

4.5 Photos of the test setup

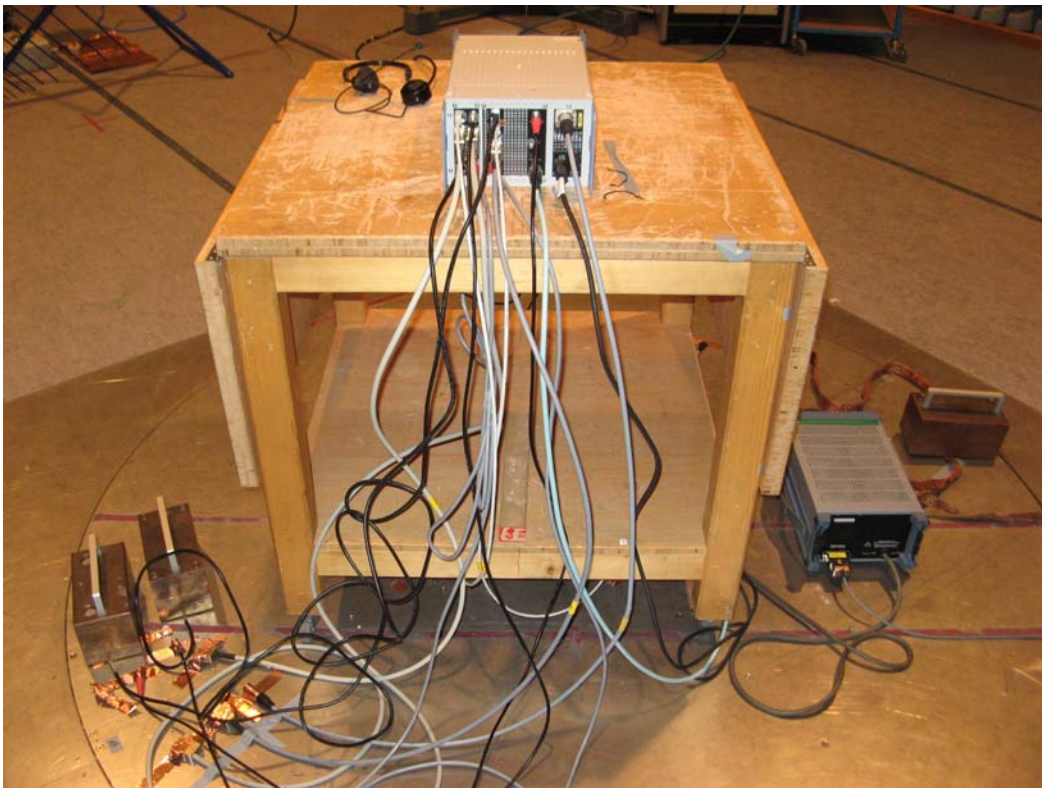


Figure 4-2: Test setup, rear view, cabling

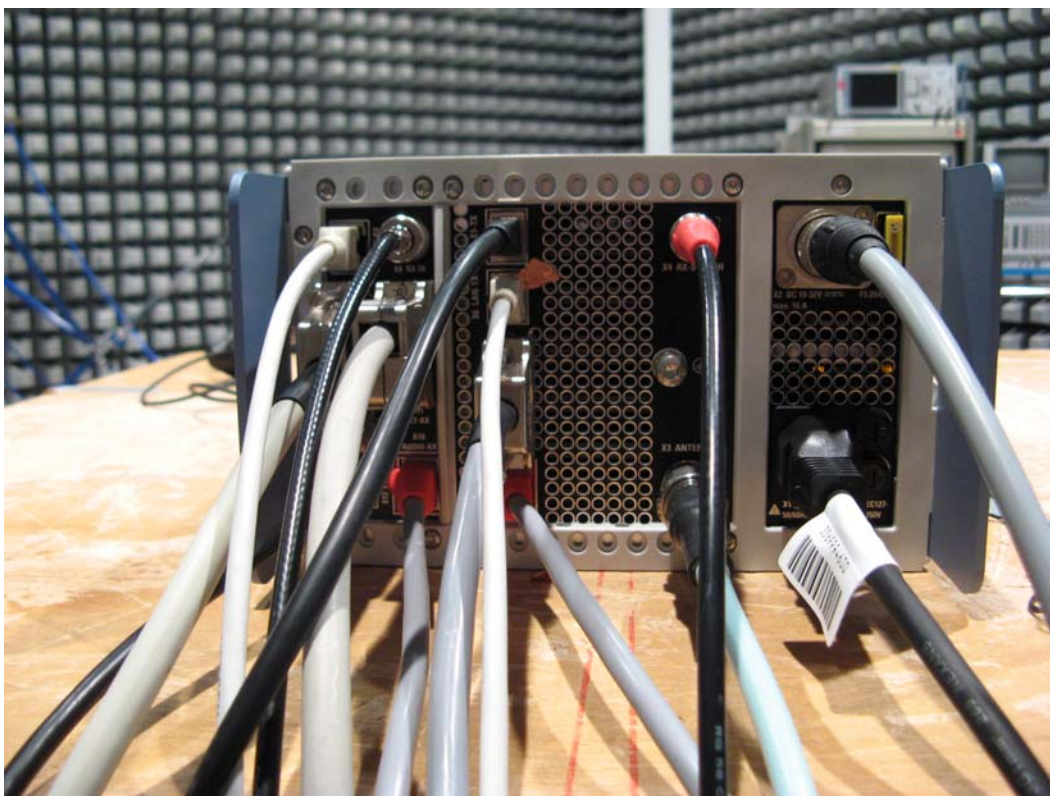


Figure 4-3: Test setup, rear view, cabling

The test report shall not be reproduced except in full without the written approval of the testing laboratory



Figure 4-4: Test setup, front view

The test report shall not be reproduced except in full, without the written approval of the testing laboratory

6 Test Specifications and Results

The test results in the report refer exclusively to the test object described in section 4 and the test period in section 3.3.

6.1 Radiated Emission Tests

6.1.1 Radiated Emission 10 kHz – 30 MHz

Specification:

- FCC Part 2, §2.1053, §2.1057, with FCC Part 87.139 Emission limitations.

The field strength was measured with a 41-inch rod antenna with an appropriate matching network. The antenna was placed at one position at the front side in 3-meter distance. The test was performed with a computer-controlled testset, controlling the test receivers and the turntable. The EUT was rotated with a turntable between 0 to 360 degrees. During the preview test the detector function was set to peak and the final measurement was carried out with detector function set to peak.

The measuring bandwidth and the detector function were selected according to following table.

Frequency Band	BW
10 kHz to 30 MHz	10 kHz

Table 6-1: Resolution bandwidth in the range 10 kHz to 30 MHz

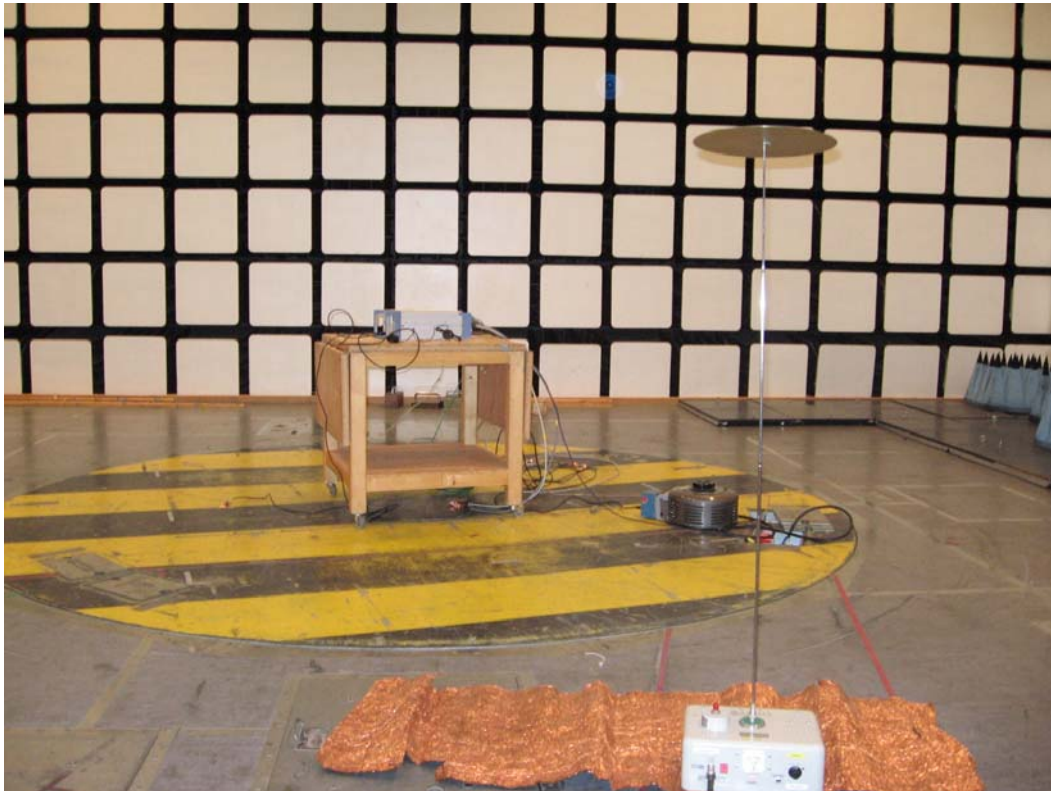


Figure 6-1: Test setup for radiated emission measurement, 10 kHz MHz to 30 MHz

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6.1.2 Radiated Emission 30 MHz – 1 GHz

Specification:

- FCC Part 2, §2.1053, §2.1057, with FCC Part 87.139 Emission limitations.

The purpose of this test is to evaluate the electrical component of the electromagnetic field radiated by the EUT between 30MHz and 1000MHz.

The EUT was placed on a turntable in order to determine the direction of maximum field strength for each predominant emission around 360 degrees (step = 45 degrees). At each azimuth step, the antenna was raised from the height of 1 to 4m (step = 1m) with both, horizontal and vertical planes of polarisation. This measurement was made with an automatic test set. Pre-Scans were made with peak-detection with variation of turntable angle, antenna height and polarisation. The measuring distance was 10 m. The test set-up of **Figure 6-4** was used.

The detector function was set to peak, the measuring bandwidth was selected according to the following table:

Frequency Band	BW
30 MHz to 128.8375 MHz	10 kHz
128.8375 MHz – 131.3625 MHz	licensee frequency block
131.3625 MHz to 1000 MHz	10 kHz

Table 6-2: Resolution bandwidth in the range 30 MHz to 1 GHz

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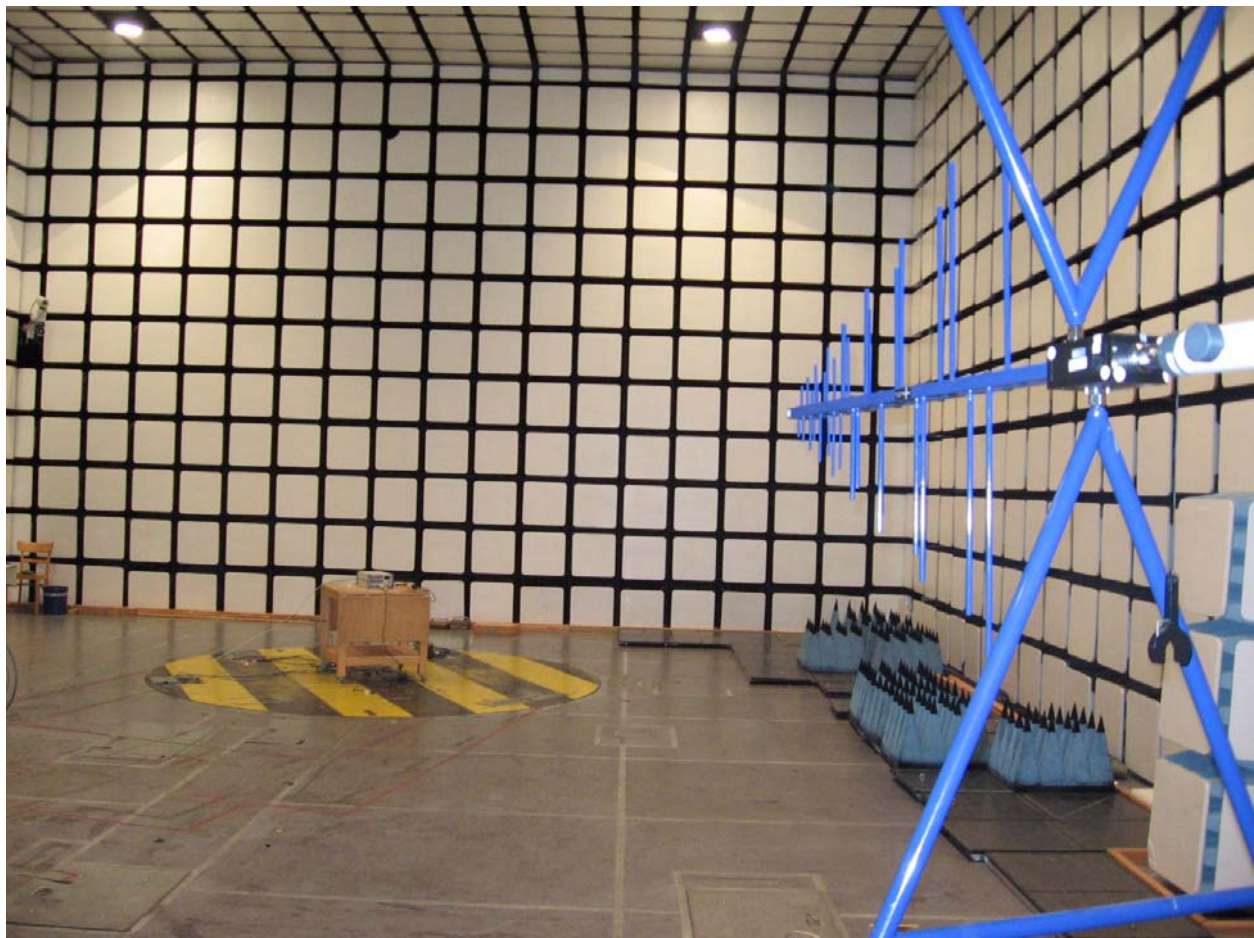


Figure 6-4: Test setup for radiated emission measurement, 30 MHz to 1000 MHz

6.1.3 Radiated Emission 1 GHz – 16 GHz

Specification:

- FCC Part 2, §2.1053, §2.1057, with FCC Part 87 Emission limitations.

The electric field strength was measured in the frequency range 1 GHz to 16 GHz using a horn antenna and a test receiver. The test was performed using a computer-controlled testset, controlling the test receivers, the turntable and the polarisation of the antenna. The measuring distance was 3 m.

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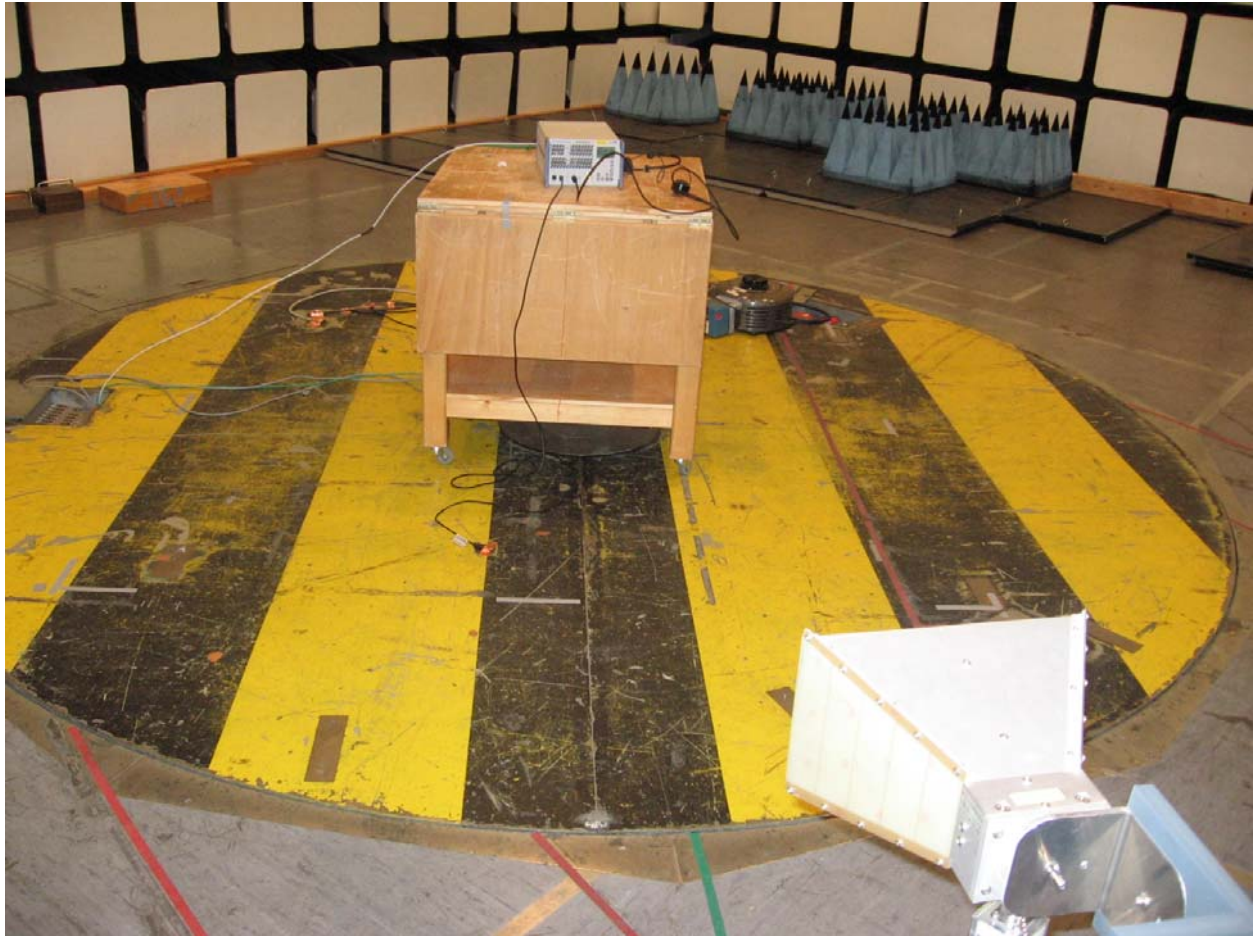


Figure 6-7: Test setup for radiated emission measurement, 1 GHz to 16 GHz

The detector function was set to peak, the measuring bandwidth was selected according to the following table:

Frequency Band	BW required	step size
1 GHz to 16 GHz	1 MHz	300 kHz

Table 6-3 Resolution bandwidth in the range 1 GHz to 16 GHz