



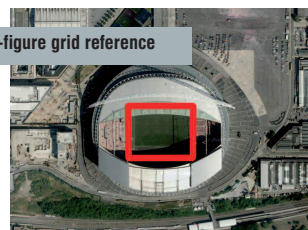
IN NAVIGATION TERMS BIGGER IS SMALLER

The National Grid is the map reference system used on all Ordnance Survey maps to identify the position of any feature and works by breaking down Great Britain¹ into progressively smaller squares identified first by letters and then numbers, which is why a grid reference places you inside a square (an area) – this is not an absolute position (pinpoint).

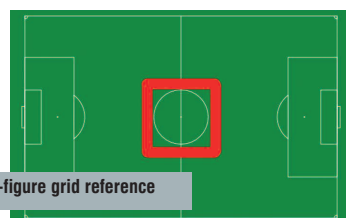
4-figure grid reference



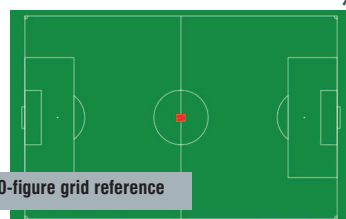
6-figure grid reference



8-figure grid reference



10-figure grid reference



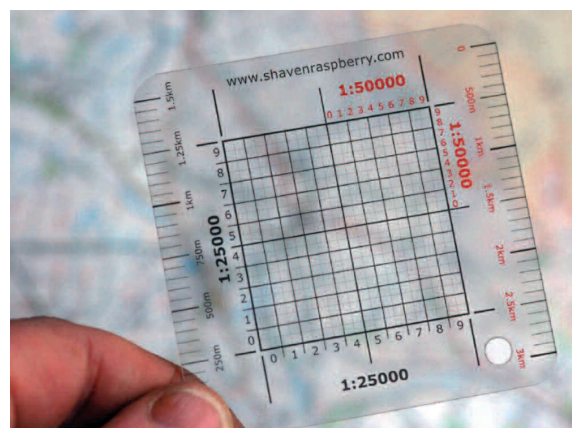
LYLE BROTHERTON
INSTRUCTS ADVANCED SEARCH AND RESCUE NAVIGATION TO MOUNTAIN RESCUE TEAMS AND THE SPECIAL FORCES. HE IS AUTHOR OF THE ULTIMATE NAVIGATION MANUAL: ALL THE TECHNIQUES YOU NEED TO BECOME AN EXPERT NAVIGATOR.

Like most of my contemporaries, I was taught to use six-figure grid references, simply because at the time the equipment needed to accurately calculate bigger grid references was out of the reach of most individuals. Global Navigation Satellite Systems, to be precise the American GPS system, changed everything and today other GNSS, such as the Russian GLONASS system give greater resilience to the use of handheld satnavs.

The bigger the grid reference the smaller the square it describes. On a 1:25 000 scale map these areas are:-

Grid Reference	Example	Using	Boundary of area covered (m)	Area described by the grid reference (m2)	Area equivalent to
4-figure	NT 54 16	Finger	1000 x 1000	1,000,000	An area larger than Wembley Stadium
6-figure	NT 540 162	Compass roamer	100 x 100	10,000	1.4 Wembley-sized football pitches
8-figure	NT 5405 1623	Grid reference tool	10 x 10	100	The centre circle on the pitch at Wembley
10-figure	NT 54058 16239	Satnav/Google Earth/SARMAN	1 x 1	1	The centre of the pitch

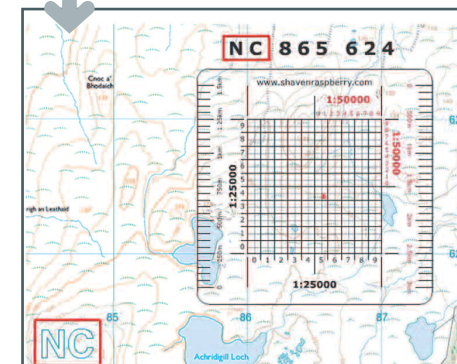
¹ Northern Ireland and the Republic of Ireland use their own National Grid system.



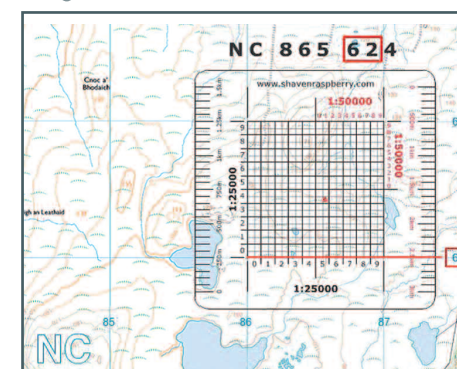
In theory, your handheld satnav is going to give you an area inside 1m² in reality this is more likely to be 3-5m² because of inaccuracies of the system. If you are using GIS such as Sarman, Mountain Map or Google Earth you will obtain ten-figure grid references. However, working with an eight-figure grid reference is perfect for most mountain rescue applications and these are easy to do with a handy tool I created a few years ago.

TO USE THIS GRID REFERENCE TOOL →

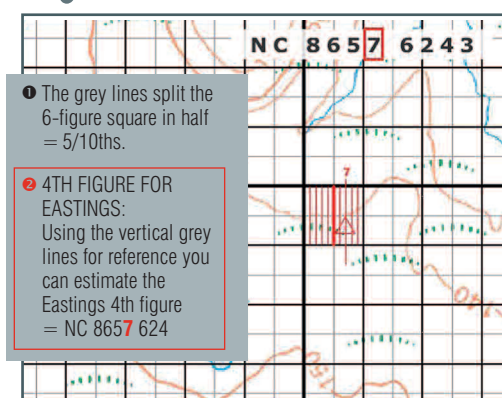
STEP ONE



STEP FOUR



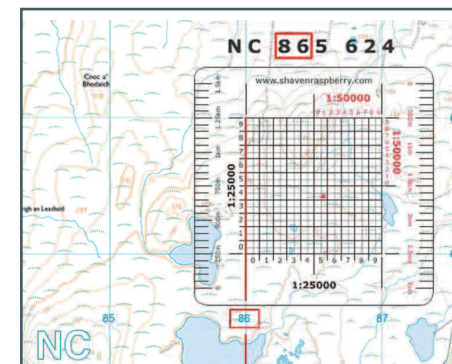
STEP SIX



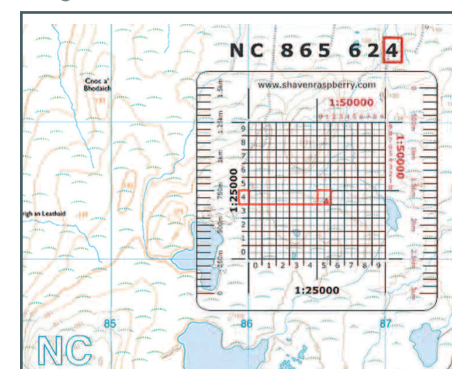
Over the years, working with the military and the emergency services, I have picked up a few tips when working with grid references.

- Be clear! When somebody gives you a grid reference verbally, either in person or via a phone/radio, repeat it back to them to confirm that you have heard it correctly and always give the two prefix letters, because the numbers alone could relate to any map within a mapping system.
- If you are reading a grid reference from a map in order to put it into a satnav you will notice that your receiver asks for a ten-figure grid reference and you only have eight. Simply add a zero to the end

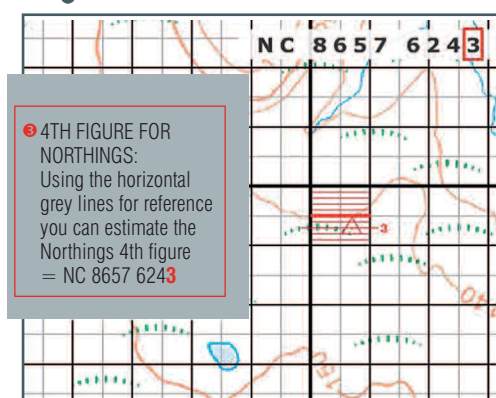
STEP TWO



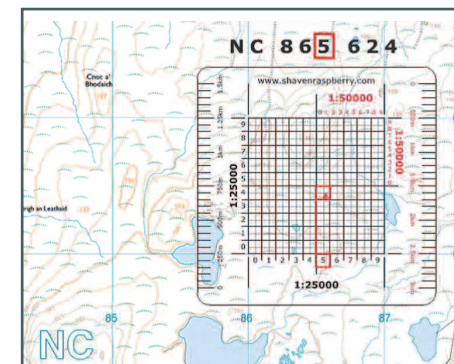
STEP FIVE



STEP SEVEN



STEP THREE



You now have a six-figure grid reference which you could also read (not as accurately) with your compass roamer. **NC 856 624**

To make it an eight-figure grid reference (Step 6), use the faint grey line as marking 5/10ths both easting and northing.

Now simply estimate how many tenths your easting is (Step 7), then your northing. Your eight-figure reference is: **NC 8567 6243**

These tools can be used on any 1:50 000 or 1:25 000 metric grid reference system, because all metric map grid systems are the same!

