

MGRS quick learning package.

History: The MGRS system is the Military Grid Reference system used worldwide by NATO countries to locate down to the square meter a location. Because the system is universally used, Canada can call in an Airstrike from a German Bomber, and the UK can call in a CASVAC nine liner from a US resource.

The system is based of the UTM system, (for the purposes of this it is unimportant).

MGRS uses a 15 digit grid reference, as you add more digits the smaller the area becomes that you are referencing.

Typically the first group of numbers represent the GZD or Grid Zone Designation, This is a huge area. Our GZD is 17T

The next 2 letters represent a 100km by 100km box or grid. Our grid is MM

So for our area you will see 17T MM these numbers will not change for us during a battle as it represents an area 100km by 100km

The next group of numbers represent an easting and northing. You must have an equal number of digits in the easting group as in the northing group.

The first number would represent a grid square down to 10 KM by 10 KM. example:
17T MM 1 6

Add another number to the eastings and northing your grid square now becomes 1KM by 1KM Example: 17T MM 12 67

Ok, see the pattern? Now add another number and your grid square is to 100 meters by 100 meters. Example 17T MM 123 678

Now adding another number gets you to a grid square 10 meters by 10 meters.
Example: 17T MM 1234 6789

So to get to 1 meter by 1 meter you add a fifth number, which is as small as you can get in the MGRS system, which is small enough. (we are not surveying land, we are dropping bombs and walking to a place) Example 17T MM 12345 67890

So when using MGRS, because we do not change the first 5 digits, 17T MM in our case, we can just drop it. So to call in a grid reference you can just read out the 10 digits, 12345 67890 That is if you are being accurate to 1 meter by one meter. If you looking to be only accurate to 10 meters by 10 meters, you can call in 4 digits in the easting and northing, example 1234 6789.

17T----GZD only, precision level $6^{\circ} \times 8^{\circ}$ (in most cases)
17T MM-----GZD and 100 km Grid Square ID, precision level 100 km
17T MM 1 6 -----precision level 10 km
17T MM 12 67-----precision level 1 km
17T MM 123 678 -----precision level 100 m
17T MM 1234 6789 -----precision level 10 m
17T MM 12345 67890 -----precision level 1 m

So let's say you find a location of an item, or place and you want to tell your commander, you can look at the GPS unit and call in the MGRS grid.

Here is how it may go when using a radio.

"Alpha squad to command"

" Command-alpha go ahead"

"Alpha- we have a grid location of a mortar tube for you"

"Alpha- send it"

"54783 34751-how copy"

"Read back 54783 34751"

"Alpha to command, readback correct, Alpha out"