

Photographing bats

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I have been asked a number of times, how I have managed to produce the bat shots I have published predominantly on Facebook. Since it was time to publish some of the shots on my website, I thought I should probably produce a little document to download for those who are interested as opposed to flood FB with this description on multiple places.

Some may be disappointed since I don't have **the** "golden solution", but what I have been doing is actually more of a "brute-force" approach instead. Anyway, here is how I do it:

1. Starting point

I know where bats are – and knowing your subject is the first thing you need to achieve. I have studied them for a couple of weeks in these places observing their movements, well as good as this is possible with bats. My experience is related to three places: Our own garden, a little swampy area with a water surface and a space in front of an old barn. All seem to be attractive for bats. In general the bats use the same flight paths over and over again – but with all the unexpected moves you'd expect from these animals.

It was very clear from the beginning, that autofocus would not work at all, no chance. Since I do currently not have a spot where I can see them emerging from their roosts, using an optical barrier for triggering the camera is not an option and I would be very cautious not to go too close to roosting sites anyway. So I am limited to observing and photographing hunting bats in open although constrained spaces.

2. Camera equipment

I am using a Canon EOS 4D mark IV, a 70-200 mm EF L-Lens / f-stop 2.8 and my 600 EX RT Flash.

3. Applied technique

- I hand hold the camera using a pre-set focal length (manual focus).
- The camera is set to: 1/200 second shutter speed and an f-stop of 4.
- In order to achieve this, I use the rear-focus technique, where the AF function is placed on one of the rear buttons of the camera so the shutter release button is only releasing the shutter and the focus setting.
- The lens is set to f-stop 4
- The flash is set to all manual but allowing to zoom according to the used focal length of the zoom lens.
- I manually tune down the flash output to 1/8th of the maximum flash power. Doing so gives me a stream of about 6-8 flashes as fast as my 5D IV can shoot. If I could use an external power supply for the flash I would probably get even more shots in a row.
- Now I sit and watch the bats. I use additionally an ultra-sonic microphone in combination with a real-time app running on my phone or iPad. This set up let me hear the bats before I actually see them. So I know a bat is approaching and I don't have to be in alert mode if no bat is around.

- In the garden case the bats fly around a small tree which, is situated in the centre of our lawn (to the right of the photo) and the bats come either from the background towards me or they are passing in front of the mentioned tree. With all the zig-zagging bats do.



- I have placed some small oil lamps on the ground, giving me some distance reference points. I use them to re-calibrate the focus setting, should that change due to all the movement of the camera gear.
- I am sitting low and observe the bats against the sky and when I think one is near the “focus area” I fire 6-8 flash shots hoping, that the bat is actually flying into the sweet focal point. Finding the right balance between shooting too early and missing the chance is the crucial skill you need to develop.
- This works surprisingly good – well, I get 2-4 reasonable shots in a night (which is the hour between 22:15 to 23:15. After that the bat activity is very much reduced, before it increases again about 5 hours later (but I am in bed then). I need to check that option, there might be a bit more light then.
- At the beginning I only used the 70 mm focal length; I otherwise mostly missed the bat at all. One can’t look through the viewfinder; you would never find the bat. This is a point-and-shoot activity. You just peer along the axis of the lenses, that’s all you can do. After some practicing I am now able to use the 200 mm focal length and still manage to get the bat in the frame most of the times. Whether it is focus is another story. I have many bat photos which are out of focus. You need to be very persistent, some call me stubborn these days.... 😊.
- This works for over water scenarios as well, you just rely on focus reference points, which are there naturally, but usually these things float on the water, so they move around as well. At the place where I have them over water the bats are a bit further away, which forces me to crop the shots pretty heavily. I have tried to use my 100-400 mm L lens, but that doesn’t work so well. Setting the flash to 1/8th of the max output isn’t producing enough light for that lens anymore.

4. Results

Some of my shots I have got are in this album; they mostly show Common Pipistrelles and one *Myotis daubentonii*. There are other species visiting the places I use for photographing, but those bats mostly are “fly overs” – I have not seriously tried to shoot them, that will have to come at a later point.

Are the bats being disturbed by the flash lights? I don't think so. When I start shooting they hang around for an hour or so. Should the flash disturb them, they could easily move on to the next garden, where there will be as many insects as in our one. I actually, believe they frequently come in and check me out. I have them very often coming in at less than 2 meters to where I sit.

That's about it. Get in touch if you have questions.