



CHOOSING AND USING TRIPODS



ROGER HICKS



CHOOSING AND USING TRIPODS AND OTHER CAMERA SUPPORTS

Roger Hicks

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Which is the best tripod? More to the point, which is the best tripod *for you*? If you are in the market for a new tripod, or even just a tripod head, this book should save you a lot more than the \$2.99 it costs (under £2 or 2.50€). It will make it very much easier to find exactly what you need, and you may even find something that is more use to you than a tripod, for a particular application.

Here, you will find extracts from the book, along with sample photographs and their captions, all set in normal type, along with summaries of the omitted parts, *in a different type-face, like this*.

In the full version of the book, there are over 25,000 words and more than 100 illustrations, many specially shot.

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[FROM THE] PREFACE

.....Some of the equipment featured in here is battered and second-hand, but we think of this as an advantage, not a disadvantage. Most things look good, and work smoothly, when they're new. It's when they've been used for a while that you can begin to perceive their true worth and quality....



Sturdivant House, Selma, Alabama. It's better to have a light tripod with you, rather than a big, heavy one which you leave at home.

Because we are publishing in electronic form, it is

(fairly) easy to do updates and corrections, so if you spot any bad errors, or think there are any significant omissions, please let us know. Let us know, too, if you think we could put stuff out in a better form than PDF. We write everything with Kindle readers and iPads in mind, on the assumption that you, our readers, are looking for good value information rather than the fluff, glitz and animated graphics of an 'enhanced reading experience'.

This determined lack of glitz, incidentally, is why this book is all in black and white. It'll work on even an original Kindle. Right now, for books of solid information like this, we don't think we need colour, and it's easier not to use it. Again, let us have your thoughts on this. In the meanwhile: well, we hope you like the book.

Roger Hicks
Frances Schultz

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1 **TRIPODS**

In photography, buying your first tripod is a rite of passage. It marks your transition from happy-snapper to Real Photographer. If you own a tripod, you are clearly Taking Photography Seriously.

Quite often, buying your second tripod is another, similar rite of passage. It marks your transition from Someone Who Believed The Advertisements, and bought mostly on price, to A Sadder, Wiser but More Realistic Photographer.

There is, after all, a very old saying about tripods. It is this. A tripod should be solid, light, and cheap. Choose any two. It is extremely difficult to find a tripod that is solid *and* light *and* cheap, and if you do, it is almost certainly going to be rather bulky, and will lack a centre column. Compactness when folded is an important fourth consideration.

Of course, solidity, lightness, cheapness and compactness (when folded) are not the only characteristics of a tripod. Others include durability, construction and ease of use, resistance to hostile environments (such as sand, mud and salt water) and versatility. You can even, if you are fussy, add good looks. That's before you even start considering tripod heads. But before we look at....

...There are really just two strong arguments for using a tripod. One is increased sharpness, and the other is when you want to set up the camera in one place, for whatever reason....



Two tripods. *The Linhof is the biggest, heaviest tripod we own, seen here at little more than half its maximum height. The Johnsons 'wobble-pod' is the smallest and lightest, except for table-tops. It is reproduced at the same scale as the Linhof, and is at full extension. But both have their place.*

Camera shake; – 'safe' shutter speeds – factors affecting hand-holding – format and focal length – cable releases, and the alternatives – when and why you need a tripod – height.



Church interior. Not only was it a long exposure: the ultra-wide lens (12/5.6 Ultra-Wide-Heliar on full frame Leica) meant that the shot had to be carefully levelled.

Table-top tripods – table-tops when tripods are 'banned' – the 4-oz/110 gm tripod – other ways to use table-top tripods – shooting through windows – bracing against the wall or chest – rigid and bendy-leg – what table-tops can support. Different tripods for different

applications – using two tripods at once.



Leica table-top tripod. *The unique folding mechanism is clear. It weighs 180 g (6 oz.) without head. This is a Rowi head: Leitz heads are prettier, taller, and a lot more expensive.*

STABILITY

Realistically, this is in most cases the principal consideration. If the tripod can't hold the camera steady, it is not fulfilling the function of a tripod. Unexpectedly, there are two separate sub-considerations here. One, which is the first thing that most first-time buyers think about, is the load-bearing capacity. How heavy a camera and lens can it support? The other, of far more interest to the experienced tripod user, is how steadily it supports whatever is mounted on it. . . .

... A good, 'dead' tripod will stop vibrating very quickly, and will be quite hard to set to vibrating again. Some tripods will however 'ring like a bell', and take a very long time to die down; if, of course, they are not set to vibrating again by another tap, or by releasing the camera, or by the wind.



Woodies. *The MPP on the right is very light, but when it's folded, it's a lot bigger than the CTM on the left, despite the fact that it is at full extension here and the lower leg sections on the CTM are barely extended at all. Both have crutch-style legs; neither has a centre column.*

A home-made laser vibration tester – best

materials for absorbing vibration; number and thickness of leg sections – tripod heads – blowing over in the wind.

WEIGHT

It is comparatively easy to make a very solid tripod, as long as you make it heavy enough. During World War Two, Leitz built a 2000mm f/4 lens for the Leica, for photographing English radar installations across the English Channel. The mount involved several tons of steel and concrete, and the lens was mounted in a huge bracket on trunnions suitable for a cannon. It was very solid, but not at all portable.

For that matter, the heaviest tripod we own is a huge old Linhof, which easily supports the heaviest cameras we own (up to 12x15 inch) and which goes up to well over 2 metres high (nearly 7 feet). It is wonderfully solid, but it weighs over 10 kg (22 lb) so we are understandably reluctant to carry it far.

At the other extreme, we have two small-to-medium light-alloy tripods that weigh under a kilogram each, complete with small ball and socket heads: near enough 2 lb, or maybe a fraction less. These are perfectly fine for the vast majority of digital or 35mm film cameras, provided we do not

put very long lenses on them (200mm and above), but they are at best marginal with heavier cameras and longer lenses.

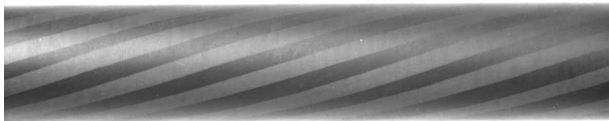
The range of weights in between is enormous....



Size and load bearing. The Gandolfi on the left weighs 6 kg and will (just) support our 12x15 inch Gandolfi plate camera. The Slik Snapman on the right weighs 1 kg and will (just) support a medium format camera. Not to the same scale.

Some tripods seem lighter than others of the same weight – ease of carrying – weight of tripod heads alone – light, medium and heavy-

duty tripods – tripod materials and weight – different qualities of carbon fibre

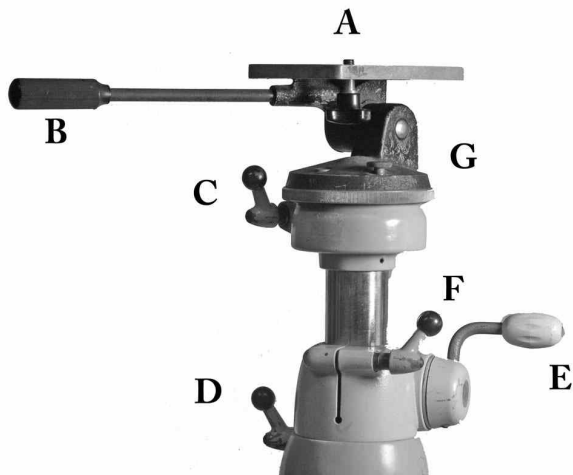


Spun carbon fibre. *The clarity of the 'grain' is no indicator of quality. Above is Redged (very good); below, Gitzo (even better).*

AFFORDABILITY

...The cheapest new tripods you can find can cost £20 or under (\$30, 25€). In fact, you can sometimes find them at under \$20 (£14, 16€). That's including the head. At the other end of the price scale, a Gitzo Traveller can cost the best part of £1000 with even a modestly good head on it: \$1500, 1200€. Clearly, a 50:1 price difference is not just a matter of fashion and branding.

Simpler is better – buying second hand – extra features on once-expensive second-hand tripods – unimportance of minor damage



Seven controls: A, camera screw, B, pan lever and tilt lock, C, lock for removing head, D, lock for removing centre column (head can be placed directly on tripod), E, crank for centre column, F, lock for centre column, G (barely visible small screw on top of head base) pan lock.

COMPACTNESS

For a given working height, the most obvious way to make a tripod more compact, when it's collapsed for carrying, is to have more leg sections.

Quite a lot of older tripods, and a few of the newer wooden ones, have only two-section legs: the outer, fixed section, and an inner, sliding section that retracts inside it. This makes for admirable stability and very quick set-up, and it keeps weight and complication to a minimum, but it also means that the tripod is still quite long when it is collapsed for carrying.

At the other extreme, very few good tripods go beyond four sections, because even this entails nine (expensive-to-make, slow-to-use) leg locks. Also, the thinnest tube, the one that telescopes inside all the others, will have to be very slender. It will need to be of the very finest materials if it is not to be excessively fragile or susceptible to bending and denting.

Many tripods therefore go for three-section legs, as a compromise for stability versus ease of set-up and leg retraction, and probably, this is the best compromise in most cases. It adds a bit more to the weight and to the cost of manufacture, but

most people can live with that.....

Other ways to make tripods more compact – trunnions – reversing legs – ultra-light wobble-pods more useful than they look....

DURABILITY

Once again, there are two separate components here: resistance to the wear and tear of normal use, and toughness in the face of misfortune or abuse. Both are inclined to be examples of 'you get what you pay for', but there are a couple of points worth making. The first has already been noted: that most of the better manufacturers sell spare parts. For a while we had a moderately-priced Cullman, an excellent amateur tripod but not designed to stand up to hard professional use. Eventually, the leg locks began to slip. Well, fine: order replacements from Cullmann. A cheap tripod is likely to wear out quite a bit faster, and is almost certain to be irreparable.

The best spare parts story we ever encountered was when we saw someone at the Linhof stand, picking up a part for a tripod his grandfather had bought 80 years before, and that had not been made for 60 years. Deadpan, the Linhof man said, "Please take better care of it, though, as we only have two more

of these pieces left, and we are not making them any more.”

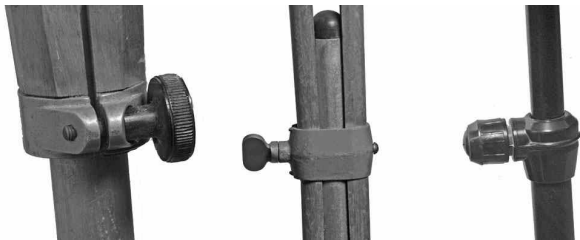


Gitzo leg lock. This is not rocket science, and all the parts (upper leg, lower leg, locking collar and intermediate fibre clamp) are replaceable.

Resistance to mechanical damage, corrosion and wear – looking after tripods – versatility – reversing centre columns – interchangeable heads – standard tripod fittings – dual-thread fittings – variable splay legs – low camera positions – weighting the tripod – ease of use – tripod bosses (the bit the legs are fastened to) – Benbo and the 'bent bolt – the advantages and disadvantages of centre columns – separable legs and bosses – the different kinds of leg lock – non-rotating legs – twist or collar locks – pinch or clamp locks – over-centre locks – other types of lock



Tripod socket adapters. Frances once tried to buy one of these in California, but was told “I think you ought to wait until one of the men gets back, so he can make sure you get the right one”.



Three pinch locks (not to scale). Left to right, CTM, MPP, Benbo

Removable and convertible legs (tripod-cum-monopod) – leg braces – 'leg warmers' for carrying the tripod in cold weather – handles – spike and rubber feet – bubble levels – levelling bowls – modular construction.



Levelling bowl (CTM)

TRIPODS: THE BOTTOM LINE

...The most difficult bit, for most people, is spending enough money to buy a good tripod. After all, it's 'just a tripod', and to quote one spectacularly ill-informed opinion I read on the internet, 'they all do the same thing'. This is a bit like saying that a blanket and loincloth 'does the same thing' as a pair of jeans and a sweatshirt, both

of which keep you warm and decent. Well, yes they do, but in rather different ways.

There is no need to spend a fortune on a tripod ... you should be able to find a decent new one, not the best but still good for decades of use, for £150-250 (\$225-375, 180-300€), or a decent second-hand one for £30-100 (\$45-150, 35-120€). And if they do develop problems, you can usually get the parts you need to fix them. What is your photography worth to you?



2 TRIPOD HEADS

As with tripods, so with tripod heads. You would not think that something so apparently simple could give rise to so many variations. Probably the oldest form of tripod head is the tilting platform, after which we have the pan-and-tilt; three- and four-way heads; ball and socket heads (including double ball); pistol-grip heads; hybrid heads, such as the NPC ProHead; and motorized mounts, including equatorial mounts.

The basic requirements of a good head are that it should be solid and simple to operate, and that it should lock precisely, without any 'creep' or displacement of the camera as you lock down. The question of locking without moving the camera is especially important when you are using very long lenses, as the last thing you want is to frame your image carefully; lock the head; and find that the framing is no longer the same. Test 'creep' with the longest lens you can get your hands on, or with the sort of laser gun-sight I mentioned earlier for testing vibration.

Tilting platforms – pan and tilt – the different requirements of still and ciné – fluid and geared heads – three- and four-way heads...



3-way head (Manfrotto) with built-in quick-release plate.



4-way head (Paterson)

BALL AND SOCKET HEADS

There is sometimes an almost religious intensity to the arguments between devotees of pan and tilt (P+T) heads, and those who prefer ball and socket (B+S) heads. B+S heads have one undeniable advantage, which is compactness. Their two other principal characteristics are seen as virtues to their admirers and vices to their detractors. One is speed of operation, and the other is the potential for single-movement locking, or rather, for complete unlocking. With a P+T or 3-way head, you can set the pan and tilt movements independently. With a B+S, you can't.....



Balls. *The smallest we own (no name) and the largest (Benbo), with a small/medium Benbo Trekker head for comparison.*

Quality – price – finish – durability – 'portrait' and 'landscape' – separate pan locks – adjustable drag – upside-down heads – double ball heads – pistol grips – other types of head – levelling bowls (again)



Pistol grip head (Slik)

QUICK RELEASE SYSTEMS

Mounting cameras on tripods, and demounting them again, can be quite fiddly and time-consuming if you have to rely on the quarter-inch or three-eighths tripod screw. It is even worse if

your fingers are cold or shaking, or if you are wearing gloves. This is why quick release (QR) systems are so popular, though they are arguably less useful with digital cameras, which rarely need to be reloaded as often as film cameras and which can usually be reloaded (or have their batteries replaced) without removing them from the tripod.

QR systems are arguably equally useful in the studio and in the field, though of course a lot depends on how often you are likely to be putting the camera on the tripod and taking it off again.

The drawback of even the best QR systems is (as ever) that they add weight, complexity and expense. Many cheaper QR systems have the disadvantage that they are also quite sloppy, so that the camera can move on the tripod head, and the worst are not even very secure: either they are all too easy not to lock properly, or even when they are locked properly, they are not strong enough for anything but the lightest cameras. Actually, even the good ones may not always lock quickly, positively and easily....

....Losing the plate is a nuisance if the QR system is detachable from the tripod head, but at least you can then go back to the plain old tripod screw....

Locking systems – safety catches – self-locking systems – Arca-Swiss the nearest there is to a standard.

TRIPOD HEADS: THE BOTTOM LINE

Just as there is no single, universal, ideal tripod, so is there no single, universal, ideal tripod head. You have to compromise to a greater or lesser extent with any of them, so as with tripods, you may find that you eventually acquire two or three or more heads for different applications.

Overall, I tend to prefer ball and socket heads for tripods that I use in the field, simply because they are lighter and more compact, while in the studio I prefer 3-way or 4-way heads, though quite honestly, I suspect that quality matters more than what type of head it is. In other words, a well-made head, of any type, is a better bet than a poorly made head, again, of any type.



3 OTHER CAMERA SUPPORTS

Sometimes you have no form of camera support with you; or tripods and even monopods are banned. How do you improvise, and how do you hold the camera as steady as possible during the exposure? After that, we'll go on to all the other options, such as monopods, clamps, string-pods, tree screws, 'limpets' and more.

SELF-SUPPORTING CAMERAS



Many folding cameras had a built-in 'foot'

Our ancestors were often better served than we are when it comes to self-supporting cameras, as the...



Improving camera balance – improvising supports – slouching against walls – bracing your elbows – monopods – self-supporting monopods – chain-pods – ladder-pods – roof platforms – pillar-type studio stands – bean bags – suckers – limpets – clamps – lash-ups – Magic Arms – tree screws – bottle-pods – gun-stocks

Above: Pillar-type studio stand. Right: Uni-Loc 'Duopod' self-supporting monopod.



OTHER CAMERA SUPPORTS: THE BOTTOM LINE

Tripods are overwhelmingly the most convenient camera supports for most people, but for particular applications, there may always be better alternatives. Once again, we come back to the simple point that there is no one, single, perfect, universal camera support. There are only the best solutions (or sometimes, the least worst solutions) to given problems. If you have two (or more) requirements that are too diverse, then the answer may well be two (or more) camera supports.



4 RELEASES AND ACCESSORIES

To get the full benefit of a tripod, especially with long exposures, you normally need to use a cable release as well. There is a surprising amount one can say about these, so I have made them the 'stars' of a short final chapter in which I also take a look at various bits and pieces that I have called, for want of a better term, tripod accessories.....

Wire releases – standardization – electrical releases – adapters – locks – air releases – solenoid releases – delayed-action releases – timed releases – the accuracy of just counting seconds is surprisingly high.



Left: old Leica/Nikon. Centre: standard PC tapered screw. Right: Linhof.



Right angle adapter and sunk panel adapter (both by Gepe)

....You don't always mount the camera directly on the tripod head. Options between the two include camera cradles; lens tripod mounts; panoramic heads; macro slides; stereo slides; right-angle holders; and upside-down holders.....

Other accessories – spirit levels – hammocks – spiders – dollies – hanging hooks – tripod bags

**CABLE RELEASES AND ACCESSORIES:
THE BOTTOM LINE**

The last sentence in the paragraph above [*in the full version*] is a good illustration of the simple truth that while cameras and lenses are glamorous

and attractive to thieves, and sometimes to other photographers as well, there's not really much prestige in owning a better tripod, let alone a better cable release.

Despite this, or perhaps precisely because of this, tripods, tripod heads, camera supports and the (rather meagre) assortment of camera accessories are quite a good demonstration of the old saying, "Quality doesn't cost, it pays," also expressed as "Buy cheap, buy twice, buy quality, buy once." Most of the illustrations in this book are of equipment we have had since new, but some was distinctly second-hand when we bought it, and we expect it to outlast us. As I said at the very beginning, the \$2.99 we charge for this book should save you many times that amount over the coming years, so I hope you don't regret buying it.

Last page: Ruin. *Although infra-red films are mostly a memory, most digital cameras can give IR effects with a suitable filter – typically at an effective ISO of 6 or so, at which point tripods are useful even in bright sunlight.*

