

From the Essay

Blame the Equipment

<https://bythom.com/technique/improving-the-photographer/blame-the-equipment.html>

By

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1. ***Upgrade the photographer.*** Technique has the biggest and most observable impact on results. Want to be the Perlman of Pixels? Practice, practice, practice (studying at Julliard doesn't hurt, either).
2. ***Upgrade the support and shot discipline.*** You can't maximize what you get out of the pixels if the camera is shaking for any reason. Just having a tripod isn't enough; it has to work, and you have to know how to make it work.
3. ***Upgrade the lens.*** Having shot thousands of test charts—maybe more, but who's counting? — and examining the results very carefully, the difference between a bad lens and a good one is as night and day as shooting those charts with a good lens and a 12mp and 36mp camera.
4. ***Upgrade your understanding.*** Complaining about dynamic range of your current camera but not using UniWB? Oops. You may not actually know what the real dynamic range of your camera is. Ditto for sharpening, contrast, gamma, color, and noise. You're not ready for an upgrade to the camera until you've actually maximized your efforts on the current one.
5. ***Upgrade your camera.*** If you've hit the limits of all the above, then it may be time to find a better camera (but that requires that you know how to do #4 and have state of the art #2 and #3). Note that it also may mean you need to move up a format to get a large benefit (e.g. 4/3 to DX, DX to FX, FX to MF).

Shot Discipline and Camera Support

By Dennis Fritsche

Shot Discipline:

1. **Camera settings** appropriate for your goal and circumstances.
 - a. **Exposure** determines balance between lights and darks. In general, expose to minimize deep shadows but do not blow out highlights.
 - b. **Aperture** determines depth of field in conjunction with distance to subject and lens focal length. Shooting everything stopped down to the max (eg f/22) is not a good thing – diffraction and loss of light. I shoot mostly f/5.6 to f/11.
 - c. **Shutter Speed** freezes motion or blurs motion – are you photographing birds in flight or a static landscape.
 - d. **ISO** determines overall noise in the image. Embrace auto-ISO. Don't keep ISO low at the expense of **Exposure**. (It's easier to deal with ISO noise than trying to recover dark areas.)
2. **Handholding or Tripod** Tripods used properly will always yield the best results. More later. Handholding gives greater freedom of motion and the ability to react to changing situations. But you need to have good discipline and technique.
 - a. **Rule of Thumb** With good technique, you can handhold a camera and expect a reasonably high keeper rate if the shutter speed is $1/(\text{focal length})$. For instance, a 200mm lens handheld at 1/200 seconds should yield good results. In my personal experience, I know I can handhold shorter focal lengths with the rule but for longer lenses I must increase that factor. For 300mm and above, I generally prefer mechanical support or a much higher shutter speed.
 - b. **Hold the Camera Securely** by supporting the lens and pressing the camera firmly against your face. Assume a stable stance. Brace yourself against something. Prop the camera on something – a rock, tree, fence post.

3. Vibration Reduction - VR (called different things by different camera systems)

- i. According to the camera manufacturers and the www pundits VR should solve all the camera shake problems with 2,3,4, or 5 stop improvement touted. (Meaning a 200mm lens should yield good results at 1/100, 1/50, 1/25, or 1/12 seconds.)
- ii. Don't believe it. You may get more keepers, but they will not all be keepers.
- iii. VR can decrease acuity at certain shutter speeds.
- iv. I turn VR off in most circumstances and always off on a tripod.
- v. Use it when needed, but practice so that you know what you, the camera, and the settings can do.

4. Vibration from Shutter Release Should be Minimized on a Tripod.

- a. DSLR – Mirror Up, Exposure Delay
- b. Mirrorless – Exposure Delay
- c. I find I don't need a cable release following this method.
- d. Handholding stabilizes the rig from vibration.
- e. Note: Exposure Delay is not the same as the timer.

Tripods and Heads: *The piece of gear we love to hate*

We know we can achieve better results with a tripod, but they are heavy and slow us down. (The slowing down part is probably a good thing expect for action photography.)

It is said most people buy three tripods and spend twice what they should have if they had just bought the right one first. I have lots of tripods but that's a different story.

My advice is to find a recommended tripod and head and then move up a couple of levels. Or just start at the top.

Good tripods last and last:

Gitzo purchased September 2008 - \$700

Really Right Stuff purchased June 2013 - \$935

Tripod for Landscape, Studio, and Most Applications This is your primary support and it needs to do the job, be easy to use, and reliable. You generally buy the legs and the head separately but perhaps from the same manufacturer.

1. **Carbon fiber** is highly recommended. Lightweight, strong, rigid.
2. **Height** You should be able to look through the viewfinder without stooping down or bending over then add 6 to 12 inches to facilitate use on uneven ground and hillsides.
3. **Center Post** Avoid a center post. It is unstable and puts your camera at risk. And you can't get as close to the ground.
4. **Number of Leg Sections** The fewer legs the, the easier it is to setup but longer in folded position. I have a 3 section for heaviest work and a 4 section as a compromise for packing in a suitcase.
5. **Adjustability** You should be able to adjust to ground level.
6. **Screw or lever tighten** Most carbon fiber legs appear to be twist type. Some people like lever style often found on aluminum and some carbon fiber.
7. **Setup** Practice so that setup is natural and repeatable and becomes second nature. When traveling from spot to spot shooting (as opposed to traveling

where the tripod needs to be packed) I do this on my 4 section which is my most used support.)

- a. Extend the lowest section by about 6 inches on all three legs. This is the ready position. The lowest section is also the smallest and least stable – better to use the upper sections for strength. Also, this keeps the first twist lock out of the water and dirt.

Most importantly, I know I can extend the other sections fully and the tripod will be at the correct height when on level ground.

- b. **Extend the Legs** Loosen the other two twist locks on a leg – usually a quarter turn – you can usually do both at the same time. Extend the sections fully. Tighten the twist locks firmly. Repeat for the other two legs.
- c. **SetUp** the tripod. Spread the legs and set them down. Make sure the top plate is level. If it is not, adjust one or more legs to level it.
- d. **Mount the Camera** to the head securely.

8. **Take Down for moving to next location via car** Again, practice.

- a. **Unmount the Camera** holding onto it the whole time. Store in your pack or put back on strap. (Note it is not good practice to mount the camera with strap still attached – too much risk of inadvertently snagging it and pulling the rig over.
- b. **Compress the Legs** On a leg, loosen the two twist locks about a quarter turn. Put your hand on the bottom and push to compress. Tighten the two twist locks usually with one hand. Repeat for the other two legs.

9. **Carrying Camera on Tripod**

- a. Many people say never do that.
- b. I keep my camera on my tripod and sling it over my shoulder if I'm walking around an area to find shots.
- c. If there is room in the car, I'll keep the rig setup when moving from spot to spot.
 - i. Check tripod joints and feet regularly
 - ii. Make sure camera firmly mounted to head and head knobs are tight.

Heads There are a wide variety of heads from many makers. I see some the have very strange concepts. I'm simple and I like simple and robust designs. There are many traditional style and many that seem gimmicky to me. I have had good luck with Really Right Stuff and my current favorite Arca Swiss D4.

Mounts I would stay away from head specific mounts. Arca Swiss is widely used and if you have to borrow someone's rig, you are more likely to be compatible. A simple ball head is a good bet.

L-Bracket I consider L-brackets required gear.

Specialty Heads are handy and sometime indispensable to track action or geared head.

Travel Tripods Are much smaller and lighter. They are not tall, and they always have a center post. Two things I don't like. But sometimes they seem the only viable options. I had a bad experience with a travel tripod, and I don't use them anymore.

If I have a good deal if walking to do, I'll put my cameras in a backpack and carry my regular tripod. You can get cases or slings to make this easier. I can pack it in my luggage with head removed.

Monopods I find them very handy for longer lenses when I just can't make myself take the tripod. There are specialty heads for monopods also.

Tripod References (bythom.com)

<https://dslrbodies.com/accessories/other-accessories/tripod-101.html>

<https://bythom.com/reviews--books/tripods-today.html>

[Backcountry Gallery | Wildlife Photography By Steve Perry](#) type tripods or monopods in search

Tripod and Other (John Sexton)

John Sexton is my favorite black and white photographer. He and his wife Anne occasionally publish a newsletter. One arrived the morning after the first time I presented this class (really). Please enjoy and go to the section *Tripods for Bipods*. We differ on advice for center posts but he makes a good point. Also see the letter from Ansel Adams about a failed tripod. He is asking John to attend to getting it fixed because John was his assistant at the time.

<http://www.johnsexton.com/newsletter06-2022.html#anchor05>

Additional Notes:

1. **Wind** can be a real issue with long lenses on a tripod. Once in Death Valley the wind was so bad I had to abandon trying to use a longer lens at Zabriskie Point. I ran into a similar problem recently in the Caprock Country. It's not ideal, but I rested my hand on the front of the lens during exposure to keep it from jumping around.
2. **Tripod Feet** come in a variety of types. Most are rubber but you can also get spikes and "snowshoe type things" for sand and snow. I use the rubber ones that came with the tripod. All feet screw onto the end of the legs.
Important: Check the tightness as they will wiggle off and you can have a mess with stuff in the leg. (If you loose one, go to a hardware store and find an appropriately sized furniture foot to put on the end of the leg.)
3. **Check Tightness** of all tripod and camera mount screws. Always carry the proper hex key.
4. **Arca-Swiss Compatibility** is an almost universal standard for head to camera mounts. If you are just starting, I recommend you get a head that is Arca-Swiss compatible. But don't change if what you have works. Rant: Nikon's long lenses with feet do not have the Arca-Swiss dovetail and we must replace the Nikon foot with one that works – come on Nikon!

Gear References (based on personal experience):

Really Right Stuff [HERE](#) – tripods, monopods, L-brackets, replacement lens feet, other support gear

Gitzo [HERE](#) – Tripods and heads

Kirk Enterprises [HERE](#) - L-brackets, replacement lens feet, other support gear

3 Legged Thing [HERE](#) – L-bracket is the only thing I have used

Wimberly (via B&H and others) – Gimbal (WH-200) for tripod and (MH-100) for monopod

Arca-Swiss (via B&H and others) – Tripod head d4, also plates

Hejnar Photo [HERE](#) – Support gear. I have use their lens foot replacement only which I found good.

Three Legged Thing [HERE](#) I have used an L-bracket. Well made.

Sling and Attachment

Sling (camera on right side – my preference) [BlackRapid Sport Breathe Original Camera Sling Design - BLACKRAPID\](#)

Sling (camera on left side) [BlackRapid Sport Left Breathe Camera Sling - BLACKRAPID](#)

Fastener included with sling [BlackRapid FastenR5 \(FR-5\) Breathe - BLACKRAPID](#)

Quick Disconnect (QD) D-Ring fits on some L-brackets and long lens feet [QD Strap Swivel \(reallyrightstuff.com\)](#)

Micro Clamp [B2-FABN-Micro | Micro Clamp with Strap Bosses | Really Right Stuff](#)

