# Equipment

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| 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 Maalingark fil (Excel) |  |
| Signal generator | AAU nr. |
| Precharged Spectrum analyzer (Still remember a power cable to it) | AAU nr. |
| Wagon | To carry equipment |
| Power cords | 230 V (+30 meter) |
| 2 sets of SMA cables and connectors | 2-3 m |
| Measuring stand x2 | 2.5 m tall |
| Wood plank or styrofoam | To place antenna on the feets of measuring stands |
| Clamps x2 |  |
| Coffee and coke | Hot and cold respectively |
| SMA calibration kit |  |

# Measurement points

Length

* 1 m
* 2 m
* 3,9 m
* 7,9 m
* 15,2 m
* 30 m

Height

* 1 cm (On the floor)
* 8 cm (On the measuring stands feet)
* 34 cm (Lowest tape marking)
* 200 cm (Highest tape marking)

# Setup

Kommer senere

# Procedure

1. Connect signal generator to transmitter antenna using SMA cable.
2. Connect spectrum analyzer to receiver antenna 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