PTTL flash operation and HSS

1/180:

1/500 HSS:

1/250 HSS:

Conclusion: The Metz58 images are brighter (but still too dark). Makes one wonder if Pentax would change the PTTL in camera implementation to make 540 images brighter if Metz images would turn out too bright.

Conclusion 2: It is good to apply some positive exposure compensation when using PTTL flash, eg +1 for the 540 and +0.5 for the Metz58.

Note: See the end of this document, the results are much better with the dog 1.5 meters away!

6. Metz 58 Master, Pentax 540 Slave to the right

Contrast-off on Metz master:

Contrast-on on Metz master:

Conclusion: contrast setting has no effect when used on the master

Contrast-on on the 540 slave:

Likewise and 540 slave flash moved from 1.5 meter to 2.5 meter:

Contrast-on 540 switched off again with flash in 2.5 meter position:

Conclusions:

Contrast setting **on** on the off camera slave does have an effect!

The off camera flash in this setting supplies less light than the master, because the shadow of the dog is brighter. (Note that in a previous version I stated that it supplied *more* light).

This is not as useful, because one would like the master on camera to act as fill and the remote slave to act as main light.

I reversed the test with the 540 as master and the Metz as slave to the right. It is identical, setting the 540 in contrast mode as master does have no effect.

This means that obtaining a different master/slave ratio requires using the flash exposure compensation on the flash units, but this will not adapt to varying distances. One would like that the slave flash automatically emits more/less power when moved away from/towards to the subject.

7. Using a slave flash and the popup flash as master

540 (contrast-off) is to right and 2.5 meters from subject:

Note that exposure is much better than the frontal PTTL images we started with!

540 (contrast-on) is to right and 2.5 meters from subject:

Conclusion: Slave emits slightly less power...

The following two show the same images but now with the Metz58 on the right stand, contrast-off:

Contrast-on:

Conclusion: no effect of contrast on/off setting with popup as master and Metz as slave. With 540 as slave contrast-on *does* make a difference.

8. Two remote flashes, popup as controller

Left 540 at 1.5 meters, right Metz at 1.5 meters:

Likewise, but contrast-on for right Metz slave (no effect):

Likewise, but contrast-on for left 540:

Surprise, the right Metz does not fire when the left 540 has contrast-on!

I repeated this a few times, it is 100% reproducible.

9. Repeated tests:

9.1. Plain PTTL with the 540 as single flash on the K10D

With the dog not at 1.0 but 1.5 meters the result is much better! Probably because the white areas are smaller.

9.2. Does contrast mode work with the Metz 58 as slave?

We now repeat the original test but with the 540 as master and the Metz as slave (right flash) to see if this makes a difference. Contrast-off on the Metz:

Metz contrast-on:

So contrast-on works also on the Metz, but the differences looks slightly smaller than with the 540.

10. Flash Tips and Tricks

10.1. Metz 58

Wireless sensitivity

The wireless sensor is located on the top of the short left side, when facing the LCD display and buttons. I noticed that all though it looks omnidirectional, it is really just sensitive towards the left side, so not from the front or the back. So it is important to direct the left side of the flash towards the trigger flash.

HSS as Master/Controller

The current V1.0 firmware of the Metz does not allow setting HSS mode as Master/Controller. HSS mode *does* work as a wireless slave. A firmware update has been promised by Metz support.

11. Final conclusions

11.1. Contrast mode

Contrast mode works, but not in the way I would expect, c.q. wish it to work. The flash with contrast-on emits less light, but contrast-on does not work for the on camera master. So one cannot have the on camera master act as fill.

Contrast mode implementation on the Metz and 540 are not completely similar. The 540 produces slightly different results (lower ratio for the off camera slave?) than the Metz as off camera slave.

When using 2 slaves the contrast-on option gives inconsistent results. If the Metz has contrast-on then the option has no effect. If the 540 has the option on then the Metz does not fire.

In a controlled environment one should use manual for really predictable results.

In a dynamic environment with a master flash on the camera one should move the slave flash away/ towards the subject to change the master/slave ratio.

11.2. Which flash?

Both the Metz-58 as the Pentax 540 are really nice flashes. I think I prefer the Metz as on camera bounce flash with the option to use the second reflector as fill. The 540 is really good as off camera flash and even has a smart optical slave mode which ignores the PTTL preflash.

I also considered the Metz-48 and Pentax 360 flashes. They are good options as long as one is not interested in using multiple flashes. The drawback of the Metz-48 is that it cannot act as a master/controller on camera, otherwise it would be a great second flash for me. The main drawback for me of the Pentax 360 is not that it doesn't have the swivel head (I assume I could live with that), but that off camera the automatic power off option cannot be disabled. I use off camera flashes a lot with optical or radio triggers and having to turn the 360 manually on after a few minutes (and restoring all it settings) is no option for me.

See Mattdm's site: http://pttl.mattdm.org/

for more flash options and all kinds of details about the flashes.