Equipment

|  |  |
| --- | --- |
| Name | Comment |
| Patch antenna x 2 | 2.44 GHz and 870 MHz |
| Monopole x 2 |  |
| Std antenna (log periodic) | (400-1000)MHz |
| Miwi demo boards x2 | PIC18F46J50 with MRF89XAM8A (868 MHz) |
| PC with excel |  |
| Signal generator | AAU nr. |
| Precharged Spectrum analyzer | AAU nr. |
| Wagon | To carry equipment |
| Power cords | 230 V |
| 2-3 m SMA cables and connectors |  |
| Measuring stand | 2.5 m tall |
| Clamps x 2 |  |
| Coffee and coke | Hot and cold respectively |
| SMA calibration kit |  |

Setup

Kommer senere

Procedure

1. Connect signal generator to antenna 1 using SMA cable.
2. Connect spectrum analyzer to antenna 2 using SMA cable
3. Connect power to signal generator
4. Turn on signal generator and spectrum analyzer
5. Set options on signal generator
   1. Freq: 868 MHz
   2. Amp: 0 dBm
6. Set options on spectrum analyzer
   1. Freq: 840 Mhz to 900 MHz
   2. Res bandwidth: 100 Hz
   3. Video bandwith: 100 Hz
   4. Int. att.: 0dB
   5. Pre amp: on
7. Place stands at XX distance
8. Mount antenna 1 at 2 m on stand 1 using holder
9. Mount antenna 2 at 2 m on stand 2 using holder
10. Make measurement
11. Write in excel
12. Repeat 8-11 for different height combinations
13. Repeat 7-12 for all distances
14. Change antenna 1 with antenna 3
15. Change antenna 2 with antenna 4
16. Repeat 7 to 13
17. Change setup to demo boards
18. Repeat 7-13