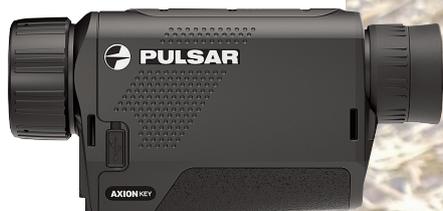


LITTLE GEM

Jules Whicker tests a handy thermal monocular that delivers on performance but won't break the bank...



Don't overlook the Axion Key XM30. For my money this little puppy is my pick of the litter

I've tested a lot of thermal cameras over the years, ranging from the tiny Seek Compact that plugs into the charging port of your phone, to the superb Pulsar Accolade XP50 bi-ocular.

At the same time, it has been evident that there's a notable price and performance gap between the best of the starter-level (£600-£800) units such as the Seek Reveal Pro, FLIR Scout TK, Torrey Pines Logic T-20, and Leupold LTO Tracker, on the one hand, and the most affordable expert-level units, principally from FLIR and Pulsar, on the other.

This matters because, so far, the first category really hasn't had what it takes to provide an image with all the information a hunter needs, and the second category has delivered the necessary performance but at a price that is out of many people's reach. Fortunately, Pulsar have stepped up to the plate here; first with their Quantum Lite series and now by starting their new Axion series with the Key XM30, which at £1270 costs almost £800 less than the top-end Axion XM38 model and almost £1000 less than the cheapest



The Axion Key XM30 comes with a sturdy Cordura pouch, but it will probably live in your jacket pocket!

"All three versions have the same 320 x 240 12µm thermal sensor running at a smooth 50Hz"

model in Pulsar's previous line of monoculars: the Helion XM38. My own Pulsar monocular, the Helion XM19F, was almost in the same ballpark, with a price-tag of £1400, but was discontinued last year. All this raises a couple of questions: why is the Axion Key XM30 so much cheaper than its stablemates? And is it good enough?

Talented trio

Let's start with a comparison of the three Axion models. All three have the same robust and lightweight hand/pocket-sized

magnesium alloy housing. This measures a petite 143 x 41 x 69mm, incorporates a 1/4-inch tripod thread, and weighs in at just 250g (270g for the XM38) with the battery fitted. All three models use the same APS3 lithium battery too – a neat 3400mAh rechargeable cell that gives a run time of up to four hours. Alternatively, you can use the USB port to connect an external power source. Most importantly, all three versions have the same 320 x 240 12µm thermal sensor running at a smooth 50Hz.

Other common features are the handy four-button layout, picture-in-picture and stadiametric rangefinder functions, and a suite of six colour palettes (Hot White, Hot Black, Hot Red, Rainbow, Ultramarine and Sepia). All three models also come supplied with a mains charger capable of charging two APS3 batteries at once, a protective nylon case, a hand strap that can be fitted to either side of the housing, a soft lens cloth, and a three-year warranty. Only when we look at other specs does the XM38 start



Axions are fantastically handy, and the Key XM30 delivers all the performance most of us need and at a price more of us can afford

ocular lens primarily designed for the larger AMOLED screen means that your first impression when looking through the Key is that the display is both small and far away from your eye. I must confess that at this point both I and my shooting buddy almost wrote the Key off as too inexpensive for its own good. However, it's my job to give things a proper test, so I stuck with it. I'm glad I did, too, because the more I used it, the better the display appeared and the more I came to value the unit as a whole (more about this later).

An additional consequence of using an LCOS display is a reduction in the minimum operating temperature from -25°C to -10°C. This might matter to those living north of the Arctic Circle but is unlikely to be of concern to most users. Finally, the Key's focus ring has a reduced range of adjustment from -4/+3 instead of the -5/+5 range found on the other models. My eyes need a lot of adjusting for, but the Key still gave me all the adjustment I needed.

So far the Key XM30 spec seems mostly to offer benefits, i.e. price, FoV, and magnification

to step away. Its larger lens gives it a quoted detection range (QDR) on a deer-sized object of 1700m – a 400m advantage over the XM30s, as well as a native optical magnification of 5x that can be digitally increased to 22x. By contrast, the XM30 runs from 4x-16x, and the Key XM30 from 2.5x-10x. Higher magnification does restrict the field of view, however: so you get just 5.8° with the XM38, vs. 7.3° with the XM30 and 7.8° with the Key XM30.

What I make of that is, firstly, that a QDR of 1200m is plenty and, secondly, that for spotting purposes I'd rather have the widest field of view and the lowest magnification, since this gives you the quickest and most efficient panoramic scan and makes it easiest to situate a heat source within the landscape. For context, my Helion XM19F has a QDR of just 700m – which has always been ample, and provides a native magnification of just 1.6x, with a horizontal FoV of 19.5°. Thus,

on magnification/FoV alone, the Key would get my vote. The next major difference has to do with the display. Whereas the XM38 and XM30 are equipped with AMOLED (Active Matrix Organic Light Emitting) 1024x768 screens, the Key uses older/cheaper technology in the form of a 960x720 LCOS (Liquid Crystal on Silicon) near-eye display.

Key issues?

The use of this smaller display in combination with a housing and



The objective lens is well protected by a rubber-armoured focusing ring, and swapping the battery is as easy as pushing a button



The control buttons are big, tactile and intuitive to use

NEWS | Axion Key XM30

The no-frills Axion Key is all the spotter you need, so splash your cash on a high-end riflescope like this Thermion XP50 instead

► (if lower is best, which I think it is!); or non-crucial limitations, i.e. indifferent first impressions and unimportant reductions in temperature and dioptr ranges). Now we come to the things Pulsar have left out, namely recording and Wi-Fi. The XM30/XM38 can record both stills and video, and can link wirelessly to Pulsar's Stream Vision app, but both facilities are absent on the Key. This means you can't mount the Key on a vehicle roof and stream the image to a tablet on the dashboard. As for recording, to me this makes most sense when teamed with a higher-resolution sensor – where the extra definition permits detailed identification – or with a weapon sight where a replay can provide valuable information about where the reticle was when the trigger was pulled and how the quarry reacted to the shot. As neither criterion applies to the XM30, I don't see the lack of a recording facility as anything close to a deal-breaker.

Conclusion

The truth is, the more I used the Key XM30 the more I liked it. Used alongside my Helion XM19F, there really wasn't much I could see with the larger unit that I couldn't see with the Key,



"It definitely wasn't love at first sight, but spending time with the Axion key has led me to regard it as the most affordable genuinely useful thermal on the market"

but the Key was lighter in the hand, reducing fatigue, and dropped easily into my breast pocket rather than having to be squeezed in. I also found myself navigating the control buttons better with the Key, even though I had many more hours' experience with the Helion. Consequently, by the end of the test period, I was taking the Key

with me as a matter of course and leaving the Helion behind. On top of this, I like the new pop-in-pop-out APS3 battery and its two-at-a-time charger better than the blocky cam-locking B-Pack. To conclude, it definitely wasn't love at first sight, but spending time with the Axion key has led me to regard it as the most affordable genuinely useful thermal on the market. More than this: even if I had the budget for an XM38, I reckon

I'd still go for the Key XM30, as it gives me all I really need from a thermal spotter and nothing I don't. That said, if more magnification, a bigger screen, recording and Wi-Fi are important to you, or if you're heading off to hunt in some frozen wilderness, then do check out the XM30 and XM38 models, as they'll tick all those boxes and do so in a rugged but pocket-sized format that's a true pleasure to use. **GM**



Tripod mount – A tripod socket makes more sense on the Wi-Fi capable XM30 and XM38 than on the Key, but it's there if you want it

TECHNICAL SPECIFICATION

Name:	Axion Key XM30
Magnification:	2.5x to 10.0x (4x Digital Zoom) Field of View (H/V): 7.8°/5.9°
Detection Range:	1300m
Sensor:	320x240 12µm @ 50Hz
Power:	APS3 quick-change rechargeable battery
Run time:	Up to four hours
Display:	LCOS 960x720
Dimensions:	143 x 41 x 69 mm
Weight:	250g
RRP:	£1269.95
Contact:	Thomas Jacks Ltd: thomasjacks.co.uk Thanks to Scott Country: scottcountry.co.uk

