## TRIPOD TIPS AND TECHNIQUES

Choosing a tripod -
For landscape photography, any tripod you consider should be capable of elevating your camera to at least your standing eye level, on a flat surface, without the aid of raising a center post. It should also be capable of supporting your camera at or very close to ground level without resorting to inverting a center post. The legs must be capable of moving independently. That is, they should each be able to be set at angles different from one another. There should be at least 3 positive locks at different points in the swing of the leg. The number of leg sections should be minimized. 3 leg sections, one fixed and 2 adjustable is preferred.

Choosing a head/quick release system -
There are 2 basic head styles used for landscape photography, 3 way Pan \& Tilt and Ball. The overwhelming choice of working professionals is the ball head. The ball head uses a single knob or lever to lock / release the tension on the ball. The perceived advantage to this is quickness. With the ball released, you can maneuver the ball left, right, up, down very easily. There is generally an adjustable 'drag' setting that pre-loads some tension on the ball allowing it to be moved/adjusted while not allowing it to 'flop' freely. Choose a ball head that incorporates a panning base. When you want to make a panorama image, you want to be able to turn the head without loosening the ball. Examples of well designed and built ball heads are Really Right Stuff BH-40 \& BH-55, Kirk Enterprises BH-1 \& BH-3, Arca Swiss Monoball Z1sp.

One ball head style to avoid at all costs is the 'Pistol Grip'. While it seems like a good idea, it isn't. The grip is too tall and the ball too small. When you move the camera off center to compensate for being on a hill or to make a vertical photo, the spring locking mechanism isn't strong enough to hold the camera in position...it creeps down. This is a frustrating scenario.

The other style, 3 Way Pan \& Tilt, has one handle or knob for each of the 3 axis of movement, left/right, up/down, camera tilt left/right. The benefit of this style is that each control is independent. It enables you to work methodically. Adjust the left / right, lock it in place. Adjust the up / down, lock it in place. Finally, adjust the camera tilt and lock it in place. This order of working is the preferred order. Once all adjustments are locked in, it may be necessary to go back and 'fine tune' the composition by further adjusting one or all the controls. Using this style of head you naturally get a panning base to facilitate making panoramas, and you get the ability to easily make vertical panoramas too. This is much more difficult when using a ball head. Examples of well designed and built 3 Way heads are Manfrotto 804RC2, Manfrotto 808RC4, Manfrotto 229.

Whichever style head is chosen, an included feature is a quick release. The quick release is composed of a 'plate' that is screwed onto the bottom of the camera or lens foot and remains there for as long as you own the equipment. What this means is...for every piece of equipment you own that can be attached to a tripod, you should have a
quick release plate for it. Believing that you can move a plate from one piece of gear to the next in the field, in the 'heat of battle' is folly. What you've created is a slow release system. This will be very clumsy.

There are 2 styles of quick releases. The one most commonly used with ball heads is referred to as an Arca Swiss style, sliding dovetail design. This is also known as an 'open' style. The plates can generally be slid in to the clamp from either end, or loaded from the top in certain instances. An advantage to this style is that when used with longer lenses that have tripod mounts, the camera and lens assembly can be slid forward and backward to help achieve better balance. Virtually any Arca style camera body plate or lens plate, from any manufacturer, can be used with any other manufacturers clamp.

The other style quick release is known as a 'captive' style. This is what all the Manfrotto tripod heads use. Here, the plate fits into a pocket on the top of the head. As such, it's fixed. Depending on the head chosen, the size and shape of the pocket varies. You have to be sure to purchase the correct accessory plates to match your tripod head.

Assembling the head to the legs -
The heads referenced above come with a $3 / 8^{\prime \prime}$ female thread for mounting to the tripod. The tripods come with a $3 / 8^{\prime \prime}$ male thread either on the top plate or the center post. Simply thread the head onto the legs or center post. A drop of blue loctite could be used to make sure the head doesn't loosen easily. The blue loctite will allow the parts to be separated if you need to take them apart. In the case of mounting a Manfrotto head on Manfrotto legs/center post there's another thing to be aware of. The bottom surface of the head, where the screw hole is, is made up of a series of ramps. On the bottom of the center plate / center post there are three set screws with slot heads. Thread the head onto the center plate / center post, then turn the assembly up side down and tighten the three set screws. The set screws will prevent the head from unscrewing. In this instance, the loctite is not necessary on the $3 / 8$ " thread.

Assembling the quick release plate to the camera or lens -
The Manfrotto lens plates are marked on the bottom with an arrow and the word 'lens'. Be sure that the arrow points in the same direction as the lens. Tighten the fastener as tight as you can. I think it's virtually impossible to over tighten this screw. As stated above, this plate should never come off the camera or lens. The worst thing is to have this work loose. It means you can't be sure of a rigid set up. A less than rigid set up leads to unsharp photos.

Arca style lens and camera plates are generally secured with a screw that needs a 5 mm allen wrench to tighten and loosen. You can really bear down with the allen wrench. Keep the wrench in the camera bag for safe keeping.

In the field -
Finally now to the nitty gritty of how to handle this 3 legged snake.
Firstly, always extend the lowest leg section first. If the camera position demands it, extend it all the way out before extending the next lowest leg section. And so it goes 'till all are fully extended. Reason for this method is when the tripod is set up and you need
to make a small height adjustment, it can be made in the uppermost leg section rather than stooping to adjust the lower section.

So how do I physically go about extending the legs? I hold the tripod in my right hand (personal preference) so that it's pretty well balanced. Then extend my arm so that with my left hand I can work the leg locks. Unlocking one leg only, I extend that legs lowest section and then lock it in place. If I need to extend another section of the same leg, I do it now. Notice, the location of the second lock is in virtually the same place as was the first. Extend the second section and lock it in place. Now, I will generally set the extended leg on the ground and basically balance the tripod over this leg. With the leg supporting the weight, I can easily extend the other legs, following the same procedure, 'till all are about the same length. I can now make adjustments to one leg (usually) to compensate for a slope if necessary. What I aim to achieve here is the camera platform being approximately level. I want the camera to be roughly in the center of the legs, not way to one side or the other. This is unstable. Next, l'll attach the camera to the head. At this point, the assembly should not be tippy, it should be solid. There should be no need to hold onto the camera or tripod to prevent it from being accidently knocked over by a slight bump or by a moderate wind. I like to have one leg pointing directly away from me in the direction I'm shooting. This means l'm standing between the other 2 legs, not straddling a leg.

When using a ball head, I like to have the ball locking knob on my left. I do this so that I can keep my right hand on the camera to move and steady it into position. I also keep the clamp knob or lever to the front of the camera, away from me. This keeps it out of my way and I won't reach for it and loosen the camera when I want to loosen the ball. If using a longer lens with a tripod collar, l'll turn the clamp so that the knob or lever is on the right side, for the same reason.

With a 3 way head, the lever that moves the camera up and down should be pointing toward you. It will be sticking you in the throat if you will. The lever that turns the camera to level it left to right will be on the right and the lever that moves the head in a panning motion will be toward the back and right. The clamp release/lock lever will be on the back, facing you. l've seen a lot of people struggle with this release/lock lever. There are a couple of ways this can be worked...one correct one. To properly use this, depress the lock tab and rotate the handle. Release the lock tab almost immediately and continue to rotate the lever fully, as far as it will go. Done this way the lever will lock the clamp in the fully open position, ready to accept the plate when you want to attach the camera. To attach the camera, place the plate in the pocket, front edge first and press down on the camera. The plate will push down on a brass pin to release the locking lever. Always verify that the camera is secure prior to letting go of it.

Once the camera is on the tripod, manipulate the aiming of the camera by using the tripod head controls, not by holding onto the camera and trying to maneuver it. This will lead to frustration and potentially to loosening the screw holding the plate to the camera.

Suppose you want to move the tripod, set up, to another nearby location. I suggest that you remove the camera from the head. You can leave it attached, but it's safer to remove it. Next, grasp the 2 legs you've been standing between and begin to step forward. At the same time swing the legs toward the center. When all the legs are together, lift the assembly and walk away. You can hoist the tripod over your shoulder, carry it across your chest or under your arm. I prefer over the shoulder. On arriving at the next location, set down one leg, grasp the remaining legs and step back while
spreading the legs apart. When the legs are fully separated, set down the two you're holding.

When it's time to put the tripod away, remove the camera and stow it. What I generally do is grab one of the legs l've been standing between, but it really doesn't matter, and loosen the upper leg lock. Collapse the upper leg section. Loosen the next leg lock and collapse that section. When you get to the bottom section, leave about 3 inches of lower leg extended. Why do this? This will keep the bottom leg lock out of the sand and mud the next time you set the tripod down. At this point, the tripod is balancing on 2 legs with your help. Grab another leg and get the assembly to balance on one leg again. Now collapse the leg without any weight on it, starting with the upper section again. For the last leg, with the weight balanced, loosen the upper leg lock and allow the tripod to descend. Now pick it up and loosen the lower leg locks, in turn, and collapse the leg sections. Again, leave about 3 inches of the lowest leg section exposed.

