

GROUP
TEST

panoramic tripod heads **tested**

Panoramic tripod heads

The smart way to perfect panoramics

Even if you've used a tripod, lining everything up and 'stitching' a sequence of shots into a panorama can be a nightmare. Though they look complex, special panoramic heads provide the answer and give the perfect stitch every time

test **mat gallagher**

There's a lot to be said for getting your image right first time.

Image-editing software can do some amazing things and no-one would want to be without it, but with a little bit of extra knowledge and effort you can dramatically cut down the time you spend perfecting each image.

Creating a panoramic image by joining (or stitching) pictures together is a great way to get a really wide high-resolution image. Joining them has been made ever easier by special stitching software but even this will run into problems when you have subjects in the foreground and the background – as every good image should. This isn't necessarily the software's fault. Even if your camera has been kept perfectly level on a tripod, if the point of rotation is

not in the right position for the camera, the foreground will appear to move between shots.

The good news is, by using a special panoramic tripod head (or a VR head), you can position the camera to the perfect rotation point, fixing the problem and join the sequence of pics together with ease.

Try holding a pen up about 12in from your face then, while looking at the pen, close one eye, open it, then close the other eye – the pen will appear to move slightly depending on which eye you look through. This is the same with a camera that is not being turned around the lens's central rotation, or nodal point. We're going to look closely at three 'pano' heads, reveal how to use them, and tell you which is the best value.

What we tested

We chose three panoramic heads designed for keen photographers.

■ King Pano head system	£85
■ Manfrotto MN303 head	£250
■ Red door Panosaurus head	£75

How we did the test



We took the three heads out on location for some hands-on panoramic shooting, using a Nikon D50 with 18-55mm lens (set to 18mm), a Kaidan and a Manfrotto levelling plate, and a Manfrotto 055 tripod.

We set up the 'nodal point' on each of the heads and took a series of shots. The images were then stitched together using Photoshop's PhotoMerge to check for accurate results. The heads were also judged on the ease of set up, sturdiness, weight and useability.

How a panoramic head works

If you're about to use a panoramic head for the first time it can look fairly overwhelming and far more complicated than it actually is. The head is merely a positioning device to ensure your camera sits in the right place. Once you have it in position it's just a matter of pressing the button.

Follow these six easy steps and you'll be well on your way to a perfect panorama. First find an area with a decent amount of space, either in the garden or local park, extend the tripod to just less than shoulder height or full leg extension (if using smaller tripod) and stand it on flat ground.



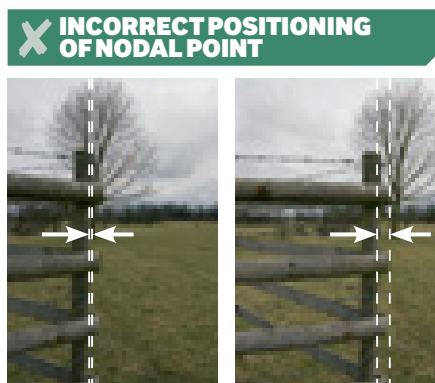
1 START MOUNT CAMERA AND LEVEL TRIPOD. Lock off all adjustments on the tripod and ensure the head is securely on. Place the camera on the tripod in a portrait position and, using the spirit level, adjust the legs or levelling plate to get it spot on.



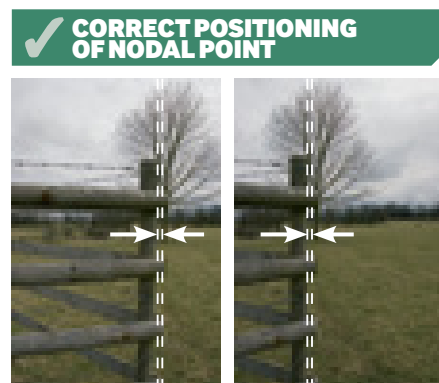
2 FIND THE CENTRE POINT. Adjust the first plate that moves the camera left-to-right so that the centre of the lens sits directly over the centre of the tripod. Some heads will allow you to point the camera down at the head to align it through the viewfinder.



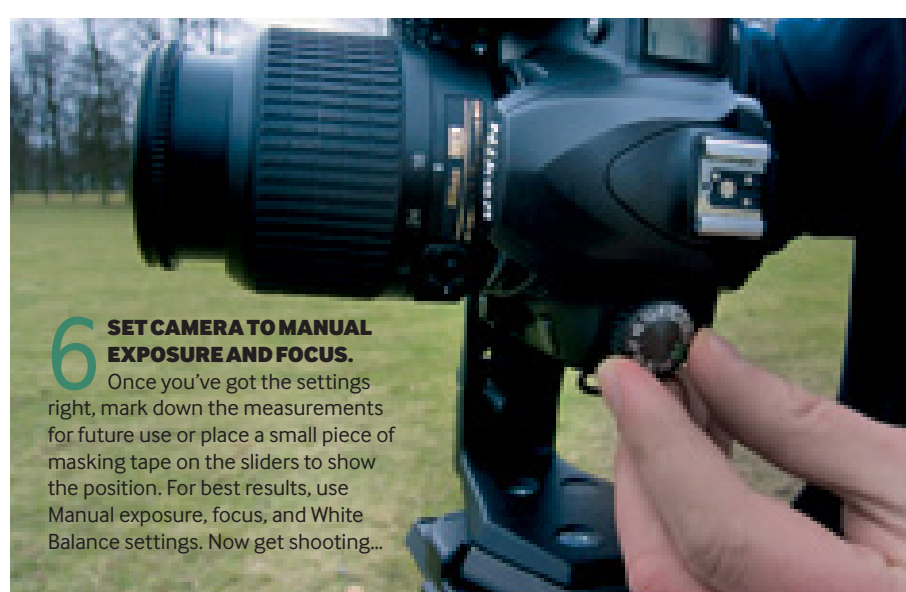
3 NODAL POSITION (FRONT-TO-BACK). Now adjust the second slider, moving the camera forwards and backwards, so that the lens sits over the centre of the tripod. The exact point can be anywhere between the front of the lens and the sensor, so it's a matter of trial and error.



4 TEST FOR MOVEMENT AND RE-ADJUST. Choose two vertical features (such as trees, lampposts, etc), one very close and one off in the distance. Position your camera so the subjects line up in the centre of your picture with a small gap between them (recheck the camera is level after re-positioning), then rotate the head so the features move to one side of the frame, then rotate the other way. If the size of the gap between them changes, the nodal point is wrong. Readjust the second slider as in step 3. As a rule, if the gap increases the camera needs moving backwards, and if it decreases move the camera forwards.



5 SET INTERVAL, TRY TEST STITCH AND RECORD SETTINGS. It's best to give yourself plenty of overlap for the stitch, so aim to overlap between half and a third of the image each time. This can be set on the click stops (if supplied) and is measured in degrees and in number of shots (for a 360 degree image). Set the camera's image quality to low and try a test shoot. View the images back on your PC, if things still aren't lining up, go back and redo steps 3 and 4.



6 SET CAMERA TO MANUAL EXPOSURE AND FOCUS. Once you've got the settings right, mark down the measurements for future use or place a small piece of masking tape on the sliders to show the position. For best results, use Manual exposure, focus, and White Balance settings. Now get shooting...

What to look for

Use the information below to find the perfect panoramic head for your kind of photography...

WHAT TYPE OF USER ARE YOU?

Do you live, sleep and breathe panoramas or do you only consider shooting a sequence every once in a while? If you're new to panoramas or see yourself only doing it occasionally, you may want to start off with a basic model and progress to a more advanced head if you really get to love it.

WATCH THE WEIGHT

Some panoramic heads can be pretty hefty at over 2Kg, so may not be suitable to lug on a long mountain walk on the offchance of an opportunity.

SETUP TIME

Spending hours getting the shot right is great in nice weather but on a cold wet day in the middle of a gale it's not so much fun, so this needs to be quick!

FLEXIBILITY

If you've got more than one camera or a range of lenses to use for your panoramas, you'll need to make adjustments for each one. Each head will also state a load limit, so if you're using a heavy camera/lens check that the head will support it safely and securely.

EASE OF USE

Once you've gone through the process of setting the nodal point for the first time it becomes easier, but if you can avoid having to refind it every time you'll enjoy panoramas more. Check if the head will stay in place when the camera's off or if you can use slider measurements to quickly reposition it.

SLIDER (LEFT-TO-RIGHT)

To position lens directly over rotation. If a vertical rotation is available, this can be judged through the viewfinder.

CLICKSTOP ROTATION

Adjustable click stops mean you can take your shots without having to line-up the overlap each time.

LEVELLING BASE

Essential if you want to get your camera level, and will really help your panoramas in the long run.

CAMERA ATTACHMENT

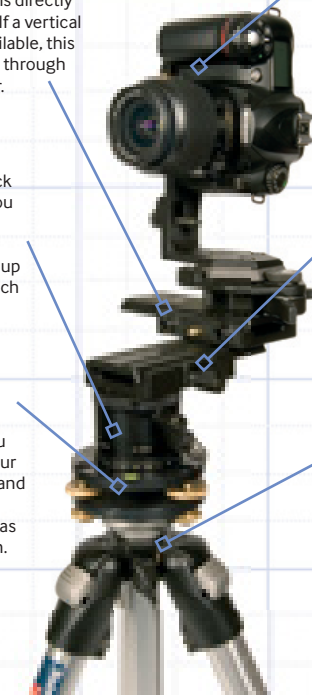
The camera should be easy to attach and sturdy once on. Being able to take your camera off again without affecting your settings is a bonus, too.

SLIDER (FRONT-TO-BACK)

Used when finding the final position of the Nodal point, somewhere between the front of the lens and the sensor.

HEAVY DUTY TRIPOD

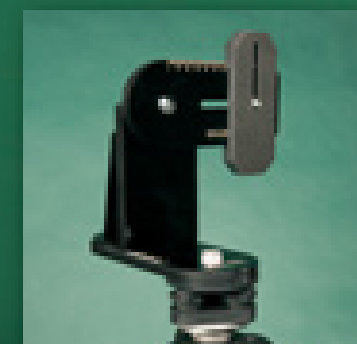
You need to keep the camera absolutely steady so a good solid set of legs is a must.



■ ACRYLIC CONSTRUCTION ■ 0.68KG

King Pano £85 + £19 Shipping

This lightweight acrylic unit has been specially designed to satisfy one man's passion for panoramas. The unit is well built and easy to use, with full rotation both on the horizontal and vertical. It has a basic levelling plate built-in, too, so there's no need for an extra purchase. The design is basic and the top slider must be completely removed to attach the camera. For this reason, mounting the camera out in the cold can be a little fiddly, and could be improved with a few more larger, hand-turnable screws. King Pano is a very small company based in the US so there is a waiting time for orders, plus the shipping cost. But even with this, it's an ideal choice for the occasional panorama snapper and a great product for the money.



The King Pano is a lightweight head with a lot of style. An ideal unit for the occasional panorama snapper.

RATINGS

FEATURES & BUILD
PERFORMANCE
VALUE
OVERALL

★★★★
★★★★
★★★★
★★★★



■ ALUMINIUM CONSTRUCTION ■ 2KG

Manfrotto MN303

£250 (€335 with levelling base)

At first sight, the 303 looks impressive. It's big, heavy, and built to last, and the solid aluminium construction just breathes confidence. With all the dials and sliders, it can appear overwhelming for the novice but it's actually very easy to use. The camera attaches to a quick release arm which allows you to swap between landscape and portrait positions with ease, and you can even remove the camera without changing the slider positions. There's no vertical rotation but the horizontal movement gives positive click positions, which can be adjusted for the number of shots/camera's angle-of-view. Once you add the price of the levelling plate (£85) to this tripod, it's an expensive solution but by far the best here.



This is a serious head and at 2.6KG (with levelling base), it's not for opportunist panoramas. Useability & build quality are superb, though.

RATINGS

FEATURES & BUILD

PERFORMANCE

VALUE

OVERALL

★★★★★

★★★★★

★★★★★

★★★★★



■ ALUMINIUM, PVC, WOOD CONSTRUCTION ■ 1.5KG

Red Door Panosaurus

£75 (€140 with levelling head)

This head has the feel of an enthusiast's creation, as opposed to a commercial design, and is actually produced by Red Door, one of the UK's few panorama specialists. They admit, "it may not be the prettiest kid on the block" but it does the job. The unit is made of a mixture of aluminium, PVC plastic and wood, and has a certain 'homemade' feel to it. Like the King Pano, the bracket must be removed to attach or detach the camera and needs a screwdriver (or a two pence piece) to do so. It features vertical rotation, allowing you to line up the lens easily and is fine for cameras under 1.5kg. A great low-cost solution but not as slick as the King Pano.



A practical solution with a rather homemade feel. Does the job but lacks refinement. You still need to add the levelling plate, though.

RATINGS

FEATURES & BUILD

PERFORMANCE

VALUE

OVERALL

★★★★

★★★★★

★★★★★

★★★★



Overall verdict

The benefits of using a panoramic head really become clear once you attempt to stitch the images together. The results are much smoother to blend and save you hours of adjusting and fiddling. All of the units we tested, once set up, were very capable of doing the job. The Panosaurus is, without doubt, a well-priced solution and is capable of achieving the results, but its build quality was outclassed in this test.

The King Pano did impress, though, with its stylish build and value for money – even including a levelling plate in the package. Although not perfect, it is light and hence the ideal solution for those looking for an occasional panoramic head.

The Manfrotto 303 had the advantage of the easy camera attachment and quick release plate. It's pretty heavy and it lacks the vertical rotation, but this was a relatively minor point and could be judged by eye. If you're really serious about your panoramas, the Manfrotto justifies the extra price in its build quality and usability, and is the best here.

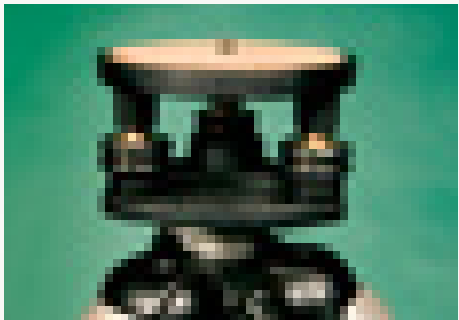


SPECS

	Manfrotto MN303	Red door Panosaurus	King Pano
Street price	£250 (€335 with levelling base)	£75 (€140 with levelling plate)	£85 (plus £19 shipping to UK)
Weight	2Kg (0.6Kg for 338 levelling base)	0.9Kg	0.68Kg
Construction	Aluminium	Alu, PVC Plastic, Wood	Acrylic
Horizontal rotation	360	360	360
Vertical rotation	0	360	360
Quick release	Yes	No	No
Load capacity	5Kg	1.5kg	1.6Kg
Tripod thread	3/8in female	1/4in female	1/4in or 3/8in female
Height	31.3cm	32cm	22.9cm
Visit	www.manfrotto.com	www.red-door.co.uk	www.kingpano.com
Features & build	★★★★★	★★★	★★★★★
Performance	★★★★★	★★★★★	★★★★★
Value for money	★★★★★	★★★	★★★★★
Overall verdict	★★★★★	★★★	★★★★★

RATINGS

You'll also need...



Kaidan QPXL Levelling Base £77

A good levelling base is essential for good panoramas and this one from Kaidan is a simple construction with rubberised adjustments that makes it very easy to use in all conditions.



Manfrotto 190 Pro Tripod £80

A great priced, solid, professional tripod, and a previous Gold Award winner of our September 05 issue tripod test. If you want a sturdy set of legs on a budget, this is a must.

More great panoramic ideas...

■ PAGE 49 EASY PANORAMIC TECHNIQUES
How to set up your camera in the right way to take stunning panoramic images – and how to stitch them together successfully in software.

■ PAGE 54 QUALITY PANORAMIC PRINTS
Whether you choose to print at home or send your images to a lab, we'll show you how to get a first class job.