

Tech corner – Maidenhead grid squares

The **Maidenhead Locator System** is a way of describing one's location anywhere in the world. The system was devised by John Morris G4ANB and was originally presented in 1980 in Maidenhead, England. They were originally meant to help calculate distance in VHF contesting (points per kilometer being important).

Maidenhead locators are sometimes referred to as QTH locator, grid locator or grid squares, and are based on latitude and longitude. Each Maidenhead locator will have an even number of characters, either 2, 4, 6 or 8. The more characters, the more precise the location.

The first two characters are called the **field** and are always letters. The earth is broken down into 324 (18^2) fields, each of which is 10° latitude by 20° longitude.

When the second two characters are added, this is called a **square**. These next two characters are always numerals. There are 100 (10×10) squares in a field. Each square is 1° latitude by 2° longitude. In Utah, this is roughly 69 miles $\times$ 107 miles (not exactly square). These locators are often the ones people are looking for in the contests called *grid chases*.

Two more letter characters may be added for greater precision. This six-digit locator is called a **subsquare**. There are 24×24 (576) subsquares in a square. The size of a subsquare is roughly 2.9×4.4 miles in Utah.

Even more precision may be provided with the **extended square**. This is done by adding two more digits to the locator. This gives us eight characters. In Utah, the size of the subsquare becoming about 0.3×0.4 miles.

Note that the military uses different grid systems based on either latitude, longitude, or UTM grids, depending on the branch of the service. Furthermore, as I understand from a source within Utah County Search and Rescue, they use longitude and latitude as well, so a Maidenhead locator would probably be of little use to them either, for example.

As far as Utah goes, there are 14 squares that either are entirely or partially in Utah. For the cities in Salt Lake and Utah Counties, a bulk of cities are in the grid square DN40 as are Park City and Heber City. In Salt Lake County, many of the cities on the west side



of the valley (like West Valley City) straddle DN40 and DN30, as is the case with Eagle Mountain in Utah County. Much of Tooele County is in DN30. The line between DN40/DN30 and DN41/DN31 is on the northside of Farmington in Davis County. These two grid squares run all the way to the Idaho border. DM49 starts near Santaquin and includes Nephi, Sanpete County, Price, and Huntington.

DN31	DN41	
DN30	DN40	DN50
DM39	DM49	DM59
DM38	DM48	DM58
DM37	DM47	DM57

Utah, with its grid squares

What I had mentioned previously about Utah being part of 14 grid squares is mostly true, but with a slight exception. In the 1800s when the boundaries were surveyed, they were slightly off the exact integers of latitude and longitude. As an example, the Four Corners Monument Navajo Tribal Park is located entirely in DM56lx in spite of containing the southeast corner of Utah.

You can look up your own grid square by town or call sign at

https://www.levinecentral.com/ham/grid_square.php

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