

Why a Ball Head?

By J. Ramon Palacios

Username: jrp

Whenever the topic of perfect tripods and accessories comes up, one of the first questions we get is "Why a ball head?"

Well, because serious amateur and professional photographers felt a need for them. Allow me to explain why.

The early pan and one-axis tilt heads



I remember my first tripod. It was a wonderful 4-sections German unit with a pan-tilt on one axis only head. The integrated head was atop a center column and a ¼" screw attached the camera body, with a single handle to control the angle of tilt and lock it.

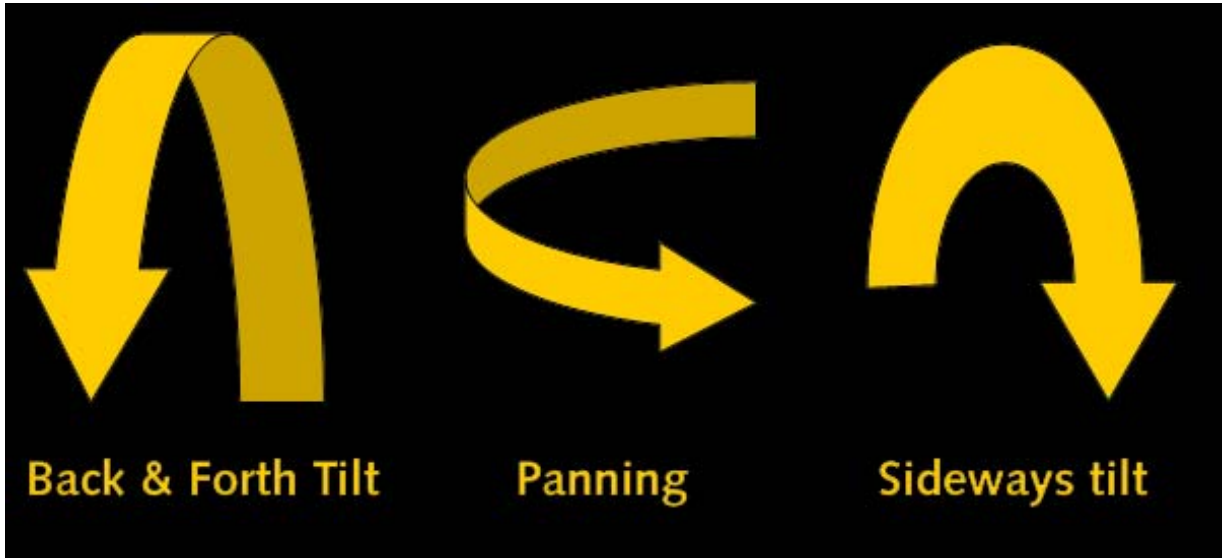
That tripod, made of shiny aluminum tubing and sturdy leg section locks, was very nice. However, leaning on it for added stability would have been madness, for the thought felt pregnant with the high probability of a final farewell to the not so inexpensive and hard to replace tripod, bought in either Cologne or Zurich for me by a dear uncle.

The integrated head was made of some aluminum alloy castings and it did not take long to find out that over tightening the handle steel bolt could kill its copper alloy bushing threads. Panning was accomplished by unscrewing the lock of the central column.

You could say it was an acceptable solution for landscape photography, due to its perceived portability compared to the monster tripods for studio work, but if a level needed to be achieved along a horizon on uneven terrain, one had to add rocks under the legs to get there because there was no sideways tilt. The tripod legs only locked when a leg section was fully extended or fully collapsed so it was not easy to adjust their height. Not the best solution.

I have a nightmare-like memory of me abandoning it discreetly in a busy train station bench in a foreign country, walking away fast, with the haunting thought that a well-intentioned old lady would fight her advanced arthritis to run after me to give it back "Sir, you forgot this."

The later pan-tilt heads



It was some 15 years and a few more tripods and heads later that I finally had a workable 3-axis pan-tilt head and a considerably more sturdy adjustable legs tripod. Lino Manfrotto (Photojournalist and industrial/commercial photographer) and Gilberto Battocchio (ingenious mechanical technician) had teamed up some three or four years earlier and were designing very good tripods and heads. They were great pioneers in the fields of camera and lighting support as well as others.

Not a very early morning person, it took a few more years for my first sunrise with an improved tripod and a later 3-way head. When that day came up, the golden hours effects went by so fast that I could not make but a very few shots. It felt short of all that I wanted with different compositions, moving the tripod just a few feet away, very slow at having to unlock and relock three knobs for a simple minor change. Again, not the best solution when in a hurry.



The geared 3-way heads

As my photographic interests and curiosity kept on widening in scope, when I began with serious play (I could even dare call it "work") at micro, macro and extreme close-up photography, I bought a gorgeous looking geared 3-way head. The rationale for doing that was very straightforward: "... allows for precision changes of camera-lens position, in all three axes." Very soon I discovered it was only good if your subjects were inanimate, dead or heavily sedated, in addition to needing a very heavy tripod and a proven loyal Sherpa to carry it just into your garden or backyard. Once more, not a good solution for any non-static subject.



Ball Heads

Ball heads came to be because serious amateur and professional photographers felt a need for something better, an easier and faster to use device than pan-tilt heads and because engineering comes from ingenuity. So it is thanks to the human spirit and its magnificent vocation for problem solving that ball heads were born. And not by accident; these are not vaccines, almost always discovered by a lab accident. They are the result of a quest for the best way to permanently simplify and speed up the process of setting up and changing a photographic image composition, by teams who lived and understood well both mechanical engineering and photographers' needs.



The typical Ball Head - Then and Now

A housing with a center ball inside, capable of moving on any direction and almost at any angle was the key to substitute the 3-way pan-tilt head. The ball has a center bolt at its top, to which a camera can be secured, either directly to a platform with a screw or via a clamp to retain a base plate. Most later added a panning base too and an open channel in the housing to enable the camera to be dropped on a side for horizontal compositions.

Simple ball heads have one knob only, for locking the ball, without a panning base. The next levels have two knobs, one for locking the ball, another for a panning base. Newer simple heads have a single knob locking both the ball and the panning base, creating a flopping risk.



Pretty soon photographers requested to have an increased drag friction control for increased weight of loads, to avoid creeping. So ball heads ended up with three controls. Creeping means that you lock the ball thinking of an exact position, but when done you find out it has moved down. Inaccuracy is always a bad call, especially when doing macro.

In practical use in the field, most of those ball heads also have several other problems. Loosening the friction control to change a composition is a must, and one can inadvertently loosen it too much, to the point where the gear will flop and damage. Also, you must remove your eyes away from the viewfinder to make sure you are moving the correct knob. You don't want the largest and more expensive gear to flop when you think you are trying to change the panning angle.

Most designs are also not so practical, having large knobs extending much away from the housing with a tendency to get caught in the bushes.

Also, the wisdom of the age dictated that the largest the ball head the better it was, so when moving away from 3-way pan-tilt heads into ball heads always meant more weight to carry, often considerably more.

In addition, purchasing into one brand meant locking yourself into it to a large extent, since when using a clamp and plates they had to be of the proprietary design and make, not always the best to hold your gear perfectly, without twisting or vibrating. Moving into another brand meant having to buy not just the ball head but also a set of new plates for your camera body and long lens collection.

Overall, a simple ball head speeded up the process of changing and locking compositions but created other concerns; even risks not present in the pan-tilt heads. Simple acting like a reduced size vise, ball heads held little or no interest from medium format and view camera users. Fortunately today there are ball heads in the market that solve from one to some to all of the above mentioned problems in various degrees.

Conclusion

If you want a fast and secure means to set and change photographic compositions in the field and the studio, get a ball head over a 3-way pan-tilt head.

If you have decided over a ball head, try to get a truly professional one for maximum speed, precision, comfort and safety.

Have a great time 😊