The MODE Function:

Impedance - Common Mode of Operation (not discussed here, see SWR Measurements)

Coax Loss in Db's:

- Useful for evaluating the difference between RG-58 / RG-8 / RG8X / 400N50 / ect
- Note that often with frequencies below 100MHZ, that loss is only given as <0.28db, unless the coax-cable is long.
- This tool is quite useful for evaluating questionable coax, like water damage or physical defects. Like wondering if that old coax is still usefull and Ok.
- This inspection should be carried out with the frequency of use, as the DB Loss increases as the frequency goes up.
- In terms of actual numbers for the DB Loss, remember that 1DB represents 17% loss, a total of 3DB would be a 50% loss, but that would thankfully be not likely tto happen.
- Those DB's add up, as Log does simply add numerically.

DB's	Factor (Gain):	Percentage (Loss	Power to the Antenna):
0DB	1.0x	0.0% (no loss)	100%
1DB	1.25x	16.7%	83.3%
2DB	1.6x	37.5%	62.5%
3DB	2.0x	50%	50%
4DB	2.5x	60%	40%
5DB	3.2x	68.75%	31.25%
6DB	4.0x	75%	25%
7DB	5.0x	80%	20%
8DB	6.4x	84.375%	15.625%
9DB	8.0x	87.50%	12.5%
10DB	10x	90.0%	10%
	DB's 0DB 1DB 2DB 3DB 4DB 5DB 6DB 7DB 8DB 9DB 10DB	DB'sFactor (Gain):0DB1.0x1DB1.25x2DB1.6x3DB2.0x4DB2.5x5DB3.2x6DB4.0x7DB5.0x8DB6.4x9DB8.0x10DB10x	DB'sFactor (Gain):Percentage (Loss0DB1.0x0.0% (no loss)1DB1.25x16.7%2DB1.6x37.5%3DB2.0x50%4DB2.5x60%5DB3.2x68.75%6DB4.0x75%7DB5.0x80%8DB6.4x84.375%9DB8.0x87.50%10DB10x90.0%

Amount of Capacitance in pF (pico-farads):

Useful to measure a capacitance, perhaps variable, to shorten an antenna. (more later ?)

Amount of Inductance in uH (micro-henry):

Useful to measure a coil, constructed as a base value, to lengthen an antenna. (more later ?)

As a Frequency Counter:

A useful piece of equipment, when there is aquestion about your actual transmit frequency, but don't try this on a SSB signal because the Sideband is a range of frequencies, unless you are modulating with a single tone, which would result in an offset frequency of your carrier and the tone as an mathematical offset added in.

WA7RSO - 11/18/2020 The MODE Function.odt