

RADIO TEST REPORT

No. 715810-2

EQUIPMENT UNDER TEST

Equipment: Conference Telephone
Type / model: KT300
Manufacturer: Konftel AB
Tested by request of: Konftel AB

SUMMARY

The equipment complies with the requirements of the following standards:

FCC, Part 15, Subpart B (2006) Class B.
RSS-Gen, Issue 2 (June 2007).

Industry Canada listed test facility No. IC 3481



Date of issue: 2007-12-03



Tested by:

Niklas Boström

Approved by:

Björn Utermöhl

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Björn Utermöhl



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CONTENTS

	Page
1. Client information	3
2. Equipment under test (EUT).....	3
2.1 Identification of the EUT according to the manufacturer/client declaration.....	3
2.2 Additional hardware information about the EUT	3
2.3 Additional information about the EUT	4
2.4 Peripheral equipment	4
3. Test specifications	5
3.1 Standards.....	5
3.2 Additions, deviations and exclusions from standards.....	5
3.3 Test set-up	5
3.4 Operating environment.....	5
4. Test summary	6
5. Radiated spurious emissions	7
5.1 Measurement uncertainty	7
5.2 Test equipment.....	7
5.3 Measurement set-up Test site: Semi-anechoic shielded chamber (30 – 1000 MHz) ...	8
5.4 Test protocol.....	10
6. Conducted disturbance voltage in the frequency range 0,15 - 30 MHz.....	12
6.1 Measurement uncertainty	12
6.2 Test equipment.....	12
6.3 Measurement set-up.....	13
6.4 Test protocol.....	14
APPENDIX I – PHOTOS OF THE EUT.....	15



1. CLIENT INFORMATION

The EUT has been tested by request of

Company: Konftel AB
Name of contact: Tommy Edlund
Box 268
SE-901 06 UMEÅ
Phone: +46 (0)90 70 64 70

2. EQUIPMENT UNDER TEST (EUT)**2.1 Identification of the EUT according to the manufacturer/client declaration**

Equipment: Conference Telephone
Type/Model: KT300
Brand name: KT300
Serial number: No visible serial number on product
Manufacturer: Konftel AB
Rating/Supplying voltage: 100-240VAC, 50/60 Hz
Operating temperature range: +5 to +40 °C
Receiver frequency range: 433.92 MHz +-250 kHz

2.2 Additional hardware information about the EUT

The EUT consists of the following units:

Unit	Type and version
Conference telephone	KT300, R1A
External Microphone	KTM04, R1A
External Microphone	KTM04, R1A
AC adaptor	Ktec KSAFE1400150W1UV



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2.3 Additional information about the EUT

During the tests the EUT supported the following software:

Software	Version	Comment
KT300 application	EU01.01.01	
KTM04 application	EU01.01.01	

2.4 Peripheral equipment

Peripheral equipment is defined as equipment needed for correct operation of the EUT during the tests, but not included as a part of the testing and evaluation of the EUT.

Equipment	Manufacturer / Type	Serial number
Laptop	IBM Thinkpad (500MHZ)	Semko No 30774



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3. TEST SPECIFICATIONS

3.1 Standards

FCC 47 CFR part 15 (2006) Subpart B – Unintentional radiators, Class B.

Measurements methods according to ANSI C63.4-2003

RSS-Gen, Issue 2 (June 2007): General Requirements and Information for the Certification of Radiocommunication Equipment.

3.2 Additions, deviations and exclusions from standards

No deviations or exclusions have been made from standards.

3.3 Test set-up

Measurement set-ups for the test of conducted disturbance voltage in the frequency range 0,15-30 MHz and out-of-band spurious emissions test are described in corresponding sections.

3.4 Operating environment

If not additionally specified, the tests were performed under the following environmental conditions:

Air temperature: 20-25 °C

Relative humidity: 15-25 %



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4. TEST SUMMARY

The results in this report apply only to the sample tested.

FCC reference	Industry Canada reference	Test	Result	Note
15B	6 (a)(Table1)	Out of band spurious emissions, radiated Class B	PASS	1, 2
15B	7.2.2 (Table 2)	Conducted emission at AC port	PASS	1

Notes:

1. Industry Canada reference: RSS-Gen, Issue 2 (June 2007)
2. The measured result is below the upper limit, but by a margin less than half of the uncertainty interval. It is therefore not possible to state compliance based on the 95% level of confidence. However, the result indicates that compliance is more probable than non-compliance.



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5. RADIATED SPURIOUS EMISSIONS

5.1 Measurement uncertainty

Radiated disturbance electric field intensity, 30 – 1000 MHz: ± 4,6 dB

Radiated disturbance electric field intensity, 1000 – 18000 MHz: ± 6,0 dB

The measurement uncertainty describes the overall uncertainty of the given measured value during operation of the EUT.

Measurement uncertainty is calculated in accordance with EA-4/02-1997. The measurement uncertainty is given with a confidence of 95%.

5.2 Test equipment

Equipment	Manufacturer	Type	SEMKO No.
<i>Test site: "Björkhallen"</i> <i>Semi-anechoic shielded chamber, 6 x 9 x 6 m (W x L x H)</i>			30900, 30901
Software:	Rohde & Schwarz	EMC 32	
Measurement receiver:	Rohde & Schwarz	ESCI	12798
Antenna, bilog:	Rohde & Schwarz	HL-562	30711
<i>Test site: "Radiohallen"</i> <i>Anechoic shielded chamber, 3,7 x 7,0 x 2,4 m (W x L x H)</i>			12285
Software:	Rohde & Schwarz	ES-K1, V1.70	
Signal analyser:	Rohde & Schwarz	FSIQ 40	40023
Preamplifier:	MITEQ	AFS6/AFS44	12335
Antennas:			
Double Ridge Guide Horn:	EMCO	3115	4936
Transformer	Tufvassons	AFM-1500	375



5.3 Measurement set-up Test site: Semi-anechoic shielded chamber (30 – 1000 MHz)

The radiated disturbance electric field intensity was measured in a semi-anechoic chamber at a distance of 3 m and the EUT was placed on a non-metallic table, 0,8 m above the reference ground plane. The specified test mode was enabled. Test set-up photos are given below.

An overview sweep with peak detection of the electric field intensity was performed with the measurement receiver in max-hold and with the antenna placed 1,5 m, 2,5 m and 3,5 m above the floor. The polarisation was horizontal and vertical. The measurements were repeated with the EUT rotated in 90-degree steps.

At the frequencies where high disturbance levels were found a search for max disturbance level was performed. With the EUT and antenna in the worst-case configuration new measurements with quasi-peak detector were carried out.

The EUT was supplied with 120 V AC (60 Hz) during the test.

Test set-up photos:



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Test site: Radio anechoic shielded chamber (1 – 10 GHz)

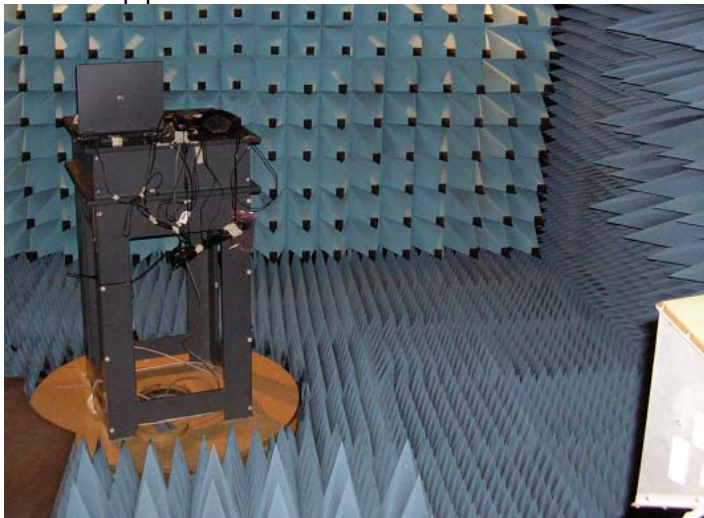
In the Radio anechoic chamber the EUT was placed on a non-metallic table, 1,4 m above the floor. The radiated disturbance electric field intensity was measured at a distance of 3 m. The specified test mode was enabled.

An overview sweep with peak detection of the electric field intensity was performed with the spectrum analyser in max-hold and with the antenna height adjusted at the level of the EUT center (placed 1,5 m above the floor). The polarisation was horizontal and vertical. The measurements were repeated with the EUT rotated in 90-degree steps.

At the frequencies where high disturbance levels were found a search for max disturbance level was performed. With the EUT and antenna in the worst-case configuration new measurements with peak and average detectors were carried out.

The EUT was supplied by 120 V AC (50 Hz) during the test.

Test set-up photos:



Intertek Semko AB

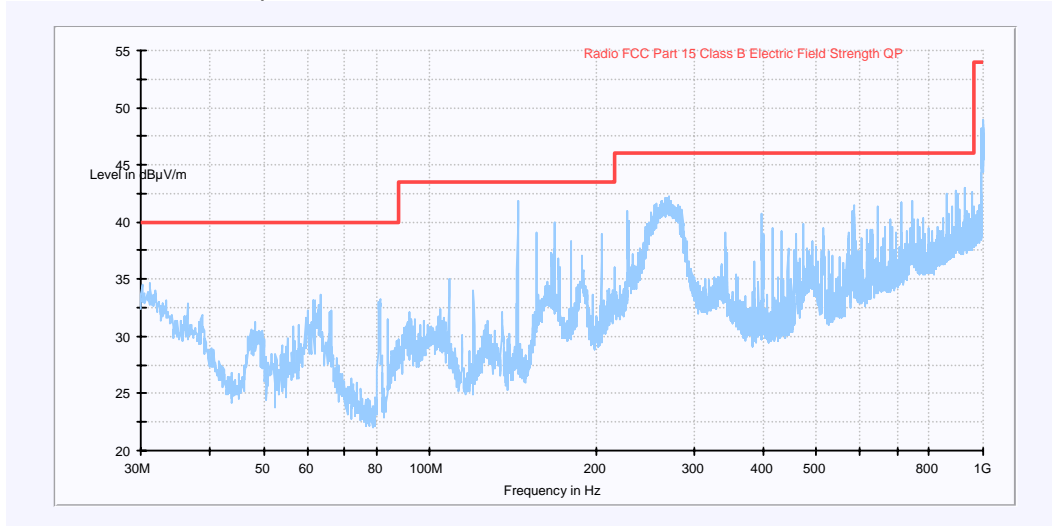
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5.4 Test protocol

Semi-anechoic shielded chamber

Date of test: 2007-11-19

30 – 1000 MHz, max peak at a distance of 3 m in RX mode

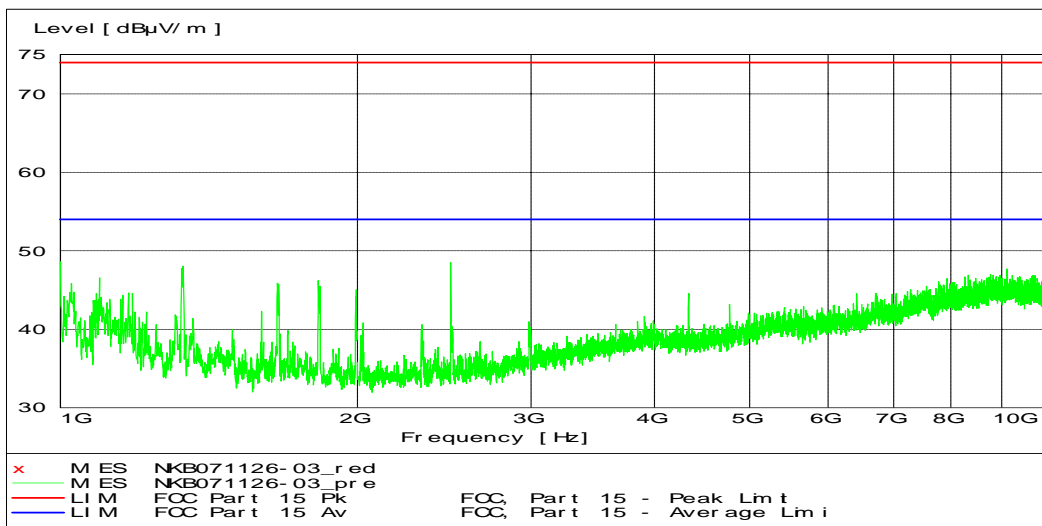


b v

Radio anechoic shielded chamber

Date of test: 2007-11-26

1000 – 10000 MHz, max peak at a distance of 3 m in the RX mode



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Data summary

Field strength of spurious emissions						
Frequency [MHz]	RBW [kHz]	Measured level		Limit		Note
		Peak [dB(μV/m)]	QP/AV [dB(μV/m)]	Peak [dB(μV/m)]	QP/AV [dB(μV/m)]	
266.558	120	-	39.8		46	
398.945	120	-	37.0		46	
745.457	120	-	40.5		46	1
860.153	120	-	39.9		46	
892.918	120	-	41.6		46	
925.684	120	-	40.6		46	
1000.000	1000	58.2	37.8	74	54	
1332.600	1000	53.87	33.13	74	54	
1660.970	1000	56.6	34.6	74	54	
1828.270	1000	53.8	34.95	74	54	
1998.230	1000	56.5	31.6	74	54	
2489.00	1000	47.7	26.2	74	54	
4334.470	1000	49.0	44.3	74	54	

Example calculation:

Measured level [dBμV/m] = Analyser reading [dBμV] + cable loss [dB] – preamplifier gain [dB] + antenna factor [1/m]

NOTE:

1. The measured result is below the upper limit, but by a margin less than half of the uncertainty interval. It is therefore not possible to state compliance based on the 95% level of confidence. However, the result indicates that compliance is more probable than non-compliance.



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6. CONDUCTED DISTURBANCE VOLTAGE IN THE FREQUENCY RANGE 0,15 - 30 MHZ**6.1 Measurement uncertainty**

Conducted disturbance voltage, quasi-peak detection: $\pm 2,0$ dB

The measurement uncertainty describes the overall uncertainty of the given measured value during operation of the EUT.

Measurement uncertainty is calculated in accordance with EA-4/02-1997.
The measurement uncertainty is given with a confidence of 95%.

6.2 Test equipment

Test site:	FCC		
Equipment	Manufacturer	Type	SEMKO No.
Software:	Rohde & Schwarz	ES-K1 V1.60	
Measurement receiver:	Rohde & Schwarz	ESHS 30	4946
Artificial mains network:	Rohde & Schwarz	ESH3-Z5	2727
Transformer	Tufvassons	AFM-1500	375



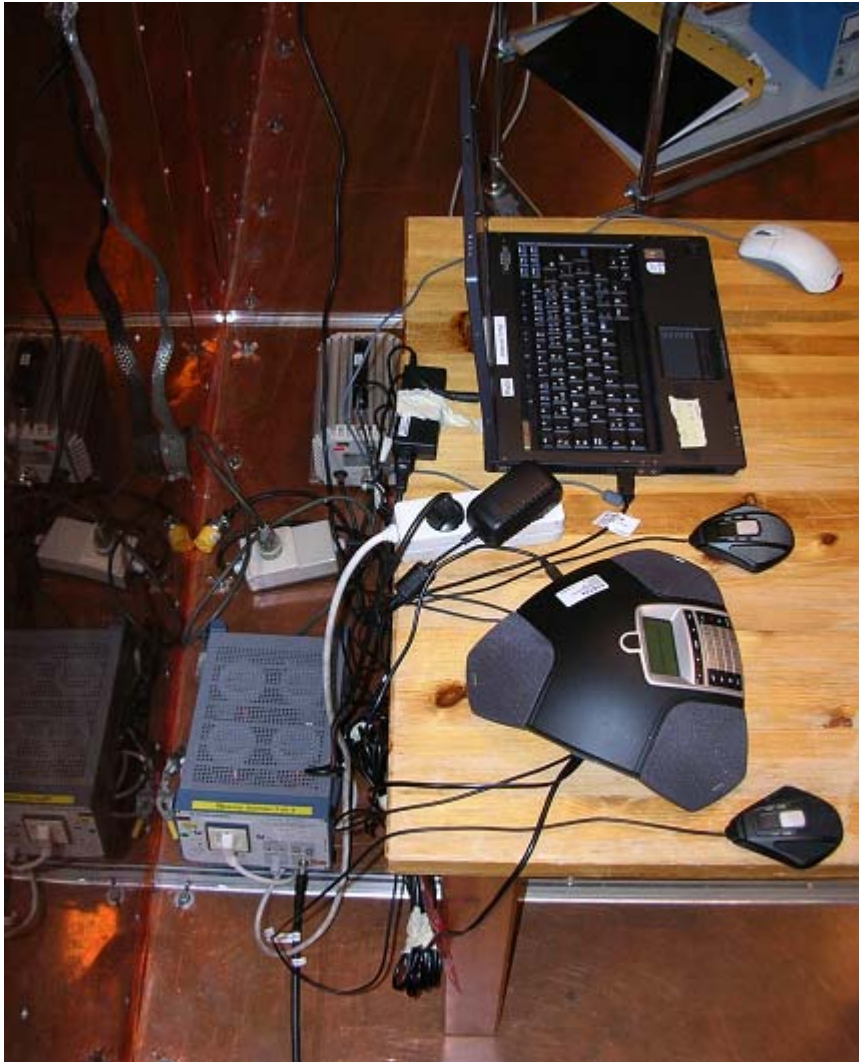
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6.3 Measurement set-up

The mains terminal disturbance voltage was measured with the EUT located 0,8 m above the ground plane and 0,4 m from the vertical ground plane. The EUT was connected to an artificial mains network (AMN). The AMN was placed on the ground plane. Amplitude measurements were performed with a quasi-peak detector. The EUT was supplied by 120 VAC (60 Hz) during the test.

Test set-up photo:



Intertek Semko AB

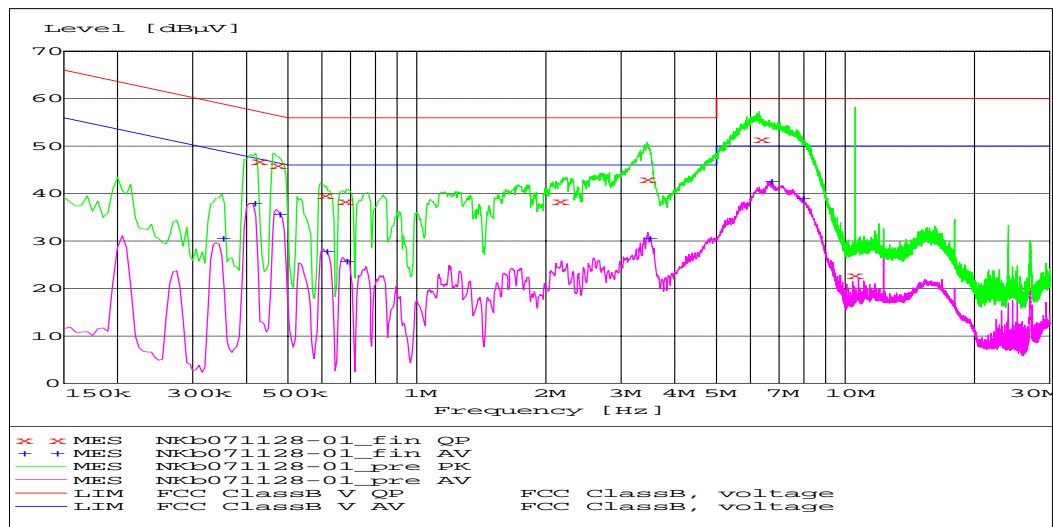
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6.4 Test protocol

Date of test: 2007-11-28

Frequency /MHz	Quasi-Peak	
	Disturbance Level /dB(μV)	Permitted limit /dB(μV)
0.425	46.8	57
0.470	46.0	57
0.605	39.7	56
0.675	38.4	56
2.140	38.5	56
3.425	43.1	56
6.325	51.6	60
10.445	22.9	60

Overview sweeps performed with peak and average detectors



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APPENDIX I – PHOTOS OF THE EUT

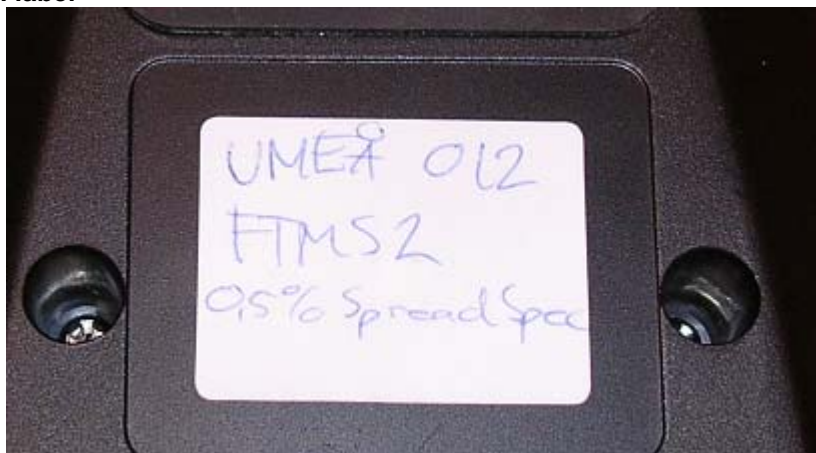
Front side



Back side



Identification label



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External microphone



AC adaptor



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Label on AC adaptor



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