

## FUTURE-SAFETY

# MANTA Helmet

ORIGIN: UK  
 COST: £  
 (USAR right £ )  
 WEIGHT: g  
 COLOURS: Orange, Blue, White,  
 Yellow, OliveGreen, Red, &  
 Custom

goggles &  
 Tikka mount

**M**any UK Fire Services feel the Manta is the answer to most of their prayers - one helmet that does the lot - rope rescue, water rescue, extrication, USAR, ATV/bike/horse riding and even wildland fire-fighting (though obviously not urban firefighting) and it does it to recognised certification. And it is this above all else that swings it these days in terms of a purchasing decision because if it doesn't have the relevant EN or NFPA code, it pretty much doesn't matter how good it is at the required task it just won't be used in a government agency.

So we can't say that the Manta is going to remain the best multi-role helmet on the market but in Europe it is currently the ONLY rescue helmet to meet this array of standards (EN14502, PAS 028: 2002 Marine Safety Helmet & FS/1 Quad & ATV Helmet as well as EN352-3:1997 Mounted Hearing Protection and EN166:2002 Personal Eye Protection!) It's key feature is a fully encapsulated shell in distinct contrast to the suspended cradle of a Gallet or a Petzl. Users of water rescue and cycling helmets will be more familiar with this style of compact foam lining than climbers and we were amazed to learn that after years of thinking that peak impact was all about the clearance between the head and the shell (hence the pronounced cradle of, for instance the Edelrid helmet) it is the solid foam liner that wins out in impact resistance, or more accurately, absorption. The introduction of EN14502 relating to High Performance Safety Helmet has given technical rescue a relevant standard that was previously only partially met by UIAA/EN12492. That's not to decry that particular climbing-based standard but the vast majority

of protection requirements are not from objects falling onto the crown - they are lateral and front or back impact (collision) and falling over or off of something - too many other helmets simply quoted the old industrial standard EN 397 which is far too general to be of relevance to a modern multi-role rescue helmet.

### CONSTRUCTION & IN ACTION

The Manta has a smooth ABS shell with two sets of ventilation holes that are covered by clip on vent covers. These can be supplied in different colours to allow for rank or service distinctions within the same coloured helmet or they can be luminous which is useful for night ops. Something that pleases the purchasing departments no end is that the Manta is a one-size fits all (52-62cm) no...really it is - it fits an 11 year-old just as easily as a fat-headed 60-year-old so all you average-headed folk should have no concerns. You can see front-on that the Manta looks relatively wide but in fact it's no wider or longer than a Petzl Vertex it's just that it rises almost vertically from the edges before curving to form the dome so there is definitely more surface area of helmet. Adjustment is provided by a one-handed ratchet mounted on a familiar plastic head band. I found that I was uncomfortably aware of its presence especially after long periods of work but not one other person I've spoken to agreed and they all seemed pleased with the Manta's comfort levels. Aside from the expanded foam liner there is a soft foam 'star'-shaped padding to protect the crown and improve comfort as well as a removable padded sweat cover on the front band. Hearing is

excellent because this is a cut-away helmet which I know causes discussion with some water rescuers. Our lads felt that this was a great design overall but

there will be die-hard full shell users who will denounce the cutaway as leaving the ears too exposed to cold and impact. That's down to personal choice and user-conditions.

Anton Phillips one of the fire service's Animal Rescue specialists has been using a low-key green version with luminous vent covers for several months and makes the very valid point that the lack of frontal peak (as compared to standard fire helmets) is a definite plus when dealing with flailing animals in confined spaces plus this is the only multi-role rescue helmet to comply with horse-riding regs. We also spoke to Humberside Fire & Rescue who were the first in the UK to adopt Manta across-the-board and they continue to be very pleased with performance and longevity.

Manta comes with drop-down goggles concealed between the shell and the expanded polypropylene liner. These are quite stiff on the USAR model we've been using and require two hands to release. But this is a very useful feature common to the best fire helmets. Also extremely useful is the optional Petzl Tikka mount for the Tika XP head torch. It's only a small headtorch but it packs a useful punch for something so easily lost in your pockets. What was not quite so useful was that even though this mount is extremely low profile with no



torch on it, it still impedes movement of the visor. Moral: mount it higher up the curve and utilise the Tikka's swivel more. The expanded polypropylene liner has an obvious insulating quality which is brilliant in water and on a cold day but not quite so good in full chainsaw or disc-cutter garb on a hot day - I found it very warm compared to a more open cradle helmet but of course that would lack this degree of protection (and certification). Future-Safety have a background in supply of forestry helmets and accessories so it's no surprise that their USAR package is pretty good with a wrap around mesh visor (or a full clear/smoked visor) married to high-spec Peltor Optime II ear defenders. The entire assembly with Tikka headtorch is about 920 grams. In its most stripped-down form the Manta weighs \_\_\_\_\_ and costs \_\_\_\_\_. Compare this to an F2 at 520g and £100 or a Petzl Vertex at 465g and £47. It's little wonder that so many agencies worldwide from Special Forces and Navies to Coastguard and Fire Services are drawn to the Manta. It's going to have alarmed a number of the traditional market leaders who may continue to make excellent products but unless they pull their collective fingers out and follow Future-Safety's lead they are going to miss this pretty large multi-role market.

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We can be pretty confident in stating that the Manta is the currently the best multi-role helmet on the market because in Europe it is currently the ONLY rescue helmet to meet this array of standards: EN14502, PAS 028: 2002 Marine Safety Helmet & FS/1 Quad & ATV Helmet as well as EN352-3:1997 Mounted Hearing Protection and EN166:2002 Personal Eye Protection! Its key feature is an expanded polyethylene liner in distinct contrast to the suspended cradle of a Gallet or a Petzl. Users of water rescue and cycling helmets will be more familiar with this style of compact foam lining than climbers and we were amazed to learn that after years of thinking that peak impact was all about the clearance between the head and the shell (hence the pronounced cradle of, for instance the Edelrid helmet) it is the solid foam liner that wins out in impact resistance, or more accurately, absorption. The introduction of EN14502 relating to High Performance Safety Helmets has given technical rescue a relevant standard that was previously only partially met by UIAA/EN12492. That's not to decry that particular climbing-based standard but the vast majority of protection requirements are not from objects falling onto the crown - they are lateral and front or back impact (collision) and falling over or off of something - too many other helmets simply quoted the old industrial standard EN 397 which is far too general to be of relevance to a modern multi-role rescue helmet.

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Something that pleases the purchasing departments is that the Manta is a one-size fits all (52-62cm) no...really it is - it fits an 11 year-old just as easily as a fat-headed 60-year-old so all you average-headed folk should have no concerns. What's more, all of the components are replaceable which adds to the longevity of the Manta. You can see front-on that the Manta looks relatively wide but in fact it's no wider or longer than a Petzl Vertex it's just that it rises almost vertically from the edges before curving to form the dome so there is definitely more surface area of helmet. Adjustment is provided by a one-handed ratchet mounted on a familiar plastic head band. I found that I was uncomfortably aware of it's presence especially after long periods of work but not one other person I've spoken to agreed and they all seemed pleased with the Manta's comfort levels. Aside from the expanded foam liner there is a soft foam 'star'-shaped padding to protect the crown and improve comfort as well as a removable padded sweat cover on the front band.

Hearing is excellent because this is a cut-away helmet which I know causes discussion with some water rescuers. Our lads felt that this was a great design overall but there will be die-hard full-shell users who will denounce the cutaway as leaving the ears too exposed to cold and impact. That's down to personal choice and user-conditions. Anton Phillips one of the fire service's Animal Rescue specialists has been using a low-key green version with luminous vent covers for several months and makes the very valid point that the lack of frontal peak (as compared to standard fire helmets) is a definite plus when dealing with flailing animals in confined spaces plus this is the only multi-role rescue helmet to comply with equine regs. Our own Gary Cross has been using both the Coastguard version (pic above) and the fire service version modeled by Paul in the main pic: [the Manta] felt a little uncomfortable either side of my crown, although after a short period of time it wasn't a concern, (I think



right: The Manta with comms being trialled by UK Coastguard  
Far right: Gary Cross in mid swim. The open ear is good for hearing but not so good for keeping out the cold and wet - one of the trade-offs with a multi-role over dedicated water rescue helmet? Note also that the vents are best removed when in-water to improve through-flow and limit the forces of water acting on the chin strap.



the helmet comes in 2 different sized foam inners?). The helmet has performed really well with no excess movement whilst in whitewater, the insulating properties in water are very good although not quite the snug fit of my old favorite predator or the gecko which are second to none in freezing conditions.... I found the helmet to be unobtrusive in confined spaces and used it for International Extrication Competition in Cardiff with no probs apart from being hot (something crews should monitor on baking hot days as your head is prone to overheating no matter what the helmet. I believe there were some complaints from USAR personnel using the early version that the visor was striking the nose and/or becoming scratched dusty confined space conditions but I have experienced no such problems with this latest model and they are now easily replaced. We also spoke to Humberside Fire & Rescue who were the first in the UK to adopt Manta across-the-board and they continue to be very pleased with performance and longevity.....

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contact: [www.future-safety.com](http://www.future-safety.com)

Paul Hebdige of Hampshire & Rescue was an original member of the Technical Rescue Unit when we first started the magazine and has never forgiven us for not having him on the front cover of the very first issue instead of Les Agate. So here he is, resplendent in his Manta Helmet with Petzl universal headlamp mount and Tikka XP and not at all bitter! Note the SOLAS tape and press-studs for a full or cut-down clear face visor much loved by boat crews. Photo Gary Cross