

Taking Basketball Photos: A detailed guide

<http://www.paullesterphoto.com>

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Introduction

"Losers have tons of variety. Champions just take pride in learning to hit the same old boring winning shots."

- Braden, Vic

I rather like the above quote. It's all about practice. Over the 30 or so years that I've practiced photography, I'm still learning, still enjoying it. It is my hope that this guide, a starting point, will help you get the types of basketball photos that you'll be proud to display and share with your friends and family.

On April 28th, 2008, I wrote the initial version of Taking Basketball Photos: A Basic Guide. It was well received. Nearly 4 years later, it is still the largest draw to my website. Apparently there are more than a few people who want to know how to take basketball photos.

This expanded guide will give additional details not provided in the summary. As things are generally not "one size fits all", this may not cover every situation, but the techniques described here are what I came up with after shooting hundreds of basketball games, hundreds of thousands of frames, in other words, a lot of practice! I've tried to adapt the content to work for no matter what type of digital camera you use, DSLR or Point & Shoot.

So, here are my opinions and experiences as to what works for photographing basketball.

Basketball is a fast paced game. There's action all over the court and, like most sports, it moves left-right-diagonally and up and down. There is the potential to take some very interesting shots, but also a greater potential to miss them if you are not prepared, so let's start first with equipment:



Equipment:

You've heard that tired old expression: "The camera doesn't matter. It's the photographer." Well, let me tell you that in sports photography, the camera matters! It matters a lot! Get a slow-focusing, cheap camera and you are going to be severely disappointed. Even if you place yourself in the right position, get the correct exposure, etc., it will be hit and miss because the camera will not be able to keep up with the action.

Frame Rate:

One of the most important considerations for photographing basketball, in my opinion, is speed. Not shutter speed, but frames per second, or FPS. You can get by, barely, with 2.5 FPS, but I wouldn't recommend it. If you can find a camera having an FPS of 4 or better, I'd say that would be a good bet. Basketball is very fast moving and you need the frame rate to be able to catch those important moments. If you can afford it, 5 - 8 FPS is even better.

Previously, cameras with these shutter speeds were out of range of the average consumer, typically costing well over \$1,000, perhaps \$2,000. Advances in technology, however, have brought mirrorless cameras with electronic shutters, such as the [Nikon J1](#). These cameras offer shutter speeds up to an incredible 10, 30, or 60 frames per second, depending on pixel resolution. This insures that you'll hardly ever miss any of the action. These amazing speeds can be had for \$599.00, including a lens!

That said, this doesn't mean that if you don't have a camera capable of these speeds, that you can't get good photos. You will just need a better technique, better knowledge of the game, and the ability to anticipate the action. The more that you practice, the better photos that you'll get.

Technique:

Practice your technique during your son's or daughter's practice! This is the best time to hone your skills. No pressure at this time to get it right and you can experiment to your heart's content!!!

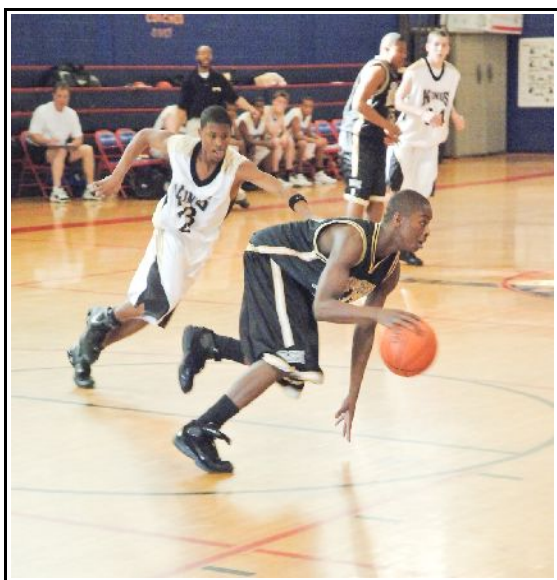
Technique requires practice. Your photos will get better and better the more that you practice, the more that you get to know your camera. Ideally, throughout the season and your practice, you'll get to know your camera so well that you won't even have to think about how it works, you'll know. It will be come an extension of you. Below are helpful techniques to get the most out of your basketball photography experience.



Pre-focus. Don't Auto Focus (Unless you have a really fast autofocusing camera!)

Auto focus (AF) can be the Achilles heel of photographing basketball. If your camera doesn't have nearly instantaneous focus capabilities, the moments will certainly be lost while the camera seeks to focus, and seeks, and seeks. The auto focus problem is further exacerbated by being closer to the action because then players are changing position faster due to the limited field of view. So, rather than trying to get a super fast focusing camera, get one that has manual focus capabilities. This is the fastest way to take pictures.

Learning and practicing without AF.



By all means, learn the operation of your camera before shooting your first basketball game. This will give you better results. Take a bit of time to read the manual and learn how the camera works. In particular, learn how to turn off the auto focus, especially if you don't have a camera that can keep up with the action.

One way to tell is to point your camera at a subject, depress the shutter button partially, and see how long it takes to autofocus. If it takes longer than the blink of an eye, then you'll likely miss some action. Also, after focusing, switch to another subject, and try again. Continue with these experiments to see how fast your autofocus can change. If you notice ANY lag in the focusing, just remember, this represents missed opportunities.

Turning AF off.

Next, focus on something about 10 – 15 feet away, or the approximate distance that you think you'll be shooting from when you are photographing the game, let the AF focus on that point. Turn AF off, but don't move from your location. Take the same shot. It should be in focus. Next, position the camera to another object, about the same distance from the current object, shoot. This should be in focus as well. You may notice, hopefully, that the lag time between pressing the shutter and making the shot is significantly less. Increased opportunities. Now, you're ready to get into the proper position for shooting.

Exposure

Most gymnasiums, it seems, are fairly dimly lit. Our eyes, wonderful tools that they are, can adapt to the light intensity and color balance quite easily. Cameras have a limited range and we must compensate by increasing the sensitivity of our camera's sensor using the ISO setting.

ISO:

ISO represents a camera's sensitivity to the available light. Each doubling of ISO, represents a doubling of sensitivity to light, for example: ISO 100 is ½ as sensitive as ISO 200, which is half as sensitive as ISO 400, but 2x as sensitive as ISO 100. Point & Shoot cameras will typically go to ISO 3200, with some of the more expensive cameras going to ISO 6400 and beyond.

Digital noise

There is a trade off between the lower ISOs and the higher ones. Each increase of ISO leads to increase in digital noise, or those speckles that you see on a print; however, don't be afraid to experiment with the higher ISOs. The amount of noise that you'll see depends on a number of factors, such as how large you intend to make the photos, how much black in the photo (it's most readily apparent in the shadows), etc. If you are planning just to share them in e-mail, on your Flickr account, or make small prints (8x10) or less, this should not be an issue at all. It's better to have a bit of digital noise and have the shot, then to miss the shot altogether!

Shutter speed:

Why does increased ISO make a difference? Two words: Shutter speed! In order to freeze the action, you need a sufficient shutter speed. I've found that a shutter speed of 1/125 works really well. Of course, anything above that, 1/250, 1/500, etc, will work fabulously.

Again, I would recommend learning how to set your camera's exposure manually, if possible. Then, when in the gym, during warm ups, take a few shots with the camera on auto exposure, note the exposure, and set your camera to shoot at that exposure, for example f/4 @ 1/125, manually. This will make sure that you get consistently exposed shots during the game. Allowing the meter to set exposure on each shot can lead to some exposures that are good, some that are not so good because of the effect of where you are pointing the camera can change the exposure. Pointing into a dark area causes more exposure and may overexpose your player. Pointing into a bright area may underexpose your player.



I'd rather take this choice out of the camera's hand.

Exposure and shutter speed discussions are out of the scope of this guide; however, I do have more information about [aperture](#) and [shutter speed](#). Follow the links.

Quantity counts!

Some may disagree because they prefer to shoot everything in RAW; however, in sports photography, RAW is NOT your friend. The reason is that RAW files are so large that the number of shots that can be held in the buffer is significantly smaller than say, a medium sized JPEG. You'll find your camera doing more pausing than anything else as it tries to keep up with the frame rate. Here, you've taken measures to increase your throughput to make sure you get that important shot. You've gotten a 4 FPS camera, manually focused, and then gone and shot yourself in the foot by shooting RAW. My suggestion would be a medium size JPG with moderate compression (1:8). This is how I shoot all of my basketball games. This is not to say that you should blaze away indiscriminately, but it sure is nice to be able to have that throughput and to catch that precious shot instead of having your finger on the shutter and hearing ... silence as it tries to write the buffer.

Don't worry about your 'hit' rate. Frequently, I will shoot over 1,000 frames at a game just to come home with 20 or so good shots. That's a good day for me! The others are not necessarily bad, but just transitional shots on the way to the good ones.



Lens selection (DSLR only)

This only applies if you are using a camera with interchangeable lenses. If you are using a point and shoot, you may skip this section.

There are two considerations:

◆Distance to action: This is usually not a problem. Getting access to the sidelines or even baselines of a high school basketball game is very easy, at least where I live. As long as you don't get in the way of the referee, you've got no problems. My preferred lens of choice is the Nikon 50mm f/1.8. This lens has a nice large aperture and lets in plenty of light (you'll need it) and has a wide enough angle of view so that you catch all of the action when you are up

close. A 35mm lens also works well, too.

◆Available light: This is usually the problem with gymnasiums. They are pretty dim. Regarding

lenses, unless you have a really high ISO camera, I would say get a lens capable of f/2.8 or better (2.0, 1.8, etc). This will allow you to capture action at a decent shutter speed. I find that 1/125 works well and a decent ISO, like 800. This also results in less graininess for the image.

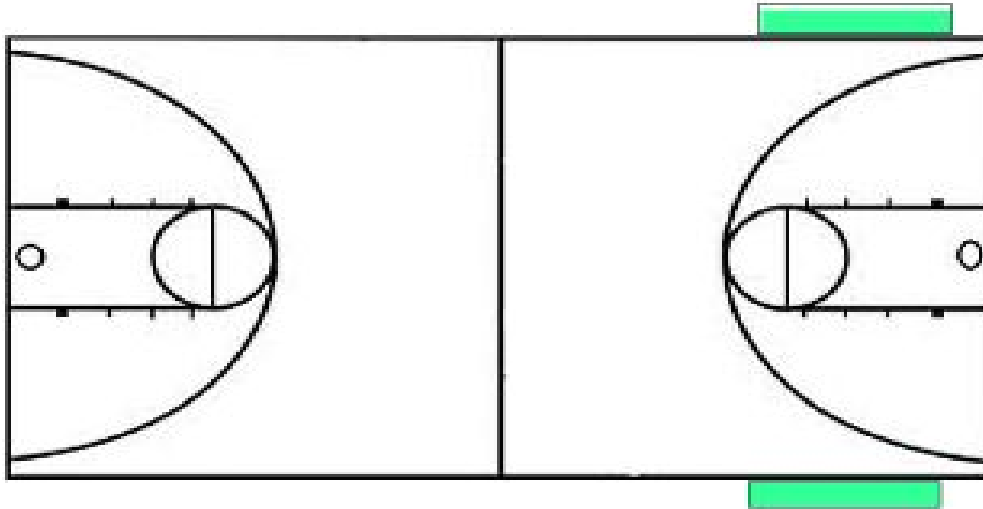


Figure 1:

Location. Location. Location

That's a familiar real estate mantra, but it works for basketball as well. Get to know the game. Look at where most of the action happens and then be there! I prefer either sideline right in line with the basket, or at the baseline right underneath the basket; however, be careful here. In the diagram, above, I have marked the areas in green where I prefer to stand. This gives me a good look at the action and is where most of the action happens, generally.

I've been hit with a ball right in the head more than once. It's not for the weak of heart! **Keep that camera on a neck strap!!! You don't want the ball to knock it out of your hands!**

- Find the location where you'd like to stand – Generally, I find the corners of the court a great place to stand; not exactly on the corner, but a few feet away from the baseline, along the sides of the court. This allows me to see the action coming to the basket, rebounds, and fouls, as this is where most of the action is to be found. You may want to switch sides of the court.
- During the warm-ups, find a player that is in the approximate place where you'll be taking most of your shots, focus on him/her using AF. Check the photo. If it is in focus, change your camera to manual focus. Make sure that you take a few shots on manual, just to make sure that you are capturing focused shots. Also, set your camera to your preferred frame rate, preferably 3 frames per second or above.
- As you are shooting manually, you want to try to keep the action parallel to yourself. That is, moving left to right or right to left in front of you. You want to minimize the amount of distance changing, if at all possible.

- Now, the camera will not need to try to auto focus and you'll get maximum throughput. Don't forget to refocus if you change locations!



Panning

You've done it! Now you're finally at the game, ready to take your photos! Panning is a technique that you will use to help you follow the action. You keep your camera at the ready, holding it to your eye, looking the viewfinder, or perhaps in front of you, looking at the display. As the action moves in front of you, left to right, or right to left, rotate at your waist, following the action and taking pictures all the while until the play has completed.

The above photo is the effect of panning the camera at a slow shutter speed. This gives the appearance of motion. In this case 1/8 of a second, must too slow to hand hold normally, but for creative aspects, it can work.

Other Considerations:

Maintain context

If at all possible, keep the ball in the frame! For those actions shots under the basket, try to make sure that you can see part of the goal, or at least the net! It makes the story that much better.



Other parts of the story

Remember, some parts of the story may not be action filled, but are no less intense. Look to the bench, look to the crowd, the cheerleaders, the foul line, the coach! They are all part of the story. Coaches get especially animated during the game, particularly in high school and beyond!

Summary:

- ◆ Camera with high FPS rate: 3 FPS or better
- ◆ Manually pre-focus and wait for the action
- ◆ Shoot JPG. Faster throughput. Less time spent writing to the card
- ◆ Fast, short focal length (35mm, 50mm) lens with f/2.0 or better f/1.8, f/1.4
- ◆ Shutter Priority or TV 1/125 second
- ◆ Find a good location, sometimes this may be in the stands. If it is in the stands, then a longer lens will be needed. I prefer Nikon's 80-200mm f/2.8. It's a bit heavy, but that f/2.8 is invaluable.
- ◆ Have a look around for other parts of the story
- ◆ Practice before you go. Practice! Practice! Practice!

Well, I hope that helps! Happy shooting!

Addendum:

Helpful references and additional information:

Other articles that I have written that you may find interesting and helpful.

[For The Newbies: Shutter Speed](#)

[For The Newbies : Aperture](#)

[Zoo Shooting Guide:](#)

Cameras:

The following list is quick list of cameras that I put together that have frame rates adequate for basketball photography. This list is not to be construed as comprehensive, but more of a quick look:

Nikon 1 – J 1 or V1 10, 30, or 60 FPS

Canon – Powershot SX40 – up to 10.3 FPS

Olympus – E-PM1 – 5 FPS

I picked a few cameras from the top manufacturers, all of these costing under \$1,000, most under \$500. A quick search on Google for “High Frame Rate Digital Cameras” should give you quite a bit to look at, should you be in the market for such a camera. That said, remember, it's all about timing. You may be able to do it with the equipment that you have. Try it before you buy a new one!