

# EMC EMISSIONS - TEST REPORT

Test Report No. **BC201533-1** Issue Date April 3, 2002

Model / Serial No. AMS-SM01 & SCRAM / 103 & 112

Product Type Smart Modem & Secured Remote Alcohol Monitoring Bracelet

Client Alcohol Monitoring Systems, LLC

Manufacturer Alcohol Monitoring Systems, LLC

License holder Alcohol Monitoring Systems, LLC

Address 9135 Ridgeline Blvd., #190  
Highlands Ranch, CO 80129

Test Criteria Applied **FCC Part 15** 47 CFR 15: Radio Frequency Devices  
**Class B**

Test Result **PASS**

Test Project Number **BC201533**

References BC201533

Total Pages Including Appendices: 61



Reviewed By : Todd Seeley



Reviewed By : Robert Cresswell

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NVLAP Lab code 100271-1

## D I R E C T O R Y

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### STATEMENT OF MEASUREMENT UNCERTAINTY

The data and results referenced in this document are true and accurate. The measurement uncertainty for Conducted Emissions in the frequency range of 150kHz – 30MHz is calculated to be  $\pm 2.30\text{dB}$  and for Radiated Emissions is calculated to be  $\pm 3.60\text{dB}$  in the frequency range of 30MHz – 200MHz and  $\pm 3.38\text{dB}$  in the frequency range of 200MHz – 1000MHz.

EUT Received Date: 25 March 2002

Testing Start Date: 25 March 2002

Testing End Date: 26 March 2002

The tests were performed according to following regulations :

- - FCC Part 15:2001
- - FCC Part 15.249
- Class B
- Class B

**Emission Test Results:**

**Conducted emissions, Powerline 450 kHz- 30 MHz**

<b>Test Result</b>	<b>PASS</b>		
Minimum limit margin	<u>11.7</u> dB	at	<u>2.84</u> MHz
Maximum limit exceeding	<u>          </u> dB	at	<u>          </u> MHz

Remarks: \_\_\_\_\_

**Radiated emissions (electric field) 30 MHz - 1000 MHz**

<b>Test Result</b>	<b>PASS</b>		
Minimum limit margin	<u>0.7</u> dB	at	<u>56.53</u> MHz
Maximum limit exceeding	<u>          </u> dB	at	<u>          </u> MHz

Remarks: \_\_\_\_\_

**GENERAL REMARKS:**

**None**

Modifications required to pass:

**See Modification Sheet – pages 4-6**

Test Specification Deviations: Additions to or Exclusions from:

**None**

# MODIFICATION SHEET

Test Report #: BC201533 Test Area: TT1-1

Test Method: Tst Date: 26 Mar 02

EUT Model #: AMS-SM01 EUT POWER: 120 V AC 60 Hz

EUT Serial #: 103 Temperature: 23 °C

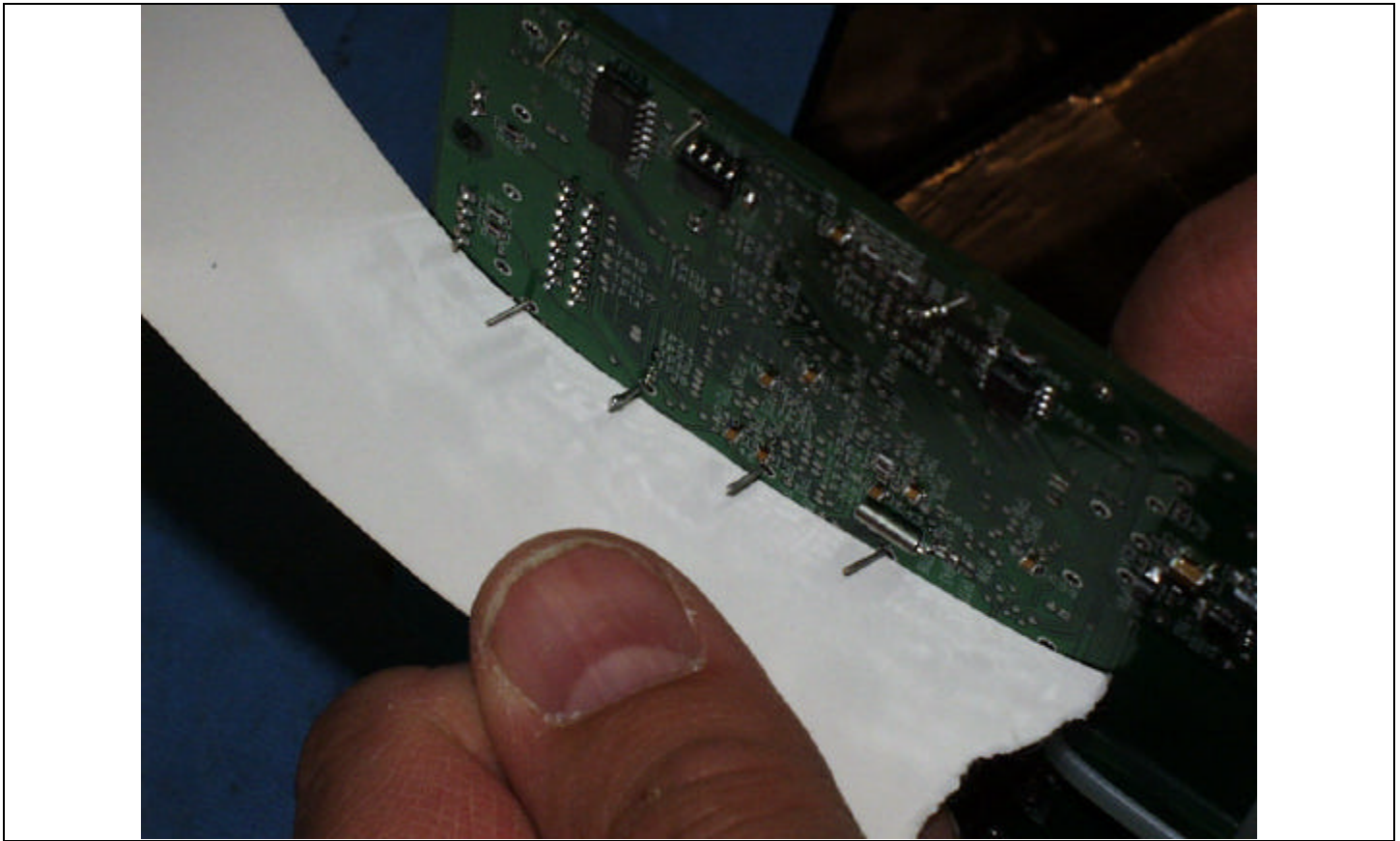
Manufacturer: AM Air Pressure: 80.0 kPa

EUT Description: Smart Modem Relative Humidity: 25 %

Notes: \_\_\_\_\_ Page: 1 of 3

Date of Modification: 26 Mar 02 Number of Modification Nb

Data Sheet Reference: Refe Photos Taken Pht



Customer: Jeff Hawthorne Signature On File \_\_\_\_\_  
Printed Signature

Tested by: Dan Dillon *Daniel M. Dillon* \_\_\_\_\_  
Printed Signature

Reviewed by: Todd Seeley *Todd Seeley* \_\_\_\_\_  
Printed Signature

# MODIFICATION SHEET

Test Report #: BC201533 Test Area: TT1-1

Test Method: Tst Date: 26 Mar 02

EUT Model #: AMS-SM01 EUT POWER: 120 V AC 60 Hz

EUT Serial #: 103 Temperature: 23 °C

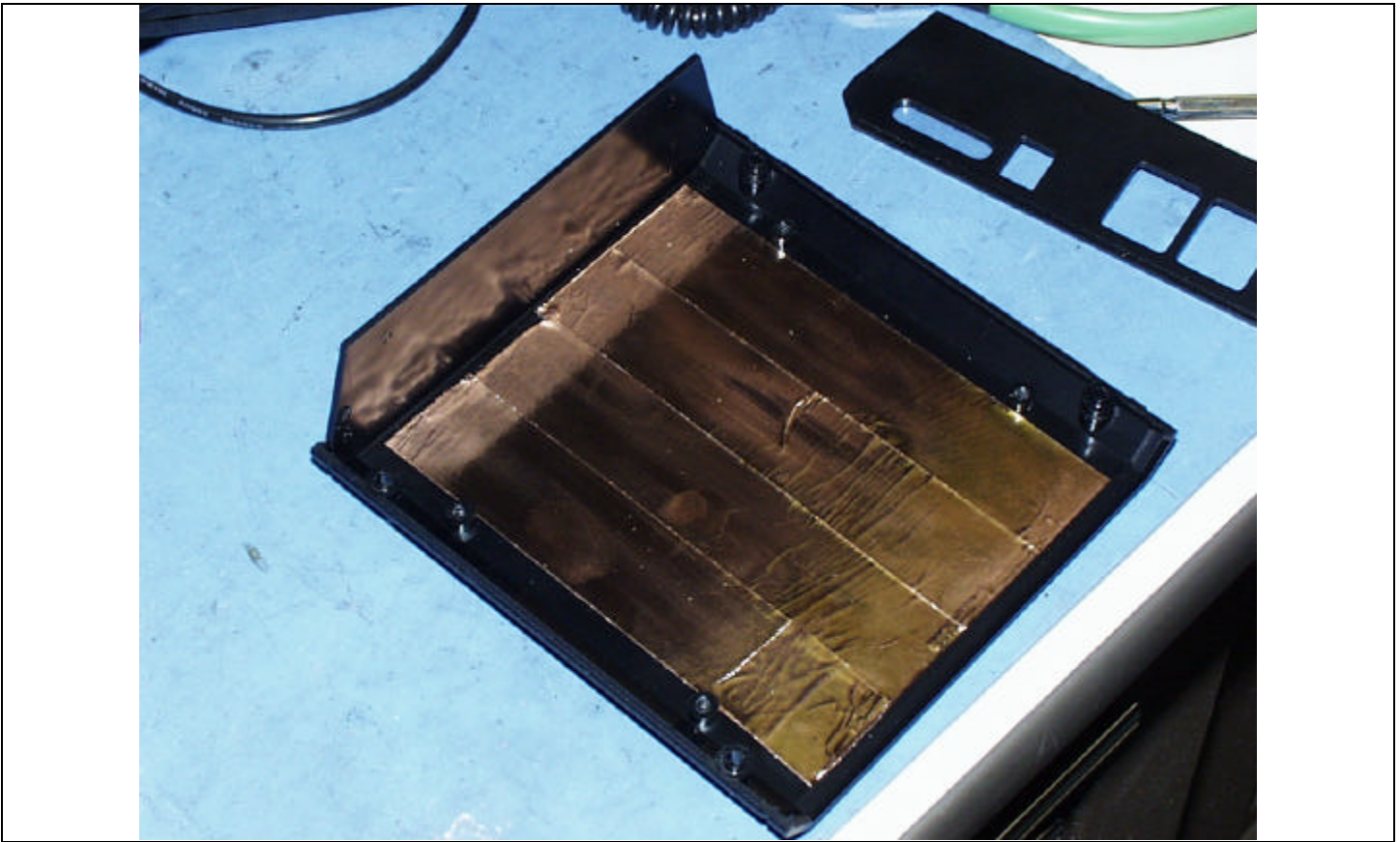
Manufacturer: AM Air Pressure: 80.0 kPa

EUT Description: Smart Modem Relative Humidity: 25 %

Notes: Page: 2 of 3

Date of Modification: 26 Mar 02 Number of Modification Nb

Data Sheet Reference: Refe Photos Taken Pht



Customer: Jeff Hawthorne  
Printed

Signature On File  
Signature

Tested by: Dan Dillon  
Printed

*Daniel M. Dillon*  
Signature

Reviewed by: Todd Seeley  
Printed

*Todd Seeley*  
Signature

# MODIFICATION SHEET



Test Report #: BC201533 Test Area: TT1-1

Test Method: Tst Date: 26 Mar 02

EUT Model #: AMS-SM01 EUT POWER: 120 V AC 60 Hz

EUT Serial #: 103 Temperature: 23 °C

Manufacturer: AM Air Pressure: 80.0 kPa

EUT Description: Smart Modem Relative Humidity: 25 %

Notes: Page: 3 of 3

Date of Modification: 26 Mar 02 Number of Modification Nb

Data Sheet Reference: Refe Photos Taken Pht

## Modifications Made:

- 1 Added copper image plane to the bottom of the chassis and connected it with ground. This reduced emissions in the 55 – 65 MHz range enough to meet the FCC B radiated emissions limit.

Customer: Jeff Hawthorne Signature On File  
Printed Signature

Tested by: Dan Dillon Signature  
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Reviewed by: Todd Seeley Signature  
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## Appendix A

Test Data Sheets  
and  
Test Equipment Used



# Conducted Electromagnetic Emissions



Test Report #: **BC201533 Run 01**  
 Test Method: **FCC**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **AM**  
 EUT Description: **Smart Modem**  
 Notes: **Dialing out, RF off**

Test Area: **Pinewood Site 1 Cond**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**

Temperature: **23** °C  
 Relative Humidity: **<26** %  
 Air Pressure: **80** kPa  
 Page: **1** of 2

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / LISN / ATTEN	FINAL	TEST POINT	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB)	(dBuV)		FCC B	N/A
0.450	22.0 Qp	0.1 / 0.0 / -10.0	32.1	Neutral	-15.9	N/A
0.452	22.0 Qp	0.1 / 0.0 / -10.0	32.1	Neutral	-15.9	N/A
2.80	25.0 Qp	0.3 / 0.0 / -10.0	35.3	Neutral	-12.7	N/A
3.40	20.0 Qp	0.3 / 0.0 / -10.0	30.3	Neutral	-17.7	N/A
5.00	11.0 Qp	0.4 / 0.0 / -10.0	21.4	Neutral	-26.6	N/A
7.40	9.0 Qp	0.6 / 0.0 / -10.0	19.6	Neutral	-28.4	N/A
17.20	5.0 Qp	0.9 / 0.0 / -10.0	15.9	Neutral	-32.1	N/A
0.450	19.0 Qp	0.1 / 0.0 / -10.0	29.1	Line 1	-18.9	N/A
0.452	19.0 Qp	0.1 / 0.0 / -10.0	29.1	Line 1	-18.9	N/A
2.84	26.0 Qp	0.3 / 0.0 / -10.0	36.3	Line 1	-11.7	N/A
3.40	7.0 Qp	0.3 / 0.0 / -10.0	17.3	Line 1	-30.7	N/A
5.00	16.0 Qp	0.4 / 0.0 / -10.0	26.4	Line 1	-21.6	N/A
7.40	9.0 Qp	0.6 / 0.0 / -10.0	19.6	Line 1	-28.4	N/A
17.20	5.0 Qp	0.9 / 0.0 / -10.0	15.9	Line 1	-32.1	N/A

Tested by: **Dan Dillon**  
 \_\_\_\_\_  
 Printed

  
 \_\_\_\_\_  
 Signature

Reviewed by: **Todd Seeley**  
 \_\_\_\_\_  
 Printed

  
 \_\_\_\_\_  
 Signature



# Conducted Electromagnetic Emissions



Test Report #: BC201533 Run 01      Test Area: Pinewood Site 1 Cond  
 Test Method: FCC      Test Date: 25-Mar-2002  
 EUT Model #: AMS-SM01      EUT Power: 120 VAC / 60 Hz  
 EUT Serial #: 103  
 Manufacturer: AM  
 EUT Description: Smart Modem  
 Notes: Dialing out, RF off

Temperature: 23 °C  
 Relative Humidity: <26 %  
 Air Pressure: 80 kPa  
 Page: 2 of 2

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / LISN / ATTEN	FINAL	TEST POINT	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB)	(dBuV)		FCC B	N/A
<b>***** Measurement Summary *****</b>						
2.84	26.0 Qp	0.3 / 0.0 / -10.0	36.3	Line 1	-11.7	N/A
2.80	25.0 Qp	0.3 / 0.0 / -10.0	35.3	Neutral	-12.7	N/A
0.452	22.0 Qp	0.1 / 0.0 / -10.0	32.1	Neutral	-15.9	N/A
3.40	20.0 Qp	0.3 / 0.0 / -10.0	30.3	Neutral	-17.7	N/A
5.00	16.0 Qp	0.4 / 0.0 / -10.0	26.4	Line 1	-21.6	N/A
7.40	9.0 Qp	0.6 / 0.0 / -10.0	19.6	Line 1	-28.4	N/A
17.20	5.0 Qp	0.9 / 0.0 / -10.0	15.9	Line 1	-32.1	N/A

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 Signature

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 Printed

  
 Signature

# Conducted Electromagnetic Emissions



Test Report #: BC201533 Run 02      Test Area: Pinewood Site 1 Cond  
 Test Method: FCC      Test Date: 25-Mar-2002  
 EUT Model #: AMS-SM01      EUT Power: 120 VAC / 60 Hz  
 EUT Serial #: 103  
 Manufacturer: AM  
 EUT Description: Smart Modem  
 Notes: RF on

Temperature: 23 °C  
 Relative Humidity: <26 %  
 Air Pressure: 80 kPa  
 Page: 1 of 2

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / LISN / ATTEN	FINAL	TEST POINT	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB)	(dBuV)		FCC B	N/A
0.450	21.0 Qp	0.1 / 0.0 / -10.0	31.1	Neutral	-16.9	N/A
0.466	21.0 Qp	0.1 / 0.0 / -10.0	31.1	Neutral	-16.9	N/A
3.00	3.0 Qp	0.3 / 0.0 / -10.0	13.3	Neutral	-34.7	N/A
3.40	2.0 Qp	0.3 / 0.0 / -10.0	12.3	Neutral	-35.7	N/A
0.880	10.0 Qp	0.2 / 0.0 / -10.0	20.2	Neutral	-27.8	N/A
21.67	2.0 Qp	1.0 / 0.0 / -10.0	13.0	Neutral	-35.0	N/A
0.450	18.0 Qp	0.1 / 0.0 / -10.0	28.1	Line 1	-19.9	N/A
0.490	17.0 Qp	0.1 / 0.0 / -10.0	27.1	Line 1	-20.9	N/A
0.960	12.0 Qp	0.2 / 0.0 / -10.0	22.2	Line 1	-25.8	N/A
3.00	4.0 Qp	0.3 / 0.0 / -10.0	14.3	Line 1	-33.7	N/A
3.57	11.0 Qp	0.3 / 0.0 / -10.0	21.3	Line 1	-26.7	N/A
3.87	2.0 Qp	0.3 / 0.0 / -10.0	12.3	Line 1	-35.7	N/A

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# Conducted Electromagnetic Emissions



Test Report #: BC201533 Run 02      Test Area: Pinewood Site 1 Cond  
 Test Method: FCC      Test Date: 25-Mar-2002  
 EUT Model #: AMS-SM01      EUT Power: 120 VAC / 60 Hz  
 EUT Serial #: 103  
 Manufacturer: AM  
 EUT Description: Smart Modem  
 Notes: RF on

Temperature: 23 °C  
 Relative Humidity: <26 %  
 Air Pressure: 80 kPa  
 Page: 2 of 2

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / LISN / ATTEN	FINAL	TEST POINT	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB)	(dBuV)		FCC B	N/A
<b>***** Measurement Summary *****</b>						
0.450	21.0 Qp	0.1 / 0.0 / -10.0	31.1	Neutral	-16.9	N/A
0.466	21.0 Qp	0.1 / 0.0 / -10.0	31.1	Neutral	-16.9	N/A
0.490	17.0 Qp	0.1 / 0.0 / -10.0	27.1	Line 1	-20.9	N/A
0.960	12.0 Qp	0.2 / 0.0 / -10.0	22.2	Line 1	-25.8	N/A
3.57	11.0 Qp	0.3 / 0.0 / -10.0	21.3	Line 1	-26.7	N/A
0.880	10.0 Qp	0.2 / 0.0 / -10.0	20.2	Neutral	-27.8	N/A
3.00	4.0 Qp	0.3 / 0.0 / -10.0	14.3	Line 1	-33.7	N/A
21.67	2.0 Qp	1.0 / 0.0 / -10.0	13.0	Neutral	-35.0	N/A
3.40	2.0 Qp	0.3 / 0.0 / -10.0	12.3	Neutral	-35.7	N/A
3.87	2.0 Qp	0.3 / 0.0 / -10.0	12.3	Line 1	-35.7	N/A

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 Printed

  
 Signature

# Radiated Electromagnetic Emissions



Test Report #: BC201533 Run 1      Test Area: Pinewood Site 1 (3m)  
 Test Method: FCC Part 15      Test Date: 25-Mar-2002  
 EUT Model #: AMS-SM01      EUT Power: 120 VAC / 60 Hz  
 EUT Serial #: 103  
 Manufacturer: Alcohol Monitoring Systems  
 EUT Description: Smart Modem  
 Notes: RF off, modem continuously calling and transferring data.

Temperature: 24 °C  
 Relative Humidity: <26 %  
 Air Pressure: 80 kPa  
 Page: 1 of 35

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
200.03	34.8 Qp	0.8 / 11.5 / 22.1	24.9	V / 1.0 / 0.0	-18.6	N/A
201.46	34.6 Qp	0.8 / 11.7 / 22.1	24.9	V / 1.0 / 0.0	-18.6	N/A
202.75	29.8 Qp	0.8 / 11.8 / 22.1	20.2	V / 1.0 / 0.0	-23.3	N/A
205.65	42.4 Qp	0.8 / 12.1 / 22.1	33.1	V / 1.0 / 0.0	-10.4	N/A
209.84	38.2 Qp	0.8 / 12.6 / 22.1	29.4	V / 1.0 / 0.0	-14.1	N/A
214.04	42.6 Qp	0.8 / 13.0 / 22.1	34.2	V / 1.0 / 0.0	-9.3	N/A
218.24	39.8 Qp	0.8 / 13.5 / 22.1	31.9	V / 1.0 / 0.0	-14.1	N/A
222.44	39.5 Qp	0.8 / 13.9 / 22.1	32.1	V / 1.0 / 0.0	-13.9	N/A
226.64	37.6 Qp	0.8 / 14.2 / 22.1	30.4	V / 1.0 / 0.0	-15.6	N/A
230.82	40.8 Qp	0.8 / 14.2 / 22.1	33.7	V / 1.0 / 0.0	-12.3	N/A
235.03	41.2 Qp	0.8 / 14.3 / 22.1	34.2	V / 1.0 / 0.0	-11.8	N/A
239.22	41.8 Qp	0.8 / 14.3 / 22.1	34.8	V / 1.0 / 0.0	-11.2	N/A
243.43	41.2 Qp	0.8 / 14.3 / 22.1	34.3	V / 1.0 / 0.0	-11.7	N/A
247.61	40.7 Qp	0.8 / 14.4 / 22.1	33.8	V / 1.0 / 0.0	-12.2	N/A
251.81	39.5 Qp	0.8 / 14.4 / 22.1	32.6	V / 1.0 / 0.0	-13.4	N/A
256.01	34.6 Qp	0.8 / 14.3 / 22.1	27.7	V / 1.0 / 0.0	-18.3	N/A
260.21	33.3 Qp	0.8 / 14.3 / 22.1	26.3	V / 1.0 / 0.0	-19.7	N/A
264.41	30.6 Qp	0.8 / 14.2 / 22.1	23.5	V / 1.0 / 0.0	-22.5	N/A
268.61	33.8 Qp	0.9 / 14.2 / 22.1	26.7	V / 1.0 / 0.0	-19.3	N/A
272.80	32.3 Qp	0.9 / 14.1 / 22.1	25.2	V / 1.0 / 0.0	-20.8	N/A
277.00	34.6 Qp	0.9 / 14.1 / 22.1	27.5	V / 1.0 / 0.0	-18.5	N/A
281.19	35.4 Qp	0.9 / 14.2 / 22.1	28.3	V / 1.0 / 0.0	-17.7	N/A
285.38	33.4 Qp	0.9 / 14.2 / 22.1	26.4	V / 1.0 / 0.0	-19.6	N/A
289.58	31.1 Qp	0.9 / 14.3 / 22.1	24.2	V / 1.0 / 0.0	-21.8	N/A
293.79	33.5 Qp	0.9 / 14.3 / 22.1	26.7	V / 1.0 / 0.0	-19.3	N/A
297.99	31.2 Qp	0.9 / 14.4 / 22.1	24.4	V / 1.0 / 0.0	-21.6	N/A
302.19	33.4 Qp	0.9 / 14.4 / 22.0	26.6	V / 1.0 / 0.0	-19.4	N/A

Tested by: Dan Dillon  
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 Signature

Reviewed by: Todd Seeley  
 Printed

  
 Signature

# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**

Temperature: **24 °C**  
 Relative Humidity: **<26 %**  
 Air Pressure: **80 kPa**  
 Page: **2 of 35**

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
306.37	33.0 Qp	0.9 / 14.4 / 22.0	26.3	V / 1.0 / 0.0	-19.7	N/A
310.56	31.5 Qp	0.9 / 14.4 / 22.0	24.8	V / 1.0 / 0.0	-21.2	N/A
314.76	31.9 Qp	0.9 / 14.4 / 22.0	25.2	V / 1.0 / 0.0	-20.8	N/A
318.96	28.9 Qp	0.9 / 14.4 / 22.0	22.2	V / 1.0 / 0.0	-23.8	N/A
323.17	29.2 Qp	0.9 / 14.4 / 22.0	22.6	V / 1.0 / 0.0	-23.4	N/A
327.36	26.4 Qp	1.0 / 14.4 / 22.0	19.8	V / 1.0 / 0.0	-26.2	N/A
331.56	25.8 Qp	1.0 / 14.5 / 22.0	19.3	V / 1.0 / 0.0	-26.7	N/A
339.95	30.8 Qp	1.0 / 14.6 / 22.0	24.4	V / 1.0 / 0.0	-21.6	N/A
344.14	31.7 Qp	1.0 / 14.7 / 22.0	25.4	V / 1.0 / 0.0	-20.6	N/A
348.34	34.7 Qp	1.0 / 14.8 / 22.0	28.5	V / 1.0 / 0.0	-17.5	N/A
352.54	31.2 Qp	1.0 / 14.8 / 21.9	25.1	V / 1.0 / 0.0	-20.9	N/A
356.74	32.7 Qp	1.0 / 14.8 / 21.9	26.6	V / 1.0 / 0.0	-19.4	N/A
360.94	29.9 Qp	1.0 / 14.8 / 21.9	23.8	V / 1.0 / 0.0	-22.2	N/A
365.12	33.5 Qp	1.0 / 14.9 / 21.9	27.5	V / 1.0 / 0.0	-18.5	N/A
369.31	33.0 Qp	1.0 / 14.9 / 21.9	27.0	V / 1.0 / 0.0	-19.0	N/A
373.51	34.2 Qp	1.0 / 14.9 / 21.9	28.2	V / 1.0 / 0.0	-17.8	N/A
377.71	32.8 Qp	1.1 / 15.2 / 21.9	27.1	V / 1.0 / 0.0	-18.9	N/A
381.92	31.4 Qp	1.1 / 15.7 / 21.9	26.2	V / 1.0 / 0.0	-19.8	N/A
386.12	30.7 Qp	1.1 / 16.2 / 21.9	26.1	V / 1.0 / 0.0	-19.9	N/A
390.31	29.7 Qp	1.1 / 16.7 / 21.9	25.5	V / 1.0 / 0.0	-20.5	N/A
394.51	29.8 Qp	1.1 / 17.2 / 21.9	26.1	V / 1.0 / 0.0	-19.9	N/A
398.70	25.9 Qp	1.1 / 17.6 / 21.9	22.8	V / 1.0 / 0.0	-23.2	N/A
402.90	25.4 Qp	1.1 / 17.7 / 21.8	22.4	V / 1.0 / 0.0	-23.6	N/A
407.09	26.7 Qp	1.1 / 17.5 / 21.8	23.5	V / 1.0 / 0.0	-22.5	N/A
411.29	26.7 Qp	1.1 / 17.3 / 21.8	23.3	V / 1.0 / 0.0	-22.7	N/A
415.49	27.9 Qp	1.1 / 17.1 / 21.8	24.4	V / 1.0 / 0.0	-21.6	N/A
419.69	29.9 Qp	1.1 / 16.9 / 21.8	26.2	V / 1.0 / 0.0	-19.8	N/A
423.88	29.9 Qp	1.1 / 16.7 / 21.8	25.9	V / 1.0 / 0.0	-20.1	N/A

Tested by: **Dan Dillon**

Printed

Signature

Reviewed by: **Todd Seeley**

Printed

Signature

# Radiated Electromagnetic Emissions



Test Report #: BC201533 Run 1      Test Area: Pinewood Site 1 (3m)  
 Test Method: FCC Part 15      Test Date: 25-Mar-2002  
 EUT Model #: AMS-SM01      EUT Power: 120 VAC / 60 Hz  
 EUT Serial #: 103  
 Manufacturer: Alcohol Monitoring Systems  
 EUT Description: Smart Modem  
 Notes: RF off, modem continuously calling and transferring data.

Temperature: 24 °C  
 Relative Humidity: <26 %  
 Air Pressure: 80 kPa  
 Page: 3 of 35

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
428.08	33.4 Qp	1.2 / 16.7 / 21.8	29.4	V / 1.0 / 0.0	-16.6	N/A
432.28	32.0 Qp	1.2 / 16.8 / 21.8	28.1	V / 1.0 / 0.0	-17.9	N/A
436.48	34.5 Qp	1.2 / 16.8 / 21.8	30.7	V / 1.0 / 0.0	-15.3	N/A
440.68	30.2 Qp	1.2 / 16.8 / 21.8	26.4	V / 1.0 / 0.0	-19.6	N/A
444.85	32.4 Qp	1.2 / 16.9 / 21.8	28.6	V / 1.0 / 0.0	-17.4	N/A
449.05	27.9 Qp	1.2 / 16.9 / 21.8	24.2	V / 1.0 / 0.0	-21.8	N/A
453.27	30.6 Qp	1.2 / 17.0 / 21.8	27.0	V / 1.0 / 0.0	-19.0	N/A
461.66	28.7 Qp	1.2 / 17.3 / 21.8	25.4	V / 1.0 / 0.0	-20.6	N/A
470.04	31.1 Qp	1.2 / 17.5 / 21.8	28.1	V / 1.0 / 0.0	-17.9	N/A
474.24	28.8 Qp	1.2 / 17.7 / 21.8	25.9	V / 1.0 / 0.0	-20.1	N/A
478.44	32.7 Qp	1.3 / 17.8 / 21.8	30.0	V / 1.0 / 0.0	-16.0	N/A
482.64	28.9 Qp	1.3 / 17.9 / 21.8	26.3	V / 1.0 / 0.0	-19.7	N/A
486.84	32.9 Qp	1.3 / 18.0 / 21.8	30.4	V / 1.0 / 0.0	-15.6	N/A
491.04	29.6 Qp	1.3 / 18.1 / 21.8	27.2	V / 1.0 / 0.0	-18.8	N/A
495.24	33.6 Qp	1.3 / 18.2 / 21.8	31.4	V / 1.0 / 0.0	-14.6	N/A
499.42	31.7 Qp	1.3 / 18.3 / 21.8	29.5	V / 1.0 / 0.0	-16.5	N/A
503.62	34.6 Qp	1.3 / 18.2 / 21.8	32.4	V / 1.0 / 0.0	-13.6	N/A
507.82	33.2 Qp	1.3 / 18.1 / 21.8	30.9	V / 1.0 / 0.0	-15.1	N/A
512.02	35.3 Qp	1.3 / 18.1 / 21.8	32.9	V / 1.0 / 0.0	-13.1	N/A
516.22	34.6 Qp	1.3 / 18.0 / 21.8	32.0	V / 1.0 / 0.0	-14.0	N/A
520.42	35.9 Qp	1.3 / 17.9 / 21.9	33.2	V / 1.0 / 0.0	-12.8	N/A
524.61	35.5 Qp	1.3 / 17.8 / 21.9	32.7	V / 1.0 / 0.0	-13.3	N/A
528.80	36.2 Qp	1.3 / 18.0 / 21.9	33.6	V / 1.0 / 0.0	-12.4	N/A
533.00	35.2 Qp	1.3 / 18.2 / 21.9	32.8	V / 1.0 / 0.0	-13.2	N/A
537.19	38.9 Qp	1.3 / 18.4 / 22.0	36.7	V / 1.0 / 0.0	-9.3	N/A
541.39	33.1 Qp	1.3 / 18.7 / 22.0	31.1	V / 1.0 / 0.0	-14.9	N/A
545.59	33.1 Qp	1.3 / 18.9 / 22.0	31.3	V / 1.0 / 0.0	-14.7	N/A
549.79	30.7 Qp	1.3 / 19.1 / 22.0	29.1	V / 1.0 / 0.0	-16.9	N/A

Tested by: Dan Dillon

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Reviewed by: Todd Seeley

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# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**

Temperature: **24 °C**  
 Relative Humidity: **<26 %**  
 Air Pressure: **80 kPa**  
 Page: **4 of 35**

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
553.99	29.4 Qp	1.4 / 19.3 / 22.1	27.9	V / 1.0 / 0.0	-18.1	N/A
558.18	26.8 Qp	1.4 / 19.4 / 22.1	25.4	V / 1.0 / 0.0	-20.6	N/A
566.58	28.2 Qp	1.4 / 19.8 / 22.1	27.1	V / 1.0 / 0.0	-18.9	N/A
570.78	28.9 Qp	1.4 / 19.9 / 22.2	28.0	V / 1.0 / 0.0	-18.0	N/A
574.96	30.2 Qp	1.4 / 20.1 / 22.2	29.5	V / 1.0 / 0.0	-16.5	N/A
579.16	32.9 Qp	1.4 / 20.1 / 22.2	32.1	V / 1.0 / 0.0	-13.9	N/A
583.36	33.0 Qp	1.4 / 20.1 / 22.2	32.3	V / 1.0 / 0.0	-13.7	N/A
587.56	34.0 Qp	1.4 / 20.0 / 22.3	33.2	V / 1.0 / 0.0	-12.8	N/A
591.75	32.2 Qp	1.4 / 20.0 / 22.3	31.3	V / 1.0 / 0.0	-14.7	N/A
595.95	34.9 Qp	1.4 / 20.0 / 22.3	34.0	V / 1.0 / 0.0	-12.0	N/A
600.15	33.0 Qp	1.4 / 20.0 / 22.3	32.1	V / 1.0 / 0.0	-13.9	N/A
604.35	36.5 Qp	1.4 / 20.2 / 22.5	35.5	V / 1.0 / 0.0	-10.5	N/A
608.54	32.0 Qp	1.4 / 20.3 / 22.7	31.1	V / 1.0 / 0.0	-14.9	N/A
612.74	35.2 Qp	1.4 / 20.5 / 22.8	34.3	V / 1.0 / 0.0	-11.7	N/A
616.94	29.4 Qp	1.4 / 20.6 / 23.0	28.5	V / 1.0 / 0.0	-17.5	N/A
621.14	34.2 Qp	1.4 / 20.8 / 23.1	33.2	V / 1.0 / 0.0	-12.8	N/A
625.34	29.2 Qp	1.4 / 20.9 / 23.3	28.2	V / 1.0 / 0.0	-17.8	N/A
629.52	35.1 Qp	1.4 / 20.9 / 23.5	33.9	V / 1.0 / 0.0	-12.1	N/A
633.72	28.1 Qp	1.4 / 20.9 / 23.6	26.9	V / 1.0 / 0.0	-19.1	N/A
637.92	34.1 Qp	1.4 / 21.0 / 23.8	32.7	V / 1.0 / 0.0	-13.3	N/A
642.10	26.7 Qp	1.4 / 21.0 / 23.9	25.2	V / 1.0 / 0.0	-20.8	N/A
646.30	33.6 Qp	1.4 / 21.0 / 24.1	32.0	V / 1.0 / 0.0	-14.0	N/A
650.50	26.2 Qp	1.5 / 21.0 / 24.3	24.3	V / 1.0 / 0.0	-21.7	N/A
654.70	33.5 Qp	1.5 / 21.0 / 24.4	31.5	V / 1.0 / 0.0	-14.5	N/A
658.90	26.2 Qp	1.5 / 21.0 / 24.6	24.0	V / 1.0 / 0.0	-22.0	N/A
663.10	33.1 Qp	1.5 / 20.9 / 24.7	30.8	V / 1.0 / 0.0	-15.2	N/A
667.29	26.8 Qp	1.5 / 20.9 / 24.9	24.3	V / 1.0 / 0.0	-21.7	N/A
671.49	32.2 Qp	1.5 / 20.9 / 25.1	29.6	V / 1.0 / 0.0	-16.4	N/A

Tested by: **Dan Dillon**

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Reviewed by: **Todd Seeley**

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# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**

Temperature: **24** °C  
 Relative Humidity: **<26** %  
 Air Pressure: **80** kPa  
 Page: **5 of 35**

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
675.69	26.8 Qp	1.5 / 20.9 / 25.2	24.0	V / 1.0 / 0.0	-22.0	N/A
679.89	32.5 Qp	1.5 / 20.9 / 25.4	29.5	V / 1.0 / 0.0	-16.5	N/A
684.09	26.0 Qp	1.5 / 20.9 / 25.5	22.8	V / 1.0 / 0.0	-23.2	N/A
688.27	29.4 Qp	1.5 / 20.8 / 25.7	26.1	V / 1.0 / 0.0	-19.9	N/A
692.47	25.2 Qp	1.5 / 20.8 / 25.9	21.7	V / 1.0 / 0.0	-24.3	N/A
696.67	30.8 Qp	1.5 / 20.8 / 26.0	27.0	V / 1.0 / 0.0	-19.0	N/A
700.87	26.6 Qp	1.5 / 20.8 / 26.1	22.7	V / 1.0 / 0.0	-23.3	N/A
705.07	34.4 Qp	1.5 / 20.8 / 25.9	30.8	V / 1.0 / 0.0	-15.2	N/A
709.27	27.2 Qp	1.5 / 20.8 / 25.7	23.9	V / 1.0 / 0.0	-22.1	N/A
713.46	31.8 Qp	1.5 / 20.9 / 25.5	28.6	V / 1.0 / 0.0	-17.4	N/A
717.62	32.0 Qp	1.5 / 20.9 / 25.3	29.1	V / 1.0 / 0.0	-16.9	N/A
721.84	29.2 Qp	1.5 / 20.9 / 25.2	26.5	V / 1.0 / 0.0	-19.5	N/A
730.24	28.0 Qp	1.5 / 21.0 / 24.8	25.7	V / 1.0 / 0.0	-20.3	N/A
738.64	28.6 Qp	1.5 / 21.1 / 24.4	26.8	V / 1.0 / 0.0	-19.2	N/A
747.04	30.1 Qp	1.5 / 21.3 / 24.0	28.8	V / 1.0 / 0.0	-17.2	N/A
755.44	27.8 Qp	1.6 / 21.4 / 23.6	27.1	V / 1.0 / 0.0	-18.9	N/A
763.81	29.2 Qp	1.6 / 21.6 / 23.2	29.1	V / 1.0 / 0.0	-16.9	N/A
772.21	29.6 Qp	1.6 / 21.7 / 22.9	30.1	V / 1.0 / 0.0	-15.9	N/A
776.41	25.9 Qp	1.6 / 21.8 / 22.7	26.6	V / 1.0 / 0.0	-19.4	N/A
780.61	30.2 Qp	1.6 / 21.9 / 22.5	31.2	V / 1.0 / 0.0	-14.8	N/A
788.99	29.9 Qp	1.6 / 22.0 / 22.1	31.3	V / 1.0 / 0.0	-14.7	N/A
793.19	26.1 Qp	1.6 / 22.0 / 21.9	27.8	V / 1.0 / 0.0	-18.2	N/A
797.39	31.6 Qp	1.6 / 22.1 / 21.7	33.5	V / 1.0 / 0.0	-12.5	N/A
801.59	25.2 Qp	1.6 / 22.1 / 21.6	27.3	V / 1.0 / 0.0	-18.7	N/A
805.79	31.9 Qp	1.6 / 22.2 / 21.6	34.1	V / 1.0 / 0.0	-11.9	N/A
809.99	25.2 Qp	1.6 / 22.3 / 21.5	27.5	V / 1.0 / 0.0	-18.5	N/A
814.19	30.6 Qp	1.6 / 22.3 / 21.5	33.0	V / 1.0 / 0.0	-13.0	N/A
818.39	25.9 Qp	1.6 / 22.4 / 21.5	28.4	V / 1.0 / 0.0	-17.6	N/A

Tested by: **Dan Dillon**

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Reviewed by: **Todd Seeley**

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# Radiated Electromagnetic Emissions



Test Report #: BC201533 Run 1      Test Area: Pinewood Site 1 (3m)  
 Test Method: FCC Part 15      Test Date: 25-Mar-2002  
 EUT Model #: AMS-SM01      EUT Power: 120 VAC / 60 Hz  
 EUT Serial #: 103  
 Manufacturer: Alcohol Monitoring Systems  
 EUT Description: Smart Modem  
 Notes: RF off, modem continuously calling and transferring data.

Temperature: 24 °C  
 Relative Humidity: <26 %  
 Air Pressure: 80 kPa  
 Page: 6 of 35

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dBm) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
822.57	29.8 Qp	1.6 / 22.5 / 21.4	32.4	V / 1.0 / 0.0	-13.6	N/A
826.77	23.4 Qp	1.6 / 22.5 / 21.4	26.2	V / 1.0 / 0.0	-19.8	N/A
830.97	27.0 Qp	1.6 / 22.6 / 21.4	29.9	V / 1.0 / 0.0	-16.1	N/A
839.37	27.9 Qp	1.7 / 22.7 / 21.3	30.9	V / 1.0 / 0.0	-15.1	N/A
843.54	24.8 Qp	1.7 / 22.7 / 21.3	27.9	V / 1.0 / 0.0	-18.1	N/A
847.74	31.2 Qp	1.7 / 22.8 / 21.2	34.5	V / 1.0 / 0.0	-11.5	N/A
864.54	37.2 Qp	1.7 / 23.1 / 21.1	40.9	V / 1.0 / 0.0	-5.1	N/A
898.12	23.9 Qp	1.7 / 24.2 / 20.9	29.0	V / 1.0 / 0.0	-17.0	N/A
910.70	24.2 Qp	1.8 / 24.6 / 20.8	29.8	V / 1.0 / 0.0	-16.2	N/A
914.90	29.6 Qp	1.8 / 24.8 / 20.8	35.4	V / 1.0 / 0.0	-10.6	N/A
919.10	27.8 Qp	1.8 / 24.9 / 20.8	33.7	V / 1.0 / 0.0	-12.3	N/A
923.30	32.7 Qp	1.8 / 25.0 / 20.8	38.8	V / 1.0 / 0.0	-7.2	N/A
927.50	29.0 Qp	1.8 / 25.1 / 20.7	35.2	V / 1.0 / 0.0	-10.8	N/A
931.70	31.6 Qp	1.8 / 25.2 / 20.7	37.9	V / 1.0 / 0.0	-8.1	N/A
940.10	29.7 Qp	1.8 / 25.4 / 20.7	36.2	V / 1.0 / 0.0	-9.8	N/A
944.30	26.8 Qp	1.8 / 25.5 / 20.7	33.4	V / 1.0 / 0.0	-12.6	N/A
948.48	29.2 Qp	1.8 / 25.6 / 20.7	36.0	V / 1.0 / 0.0	-10.0	N/A
956.86	30.7 Qp	1.8 / 25.7 / 20.6	37.5	V / 1.0 / 0.0	-8.5	N/A
961.06	28.0 Qp	1.8 / 25.7 / 20.6	35.0	V / 1.0 / 0.0	-19.0	N/A
965.26	31.0 Qp	1.8 / 25.8 / 20.6	38.0	V / 1.0 / 0.0	-16.0	N/A
969.46	28.7 Qp	1.9 / 25.8 / 20.6	35.8	V / 1.0 / 0.0	-18.2	N/A
973.66	32.5 Qp	1.9 / 25.9 / 20.6	39.6	V / 1.0 / 0.0	-14.4	N/A
977.86	30.6 Qp	1.9 / 25.8 / 20.5	37.7	V / 1.0 / 0.0	-16.3	N/A
982.06	33.6 Qp	1.9 / 25.7 / 20.5	40.7	V / 1.0 / 0.0	-13.3	N/A
986.24	31.8 Qp	1.9 / 25.6 / 20.5	38.8	V / 1.0 / 0.0	-15.2	N/A
990.44	34.6 Qp	1.9 / 25.5 / 20.5	41.5	V / 1.0 / 0.0	-12.5	N/A
994.64	31.2 Qp	1.9 / 25.4 / 20.5	38.0	V / 1.0 / 0.0	-16.0	N/A
998.84	31.8 Qp	1.9 / 25.3 / 20.5	38.5	V / 1.0 / 0.0	-15.5	N/A

Tested by: Dan Dillon

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Reviewed by: Todd Seeley

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# Radiated Electromagnetic Emissions



Test Report #: BC201533 Run 1      Test Area: Pinewood Site 1 (3m)  
 Test Method: FCC Part 15      Test Date: 25-Mar-2002  
 EUT Model #: AMS-SM01      EUT Power: 120 VAC / 60 Hz  
 EUT Serial #: 103  
 Manufacturer: Alcohol Monitoring Systems  
 EUT Description: Smart Modem  
 Notes: RF off, modem continuously calling and transferring data.

Temperature: 24 °C  
 Relative Humidity: <26 %  
 Air Pressure: 80 kPa  
 Page: 7 of 35

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
200.03	37.0 Qp	0.8 / 11.5 / 22.1	27.1	V / 1.0 / 90.0	-16.4	N/A
256.01	36.5 Qp	0.8 / 14.3 / 22.1	29.6	V / 1.0 / 90.0	-16.4	N/A
264.41	33.0 Qp	0.8 / 14.2 / 22.1	25.9	V / 1.0 / 90.0	-20.1	N/A
272.80	34.6 Qp	0.9 / 14.1 / 22.1	27.6	V / 1.0 / 90.0	-18.4	N/A
323.17	31.7 Qp	0.9 / 14.4 / 22.0	25.0	V / 1.0 / 90.0	-21.0	N/A
327.36	27.3 Qp	1.0 / 14.4 / 22.0	20.7	V / 1.0 / 90.0	-25.3	N/A
331.56	28.2 Qp	1.0 / 14.5 / 22.0	21.6	V / 1.0 / 90.0	-24.4	N/A
348.34	35.1 Qp	1.0 / 14.8 / 22.0	28.9	V / 1.0 / 90.0	-17.1	N/A
352.54	34.1 Qp	1.0 / 14.8 / 21.9	28.0	V / 1.0 / 90.0	-18.0	N/A
356.74	34.9 Qp	1.0 / 14.8 / 21.9	28.8	V / 1.0 / 90.0	-17.2	N/A
360.94	33.1 Qp	1.0 / 14.8 / 21.9	27.1	V / 1.0 / 90.0	-18.9	N/A
373.51	34.7 Qp	1.0 / 14.9 / 21.9	28.7	V / 1.0 / 90.0	-17.3	N/A
377.71	33.8 Qp	1.1 / 15.2 / 21.9	28.2	V / 1.0 / 90.0	-17.8	N/A
381.92	34.0 Qp	1.1 / 15.7 / 21.9	28.8	V / 1.0 / 90.0	-17.2	N/A
386.12	34.5 Qp	1.1 / 16.2 / 21.9	29.8	V / 1.0 / 90.0	-16.2	N/A
390.31	34.1 Qp	1.1 / 16.7 / 21.9	30.0	V / 1.0 / 90.0	-16.0	N/A
394.51	34.0 Qp	1.1 / 17.2 / 21.9	30.4	V / 1.0 / 90.0	-15.6	N/A
398.70	31.9 Qp	1.1 / 17.6 / 21.9	28.8	V / 1.0 / 90.0	-17.2	N/A
402.90	31.5 Qp	1.1 / 17.7 / 21.8	28.4	V / 1.0 / 90.0	-17.6	N/A
407.09	31.6 Qp	1.1 / 17.5 / 21.8	28.3	V / 1.0 / 90.0	-17.7	N/A
411.29	31.8 Qp	1.1 / 17.3 / 21.8	28.3	V / 1.0 / 90.0	-17.7	N/A
415.49	31.0 Qp	1.1 / 17.1 / 21.8	27.4	V / 1.0 / 90.0	-18.6	N/A
444.85	35.3 Qp	1.2 / 16.9 / 21.8	31.5	V / 1.0 / 90.0	-14.5	N/A
449.05	30.6 Qp	1.2 / 16.9 / 21.8	26.9	V / 1.0 / 90.0	-19.1	N/A
453.27	33.5 Qp	1.2 / 17.0 / 21.8	29.9	V / 1.0 / 90.0	-16.1	N/A
461.66	29.0 Qp	1.2 / 17.3 / 21.8	25.7	V / 1.0 / 90.0	-20.3	N/A
520.42	36.0 Qp	1.3 / 17.9 / 21.9	33.3	V / 1.0 / 90.0	-12.7	N/A

Tested by: Dan Dillon

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Reviewed by: Todd Seeley

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# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**

Temperature: **24** °C  
 Relative Humidity: **<26** %  
 Air Pressure: **80** kPa  
 Page: **8 of 35**

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
528.80	36.8 Qp	1.3 / 18.0 / 21.9	34.2	V / 1.0 / 90.0	-11.8	N/A
541.39	34.7 Qp	1.3 / 18.7 / 22.0	32.7	V / 1.0 / 90.0	-13.3	N/A
545.59	36.9 Qp	1.3 / 18.9 / 22.0	35.1	V / 1.0 / 90.0	-10.9	N/A
549.79	32.4 Qp	1.3 / 19.1 / 22.0	30.8	V / 1.0 / 90.0	-15.2	N/A
553.99	31.2 Qp	1.4 / 19.3 / 22.1	29.8	V / 1.0 / 90.0	-16.2	N/A
558.18	29.4 Qp	1.4 / 19.4 / 22.1	28.0	V / 1.0 / 90.0	-18.0	N/A
566.58	31.8 Qp	1.4 / 19.8 / 22.1	30.7	V / 1.0 / 90.0	-15.3	N/A
570.78	33.4 Qp	1.4 / 19.9 / 22.2	32.5	V / 1.0 / 90.0	-13.5	N/A
574.96	32.7 Qp	1.4 / 20.1 / 22.2	32.0	V / 1.0 / 90.0	-14.0	N/A
579.16	35.6 Qp	1.4 / 20.1 / 22.2	34.9	V / 1.0 / 90.0	-11.1	N/A
583.36	34.7 Qp	1.4 / 20.1 / 22.2	33.9	V / 1.0 / 90.0	-12.1	N/A
587.56	36.8 Qp	1.4 / 20.0 / 22.3	36.0	V / 1.0 / 90.0	-10.0	N/A
591.75	34.5 Qp	1.4 / 20.0 / 22.3	33.6	V / 1.0 / 90.0	-12.4	N/A
595.95	36.6 Qp	1.4 / 20.0 / 22.3	35.8	V / 1.0 / 90.0	-10.2	N/A
600.15	33.7 Qp	1.4 / 20.0 / 22.3	32.8	V / 1.0 / 90.0	-13.2	N/A
608.54	32.8 Qp	1.4 / 20.3 / 22.7	31.8	V / 1.0 / 90.0	-14.2	N/A
616.94	30.1 Qp	1.4 / 20.6 / 23.0	29.1	V / 1.0 / 90.0	-16.9	N/A
625.34	30.4 Qp	1.4 / 20.9 / 23.3	29.5	V / 1.0 / 90.0	-16.5	N/A
633.72	30.2 Qp	1.4 / 20.9 / 23.6	28.9	V / 1.0 / 90.0	-17.1	N/A
637.92	35.9 Qp	1.4 / 21.0 / 23.8	34.5	V / 1.0 / 90.0	-11.5	N/A
642.10	30.1 Qp	1.4 / 21.0 / 23.9	28.6	V / 1.0 / 90.0	-17.4	N/A
646.30	37.9 Qp	1.4 / 21.0 / 24.1	36.2	V / 1.0 / 90.0	-9.8	N/A
650.50	30.7 Qp	1.5 / 21.0 / 24.3	28.9	V / 1.0 / 90.0	-17.1	N/A
654.70	37.2 Qp	1.5 / 21.0 / 24.4	35.3	V / 1.0 / 90.0	-10.7	N/A
658.90	29.4 Qp	1.5 / 21.0 / 24.6	27.3	V / 1.0 / 90.0	-18.7	N/A
663.10	35.6 Qp	1.5 / 20.9 / 24.7	33.3	V / 1.0 / 90.0	-12.7	N/A
667.29	28.2 Qp	1.5 / 20.9 / 24.9	25.7	V / 1.0 / 90.0	-20.3	N/A
671.49	33.6 Qp	1.5 / 20.9 / 25.1	31.0	V / 1.0 / 90.0	-15.0	N/A

Tested by: **Dan Dillon**  
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Reviewed by: **Todd Seeley**  
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# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**

Temperature: **24** °C  
 Relative Humidity: **<26** %  
 Air Pressure: **80** kPa  
 Page: **9 of 35**

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
675.69	27.7 Qp	1.5 / 20.9 / 25.2	24.8	V / 1.0 / 90.0	-21.2	N/A
679.89	33.6 Qp	1.5 / 20.9 / 25.4	30.6	V / 1.0 / 90.0	-15.4	N/A
684.09	27.9 Qp	1.5 / 20.9 / 25.5	24.7	V / 1.0 / 90.0	-21.3	N/A
688.27	33.6 Qp	1.5 / 20.8 / 25.7	30.3	V / 1.0 / 90.0	-15.7	N/A
692.47	28.3 Qp	1.5 / 20.8 / 25.9	24.8	V / 1.0 / 90.0	-21.2	N/A
696.67	35.2 Qp	1.5 / 20.8 / 26.0	31.5	V / 1.0 / 90.0	-14.5	N/A
700.87	29.2 Qp	1.5 / 20.8 / 26.1	25.3	V / 1.0 / 90.0	-20.7	N/A
705.07	36.7 Qp	1.5 / 20.8 / 25.9	33.1	V / 1.0 / 90.0	-12.9	N/A
709.27	28.7 Qp	1.5 / 20.8 / 25.7	25.3	V / 1.0 / 90.0	-20.7	N/A
713.46	35.4 Qp	1.5 / 20.9 / 25.5	32.2	V / 1.0 / 90.0	-13.8	N/A
721.84	36.3 Qp	1.5 / 20.9 / 25.2	33.6	V / 1.0 / 90.0	-12.4	N/A
730.24	36.4 Qp	1.5 / 21.0 / 24.8	34.1	V / 1.0 / 90.0	-11.9	N/A
738.64	38.1 Qp	1.5 / 21.1 / 24.4	36.4	V / 1.0 / 90.0	-9.6	N/A
747.04	38.6 Qp	1.5 / 21.3 / 24.0	37.3	V / 1.0 / 90.0	-8.7	N/A
755.44	36.9 Qp	1.6 / 21.4 / 23.6	36.2	V / 1.0 / 90.0	-9.8	N/A
763.81	37.1 Qp	1.6 / 21.6 / 23.2	37.0	V / 1.0 / 90.0	-9.0	N/A
772.21	37.4 Qp	1.6 / 21.7 / 22.9	37.9	V / 1.0 / 90.0	-8.1	N/A
776.41	29.4 Qp	1.6 / 21.8 / 22.7	30.1	V / 1.0 / 90.0	-15.9	N/A
780.61	36.8 Qp	1.6 / 21.9 / 22.5	37.7	V / 1.0 / 90.0	-8.3	N/A
788.99	34.4 Qp	1.6 / 22.0 / 22.1	35.8	V / 1.0 / 90.0	-10.2	N/A
793.19	26.8 Qp	1.6 / 22.0 / 21.9	28.5	V / 1.0 / 90.0	-17.5	N/A
797.39	34.2 Qp	1.6 / 22.1 / 21.7	36.1	V / 1.0 / 90.0	-9.9	N/A
805.79	33.6 Qp	1.6 / 22.2 / 21.6	35.8	V / 1.0 / 90.0	-10.2	N/A
809.99	25.9 Qp	1.6 / 22.3 / 21.5	28.3	V / 1.0 / 90.0	-17.7	N/A
814.19	34.6 Qp	1.6 / 22.3 / 21.5	37.0	V / 1.0 / 90.0	-9.0	N/A
818.39	26.4 Qp	1.6 / 22.4 / 21.5	29.0	V / 1.0 / 90.0	-17.0	N/A
822.57	34.9 Qp	1.6 / 22.5 / 21.4	37.5	V / 1.0 / 90.0	-8.5	N/A
826.77	26.6 Qp	1.6 / 22.5 / 21.4	29.3	V / 1.0 / 90.0	-16.7	N/A

Tested by: **Dan Dillon**  
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Reviewed by: **Todd Seeley**  
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 Signature

# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**

Temperature: **24 °C**  
 Relative Humidity: **<26 %**  
 Air Pressure: **80 kPa**  
 Page: **10 of 35**

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
830.97	34.6 Qp	1.6 / 22.6 / 21.4	37.5	V / 1.0 / 90.0	-8.5	N/A
839.37	34.6 Qp	1.7 / 22.7 / 21.3	37.6	V / 1.0 / 90.0	-8.4	N/A
843.54	27.6 Qp	1.7 / 22.7 / 21.3	30.7	V / 1.0 / 90.0	-15.3	N/A
847.74	34.9 Qp	1.7 / 22.8 / 21.2	38.1	V / 1.0 / 90.0	-7.9	N/A
910.70	26.5 Qp	1.8 / 24.6 / 20.8	32.1	V / 1.0 / 90.0	-13.9	N/A
914.90	31.6 Qp	1.8 / 24.8 / 20.8	37.3	V / 1.0 / 90.0	-8.7	N/A
432.52	33.3 Qp	1.2 / 16.8 / 21.8	29.4	V / 1.0 / 180.0	-16.6	N/A
474.31	33.1 Qp	1.2 / 17.7 / 21.8	30.3	V / 1.0 / 180.0	-15.7	N/A
474.31	33.2 Qp	1.2 / 17.7 / 21.8	30.4	V / 1.0 / 180.0	-15.6	N/A
238.38	30.8 Qp	0.8 / 14.3 / 22.1	23.8	V / 1.0 / 180.0	-22.2	N/A
280.03	27.4 Qp	0.9 / 14.2 / 22.1	20.4	V / 1.0 / 180.0	-25.6	N/A
294.91	27.9 Qp	0.9 / 14.3 / 22.1	21.0	V / 1.0 / 180.0	-25.0	N/A
314.56	27.4 Qp	0.9 / 14.4 / 22.0	20.7	V / 1.0 / 180.0	-25.3	N/A
420.26	27.3 Qp	1.1 / 16.9 / 21.8	23.5	V / 1.0 / 180.0	-22.5	N/A
422.71	30.4 Qp	1.1 / 16.8 / 21.8	26.5	V / 1.0 / 180.0	-19.5	N/A
425.17	30.4 Qp	1.2 / 16.7 / 21.8	26.4	V / 1.0 / 180.0	-19.6	N/A
430.08	29.1 Qp	1.2 / 16.7 / 21.8	25.2	V / 1.0 / 180.0	-20.8	N/A
435.00	32.0 Qp	1.2 / 16.8 / 21.8	28.2	V / 1.0 / 180.0	-17.8	N/A
439.93	29.4 Qp	1.2 / 16.8 / 21.8	25.6	V / 1.0 / 180.0	-20.4	N/A
442.37	32.4 Qp	1.2 / 16.8 / 21.8	28.6	V / 1.0 / 180.0	-17.4	N/A
449.75	27.9 Qp	1.2 / 16.9 / 21.8	24.2	V / 1.0 / 180.0	-21.8	N/A
452.21	32.8 Qp	1.2 / 17.0 / 21.8	29.2	V / 1.0 / 180.0	-16.8	N/A
454.67	28.2 Qp	1.2 / 17.0 / 21.8	24.7	V / 1.0 / 180.0	-21.3	N/A
459.56	29.2 Qp	1.2 / 17.2 / 21.8	25.9	V / 1.0 / 180.0	-20.1	N/A
462.02	32.5 Qp	1.2 / 17.3 / 21.8	29.3	V / 1.0 / 180.0	-16.7	N/A
464.49	27.8 Qp	1.2 / 17.4 / 21.8	24.6	V / 1.0 / 180.0	-21.4	N/A
466.94	28.9 Qp	1.2 / 17.4 / 21.8	25.7	V / 1.0 / 180.0	-20.3	N/A

Tested by: **Dan Dillon**

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Reviewed by: **Todd Seeley**

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# Radiated Electromagnetic Emissions



Test Report #: BC201533 Run 1      Test Area: Pinewood Site 1 (3m)  
 Test Method: FCC Part 15      Test Date: 25-Mar-2002  
 EUT Model #: AMS-SM01      EUT Power: 120 VAC / 60 Hz  
 EUT Serial #: 103  
 Manufacturer: Alcohol Monitoring Systems  
 EUT Description: Smart Modem  
 Notes: RF off, modem continuously calling and transferring data.

Temperature: 24 °C  
 Relative Humidity: <26 %  
 Air Pressure: 80 kPa  
 Page: 11 of 35

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
469.40	27.2 Qp	1.2 / 17.5 / 21.8	24.1	V / 1.0 / 180.0	-21.9	N/A
471.87	29.2 Qp	1.2 / 17.6 / 21.8	26.3	V / 1.0 / 180.0	-19.7	N/A
476.79	28.4 Qp	1.3 / 17.7 / 21.8	25.6	V / 1.0 / 180.0	-20.4	N/A
479.25	29.3 Qp	1.3 / 17.8 / 21.8	26.6	V / 1.0 / 180.0	-19.4	N/A
481.70	32.5 Qp	1.3 / 17.9 / 21.8	29.9	V / 1.0 / 180.0	-16.1	N/A
484.15	27.4 Qp	1.3 / 17.9 / 21.8	24.8	V / 1.0 / 180.0	-21.2	N/A
489.07	27.8 Qp	1.3 / 18.0 / 21.8	25.4	V / 1.0 / 180.0	-20.6	N/A
491.53	32.3 Qp	1.3 / 18.1 / 21.8	29.9	V / 1.0 / 180.0	-16.1	N/A
493.99	29.5 Qp	1.3 / 18.2 / 21.8	27.2	V / 1.0 / 180.0	-18.8	N/A
498.91	30.9 Qp	1.3 / 18.3 / 21.8	28.8	V / 1.0 / 180.0	-17.2	N/A
501.35	34.4 Qp	1.3 / 18.3 / 21.8	32.2	V / 1.0 / 180.0	-13.8	N/A
503.81	28.4 Qp	1.3 / 18.2 / 21.8	26.1	V / 1.0 / 180.0	-19.9	N/A
506.27	28.6 Qp	1.3 / 18.2 / 21.8	26.3	V / 1.0 / 180.0	-19.7	N/A
508.73	30.4 Qp	1.3 / 18.1 / 21.8	28.1	V / 1.0 / 180.0	-17.9	N/A
511.19	33.4 Qp	1.3 / 18.1 / 21.8	30.9	V / 1.0 / 180.0	-15.1	N/A
513.65	28.8 Qp	1.3 / 18.0 / 21.8	26.3	V / 1.0 / 180.0	-19.7	N/A
516.11	27.6 Qp	1.3 / 18.0 / 21.8	25.1	V / 1.0 / 180.0	-20.9	N/A
518.57	29.9 Qp	1.3 / 17.9 / 21.9	27.2	V / 1.0 / 180.0	-18.8	N/A
521.00	33.4 Qp	1.3 / 17.9 / 21.9	30.7	V / 1.0 / 180.0	-15.3	N/A
525.92	27.4 Qp	1.3 / 17.8 / 21.9	24.7	V / 1.0 / 180.0	-21.3	N/A
528.38	29.0 Qp	1.3 / 18.0 / 21.9	26.4	V / 1.0 / 180.0	-19.6	N/A
530.84	34.4 Qp	1.3 / 18.1 / 21.9	31.9	V / 1.0 / 180.0	-14.1	N/A
533.30	28.2 Qp	1.3 / 18.2 / 21.9	25.8	V / 1.0 / 180.0	-20.2	N/A
540.68	31.4 Qp	1.3 / 18.6 / 22.0	29.3	V / 1.0 / 180.0	-16.7	N/A
545.60	26.2 Qp	1.3 / 18.9 / 22.0	24.4	V / 1.0 / 180.0	-21.6	N/A
557.88	27.2 Qp	1.4 / 19.4 / 22.1	25.9	V / 1.0 / 180.0	-20.1	N/A
560.34	30.7 Qp	1.4 / 19.5 / 22.1	29.5	V / 1.0 / 180.0	-16.5	N/A
565.25	26.4 Qp	1.4 / 19.7 / 22.1	25.4	V / 1.0 / 180.0	-20.6	N/A

Tested by: Dan Dillon

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Reviewed by: Todd Seeley

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# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**

Temperature: **24 °C**  
 Relative Humidity: **<26 %**  
 Air Pressure: **80 kPa**  
 Page: **12 of 35**

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
567.72	27.7 Qp	1.4 / 19.8 / 22.1	26.7	V / 1.0 / 180.0	-19.3	N/A
570.17	29.9 Qp	1.4 / 19.9 / 22.2	29.0	V / 1.0 / 180.0	-17.0	N/A
570.17	29.9 Qp	1.4 / 19.9 / 22.2	29.1	V / 1.0 / 180.0	-16.9	N/A
587.37	26.8 Qp	1.4 / 20.1 / 22.3	25.9	V / 1.0 / 180.0	-20.1	N/A
589.83	25.9 Qp	1.4 / 20.0 / 22.3	25.1	V / 1.0 / 180.0	-20.9	N/A
592.29	24.7 Qp	1.4 / 20.0 / 22.3	23.8	V / 1.0 / 180.0	-22.2	N/A
597.21	27.4 Qp	1.4 / 20.0 / 22.3	26.5	V / 1.0 / 180.0	-19.5	N/A
599.67	27.6 Qp	1.4 / 20.0 / 22.3	26.6	V / 1.0 / 180.0	-19.4	N/A
604.57	26.3 Qp	1.4 / 20.2 / 22.5	25.4	V / 1.0 / 180.0	-20.6	N/A
607.02	26.6 Qp	1.4 / 20.3 / 22.6	25.6	V / 1.0 / 180.0	-20.4	N/A
626.67	26.2 Qp	1.4 / 20.9 / 23.3	25.1	V / 1.0 / 180.0	-20.9	N/A
629.13	26.2 Qp	1.4 / 20.9 / 23.4	25.1	V / 1.0 / 180.0	-20.9	N/A
631.60	26.2 Qp	1.4 / 20.9 / 23.5	25.0	V / 1.0 / 180.0	-21.0	N/A
641.43	27.4 Qp	1.4 / 21.0 / 23.9	25.8	V / 1.0 / 180.0	-20.2	N/A
643.89	26.2 Qp	1.4 / 21.0 / 24.0	24.6	V / 1.0 / 180.0	-21.4	N/A
648.82	31.4 Qp	1.4 / 21.0 / 24.2	29.6	V / 1.0 / 180.0	-16.4	N/A
651.26	31.1 Qp	1.5 / 21.0 / 24.3	29.2	V / 1.0 / 180.0	-16.8	N/A
653.73	27.0 Qp	1.5 / 21.0 / 24.4	25.1	V / 1.0 / 180.0	-20.9	N/A
658.63	26.7 Qp	1.5 / 21.0 / 24.6	24.5	V / 1.0 / 180.0	-21.5	N/A
661.10	27.8 Qp	1.5 / 21.0 / 24.7	25.6	V / 1.0 / 180.0	-20.4	N/A
668.48	28.2 Qp	1.5 / 20.9 / 24.9	25.6	V / 1.0 / 180.0	-20.4	N/A
670.93	29.3 Qp	1.5 / 20.9 / 25.0	26.6	V / 1.0 / 180.0	-19.4	N/A
673.38	25.8 Qp	1.5 / 20.9 / 25.1	23.0	V / 1.0 / 180.0	-23.0	N/A
678.30	27.4 Qp	1.5 / 20.9 / 25.3	24.4	V / 1.0 / 180.0	-21.6	N/A
680.76	26.2 Qp	1.5 / 20.9 / 25.4	23.2	V / 1.0 / 180.0	-22.8	N/A
688.14	29.1 Qp	1.5 / 20.8 / 25.7	25.7	V / 1.0 / 180.0	-20.3	N/A
690.58	27.1 Qp	1.5 / 20.8 / 25.8	23.6	V / 1.0 / 180.0	-22.4	N/A
697.96	29.2 Qp	1.5 / 20.8 / 26.1	25.4	V / 1.0 / 180.0	-20.6	N/A

Tested by: **Dan Dillon**

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Reviewed by: **Todd Seeley**

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Signature

# Radiated Electromagnetic Emissions



Test Report #: BC201533 Run 1      Test Area: Pinewood Site 1 (3m)  
 Test Method: FCC Part 15      Test Date: 25-Mar-2002  
 EUT Model #: AMS-SM01      EUT Power: 120 VAC / 60 Hz  
 EUT Serial #: 103  
 Manufacturer: Alcohol Monitoring Systems  
 EUT Description: Smart Modem

Temperature: 24 °C  
 Relative Humidity: <26 %  
 Air Pressure: 80 kPa  
 Page: 13 of 35

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

Notes: RF off, modem continuously calling and transferring data.

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
700.42	25.8 Qp	1.5 / 20.8 / 26.1	22.0	V / 1.0 / 180.0	-24.0	N/A
707.80	30.1 Qp	1.5 / 20.8 / 25.8	26.6	V / 1.0 / 180.0	-19.4	N/A
710.26	27.2 Qp	1.5 / 20.8 / 25.7	23.9	V / 1.0 / 180.0	-22.1	N/A
717.62	29.6 Qp	1.5 / 20.9 / 25.3	26.6	V / 1.0 / 180.0	-19.4	N/A
727.46	29.0 Qp	1.5 / 20.9 / 24.9	26.6	V / 1.0 / 180.0	-19.4	N/A
737.28	29.2 Qp	1.5 / 21.1 / 24.5	27.3	V / 1.0 / 180.0	-18.7	N/A
747.11	27.9 Qp	1.5 / 21.3 / 24.0	26.7	V / 1.0 / 180.0	-19.3	N/A
756.95	24.9 Qp	1.6 / 21.4 / 23.6	24.3	V / 1.0 / 180.0	-21.7	N/A
796.26	25.5 Qp	1.6 / 22.1 / 21.8	27.4	V / 1.0 / 180.0	-18.6	N/A
806.10	24.6 Qp	1.6 / 22.2 / 21.6	26.8	V / 1.0 / 180.0	-19.2	N/A
202.75	30.4 Qp	0.8 / 11.8 / 22.1	20.9	V / 1.0 / 270.0	-22.6	N/A
210.16	31.2 Qp	0.8 / 12.6 / 22.1	22.4	V / 1.0 / 270.0	-21.1	N/A
294.91	29.4 Qp	0.9 / 14.3 / 22.1	22.6	V / 1.0 / 270.0	-23.4	N/A
481.70	33.2 Qp	1.3 / 17.9 / 21.8	30.6	V / 1.0 / 270.0	-15.4	N/A
484.15	28.9 Qp	1.3 / 17.9 / 21.8	26.3	V / 1.0 / 270.0	-19.7	N/A
489.07	29.1 Qp	1.3 / 18.0 / 21.8	26.7	V / 1.0 / 270.0	-19.3	N/A
491.53	33.0 Qp	1.3 / 18.1 / 21.8	30.6	V / 1.0 / 270.0	-15.4	N/A
493.99	31.3 Qp	1.3 / 18.2 / 21.8	29.0	V / 1.0 / 270.0	-17.0	N/A
501.35	36.0 Qp	1.3 / 18.3 / 21.8	33.8	V / 1.0 / 270.0	-12.2	N/A
503.81	30.9 Qp	1.3 / 18.2 / 21.8	28.6	V / 1.0 / 270.0	-17.4	N/A
508.73	30.9 Qp	1.3 / 18.1 / 21.8	28.5	V / 1.0 / 270.0	-17.5	N/A
511.19	36.2 Qp	1.3 / 18.1 / 21.8	33.8	V / 1.0 / 270.0	-12.2	N/A
513.65	31.1 Qp	1.3 / 18.0 / 21.8	28.6	V / 1.0 / 270.0	-17.4	N/A
516.11	29.7 Qp	1.3 / 18.0 / 21.8	27.1	V / 1.0 / 270.0	-18.9	N/A
521.00	35.9 Qp	1.3 / 17.9 / 21.9	33.2	V / 1.0 / 270.0	-12.8	N/A
525.92	28.7 Qp	1.3 / 17.8 / 21.9	26.0	V / 1.0 / 270.0	-20.0	N/A
533.30	29.2 Qp	1.3 / 18.2 / 21.9	26.8	V / 1.0 / 270.0	-19.2	N/A

Tested by: Dan Dillon

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Reviewed by: Todd Seeley

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Signature



# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: FCC Part 15  
 EUT Model #: AMS-SM01  
 EUT Serial #: 103  
 Manufacturer: Alcohol Monitoring Systems  
 EUT Description: Smart Modem  
 Notes: RF off, modem continuously calling and transferring data.

Test Area: Pinewood Site 1 (3m)  
 Test Date: 25-Mar-2002  
 EUT Power: 120 VAC / 60 Hz

Temperature: 24 °C  
 Relative Humidity: <26 %  
 Air Pressure: 80 kPa  
 Page: 14 of 35

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ (MHz)	LEVEL (dBuV)	CABLE / ANT / PREAMP (dB) (dB/m) (dB)	FINAL (dBuV/m)	POL / HGT / AZ (m) (DEG)	DELTA1 (dB) FCC B (< 1GHz)	DELTA2 (dB) N/A
540.68	33.1 Qp	1.3 / 18.6 / 22.0	31.1	V / 1.0 / 270.0	-14.9	N/A
587.37	27.8 Qp	1.4 / 20.1 / 22.3	27.0	V / 1.0 / 270.0	-19.0	N/A
589.83	26.5 Qp	1.4 / 20.0 / 22.3	25.7	V / 1.0 / 270.0	-20.3	N/A
678.30	28.3 Qp	1.5 / 20.9 / 25.3	25.3	V / 1.0 / 270.0	-20.7	N/A
680.76	27.9 Qp	1.5 / 20.9 / 25.4	24.8	V / 1.0 / 270.0	-21.2	N/A
The following were maximized between 200 and 1000 MHz, vertical						
214.04 MHz was from the support equipment and was deleted from the summary						
537.19 MHz was from the support equipment and was deleted from the summary						
587.56 MHz was from the support equipment and was deleted from the summary						
646.3 MHz was from the support equipment and was deleted from the summary						
738.64 MHz was from the support equipment and was deleted from the summary						
747.11	33.6 Qp	1.5 / 21.3 / 24.0	32.4	V / 1.6 / 323.0	-13.6	N/A
755.44 MHz was from the support equipment and was deleted from the summary						
763.81 MHz was from the support equipment and was deleted from the summary						
772.21 MHz was from the support equipment and was deleted from the summary						
780.61 MHz was from the support equipment and was deleted from the summary						
797.39 MHz was from the support equipment and was deleted from the summary						
814.19 MHz was from the support equipment and was deleted from the summary						
822.57, 830.97, 839.37, 847.74, 864.54, 914.9, 923.3, 931.7, 940.1, 948.48, 956.86 MHz were all from support equipment and were deleted from the summary						
501.35	38.0 Qp	1.3 / 18.3 / 21.8	35.8	V / 1.0 / 330.0	-10.2	N/A
511.19	37.3 Qp	1.3 / 18.1 / 21.8	34.9	V / 1.0 / 324.0	-11.1	N/A

Tested by: **Dan Dillon**  
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Reviewed by: **Todd Seeley**  
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 Signature

# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**

Temperature: **24 °C**  
 Relative Humidity: **<26 %**  
 Air Pressure: **80 kPa**  
 Page: **15 of 35**

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
521.00	39.5 Qp	1.3 / 17.9 / 21.9	36.8	V / 1.0 / 325.0	-9.2	N/A
200.03	28.9 Qp	0.8 / 11.5 / 22.1	19.1	H / 2.0 / 0.0	-24.4	N/A
314.56	26.4 Qp	0.9 / 14.4 / 22.0	19.8	H / 2.0 / 0.0	-26.2	N/A
340.03	28.2 Qp	1.0 / 14.6 / 22.0	21.8	H / 2.0 / 0.0	-24.2	N/A
340.03	27.8 Qp	1.0 / 14.6 / 22.0	21.5	H / 2.0 / 0.0	-24.5	N/A
442.37	26.6 Qp	1.2 / 16.8 / 21.8	22.8	H / 2.0 / 0.0	-23.2	N/A
452.21	29.5 Qp	1.2 / 17.0 / 21.8	25.9	H / 2.0 / 0.0	-20.1	N/A
454.67	28.1 Qp	1.2 / 17.0 / 21.8	24.6	H / 2.0 / 0.0	-21.4	N/A
462.02	29.8 Qp	1.2 / 17.3 / 21.8	26.5	H / 2.0 / 0.0	-19.5	N/A
464.49	27.8 Qp	1.2 / 17.4 / 21.8	24.6	H / 2.0 / 0.0	-21.4	N/A
469.40	30.2 Qp	1.2 / 17.5 / 21.8	27.2	H / 2.0 / 0.0	-18.8	N/A
471.87	33.2 Qp	1.2 / 17.6 / 21.8	30.3	H / 2.0 / 0.0	-15.7	N/A
474.31	30.9 Qp	1.2 / 17.7 / 21.8	28.0	H / 2.0 / 0.0	-18.0	N/A
626.67	28.2 Qp	1.4 / 20.9 / 23.3	27.2	H / 1.5 / 0.0	-18.8	N/A
629.13	31.7 Qp	1.4 / 20.9 / 23.4	30.6	H / 1.5 / 0.0	-15.4	N/A
631.60	28.4 Qp	1.4 / 20.9 / 23.5	27.2	H / 1.5 / 0.0	-18.8	N/A
658.63	28.8 Qp	1.5 / 21.0 / 24.6	26.6	H / 1.5 / 0.0	-19.4	N/A
661.10	30.1 Qp	1.5 / 21.0 / 24.7	27.9	H / 1.5 / 0.0	-18.1	N/A
668.48	29.2 Qp	1.5 / 20.9 / 24.9	26.7	H / 1.5 / 0.0	-19.3	N/A
670.93	30.6 Qp	1.5 / 20.9 / 25.0	27.9	H / 1.5 / 0.0	-18.1	N/A
673.38	26.7 Qp	1.5 / 20.9 / 25.1	23.9	H / 1.5 / 0.0	-22.1	N/A
678.30	28.4 Qp	1.5 / 20.9 / 25.3	25.5	H / 1.5 / 0.0	-20.5	N/A
688.14	29.9 Qp	1.5 / 20.8 / 25.7	26.5	H / 1.5 / 0.0	-19.5	N/A
690.58	30.1 Qp	1.5 / 20.8 / 25.8	26.6	H / 1.5 / 0.0	-19.4	N/A
697.96	32.3 Qp	1.5 / 20.8 / 26.1	28.5	H / 1.5 / 0.0	-17.5	N/A
700.42	30.3 Qp	1.5 / 20.8 / 26.1	26.5	H / 1.5 / 0.0	-19.5	N/A

Tested by: **Dan Dillon**

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Reviewed by: **Todd Seeley**

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# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**

Temperature: **24** °C  
 Relative Humidity: **<26** %  
 Air Pressure: **80** kPa  
 Page: **16 of 35**

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
707.80	31.2 Qp	1.5 / 20.8 / 25.8	27.7	H / 1.5 / 0.0	-18.3	N/A
710.26	30.4 Qp	1.5 / 20.8 / 25.7	27.1	H / 1.5 / 0.0	-18.9	N/A
717.62	34.4 Qp	1.5 / 20.9 / 25.3	31.4	H / 1.5 / 0.0	-14.6	N/A
727.46	34.5 Qp	1.5 / 20.9 / 24.9	32.1	H / 1.5 / 0.0	-13.9	N/A
737.28	36.0 Qp	1.5 / 21.1 / 24.5	34.2	H / 1.5 / 0.0	-11.8	N/A
747.11	34.9 Qp	1.5 / 21.3 / 24.0	33.7	H / 1.5 / 0.0	-12.3	N/A
756.95	34.4 Qp	1.6 / 21.4 / 23.6	33.8	H / 1.5 / 0.0	-12.2	N/A
776.59	33.3 Qp	1.6 / 21.8 / 22.7	34.0	H / 1.5 / 0.0	-12.0	N/A
796.26	28.2 Qp	1.6 / 22.1 / 21.8	30.1	H / 1.5 / 0.0	-15.9	N/A
766.77	33.0 Qp	1.6 / 21.6 / 23.1	33.1	H / 1.5 / 0.0	-12.9	N/A
786.43	32.5 Qp	1.6 / 21.9 / 22.2	33.9	H / 1.5 / 0.0	-12.1	N/A
454.67	28.7 Qp	1.2 / 17.0 / 21.8	25.1	H / 2.0 / 90.0	-20.9	N/A
528.38	28.8 Qp	1.3 / 18.0 / 21.9	26.2	H / 1.5 / 90.0	-19.8	N/A
530.84	32.9 Qp	1.3 / 18.1 / 21.9	30.4	H / 1.5 / 90.0	-15.6	N/A
533.30	29.2 Qp	1.3 / 18.2 / 21.9	26.9	H / 1.5 / 90.0	-19.1	N/A
540.68	35.3 Qp	1.3 / 18.6 / 22.0	33.3	H / 1.5 / 90.0	-12.7	N/A
557.88	30.5 Qp	1.4 / 19.4 / 22.1	29.2	H / 1.5 / 90.0	-16.8	N/A
560.34	34.0 Qp	1.4 / 19.5 / 22.1	32.7	H / 1.5 / 90.0	-13.3	N/A
565.25	29.1 Qp	1.4 / 19.7 / 22.1	28.0	H / 1.5 / 90.0	-18.0	N/A
567.72	30.3 Qp	1.4 / 19.8 / 22.1	29.3	H / 1.5 / 90.0	-16.7	N/A
587.37	28.2 Qp	1.4 / 20.1 / 22.3	27.4	H / 1.5 / 90.0	-18.6	N/A
592.29	28.1 Qp	1.4 / 20.0 / 22.3	27.2	H / 1.5 / 90.0	-18.8	N/A
597.21	30.4 Qp	1.4 / 20.0 / 22.3	29.5	H / 1.5 / 90.0	-16.5	N/A
599.67	29.6 Qp	1.4 / 20.0 / 22.3	28.6	H / 1.5 / 90.0	-17.4	N/A
604.57	28.8 Qp	1.4 / 20.2 / 22.5	27.8	H / 1.5 / 90.0	-18.2	N/A
678.30	29.7 Qp	1.5 / 20.9 / 25.3	26.7	H / 1.5 / 90.0	-19.3	N/A

Tested by: **Dan Dillon**

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Reviewed by: **Todd Seeley**

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# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**  
 Temperature: **24 °C**  
 Relative Humidity: **<26 %**  
 Air Pressure: **80 kPa**  
 Page: **17 of 35**

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
420.26	28.1 Qp	1.1 / 16.9 / 21.8	24.3	H / 2.0 / 180.0	-21.7	N/A
422.71	30.9 Qp	1.1 / 16.8 / 21.8	27.0	H / 2.0 / 180.0	-19.0	N/A
454.67	29.3 Qp	1.2 / 17.0 / 21.8	25.8	H / 2.0 / 180.0	-20.2	N/A
474.31	29.4 Qp	1.2 / 17.7 / 21.8	26.6	H / 2.0 / 180.0	-19.4	N/A
518.57	30.8 Qp	1.3 / 17.9 / 21.9	28.1	H / 1.5 / 180.0	-17.9	N/A
528.38	30.9 Qp	1.3 / 18.0 / 21.9	28.3	H / 1.5 / 180.0	-17.7	N/A
533.30	31.1 Qp	1.3 / 18.2 / 21.9	28.7	H / 1.5 / 180.0	-17.3	N/A
540.68	37.2 Qp	1.3 / 18.6 / 22.0	35.2	H / 1.5 / 180.0	-10.8	N/A
557.88	30.7 Qp	1.4 / 19.4 / 22.1	29.3	H / 1.5 / 180.0	-16.7	N/A
560.34	34.5 Qp	1.4 / 19.5 / 22.1	33.2	H / 1.5 / 180.0	-12.8	N/A
570.17	32.5 Qp	1.4 / 19.9 / 22.2	31.7	H / 1.5 / 180.0	-14.3	N/A
587.37	31.9 Qp	1.4 / 20.1 / 22.3	31.1	H / 1.5 / 180.0	-14.9	N/A
589.83	31.9 Qp	1.4 / 20.0 / 22.3	31.1	H / 1.5 / 180.0	-14.9	N/A
599.67	30.0 Qp	1.4 / 20.0 / 22.3	29.1	H / 1.5 / 180.0	-16.9	N/A
607.02	29.5 Qp	1.4 / 20.3 / 22.6	28.6	H / 1.5 / 180.0	-17.4	N/A
626.67	29.3 Qp	1.4 / 20.9 / 23.3	28.3	H / 1.5 / 180.0	-17.7	N/A
631.60	29.7 Qp	1.4 / 20.9 / 23.5	28.5	H / 1.5 / 180.0	-17.5	N/A
641.43	30.8 Qp	1.4 / 21.0 / 23.9	29.3	H / 1.5 / 180.0	-16.7	N/A
643.89	28.8 Qp	1.4 / 21.0 / 24.0	27.2	H / 1.5 / 180.0	-18.8	N/A
651.26	34.2 Qp	1.5 / 21.0 / 24.3	32.4	H / 1.5 / 180.0	-13.6	N/A
653.73	30.1 Qp	1.5 / 21.0 / 24.4	28.1	H / 1.5 / 180.0	-17.9	N/A
658.63	31.0 Qp	1.5 / 21.0 / 24.6	28.9	H / 1.5 / 180.0	-17.1	N/A
661.10	32.5 Qp	1.5 / 21.0 / 24.7	30.2	H / 1.5 / 180.0	-15.8	N/A
668.48	31.4 Qp	1.5 / 20.9 / 24.9	28.8	H / 1.5 / 180.0	-17.2	N/A
670.93	32.5 Qp	1.5 / 20.9 / 25.0	29.8	H / 1.5 / 180.0	-16.2	N/A
673.38	28.4 Qp	1.5 / 20.9 / 25.1	25.6	H / 1.5 / 180.0	-20.4	N/A
678.30	31.6 Qp	1.5 / 20.9 / 25.3	28.6	H / 1.5 / 180.0	-17.4	N/A
680.76	31.5 Qp	1.5 / 20.9 / 25.4	28.4	H / 1.5 / 180.0	-17.6	N/A

Tested by: **Dan Dillon**

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Reviewed by: **Todd Seeley**

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# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**

Temperature: **24 °C**  
 Relative Humidity: **<26 %**  
 Air Pressure: **80 kPa**  
 Page: **18 of 35**

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ (MHz)	LEVEL (dBuV)	CABLE / ANT / PREAMP (dB) (dB/m) (dB)	FINAL (dBuV/m)	POL / HGT / AZ (m) (DEG)	DELTA1 (dB) FCC B (< 1GHz)	DELTA2 (dB) N/A
688.14	33.0 Qp	1.5 / 20.8 / 25.7	29.7	H / 1.5 / 180.0	-16.3	N/A
690.58	32.5 Qp	1.5 / 20.8 / 25.8	29.0	H / 1.5 / 180.0	-17.0	N/A
697.96	32.7 Qp	1.5 / 20.8 / 26.1	28.9	H / 1.5 / 180.0	-17.1	N/A
806.10	24.9 Qp	1.6 / 22.2 / 21.6	27.2	H / 1.5 / 180.0	-18.8	N/A
700.42	30.0 Qp	1.5 / 20.8 / 26.1	26.2	H / 1.5 / 270.0	-19.8	N/A
707.80	30.3 Qp	1.5 / 20.8 / 25.8	26.8	H / 1.5 / 270.0	-19.2	N/A
The following were maximized between 200 and 1000 MHz, horizontal						
540.68	38.9 Qp	1.3 / 18.6 / 22.0	36.8	H / 3.3 / 338.0	-9.2	N/A
737.28	38.1 Qp	1.5 / 21.1 / 24.5	36.2	H / 1.3 / 356.0	-9.8	N/A
776.59	38.2 Qp	1.6 / 21.8 / 22.7	38.9	H / 1.1 / 350.0	-7.1	N/A
31.95	30.8 Pk	0.2 / 13.0 / 22.4	21.6	V / 1.0 / 0.0	-18.4	N/A
34.41	31.8 Qp	0.2 / 12.7 / 22.4	22.2	V / 1.0 / 0.0	-17.8	N/A
36.88	34.4 Qp	0.2 / 12.4 / 22.4	24.6	V / 1.0 / 0.0	-15.4	N/A
39.34	35.7 Qp	0.2 / 12.1 / 22.4	25.6	V / 1.0 / 0.0	-14.4	N/A
41.77	38.4 Qp	0.3 / 11.8 / 22.4	28.0	V / 1.0 / 0.0	-12.0	N/A
46.70	42.7 Qp	0.3 / 11.1 / 22.3	31.7	V / 1.0 / 0.0	-8.3	N/A
49.16	42.1 Qp	0.3 / 10.7 / 22.3	30.8	V / 1.0 / 0.0	-9.2	N/A
51.62	47.5 Qp	0.3 / 10.4 / 22.2	35.9	V / 1.0 / 0.0	-4.1	N/A
54.08	48.9 Qp	0.3 / 10.1 / 22.1	37.2	V / 1.0 / 0.0	-2.8	N/A
56.53	44.3 Qp	0.3 / 9.8 / 22.0	32.4	V / 1.0 / 0.0	-7.6	N/A
58.99	42.2 Qp	0.4 / 9.4 / 21.9	30.1	V / 1.0 / 0.0	-9.9	N/A
61.45	50.9 Qp	0.4 / 9.2 / 21.9	38.5	V / 1.0 / 0.0	-1.5	N/A

Tested by: **Dan Dillon**

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Reviewed by: **Todd Seeley**

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# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**

Temperature: **24** °C  
 Relative Humidity: **<26** %  
 Air Pressure: **80** kPa  
 Page: **19** of 35

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
63.91	44.7 Qp	0.4 / 9.0 / 21.9	32.2	V / 1.0 / 0.0	-7.8	N/A
66.38	37.8 Qp	0.4 / 8.8 / 21.9	25.2	V / 1.0 / 0.0	-14.8	N/A
68.83	31.7 Qp	0.4 / 8.7 / 21.9	19.0	V / 1.0 / 0.0	-21.0	N/A
71.27	37.3 Qp	0.4 / 8.7 / 21.9	24.6	V / 1.0 / 0.0	-15.4	N/A
73.72	39.1 Qp	0.5 / 8.7 / 21.9	26.4	V / 1.0 / 0.0	-13.6	N/A
76.19	44.5 Qp	0.5 / 8.5 / 21.9	31.5	V / 1.0 / 0.0	-8.5	N/A
78.64	38.5 Qp	0.5 / 8.2 / 22.0	25.2	V / 1.0 / 0.0	-14.8	N/A
81.11	33.4 Qp	0.5 / 7.9 / 22.0	19.7	V / 1.0 / 0.0	-20.3	N/A
83.56	32.2 Qp	0.5 / 7.8 / 22.2	18.4	V / 1.0 / 0.0	-21.6	N/A
86.03	32.3 Qp	0.5 / 7.7 / 22.3	18.3	V / 1.0 / 0.0	-21.7	N/A
90.94	37.1 Pk	0.6 / 8.0 / 22.5	23.2	V / 1.0 / 0.0	-20.3	N/A
103.24	30.6 Pk	0.6 / 9.2 / 22.5	17.9	V / 1.0 / 0.0	-25.6	N/A
108.16	32.1 Qp	0.6 / 9.8 / 22.5	20.1	V / 1.0 / 0.0	-23.4	N/A
110.59	35.2 Qp	0.6 / 10.2 / 22.5	23.6	V / 1.0 / 0.0	-19.9	N/A
113.06	31.4 Qp	0.6 / 10.5 / 22.5	20.1	V / 1.0 / 0.0	-23.4	N/A
115.52	32.6 Qp	0.6 / 10.8 / 22.4	21.6	V / 1.0 / 0.0	-21.9	N/A
117.97	31.4 Qp	0.6 / 11.0 / 22.4	20.6	V / 1.0 / 0.0	-22.9	N/A
120.44	35.6 Qp	0.6 / 11.2 / 22.4	25.0	V / 1.0 / 0.0	-18.5	N/A
122.89	33.5 Qp	0.6 / 11.5 / 22.4	23.2	V / 1.0 / 0.0	-20.3	N/A
125.36	33.0 Qp	0.6 / 11.7 / 22.4	22.9	V / 1.0 / 0.0	-20.6	N/A
127.81	31.4 Qp	0.6 / 11.9 / 22.4	21.5	V / 1.0 / 0.0	-22.0	N/A
130.25	33.5 Qp	0.6 / 12.0 / 22.4	23.7	V / 1.0 / 0.0	-19.8	N/A
132.72	30.9 Qp	0.6 / 12.1 / 22.4	21.3	V / 1.0 / 0.0	-22.2	N/A
135.18	31.4 Qp	0.7 / 12.1 / 22.4	21.8	V / 1.0 / 0.0	-21.7	N/A
137.63	31.6 Qp	0.7 / 12.2 / 22.4	22.0	V / 1.0 / 0.0	-21.5	N/A
140.09	34.6 Qp	0.7 / 12.2 / 22.4	25.2	V / 1.0 / 0.0	-18.3	N/A
142.56	32.0 Qp	0.7 / 12.2 / 22.4	22.6	V / 1.0 / 0.0	-20.9	N/A
145.01	31.4 Qp	0.7 / 12.2 / 22.3	21.9	V / 1.0 / 0.0	-21.6	N/A

Tested by: **Dan Dillon**  
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Reviewed by: **Todd Seeley**  
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 Signature

# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**

Temperature: **24 °C**  
 Relative Humidity: **<26 %**  
 Air Pressure: **80 kPa**  
 Page: **20 of 35**

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ (MHz)	LEVEL (dBuV)	CABLE / ANT / PREAMP (dB) (dB/m) (dB)	FINAL (dBuV/m)	POL / HGT / AZ (m) (DEG)	DELTA1 (dB) FCC B (< 1GHz)	DELTA2 (dB) N/A
147.47	31.1 Qp	0.7 / 12.3 / 22.3	21.7	V / 1.0 / 0.0	-21.8	N/A
149.94	34.3 Qp	0.7 / 12.4 / 22.3	25.0	V / 1.0 / 0.0	-18.5	N/A
152.39	36.2 Qp	0.7 / 12.4 / 22.3	27.0	V / 1.0 / 0.0	-16.5	N/A
159.77	31.7 Qp	0.7 / 12.5 / 22.3	22.6	V / 1.0 / 0.0	-20.9	N/A
169.59	29.2 Qp	0.7 / 12.6 / 22.3	20.3	V / 1.0 / 0.0	-23.2	N/A
176.96	31.2 Qp	0.7 / 12.8 / 22.2	22.5	V / 1.0 / 0.0	-21.0	N/A
180.03	36.5 Qp	0.7 / 13.0 / 22.2	28.0	V / 1.0 / 0.0	-15.5	N/A
40.02	39.6 Qp	0.3 / 12.0 / 22.4	29.4	V / 1.0 / 0.0	-10.6	N/A
Maximized the following						
61.45	51.9 Qp	0.4 / 9.2 / 21.9	39.5	V / 1.0 / 113.0	-0.5	N/A
Cables maximized						
61.45	53.6 Qp	0.4 / 9.2 / 21.9	41.2	V / 1.0 / 118.0	1.2 *	N/A
54.08	51.8 Qp	0.3 / 10.1 / 22.1	40.1	V / 1.0 / 150.0	0.1 *	N/A
61.45	52.3 Qp	0.4 / 9.2 / 21.9	40.0	V / 1.0 / 150.0	0.0 *	N/A
56.53	53.6 Qp	0.3 / 9.8 / 22.0	41.7	V / 1.0 / 0.0	1.7 *	N/A
61.45	53.1 Qp	0.4 / 9.2 / 21.9	40.7	V / 1.0 / 0.0	0.7 *	N/A
31.95	33.6 Pk	0.2 / 13.0 / 22.4	24.4	V / 1.0 / 90.0	-15.6	N/A
39.34	37.0 Qp	0.2 / 12.1 / 22.4	26.9	V / 1.0 / 90.0	-13.1	N/A
41.77	39.0 Qp	0.3 / 11.8 / 22.4	28.6	V / 1.0 / 90.0	-11.4	N/A
46.70	42.4 Qp	0.3 / 11.1 / 22.3	31.4	V / 1.0 / 90.0	-8.6	N/A
49.16	42.1 Qp	0.3 / 10.7 / 22.3	30.9	V / 1.0 / 90.0	-9.1	N/A
56.53	52.6 Qp	0.3 / 9.8 / 22.0	40.7	V / 1.0 / 90.0	0.7 *	N/A
58.99	42.0 Qp	0.4 / 9.4 / 21.9	29.8	V / 1.0 / 90.0	-10.2	N/A
58.99	43.2 Qp	0.4 / 9.4 / 21.9	31.1	V / 1.0 / 90.0	-8.9	N/A

Tested by: **Dan Dillon**  
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 Signature

Reviewed by: **Todd Seeley**  
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 Signature

# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**

Temperature: **24** °C  
 Relative Humidity: **<26** %  
 Air Pressure: **80** kPa  
 Page: **21** of 35

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ (MHz)	LEVEL (dBuV)	CABLE / ANT / PREAMP (dB) (dB/m) (dB)	FINAL (dBuV/m)	POL / HGT / AZ (m) (DEG)	DELTA1 (dB) FCC B (< 1GHz)	DELTA2 (dB) N/A
63.91	47.3 Qp	0.4 / 9.0 / 21.9	34.8	V / 1.0 / 90.0	-5.2	N/A
66.38	44.4 Qp	0.4 / 8.8 / 21.9	31.8	V / 1.0 / 90.0	-8.2	N/A
68.83	43.8 Qp	0.4 / 8.7 / 21.9	31.1	V / 1.0 / 90.0	-8.9	N/A
71.27	45.1 Qp	0.4 / 8.7 / 21.9	32.4	V / 1.0 / 90.0	-7.6	N/A
73.72	43.0 Qp	0.5 / 8.7 / 21.9	30.2	V / 1.0 / 90.0	-9.8	N/A
76.19	45.5 Qp	0.5 / 8.5 / 21.9	32.5	V / 1.0 / 90.0	-7.5	N/A
78.64	42.9 Qp	0.5 / 8.2 / 22.0	29.6	V / 1.0 / 90.0	-10.4	N/A
81.11	38.7 Qp	0.5 / 7.9 / 22.0	25.1	V / 1.0 / 90.0	-14.9	N/A
83.56	39.8 Qp	0.5 / 7.8 / 22.2	25.9	V / 1.0 / 90.0	-14.1	N/A
86.03	39.5 Qp	0.5 / 7.7 / 22.3	25.5	V / 1.0 / 90.0	-14.5	N/A
103.24	37.2 Pk	0.6 / 9.2 / 22.5	24.5	V / 1.0 / 90.0	-19.0	N/A
108.16	34.4 Qp	0.6 / 9.8 / 22.5	22.4	V / 1.0 / 90.0	-21.1	N/A
117.97	32.8 Qp	0.6 / 11.0 / 22.4	22.0	V / 1.0 / 90.0	-21.5	N/A
40.02	39.9 Qp	0.3 / 12.0 / 22.4	29.7	V / 1.0 / 180.0	-10.3	N/A
41.77	38.8 Qp	0.3 / 11.8 / 22.4	28.4	V / 1.0 / 180.0	-11.6	N/A
46.70	43.1 Qp	0.3 / 11.1 / 22.3	32.2	V / 1.0 / 180.0	-7.8	N/A
49.16	42.9 Qp	0.3 / 10.7 / 22.3	31.6	V / 1.0 / 180.0	-8.4	N/A
51.62	47.1 Qp	0.3 / 10.4 / 22.2	35.5	V / 1.0 / 180.0	-4.5	N/A
56.53	52.9 Qp	0.3 / 9.8 / 22.0	41.0	V / 1.0 / 180.0	1.0 *	N/A
58.99	44.1 Qp	0.4 / 9.4 / 21.9	31.9	V / 1.0 / 180.0	-8.1	N/A
63.91	47.8 Qp	0.4 / 9.0 / 21.9	35.3	V / 1.0 / 180.0	-4.7	N/A
103.24	39.4 Qp	0.6 / 9.2 / 22.5	26.7	V / 1.0 / 180.0	-16.8	N/A
108.16	34.2 Qp	0.6 / 9.8 / 22.5	22.2	V / 1.0 / 180.0	-21.3	N/A
117.97	33.6 Qp	0.6 / 11.0 / 22.4	22.8	V / 1.0 / 180.0	-20.7	N/A
39.34	37.0 Qp	0.2 / 12.1 / 22.4	26.9	V / 1.0 / 270.0	-13.1	N/A
41.77	38.8 Qp	0.3 / 11.8 / 22.4	28.4	V / 1.0 / 270.0	-11.6	N/A

Tested by: **Dan Dillon**  
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 Signature

Reviewed by: **Todd Seeley**  
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 Printed

  
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 Signature



# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**

Temperature: **24 °C**  
 Relative Humidity: **<26 %**  
 Air Pressure: **80 kPa**  
 Page: **22 of 35**

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
46.70	43.1 Qp	0.3 / 11.1 / 22.3	32.1	V / 1.0 / 270.0	-7.9	N/A
51.62	47.2 Qp	0.3 / 10.4 / 22.2	35.7	V / 1.0 / 270.0	-4.3	N/A
56.53	53.2 Qp	0.3 / 9.8 / 22.0	41.3	V / 1.0 / 270.0	1.3 *	N/A
61.45	52.6 Qp	0.4 / 9.2 / 21.9	40.3	V / 1.0 / 270.0	0.3 *	N/A
63.91	47.6 Qp	0.4 / 9.0 / 21.9	35.1	V / 1.0 / 270.0	-4.9	N/A
117.97	33.5 Qp	0.6 / 11.0 / 22.4	22.7	V / 1.0 / 270.0	-20.8	N/A
56.53	53.6 Qp	0.3 / 9.8 / 22.0	41.6	V / 1.0 / 270.0	1.6 *	N/A
66.38	44.1 Qp	0.4 / 8.8 / 21.9	31.5	V / 1.0 / 270.0	-8.5	N/A
56.54	39.2 Qp	0.3 / 9.8 / 22.0	27.3	H / 2.0 / 0.0	-12.7	N/A
61.46	39.1 Qp	0.4 / 9.2 / 21.9	26.7	H / 2.0 / 0.0	-13.3	N/A
56.53	38.6 Qp	0.3 / 9.8 / 22.0	26.6	H / 2.0 / 90.0	-13.4	N/A
61.45	36.5 Qp	0.4 / 9.2 / 21.9	24.2	H / 2.0 / 90.0	-15.8	N/A
76.19	33.0 Qp	0.5 / 8.5 / 21.9	20.1	H / 2.0 / 90.0	-19.9	N/A
81.11	34.0 Qp	0.5 / 7.9 / 22.0	20.4	H / 2.0 / 90.0	-19.6	N/A
56.53	36.1 Qp	0.3 / 9.8 / 22.0	24.2	H / 2.0 / 180.0	-15.8	N/A
61.45	36.3 Qp	0.4 / 9.2 / 21.9	24.0	H / 2.0 / 180.0	-16.0	N/A
110.59	32.8 Qp	0.6 / 10.2 / 22.5	21.1	H / 2.0 / 180.0	-22.4	N/A
46.70	31.4 Qp	0.3 / 11.1 / 22.3	20.5	H / 2.0 / 270.0	-19.5	N/A
49.16	30.6 Qp	0.3 / 10.7 / 22.3	19.3	H / 2.0 / 270.0	-20.7	N/A
51.62	34.2 Qp	0.3 / 10.4 / 22.2	22.7	H / 2.0 / 270.0	-17.3	N/A
54.08	35.0 Qp	0.3 / 10.1 / 22.1	23.3	H / 2.0 / 270.0	-16.7	N/A
56.53	38.5 Qp	0.3 / 9.8 / 22.0	26.5	H / 2.0 / 270.0	-13.5	N/A
61.45	40.5 Qp	0.4 / 9.2 / 21.9	28.1	H / 2.0 / 270.0	-11.9	N/A
63.91	33.5 Qp	0.4 / 9.0 / 21.9	21.0	H / 2.0 / 270.0	-19.0	N/A

Tested by: **Dan Dillon**

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Reviewed by: **Todd Seeley**

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Signature

# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: FCC Part 15  
 EUT Model #: AMS-SM01  
 EUT Serial #: 103  
 Manufacturer: Alcohol Monitoring Systems  
 EUT Description: Smart Modem  
 Notes: RF off, modem continuously calling and transferring data.

Test Area: Pinewood Site 1 (3m)  
 Test Date: 25-Mar-2002  
 EUT Power: 120 VAC / 60 Hz

Temperature: 24 °C  
 Relative Humidity: <26 %  
 Air Pressure: 80 kPa  
 Page: 23 of 35

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ (MHz)	LEVEL (dBuV)	CABLE / ANT / PREAMP (dB) (dB/m) (dB)	FINAL (dBuV/m)	POL / HGT / AZ (m) (DEG)	DELTA1 (dB) FCC B (< 1GHz)	DELTA2 (dB) N/A
The following were maximized between 30 and 200 MHz, horizontal						
56.53	45.6 Qp	0.3 / 9.8 / 22.0	33.6	H / 3.3 / 87.0	-6.4	N/A
61.45	45.1 Qp	0.4 / 9.2 / 21.9	32.7	H / 3.7 / 0.0	-7.3	N/A
54.08	52.0 Qp	0.3 / 10.1 / 22.1	40.3	V / 1.0 / 110.0	0.3 *	N/A
56.53	54.4 Qp	0.3 / 9.8 / 22.0	42.5	V / 1.0 / 126.0	2.5 *	N/A
61.45	52.1 Qp	0.4 / 9.2 / 21.9	39.8	V / 1.0 / 130.0	-0.2	N/A
54.08	46.5 Qp	0.3 / 10.1 / 22.1	34.8	V / 1.0 / 122.0	-5.2	N/A
56.53	48.7 Qp	0.3 / 9.8 / 22.0	36.8	V / 1.0 / 166.0	-3.2	N/A
61.45	51.7 Qp	0.4 / 9.2 / 21.9	39.4	V / 1.0 / 118.0	-0.6	N/A
Cables maximized						
61.45	54.6 Qp	0.4 / 9.2 / 21.9	42.2	V / 1.0 / 118.0	2.2 *	N/A
56.53	52.1 Qp	0.3 / 9.8 / 22.0	40.2	V / 1.0 / 140.0	0.2 *	N/A
Added copper image plane to bottom of board						
Maximized the following						
56.53	49.1 Qp	0.3 / 9.8 / 22.0	37.2	V / 1.0 / 96.0	-2.8	N/A
Cables maximized						
56.53	51.2 Qp	0.3 / 9.8 / 22.0	39.3	V / 1.0 / 96.0	-0.7	N/A
54.08	49.1 Qp	0.3 / 10.1 / 22.1	37.4	V / 1.0 / 124.0	-2.6	N/A
61.45	47.6 Qp	0.4 / 9.2 / 21.9	35.3	V / 1.0 / 47.0	-4.7	N/A

Tested by: **Dan Dillon**  
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 Signature

Reviewed by: **Todd Seeley**  
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 Signature

# Radiated Electromagnetic Emissions



Test Report #: BC201533 Run 1      Test Area: Pinewood Site 1 (3m)  
 Test Method: FCC Part 15      Test Date: 25-Mar-2002  
 EUT Model #: AMS-SM01      EUT Power: 120 VAC / 60 Hz  
 EUT Serial #: 103  
 Manufacturer: Alcohol Monitoring Systems  
 EUT Description: Smart Modem  
 Notes: RF off, modem continuously calling and transferring data.

Temperature: 24 °C  
 Relative Humidity: <26 %  
 Air Pressure: 80 kPa  
 Page: 24 of 35

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
Cables were Maximized						
76.19	47.2 Qp	0.5 / 8.5 / 21.9	34.3	V / 1.0 / 0.0	-5.7	N/A
Rechecked all emissions within 10 dB of the limit						
No higher emissions found						

Tested by: Dan Dillon  
 Printed

  
 Signature

Reviewed by: Todd Seeley  
 Printed

  
 Signature

# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**  
 Temperature: **24 °C**  
 Relative Humidity: **<26 %**  
 Air Pressure: **80 kPa**  
 Page: **25 of 35**

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ (MHz)	LEVEL (dBuV)	CABLE / ANT / PREAMP (dB) (dBm) (dB)	FINAL (dBuV/m)	POL / HGT / AZ (m) (DEG)	DELTA1 (dB) FCC B (< 1GHz)	DELTA2 (dB) N/A
<b>***** Measurement Summary *****</b>						
56.53	51.2 Qp	0.3 / 9.8 / 22.0	39.3	V / 1.0 / 96.0	-0.7	N/A
54.08	49.1 Qp	0.3 / 10.1 / 22.1	37.4	V / 1.0 / 124.0	-2.6	N/A
51.62	47.5 Qp	0.3 / 10.4 / 22.2	35.9	V / 1.0 / 0.0	-4.1	N/A
61.45	47.6 Qp	0.4 / 9.2 / 21.9	35.3	V / 1.0 / 47.0	-4.7	N/A
63.91	47.8 Qp	0.4 / 9.0 / 21.9	35.3	V / 1.0 / 180.0	-4.7	N/A
76.19	47.2 Qp	0.5 / 8.5 / 21.9	34.3	V / 1.0 / 0.0	-5.7	N/A
776.59	38.2 Qp	1.6 / 21.8 / 22.7	38.9	H / 1.1 / 350.0	-7.1	N/A
71.27	45.1 Qp	0.4 / 8.7 / 21.9	32.4	V / 1.0 / 90.0	-7.6	N/A
46.70	43.1 Qp	0.3 / 11.1 / 22.3	32.2	V / 1.0 / 180.0	-7.8	N/A
58.99	44.1 Qp	0.4 / 9.4 / 21.9	31.9	V / 1.0 / 180.0	-8.1	N/A
66.38	44.4 Qp	0.4 / 8.8 / 21.9	31.8	V / 1.0 / 90.0	-8.2	N/A
49.16	42.9 Qp	0.3 / 10.7 / 22.3	31.6	V / 1.0 / 180.0	-8.4	N/A
68.83	43.8 Qp	0.4 / 8.7 / 21.9	31.1	V / 1.0 / 90.0	-8.9	N/A
521.00	39.5 Qp	1.3 / 17.9 / 21.9	36.8	V / 1.0 / 325.0	-9.2	N/A
540.68	38.9 Qp	1.3 / 18.6 / 22.0	36.8	H / 3.3 / 338.0	-9.2	N/A
73.72	43.0 Qp	0.5 / 8.7 / 21.9	30.2	V / 1.0 / 90.0	-9.8	N/A
737.28	38.1 Qp	1.5 / 21.1 / 24.5	36.2	H / 1.3 / 356.0	-9.8	N/A
501.35	38.0 Qp	1.3 / 18.3 / 21.8	35.8	V / 1.0 / 330.0	-10.2	N/A
595.95	36.6 Qp	1.4 / 20.0 / 22.3	35.8	V / 1.0 / 90.0	-10.2	N/A
788.99	34.4 Qp	1.6 / 22.0 / 22.1	35.8	V / 1.0 / 90.0	-10.2	N/A
805.79	33.6 Qp	1.6 / 22.2 / 21.6	35.8	V / 1.0 / 90.0	-10.2	N/A
40.02	39.9 Qp	0.3 / 12.0 / 22.4	29.7	V / 1.0 / 180.0	-10.3	N/A
78.64	42.9 Qp	0.5 / 8.2 / 22.0	29.6	V / 1.0 / 90.0	-10.4	N/A
205.65	42.4 Qp	0.8 / 12.1 / 22.1	33.1	V / 1.0 / 0.0	-10.4	N/A
604.35	36.5 Qp	1.4 / 20.2 / 22.5	35.5	V / 1.0 / 0.0	-10.5	N/A
654.70	37.2 Qp	1.5 / 21.0 / 24.4	35.3	V / 1.0 / 90.0	-10.7	N/A

Tested by: **Dan Dillon**  
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Reviewed by: **Todd Seeley**  
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# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**  
 Temperature: **24 °C**  
 Relative Humidity: **<26 %**  
 Air Pressure: **80 kPa**  
 Page: **26 of 35**

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
927.50	29.0 Qp	1.8 / 25.1 / 20.7	35.2	V / 1.0 / 0.0	-10.8	N/A
545.59	36.9 Qp	1.3 / 18.9 / 22.0	35.1	V / 1.0 / 90.0	-10.9	N/A
511.19	37.3 Qp	1.3 / 18.1 / 21.8	34.9	V / 1.0 / 324.0	-11.1	N/A
579.16	35.6 Qp	1.4 / 20.1 / 22.2	34.9	V / 1.0 / 90.0	-11.1	N/A
239.22	41.8 Qp	0.8 / 14.3 / 22.1	34.8	V / 1.0 / 0.0	-11.2	N/A
41.77	39.0 Qp	0.3 / 11.8 / 22.4	28.6	V / 1.0 / 90.0	-11.4	N/A
637.92	35.9 Qp	1.4 / 21.0 / 23.8	34.5	V / 1.0 / 90.0	-11.5	N/A
243.43	41.2 Qp	0.8 / 14.3 / 22.1	34.3	V / 1.0 / 0.0	-11.7	N/A
612.74	35.2 Qp	1.4 / 20.5 / 22.8	34.3	V / 1.0 / 0.0	-11.7	N/A
235.03	41.2 Qp	0.8 / 14.3 / 22.1	34.2	V / 1.0 / 0.0	-11.8	N/A
528.80	36.8 Qp	1.3 / 18.0 / 21.9	34.2	V / 1.0 / 90.0	-11.8	N/A
730.24	36.4 Qp	1.5 / 21.0 / 24.8	34.1	V / 1.0 / 90.0	-11.9	N/A
583.36	34.7 Qp	1.4 / 20.1 / 22.2	33.9	V / 1.0 / 90.0	-12.1	N/A
629.52	35.1 Qp	1.4 / 20.9 / 23.5	33.9	V / 1.0 / 0.0	-12.1	N/A
786.43	32.5 Qp	1.6 / 21.9 / 22.2	33.9	H / 1.5 / 0.0	-12.1	N/A
247.61	40.7 Qp	0.8 / 14.4 / 22.1	33.8	V / 1.0 / 0.0	-12.2	N/A
756.95	34.4 Qp	1.6 / 21.4 / 23.6	33.8	H / 1.5 / 0.0	-12.2	N/A
230.82	40.8 Qp	0.8 / 14.2 / 22.1	33.7	V / 1.0 / 0.0	-12.3	N/A
747.11	34.9 Qp	1.5 / 21.3 / 24.0	33.7	H / 1.5 / 0.0	-12.3	N/A
919.10	27.8 Qp	1.8 / 24.9 / 20.8	33.7	V / 1.0 / 0.0	-12.3	N/A
591.75	34.5 Qp	1.4 / 20.0 / 22.3	33.6	V / 1.0 / 90.0	-12.4	N/A
721.84	36.3 Qp	1.5 / 20.9 / 25.2	33.6	V / 1.0 / 90.0	-12.4	N/A
990.44	34.6 Qp	1.9 / 25.5 / 20.5	41.5	V / 1.0 / 0.0	-12.5	N/A
944.30	26.8 Qp	1.8 / 25.5 / 20.7	33.4	V / 1.0 / 0.0	-12.6	N/A
520.42	36.0 Qp	1.3 / 17.9 / 21.9	33.3	V / 1.0 / 90.0	-12.7	N/A
663.10	35.6 Qp	1.5 / 20.9 / 24.7	33.3	V / 1.0 / 90.0	-12.7	N/A
560.34	34.5 Qp	1.4 / 19.5 / 22.1	33.2	H / 1.5 / 180.0	-12.8	N/A
621.14	34.2 Qp	1.4 / 20.8 / 23.1	33.2	V / 1.0 / 0.0	-12.8	N/A

Tested by: **Dan Dillon**  
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Reviewed by: **Todd Seeley**  
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# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**  
 Temperature: **24 °C**  
 Relative Humidity: **<26 %**  
 Air Pressure: **80 kPa**  
 Page: **27 of 35**

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
705.07	36.7 Qp	1.5 / 20.8 / 25.9	33.1	V / 1.0 / 90.0	-12.9	N/A
766.77	33.0 Qp	1.6 / 21.6 / 23.1	33.1	H / 1.5 / 0.0	-12.9	N/A
39.34	37.0 Qp	0.2 / 12.1 / 22.4	26.9	V / 1.0 / 270.0	-13.1	N/A
512.02	35.3 Qp	1.3 / 18.1 / 21.8	32.9	V / 1.0 / 0.0	-13.1	N/A
533.00	35.2 Qp	1.3 / 18.2 / 21.9	32.8	V / 1.0 / 0.0	-13.2	N/A
600.15	33.7 Qp	1.4 / 20.0 / 22.3	32.8	V / 1.0 / 90.0	-13.2	N/A
524.61	35.5 Qp	1.3 / 17.8 / 21.9	32.7	V / 1.0 / 0.0	-13.3	N/A
541.39	34.7 Qp	1.3 / 18.7 / 22.0	32.7	V / 1.0 / 90.0	-13.3	N/A
982.06	33.6 Qp	1.9 / 25.7 / 20.5	40.7	V / 1.0 / 0.0	-13.3	N/A
251.81	39.5 Qp	0.8 / 14.4 / 22.1	32.6	V / 1.0 / 0.0	-13.4	N/A
570.78	33.4 Qp	1.4 / 19.9 / 22.2	32.5	V / 1.0 / 90.0	-13.5	N/A
503.62	34.6 Qp	1.3 / 18.2 / 21.8	32.4	V / 1.0 / 0.0	-13.6	N/A
651.26	34.2 Qp	1.5 / 21.0 / 24.3	32.4	H / 1.5 / 180.0	-13.6	N/A
713.46	35.4 Qp	1.5 / 20.9 / 25.5	32.2	V / 1.0 / 90.0	-13.8	N/A
222.44	39.5 Qp	0.8 / 13.9 / 22.1	32.1	V / 1.0 / 0.0	-13.9	N/A
727.46	34.5 Qp	1.5 / 20.9 / 24.9	32.1	H / 1.5 / 0.0	-13.9	N/A
910.70	26.5 Qp	1.8 / 24.6 / 20.8	32.1	V / 1.0 / 90.0	-13.9	N/A
516.22	34.6 Qp	1.3 / 18.0 / 21.8	32.0	V / 1.0 / 0.0	-14.0	N/A
574.96	32.7 Qp	1.4 / 20.1 / 22.2	32.0	V / 1.0 / 90.0	-14.0	N/A
83.56	39.8 Qp	0.5 / 7.8 / 22.2	25.9	V / 1.0 / 90.0	-14.1	N/A
209.84	38.2 Qp	0.8 / 12.6 / 22.1	29.4	V / 1.0 / 0.0	-14.1	N/A
218.24	39.8 Qp	0.8 / 13.5 / 22.1	31.9	V / 1.0 / 0.0	-14.1	N/A
530.84	34.4 Qp	1.3 / 18.1 / 21.9	31.9	V / 1.0 / 180.0	-14.1	N/A
608.54	32.8 Qp	1.4 / 20.3 / 22.7	31.8	V / 1.0 / 90.0	-14.2	N/A
570.17	32.5 Qp	1.4 / 19.9 / 22.2	31.7	H / 1.5 / 180.0	-14.3	N/A
973.66	32.5 Qp	1.9 / 25.9 / 20.6	39.6	V / 1.0 / 0.0	-14.4	N/A
86.03	39.5 Qp	0.5 / 7.7 / 22.3	25.5	V / 1.0 / 90.0	-14.5	N/A
444.85	35.3 Qp	1.2 / 16.9 / 21.8	31.5	V / 1.0 / 90.0	-14.5	N/A

Tested by: **Dan Dillon**

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Reviewed by: **Todd Seeley**

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# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**

Temperature: **24** °C  
 Relative Humidity: **<26** %  
 Air Pressure: **80** kPa  
 Page: **28** of 35

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
696.67	35.2 Qp	1.5 / 20.8 / 26.0	31.5	V / 1.0 / 90.0	-14.5	N/A
495.24	33.6 Qp	1.3 / 18.2 / 21.8	31.4	V / 1.0 / 0.0	-14.6	N/A
717.62	34.4 Qp	1.5 / 20.9 / 25.3	31.4	H / 1.5 / 0.0	-14.6	N/A
81.11	38.7 Qp	0.5 / 7.9 / 22.0	25.1	V / 1.0 / 90.0	-14.9	N/A
587.37	31.9 Qp	1.4 / 20.1 / 22.3	31.1	H / 1.5 / 180.0	-14.9	N/A
589.83	31.9 Qp	1.4 / 20.0 / 22.3	31.1	H / 1.5 / 180.0	-14.9	N/A
671.49	33.6 Qp	1.5 / 20.9 / 25.1	31.0	V / 1.0 / 90.0	-15.0	N/A
507.82	33.2 Qp	1.3 / 18.1 / 21.8	30.9	V / 1.0 / 0.0	-15.1	N/A
549.79	32.4 Qp	1.3 / 19.1 / 22.0	30.8	V / 1.0 / 90.0	-15.2	N/A
986.24	31.8 Qp	1.9 / 25.6 / 20.5	38.8	V / 1.0 / 0.0	-15.2	N/A
436.48	34.5 Qp	1.2 / 16.8 / 21.8	30.7	V / 1.0 / 0.0	-15.3	N/A
566.58	31.8 Qp	1.4 / 19.8 / 22.1	30.7	V / 1.0 / 90.0	-15.3	N/A
843.54	27.6 Qp	1.7 / 22.7 / 21.3	30.7	V / 1.0 / 90.0	-15.3	N/A
36.88	34.4 Qp	0.2 / 12.4 / 22.4	24.6	V / 1.0 / 0.0	-15.4	N/A
481.70	33.2 Qp	1.3 / 17.9 / 21.8	30.6	V / 1.0 / 270.0	-15.4	N/A
491.53	33.0 Qp	1.3 / 18.1 / 21.8	30.6	V / 1.0 / 270.0	-15.4	N/A
629.13	31.7 Qp	1.4 / 20.9 / 23.4	30.6	H / 1.5 / 0.0	-15.4	N/A
679.89	33.6 Qp	1.5 / 20.9 / 25.4	30.6	V / 1.0 / 90.0	-15.4	N/A
180.03	36.5 Qp	0.7 / 13.0 / 22.2	28.0	V / 1.0 / 0.0	-15.5	N/A
998.84	31.8 Qp	1.9 / 25.3 / 20.5	38.5	V / 1.0 / 0.0	-15.5	N/A
31.95	33.6 Pk	0.2 / 13.0 / 22.4	24.4	V / 1.0 / 90.0	-15.6	N/A
226.64	37.6 Qp	0.8 / 14.2 / 22.1	30.4	V / 1.0 / 0.0	-15.6	N/A
394.51	34.0 Qp	1.1 / 17.2 / 21.9	30.4	V / 1.0 / 90.0	-15.6	N/A
474.31	33.2 Qp	1.2 / 17.7 / 21.8	30.4	V / 1.0 / 180.0	-15.6	N/A
486.84	32.9 Qp	1.3 / 18.0 / 21.8	30.4	V / 1.0 / 0.0	-15.6	N/A
471.87	33.2 Qp	1.2 / 17.6 / 21.8	30.3	H / 2.0 / 0.0	-15.7	N/A
688.27	33.6 Qp	1.5 / 20.8 / 25.7	30.3	V / 1.0 / 90.0	-15.7	N/A
200.03	37.6 Qp	0.8 / 11.5 / 22.1	27.7	V / 1.0 / 90.0	-15.8	N/A

Tested by: **Dan Dillon**  
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Reviewed by: **Todd Seeley**  
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# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**

Temperature: **24** °C  
 Relative Humidity: **<26** %  
 Air Pressure: **80** kPa  
 Page: **29** of 35

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
661.10	32.5 Qp	1.5 / 21.0 / 24.7	30.2	H / 1.5 / 180.0	-15.8	N/A
776.41	29.4 Qp	1.6 / 21.8 / 22.7	30.1	V / 1.0 / 90.0	-15.9	N/A
796.26	28.2 Qp	1.6 / 22.1 / 21.8	30.1	H / 1.5 / 0.0	-15.9	N/A
390.31	34.1 Qp	1.1 / 16.7 / 21.9	30.0	V / 1.0 / 90.0	-16.0	N/A
478.44	32.7 Qp	1.3 / 17.8 / 21.8	30.0	V / 1.0 / 0.0	-16.0	N/A
965.26	31.0 Qp	1.8 / 25.8 / 20.6	38.0	V / 1.0 / 0.0	-16.0	N/A
994.64	31.2 Qp	1.9 / 25.4 / 20.5	38.0	V / 1.0 / 0.0	-16.0	N/A
453.27	33.5 Qp	1.2 / 17.0 / 21.8	29.9	V / 1.0 / 90.0	-16.1	N/A
386.12	34.5 Qp	1.1 / 16.2 / 21.9	29.8	V / 1.0 / 90.0	-16.2	N/A
553.99	31.2 Qp	1.4 / 19.3 / 22.1	29.8	V / 1.0 / 90.0	-16.2	N/A
670.93	32.5 Qp	1.5 / 20.9 / 25.0	29.8	H / 1.5 / 180.0	-16.2	N/A
688.14	33.0 Qp	1.5 / 20.8 / 25.7	29.7	H / 1.5 / 180.0	-16.3	N/A
977.86	30.6 Qp	1.9 / 25.8 / 20.5	37.7	V / 1.0 / 0.0	-16.3	N/A
256.01	36.5 Qp	0.8 / 14.3 / 22.1	29.6	V / 1.0 / 90.0	-16.4	N/A
648.82	31.4 Qp	1.4 / 21.0 / 24.2	29.6	V / 1.0 / 180.0	-16.4	N/A
152.39	36.2 Qp	0.7 / 12.4 / 22.3	27.0	V / 1.0 / 0.0	-16.5	N/A
499.42	31.7 Qp	1.3 / 18.3 / 21.8	29.5	V / 1.0 / 0.0	-16.5	N/A
597.21	30.4 Qp	1.4 / 20.0 / 22.3	29.5	H / 1.5 / 90.0	-16.5	N/A
625.34	30.4 Qp	1.4 / 20.9 / 23.3	29.5	V / 1.0 / 90.0	-16.5	N/A
428.08	33.4 Qp	1.2 / 16.7 / 21.8	29.4	V / 1.0 / 0.0	-16.6	N/A
432.52	33.3 Qp	1.2 / 16.8 / 21.8	29.4	V / 1.0 / 180.0	-16.6	N/A
462.02	32.5 Qp	1.2 / 17.3 / 21.8	29.3	V / 1.0 / 180.0	-16.7	N/A
557.88	30.7 Qp	1.4 / 19.4 / 22.1	29.3	H / 1.5 / 180.0	-16.7	N/A
567.72	30.3 Qp	1.4 / 19.8 / 22.1	29.3	H / 1.5 / 90.0	-16.7	N/A
641.43	30.8 Qp	1.4 / 21.0 / 23.9	29.3	H / 1.5 / 180.0	-16.7	N/A
826.77	26.6 Qp	1.6 / 22.5 / 21.4	29.3	V / 1.0 / 90.0	-16.7	N/A
103.24	39.4 Qp	0.6 / 9.2 / 22.5	26.7	V / 1.0 / 180.0	-16.8	N/A
452.21	32.8 Qp	1.2 / 17.0 / 21.8	29.2	V / 1.0 / 180.0	-16.8	N/A

Tested by: **Dan Dillon**  
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Reviewed by: **Todd Seeley**  
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# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**

Temperature: **24** °C  
 Relative Humidity: **<26** %  
 Air Pressure: **80** kPa  
 Page: **30** of **35**

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
599.67	30.0 Qp	1.4 / 20.0 / 22.3	29.1	H / 1.5 / 180.0	-16.9	N/A
616.94	30.1 Qp	1.4 / 20.6 / 23.0	29.1	V / 1.0 / 90.0	-16.9	N/A
493.99	31.3 Qp	1.3 / 18.2 / 21.8	29.0	V / 1.0 / 270.0	-17.0	N/A
690.58	32.5 Qp	1.5 / 20.8 / 25.8	29.0	H / 1.5 / 180.0	-17.0	N/A
818.39	26.4 Qp	1.6 / 22.4 / 21.5	29.0	V / 1.0 / 90.0	-17.0	N/A
898.12	23.9 Qp	1.7 / 24.2 / 20.9	29.0	V / 1.0 / 0.0	-17.0	N/A
348.34	35.1 Qp	1.0 / 14.8 / 22.0	28.9	V / 1.0 / 90.0	-17.1	N/A
633.72	30.2 Qp	1.4 / 20.9 / 23.6	28.9	V / 1.0 / 90.0	-17.1	N/A
650.50	30.7 Qp	1.5 / 21.0 / 24.3	28.9	V / 1.0 / 90.0	-17.1	N/A
658.63	31.0 Qp	1.5 / 21.0 / 24.6	28.9	H / 1.5 / 180.0	-17.1	N/A
697.96	32.7 Qp	1.5 / 20.8 / 26.1	28.9	H / 1.5 / 180.0	-17.1	N/A
356.74	34.9 Qp	1.0 / 14.8 / 21.9	28.8	V / 1.0 / 90.0	-17.2	N/A
381.92	34.0 Qp	1.1 / 15.7 / 21.9	28.8	V / 1.0 / 90.0	-17.2	N/A
398.70	31.9 Qp	1.1 / 17.6 / 21.9	28.8	V / 1.0 / 90.0	-17.2	N/A
498.91	30.9 Qp	1.3 / 18.3 / 21.8	28.8	V / 1.0 / 180.0	-17.2	N/A
668.48	31.4 Qp	1.5 / 20.9 / 24.9	28.8	H / 1.5 / 180.0	-17.2	N/A
373.51	34.7 Qp	1.0 / 14.9 / 21.9	28.7	V / 1.0 / 90.0	-17.3	N/A
533.30	31.1 Qp	1.3 / 18.2 / 21.9	28.7	H / 1.5 / 180.0	-17.3	N/A
442.37	32.4 Qp	1.2 / 16.8 / 21.8	28.6	V / 1.0 / 180.0	-17.4	N/A
503.81	30.9 Qp	1.3 / 18.2 / 21.8	28.6	V / 1.0 / 270.0	-17.4	N/A
513.65	31.1 Qp	1.3 / 18.0 / 21.8	28.6	V / 1.0 / 270.0	-17.4	N/A
607.02	29.5 Qp	1.4 / 20.3 / 22.6	28.6	H / 1.5 / 180.0	-17.4	N/A
642.10	30.1 Qp	1.4 / 21.0 / 23.9	28.6	V / 1.0 / 90.0	-17.4	N/A
678.30	31.6 Qp	1.5 / 20.9 / 25.3	28.6	H / 1.5 / 180.0	-17.4	N/A
508.73	30.9 Qp	1.3 / 18.1 / 21.8	28.5	V / 1.0 / 270.0	-17.5	N/A
631.60	29.7 Qp	1.4 / 20.9 / 23.5	28.5	H / 1.5 / 180.0	-17.5	N/A
793.19	26.8 Qp	1.6 / 22.0 / 21.9	28.5	V / 1.0 / 90.0	-17.5	N/A
402.90	31.5 Qp	1.1 / 17.7 / 21.8	28.4	V / 1.0 / 90.0	-17.6	N/A

Tested by: **Dan Dillon**

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Reviewed by: **Todd Seeley**

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# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**  
 Temperature: **24 °C**  
 Relative Humidity: **<26 %**  
 Air Pressure: **80 kPa**  
 Page: **31 of 35**

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
680.76	31.5 Qp	1.5 / 20.9 / 25.4	28.4	H / 1.5 / 180.0	-17.6	N/A
281.19	35.4 Qp	0.9 / 14.2 / 22.1	28.3	V / 1.0 / 0.0	-17.7	N/A
407.09	31.6 Qp	1.1 / 17.5 / 21.8	28.3	V / 1.0 / 90.0	-17.7	N/A
411.29	31.8 Qp	1.1 / 17.3 / 21.8	28.3	V / 1.0 / 90.0	-17.7	N/A
528.38	30.9 Qp	1.3 / 18.0 / 21.9	28.3	H / 1.5 / 180.0	-17.7	N/A
626.67	29.3 Qp	1.4 / 20.9 / 23.3	28.3	H / 1.5 / 180.0	-17.7	N/A
809.99	25.9 Qp	1.6 / 22.3 / 21.5	28.3	V / 1.0 / 90.0	-17.7	N/A
34.41	31.8 Qp	0.2 / 12.7 / 22.4	22.2	V / 1.0 / 0.0	-17.8	N/A
377.71	33.8 Qp	1.1 / 15.2 / 21.9	28.2	V / 1.0 / 90.0	-17.8	N/A
435.00	32.0 Qp	1.2 / 16.8 / 21.8	28.2	V / 1.0 / 180.0	-17.8	N/A
432.28	32.0 Qp	1.2 / 16.8 / 21.8	28.1	V / 1.0 / 0.0	-17.9	N/A
470.04	31.1 Qp	1.2 / 17.5 / 21.8	28.1	V / 1.0 / 0.0	-17.9	N/A
518.57	30.8 Qp	1.3 / 17.9 / 21.9	28.1	H / 1.5 / 180.0	-17.9	N/A
653.73	30.1 Qp	1.5 / 21.0 / 24.4	28.1	H / 1.5 / 180.0	-17.9	N/A
352.54	34.1 Qp	1.0 / 14.8 / 21.9	28.0	V / 1.0 / 90.0	-18.0	N/A
558.18	29.4 Qp	1.4 / 19.4 / 22.1	28.0	V / 1.0 / 90.0	-18.0	N/A
565.25	29.1 Qp	1.4 / 19.7 / 22.1	28.0	H / 1.5 / 90.0	-18.0	N/A
604.57	28.8 Qp	1.4 / 20.2 / 22.5	27.8	H / 1.5 / 90.0	-18.2	N/A
969.46	28.7 Qp	1.9 / 25.8 / 20.6	35.8	V / 1.0 / 0.0	-18.2	N/A
140.09	34.6 Qp	0.7 / 12.2 / 22.4	25.2	V / 1.0 / 0.0	-18.3	N/A
707.80	31.2 Qp	1.5 / 20.8 / 25.8	27.7	H / 1.5 / 0.0	-18.3	N/A
272.80	34.6 Qp	0.9 / 14.1 / 22.1	27.6	V / 1.0 / 90.0	-18.4	N/A
120.44	35.6 Qp	0.6 / 11.2 / 22.4	25.0	V / 1.0 / 0.0	-18.5	N/A
149.94	34.3 Qp	0.7 / 12.4 / 22.3	25.0	V / 1.0 / 0.0	-18.5	N/A
277.00	34.6 Qp	0.9 / 14.1 / 22.1	27.5	V / 1.0 / 0.0	-18.5	N/A
365.12	33.5 Qp	1.0 / 14.9 / 21.9	27.5	V / 1.0 / 0.0	-18.5	N/A
201.46	34.6 Qp	0.8 / 11.7 / 22.1	24.9	V / 1.0 / 0.0	-18.6	N/A
415.49	31.0 Qp	1.1 / 17.1 / 21.8	27.4	V / 1.0 / 90.0	-18.6	N/A

Tested by: **Dan Dillon**

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Reviewed by: **Todd Seeley**

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# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**

Temperature: **24** °C  
 Relative Humidity: **<26** %  
 Air Pressure: **80** kPa  
 Page: **32** of 35

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
658.90	29.4 Qp	1.5 / 21.0 / 24.6	27.3	V / 1.0 / 90.0	-18.7	N/A
801.59	25.2 Qp	1.6 / 22.1 / 21.6	27.3	V / 1.0 / 0.0	-18.7	N/A
469.40	30.2 Qp	1.2 / 17.5 / 21.8	27.2	H / 2.0 / 0.0	-18.8	N/A
491.04	29.6 Qp	1.3 / 18.1 / 21.8	27.2	V / 1.0 / 0.0	-18.8	N/A
592.29	28.1 Qp	1.4 / 20.0 / 22.3	27.2	H / 1.5 / 90.0	-18.8	N/A
643.89	28.8 Qp	1.4 / 21.0 / 24.0	27.2	H / 1.5 / 180.0	-18.8	N/A
806.10	24.9 Qp	1.6 / 22.2 / 21.6	27.2	H / 1.5 / 180.0	-18.8	N/A
360.94	33.1 Qp	1.0 / 14.8 / 21.9	27.1	V / 1.0 / 90.0	-18.9	N/A
516.11	29.7 Qp	1.3 / 18.0 / 21.8	27.1	V / 1.0 / 270.0	-18.9	N/A
710.26	30.4 Qp	1.5 / 20.8 / 25.7	27.1	H / 1.5 / 0.0	-18.9	N/A
369.31	33.0 Qp	1.0 / 14.9 / 21.9	27.0	V / 1.0 / 0.0	-19.0	N/A
422.71	30.9 Qp	1.1 / 16.8 / 21.8	27.0	H / 2.0 / 180.0	-19.0	N/A
961.06	28.0 Qp	1.8 / 25.7 / 20.6	35.0	V / 1.0 / 0.0	-19.0	N/A
449.05	30.6 Qp	1.2 / 16.9 / 21.8	26.9	V / 1.0 / 90.0	-19.1	N/A
268.61	33.8 Qp	0.9 / 14.2 / 22.1	26.7	V / 1.0 / 0.0	-19.3	N/A
293.79	33.5 Qp	0.9 / 14.3 / 22.1	26.7	V / 1.0 / 0.0	-19.3	N/A
489.07	29.1 Qp	1.3 / 18.0 / 21.8	26.7	V / 1.0 / 270.0	-19.3	N/A
302.19	33.4 Qp	0.9 / 14.4 / 22.0	26.6	V / 1.0 / 0.0	-19.4	N/A
479.25	29.3 Qp	1.3 / 17.8 / 21.8	26.6	V / 1.0 / 180.0	-19.4	N/A
700.42	30.3 Qp	1.5 / 20.8 / 26.1	26.5	H / 1.5 / 0.0	-19.5	N/A
285.38	33.4 Qp	0.9 / 14.2 / 22.1	26.4	V / 1.0 / 0.0	-19.6	N/A
425.17	30.4 Qp	1.2 / 16.7 / 21.8	26.4	V / 1.0 / 180.0	-19.6	N/A
440.68	30.2 Qp	1.2 / 16.8 / 21.8	26.4	V / 1.0 / 0.0	-19.6	N/A
260.21	33.3 Qp	0.8 / 14.3 / 22.1	26.3	V / 1.0 / 0.0	-19.7	N/A
306.37	33.0 Qp	0.9 / 14.4 / 22.0	26.3	V / 1.0 / 0.0	-19.7	N/A
482.64	28.9 Qp	1.3 / 17.9 / 21.8	26.3	V / 1.0 / 0.0	-19.7	N/A
484.15	28.9 Qp	1.3 / 17.9 / 21.8	26.3	V / 1.0 / 270.0	-19.7	N/A
506.27	28.6 Qp	1.3 / 18.2 / 21.8	26.3	V / 1.0 / 180.0	-19.7	N/A

Tested by: **Dan Dillon**  
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Reviewed by: **Todd Seeley**  
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 Signature

# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**

Temperature: **24** °C  
 Relative Humidity: **<26** %  
 Air Pressure: **80** kPa  
 Page: **33** of 35

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
130.25	33.5 Qp	0.6 / 12.0 / 22.4	23.7	V / 1.0 / 0.0	-19.8	N/A
419.69	29.9 Qp	1.1 / 16.9 / 21.8	26.2	V / 1.0 / 0.0	-19.8	N/A
110.59	35.2 Qp	0.6 / 10.2 / 22.5	23.6	V / 1.0 / 0.0	-19.9	N/A
525.92	28.7 Qp	1.3 / 17.8 / 21.9	26.0	V / 1.0 / 270.0	-20.0	N/A
264.41	33.0 Qp	0.8 / 14.2 / 22.1	25.9	V / 1.0 / 90.0	-20.1	N/A
423.88	29.9 Qp	1.1 / 16.7 / 21.8	25.9	V / 1.0 / 0.0	-20.1	N/A
459.56	29.2 Qp	1.2 / 17.2 / 21.8	25.9	V / 1.0 / 180.0	-20.1	N/A
474.24	28.8 Qp	1.2 / 17.7 / 21.8	25.9	V / 1.0 / 0.0	-20.1	N/A
454.67	29.3 Qp	1.2 / 17.0 / 21.8	25.8	H / 2.0 / 180.0	-20.2	N/A
90.94	37.1 Pk	0.6 / 8.0 / 22.5	23.2	V / 1.0 / 0.0	-20.3	N/A
122.89	33.5 Qp	0.6 / 11.5 / 22.4	23.2	V / 1.0 / 0.0	-20.3	N/A
461.66	29.0 Qp	1.2 / 17.3 / 21.8	25.7	V / 1.0 / 90.0	-20.3	N/A
466.94	28.9 Qp	1.2 / 17.4 / 21.8	25.7	V / 1.0 / 180.0	-20.3	N/A
667.29	28.2 Qp	1.5 / 20.9 / 24.9	25.7	V / 1.0 / 90.0	-20.3	N/A
439.93	29.4 Qp	1.2 / 16.8 / 21.8	25.6	V / 1.0 / 180.0	-20.4	N/A
476.79	28.4 Qp	1.3 / 17.7 / 21.8	25.6	V / 1.0 / 180.0	-20.4	N/A
673.38	28.4 Qp	1.5 / 20.9 / 25.1	25.6	H / 1.5 / 180.0	-20.4	N/A
125.36	33.0 Qp	0.6 / 11.7 / 22.4	22.9	V / 1.0 / 0.0	-20.6	N/A
344.14	31.7 Qp	1.0 / 14.7 / 22.0	25.4	V / 1.0 / 0.0	-20.6	N/A
117.97	33.6 Qp	0.6 / 11.0 / 22.4	22.8	V / 1.0 / 180.0	-20.7	N/A
700.87	29.2 Qp	1.5 / 20.8 / 26.1	25.3	V / 1.0 / 90.0	-20.7	N/A
709.27	28.7 Qp	1.5 / 20.8 / 25.7	25.3	V / 1.0 / 90.0	-20.7	N/A
314.76	31.9 Qp	0.9 / 14.4 / 22.0	25.2	V / 1.0 / 0.0	-20.8	N/A
430.08	29.1 Qp	1.2 / 16.7 / 21.8	25.2	V / 1.0 / 180.0	-20.8	N/A
142.56	32.0 Qp	0.7 / 12.2 / 22.4	22.6	V / 1.0 / 0.0	-20.9	N/A
159.77	31.7 Qp	0.7 / 12.5 / 22.3	22.6	V / 1.0 / 0.0	-20.9	N/A
176.96	31.2 Qp	0.7 / 12.8 / 22.2	22.5	V / 1.0 / 0.0	-21.0	N/A
323.17	31.7 Qp	0.9 / 14.4 / 22.0	25.0	V / 1.0 / 90.0	-21.0	N/A

Tested by: **Dan Dillon**  
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Reviewed by: **Todd Seeley**  
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 Signature

# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: **FCC Part 15**  
 EUT Model #: **AMS-SM01**  
 EUT Serial #: **103**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **Smart Modem**  
 Notes: **RF off, modem continuously calling and transferring data.**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **25-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**

Temperature: **24** °C  
 Relative Humidity: **<26** %  
 Air Pressure: **80** kPa  
 Page: **34** of 35

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
108.16	34.4 Qp	0.6 / 9.8 / 22.5	22.4	V / 1.0 / 90.0	-21.1	N/A
210.16	31.2 Qp	0.8 / 12.6 / 22.1	22.4	V / 1.0 / 270.0	-21.1	N/A
310.56	31.5 Qp	0.9 / 14.4 / 22.0	24.8	V / 1.0 / 0.0	-21.2	N/A
675.69	27.7 Qp	1.5 / 20.9 / 25.2	24.8	V / 1.0 / 90.0	-21.2	N/A
692.47	28.3 Qp	1.5 / 20.8 / 25.9	24.8	V / 1.0 / 90.0	-21.2	N/A
684.09	27.9 Qp	1.5 / 20.9 / 25.5	24.7	V / 1.0 / 90.0	-21.3	N/A
464.49	27.8 Qp	1.2 / 17.4 / 21.8	24.6	H / 2.0 / 0.0	-21.4	N/A
137.63	31.6 Qp	0.7 / 12.2 / 22.4	22.0	V / 1.0 / 0.0	-21.5	N/A
145.01	31.4 Qp	0.7 / 12.2 / 22.3	21.9	V / 1.0 / 0.0	-21.6	N/A
297.99	31.2 Qp	0.9 / 14.4 / 22.1	24.4	V / 1.0 / 0.0	-21.6	N/A
339.95	30.8 Qp	1.0 / 14.6 / 22.0	24.4	V / 1.0 / 0.0	-21.6	N/A
135.18	31.4 Qp	0.7 / 12.1 / 22.4	21.8	V / 1.0 / 0.0	-21.7	N/A
420.26	28.1 Qp	1.1 / 16.9 / 21.8	24.3	H / 2.0 / 180.0	-21.7	N/A
147.47	31.1 Qp	0.7 / 12.3 / 22.3	21.7	V / 1.0 / 0.0	-21.8	N/A
289.58	31.1 Qp	0.9 / 14.3 / 22.1	24.2	V / 1.0 / 0.0	-21.8	N/A
449.75	27.9 Qp	1.2 / 16.9 / 21.8	24.2	V / 1.0 / 180.0	-21.8	N/A
115.52	32.6 Qp	0.6 / 10.8 / 22.4	21.6	V / 1.0 / 0.0	-21.9	N/A
127.81	31.4 Qp	0.6 / 11.9 / 22.4	21.5	V / 1.0 / 0.0	-22.0	N/A
132.72	30.9 Qp	0.6 / 12.1 / 22.4	21.3	V / 1.0 / 0.0	-22.2	N/A
238.38	30.8 Qp	0.8 / 14.3 / 22.1	23.8	V / 1.0 / 180.0	-22.2	N/A
202.75	30.4 Qp	0.8 / 11.8 / 22.1	20.9	V / 1.0 / 270.0	-22.6	N/A
169.59	29.2 Qp	0.7 / 12.6 / 22.3	20.3	V / 1.0 / 0.0	-23.2	N/A
113.06	31.4 Qp	0.6 / 10.5 / 22.5	20.1	V / 1.0 / 0.0	-23.4	N/A
294.91	29.4 Qp	0.9 / 14.3 / 22.1	22.6	V / 1.0 / 270.0	-23.4	N/A
318.96	28.9 Qp	0.9 / 14.4 / 22.0	22.2	V / 1.0 / 0.0	-23.8	N/A
340.03	28.2 Qp	1.0 / 14.6 / 22.0	21.8	H / 2.0 / 0.0	-24.2	N/A
331.56	28.2 Qp	1.0 / 14.5 / 22.0	21.6	V / 1.0 / 90.0	-24.4	N/A
314.56	27.4 Qp	0.9 / 14.4 / 22.0	20.7	V / 1.0 / 180.0	-25.3	N/A

Tested by: **Dan Dillon**  
 \_\_\_\_\_  
 Printed

  
 \_\_\_\_\_  
 Signature

Reviewed by: **Todd Seeley**  
 \_\_\_\_\_  
 Printed

  
 \_\_\_\_\_  
 Signature

# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 1**  
 Test Method: FCC Part 15  
 EUT Model #: AMS-SM01  
 EUT Serial #: 103  
 Manufacturer: Alcohol Monitoring Systems  
 EUT Description: Smart Modem  
 Notes: RF off, modem continuously calling and transferring data.

Test Area: Pinewood Site 1 (3m)  
 Test Date: 25-Mar-2002  
 EUT Power: 120 VAC / 60 Hz

Temperature: 24 °C  
 Relative Humidity: <26 %  
 Air Pressure: 80 kPa  
 Page: 35 of 35

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
327.36	27.3 Qp	1.0 / 14.4 / 22.0	20.7	V / 1.0 / 90.0	-25.3	N/A
280.03	27.4 Qp	0.9 / 14.2 / 22.1	20.4	V / 1.0 / 180.0	-25.6	N/A

Tested by: **Dan Dillon**  
 \_\_\_\_\_  
 Printed

  
 \_\_\_\_\_  
 Signature

Reviewed by: **Todd Seeley**  
 \_\_\_\_\_  
 Printed

  
 \_\_\_\_\_  
 Signature

# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 2**  
 Test Method: FCC 15.249 <1GHz QP  
 EUT Model #: AMS-SM01 / Scram  
 EUT Serial #: 103 / 112  
 Manufacturer: Alcohol Monitoring Systems  
 EUT Description: Smart Modem  
 Notes: RF on, modem off  
 Base station and bracelet on the table.

Test Area: Pinewood Site 1 (3m)  
 Test Date: 26-Mar-2002  
 EUT Power: 120 VAC / 60 Hz

Temperature: 24 °C  
 Relative Humidity: <26 %  
 Air Pressure: 80 kPa  
 Page: 1 of 1

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ (MHz)	LEVEL (dBuV)	CABLE / ANT / PREAMP (dB) (dB/m) (dB)	FINAL (dBuV)	POL / HGT / AZ (m) (DEG)	DELTA1 (dB) FCC 15.249 <1GHz QP	DELTA2 (dB) FCC 15.249 <1GHz Pk
All readings are maximized						
916.38	57.4 Qp	1.8 / 24.8 / 0.0	83.9	V / 1.0 / 255.0	-10.1	N/A
916.38	73.1 Pk	1.8 / 24.8 / 0.0	99.7	V / 1.0 / 255.0	N/A	-14.3
916.64	62.9 Pk	1.8 / 24.8 / 0.0	89.5	V / 1.7 / 255.0	N/A	-24.5
916.64	52.8 Qp	1.8 / 24.8 / 0.0	79.4	V / 1.7 / 237.0	-14.6	N/A
916.38	66.2 Pk	1.8 / 24.8 / 0.0	92.8	H / 1.0 / 183.0	N/A	-21.2
916.38	55.3 Qp	1.8 / 24.8 / 0.0	81.9	H / 1.0 / 183.0	-12.1	N/A
916.64	54.5 Qp	1.8 / 24.8 / 0.0	81.1	H / 1.0 / 320.0	-12.9	N/A
916.64	68.4 Pk	1.8 / 24.8 / 0.0	95.0	H / 1.0 / 320.0	N/A	-19.0
No Harmonics or Spurious Observed						

Tested by: **Dan Dillon**  
 \_\_\_\_\_  
 Printed

  
 \_\_\_\_\_  
 Signature

Reviewed by: **Todd Seeley**  
 \_\_\_\_\_  
 Printed

  
 \_\_\_\_\_  
 Signature

# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 3**  
 Test Method: FCC 15.249 >1GHz AV  
 EUT Model #: AMS-SM01 / Scram  
 EUT Serial #: 103 / 112  
 Manufacturer: Alcohol Monitoring Systems  
 EUT Description: Smart Modem and RF Bracelet  
 Notes: RF on, modem off  
 Base station and bracelet on the table.

Test Area: Pinewood Site 1 (3m)  
 Test Date: 26-Mar-2002  
 EUT Power: 120 VAC / 60 Hz

Temperature: 24 °C  
 Relative Humidity: <26 %  
 Air Pressure: 80 kPa  
 Page: 1 of 3

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ (MHz)	LEVEL (dBuV)	CABLE / ANT / PREAMP (dB) (dB/m) (dB)	FINAL (dBuV)	POL / HGT / AZ (m) (DEG)	DELTA1 (dB) FCC 15.249 >1GHz Av	DELTA2 (dB) FCC 15.249 >1GHz Pk
All readings are maximized						
1832.75	73.9 Pk	2.6 / 28.4 / 37.6	67.2	V / 1.0 / 0.0	N/A	-6.8
1832.76	44.0 Av	2.6 / 28.4 / 37.6	37.3	V / 1.0 / 0.0	-16.7	N/A
1833.27	57.0 Pk	2.6 / 28.4 / 37.6	50.3	V / 1.0 / 65.0	N/A	-23.7
1833.27	41.6 Av	2.6 / 28.4 / 37.6	35.0	V / 1.0 / 65.0	-19.0	N/A
2749.14	53.8 Pk	3.3 / 31.1 / 35.7	52.5	V / 1.0 / 300.0	N/A	-21.5
2749.14	40.9 Av	3.3 / 31.1 / 35.7	39.7	V / 1.0 / 300.0	-14.3	N/A
3665.54	39.1 Pk	4.0 / 33.3 / 36.1	40.3	V / 1.0 / 70.0	N/A	-33.7
3665.54	33.5 Av	4.0 / 33.3 / 36.1	34.7	V / 1.0 / 70.0	-19.3	N/A
4581.92	38.1 Pk	4.4 / 33.7 / 38.1	38.2	V / 1.0 / 320.0	N/A	-35.8
4581.91	32.8 Av	4.4 / 33.7 / 38.1	32.9	V / 1.0 / 320.0	-21.1	N/A
5498.27	41.8 Pk	4.9 / 35.7 / 38.3	44.0	V / 1.0 / 271.0	N/A	-30.0
5498.27	34.0 Av	4.9 / 35.7 / 38.3	36.2	V / 1.0 / 271.0	-17.8	N/A
The following is a noise floor reading						
6414.81	33.6 Av	4.8 / 36.4 / 37.6	37.3	V / 1.0 / 271.0	-16.7	N/A
The following is a noise floor reading						
7331.30	33.1 Av	5.4 / 37.7 / 37.8	38.3	V / 1.0 / 271.0	-15.7	N/A

Tested by: **Dan Dillon**  
 \_\_\_\_\_  
 Printed

\_\_\_\_\_  
 Signature

Reviewed by: **Todd Seeley**  
 \_\_\_\_\_  
 Printed

\_\_\_\_\_  
 Signature



# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 3**  
 Test Method: FCC 15.249 >1GHz AV  
 EUT Model #: AMS-SM01 / Scram  
 EUT Serial #: 103 / 112  
 Manufacturer: Alcohol Monitoring Systems  
 EUT Description: Smart Modem and RF Bracelet  
 Notes: RF on, modem off  
Base station and bracelet on the table.

Test Area: Pinewood Site 1 (3m)  
 Test Date: 26-Mar-2002  
 EUT Power: 120 VAC / 60 Hz

Temperature: 24 °C  
 Relative Humidity: <26 %  
 Air Pressure: 80 kPa  
 Page: 2 of 3

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ (MHz)	LEVEL (dBuV)	CABLE / ANT / PREAMP (dB) (dB/m) (dB)	FINAL (dBuV)	POL / HGT / AZ (m) (DEG)	DELTA1 (dB) FCC 15.249 >1GHz Av	DELTA2 (dB) FCC 15.249 >1GHz Pk
The following is a noise floor reading						
8247.80	29.2 Av	5.9 / 38.3 / 45.5	27.9	V / 1.0 / 271.0	-26.1	N/A
The following is a noise floor reading						
9164.30	28.9 Av	6.3 / 39.5 / 45.4	29.2	V / 1.0 / 271.0	-24.8	N/A
The following is a noise floor reading						
9164.30	28.9 Av	6.3 / 39.5 / 45.4	29.2	H / 1.0 / 0.0	-24.8	N/A
The following is a noise floor reading						
8247.80	29.2 Av	5.9 / 38.3 / 45.5	27.8	H / 1.0 / 0.0	-26.2	N/A
The following is a noise floor reading						
7331.30	33.0 Av	5.4 / 37.7 / 37.8	38.2	H / 1.0 / 0.0	-15.8	N/A
The following is a noise floor reading						
6414.81	33.6 Av	4.8 / 36.4 / 37.6	37.3	H / 1.0 / 0.0	-16.7	N/A
5498.28	39.7 Pk	4.9 / 35.7 / 38.3	41.9	H / 1.0 / 320.0	N/A	-32.1
5498.28	30.7 Av	4.9 / 35.7 / 38.3	32.9	H / 1.0 / 320.0	-21.1	N/A

Tested by: Dan Dillon  
 Printed

  
 Signature

Reviewed by: Todd Seeley  
 Printed

  
 Signature

# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 3**  
 Test Method: FCC 15.249 >1GHz AV  
 EUT Model #: AMS-SM01 / Scram  
 EUT Serial #: 103 / 112  
 Manufacturer: Alcohol Monitoring Systems  
 EUT Description: Smart Modem and RF Bracelet  
 Notes: RF on, modem off  
 Base station and bracelet on the table.

Test Area: Pinewood Site 1 (3m)  
 Test Date: 26-Mar-2002  
 EUT Power: 120 VAC / 60 Hz

Temperature: 24 °C  
 Relative Humidity: <26 %  
 Air Pressure: 80 kPa  
 Page: 3 of 3

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ (MHz)	LEVEL (dBuV)	CABLE / ANT / PREAMP (dB) (dB/m) (dB)	FINAL (dBuV)	POL / HGT / AZ (m) (DEG)	DELTA1 (dB) FCC 15.249 >1GHz Av	DELTA2 (dB) FCC 15.249 >1GHz Pk
4581.91	36.7 Pk	4.4 / 33.7 / 38.1	36.8	H / 1.0 / 65.0	N/A	-37.2
4581.92	31.8 Av	4.4 / 33.7 / 38.1	31.9	H / 1.0 / 65.0	-22.1	N/A
3665.54	39.1 Pk	4.0 / 33.3 / 36.1	40.3	H / 1.0 / 220.0	N/A	-33.7
3665.54	33.2 Av	4.0 / 33.3 / 36.1	34.5	H / 1.0 / 220.0	-19.5	N/A
2749.15	49.6 Pk	3.3 / 31.1 / 35.7	48.4	H / 1.0 / 310.0	N/A	-25.6
2749.15	38.9 Av	3.3 / 31.1 / 35.7	37.7	H / 1.0 / 310.0	-16.3	N/A
1833.27	59.3 Pk	2.6 / 28.4 / 37.6	52.6	H / 1.0 / 16.0	N/A	-21.4
1833.27	43.0 Av	2.6 / 28.4 / 37.6	36.3	H / 1.0 / 16.0	-17.7	N/A
1832.75	68.2 Pk	2.6 / 28.4 / 37.6	61.6	H / 1.0 / 118.0	N/A	-12.4
1832.75	47.0 Av	2.6 / 28.4 / 37.6	40.3	H / 1.0 / 118.0	-13.7	N/A
No other spurious or Harmonics observed						

Tested by: **Dan Dillon**  
 \_\_\_\_\_  
 Printed

  
 \_\_\_\_\_  
 Signature

Reviewed by: **Todd Seeley**  
 \_\_\_\_\_  
 Printed

  
 \_\_\_\_\_  
 Signature

# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 04**  
 Test Method: FCC Part 15  
 EUT Model #: Scram  
 EUT Serial #: 112  
 Manufacturer: Alcohol Monitoring Systems  
 EUT Description: RF Bracelet  
 Notes: Bracelet only

Test Area: Pinewood Site 1 (3m)  
 Test Date: 26-Mar-2002  
 EUT Power: 120 VAC / 60 Hz

Temperature: 24 °C  
 Relative Humidity: <26 %  
 Air Pressure: 80 kPa  
 Page: 1 of 2

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ (MHz)	LEVEL (dBuV)	CABLE / ANT / PREAMP (dB) (dB/m) (dB)	FINAL (dBuV/m)	POL / HGT / AZ (m) (DEG)	DELTA1 (dB) FCC B (< 1GHz)	DELTA2 (dB) N/A
No emissions found 30 - 1000 MHz, vertical						
No emissions found: 30 - 1000 MHz, horizontal						
The following are noise floor readings						
200.00	21.5 Qp	0.8 / 11.5 / 22.2	11.6	V / 1.0 / 0.0	-31.9	N/A
239.56	20.9 Qp	0.8 / 14.3 / 22.1	13.9	V / 1.0 / 0.0	-32.1	N/A
240.19	24.2 Qp	0.8 / 14.3 / 22.1	17.2	V / 1.0 / 0.0	-28.8	N/A
250.00	23.8 Qp	0.8 / 14.4 / 22.1	16.9	V / 1.0 / 0.0	-29.1	N/A
260.00	20.2 Qp	0.8 / 14.3 / 22.1	13.3	V / 1.0 / 0.0	-32.7	N/A
500.00	19.2 Qp	1.3 / 18.3 / 21.8	17.0	V / 1.0 / 0.0	-29.0	N/A
900.00	18.9 Qp	1.8 / 24.3 / 20.9	24.1	V / 1.0 / 0.0	-21.9	N/A

Tested by: **Dan Dillon**  
 \_\_\_\_\_  
 Printed

  
 \_\_\_\_\_  
 Signature

Reviewed by: **Todd Seeley**  
 \_\_\_\_\_  
 Printed

  
 \_\_\_\_\_  
 Signature

# Radiated Electromagnetic Emissions



Test Report #: **BC201533 Run 04**  
 Test Method: **FCC Part 15**  
 EUT Model #: **Scram**  
 EUT Serial #: **112**  
 Manufacturer: **Alcohol Monitoring Systems**  
 EUT Description: **RF Bracelet**  
 Notes: **Bracelet only**

Test Area: **Pinewood Site 1 (3m)**  
 Test Date: **26-Mar-2002**  
 EUT Power: **120 VAC / 60 Hz**

Temperature: **24** °C  
 Relative Humidity: **<26** %  
 Air Pressure: **80** kPa  
 Page: **2** of **2**

Level Key	
Pk – Peak	Nb – Narrow Band
Qp – QuasiPeak	Bb – Broad Band
Av - Average	

FREQ	LEVEL	CABLE / ANT / PREAMP	FINAL	POL / HGT / AZ	DELTA1 (dB)	DELTA2 (dB)
(MHz)	(dBuV)	(dB) (dB/m) (dB)	(dBuV/m)	(m) (DEG)	FCC B (< 1GHz)	N/A
<b>***** Measurement Summary *****</b>						
900.00	18.9 Qp	1.8 / 24.3 / 20.9	24.1	V / 1.0 / 0.0	-21.9	N/A
240.19	24.2 Qp	0.8 / 14.3 / 22.1	17.2	V / 1.0 / 0.0	-28.8	N/A
500.00	19.2 Qp	1.3 / 18.3 / 21.8	17.0	V / 1.0 / 0.0	-29.0	N/A
250.00	23.8 Qp	0.8 / 14.4 / 22.1	16.9	V / 1.0 / 0.0	-29.1	N/A
200.00	21.5 Qp	0.8 / 11.5 / 22.2	11.6	V / 1.0 / 0.0	-31.9	N/A
239.56	20.9 Qp	0.8 / 14.3 / 22.1	13.9	V / 1.0 / 0.0	-32.1	N/A
260.00	20.2 Qp	0.8 / 14.3 / 22.1	13.3	V / 1.0 / 0.0	-32.7	N/A

Tested by: **Dan Dillon**  
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 Printed

  
 \_\_\_\_\_  
 Signature

Reviewed by: **Todd Seeley**  
 \_\_\_\_\_  
 Printed

  
 \_\_\_\_\_  
 Signature

# Equipment Report

26-Mar-2002

Project Number: BC201533

Project Date: 26-Mar-2002

Company Name: AM

Equip ID	Manufacturer	Model Number	Serial Number	Description	Date	Calibration Interval	Due	Cal Code
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Test Performed C      Conducted Emissions

8004	RHODE & SCHWARZ	ESH3	872318/036	Low Frequency Receiver (9 kHz - 30 MHz)	30-Oct-2001	12	30-Oct-2002	G
8184	RHODE & SCHWARZ	ESH2-Z5	830364/002	LISN 50 ohm/50uH 3 line (1kHz - 30 MHz)	23-Mar-2001	13	23-Apr-2002	B
8257	HP	11947A	3107A01984	Transient Limiter	09-Sep-2001	12	09-Sep-2002	B

Test Performed R      Radiated Emissions

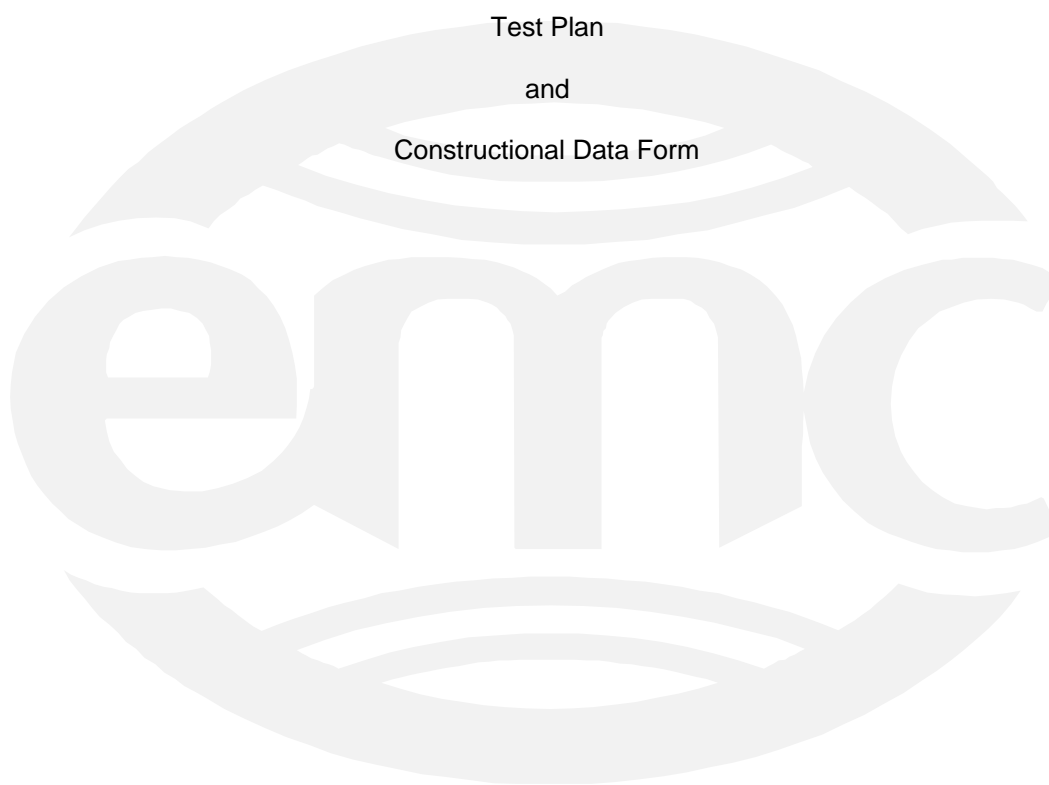
7514	A.H.SYSTEMS	SAS-200/512	104	Log Periodic Antenna (200-1500 MHz)	26-Sep-2001	12	26-Sep-2002	G
7617	MINI-CIRCUITS LAB	ZHL-42	N052792-2	Amplifier	23-Apr-2001	12	23-Apr-2002	B
7637	MITEQ	AM-2A-000110-N	848495	Amplifier	20-Mar-2002	12	20-Mar-2003	G
8179	EMCO	3108	2149	Biconical Dipole Antenna (30-300 MHz)	18-Jun-2001	12	18-Jun-2002	G
8207	AVANTEK	AWT-18037	1002	RF Pre-Amplifier (8-18 GHz)	23-Apr-2001	12	23-Apr-2002	B
8208	AVANTEK	AFT97-8434-10F	1007	RF Pre-Amplifier (4-8 GHz)	23-Apr-2001	12	23-Apr-2002	B
505010	HEWLETT-PACKARD	8568B	2732A04156	Spectrum Analyzer	27-Feb-2002	12	27-Feb-2003	G

Cal Code Legend: G=Out Source, Y=No Cal required, R=Out of Service, B=In-House Verification Required

1 of 1

## Appendix B

Test Plan  
and  
Constructional Data Form



# EMC Test Plan and Constructional Data Form

PLEASE COMPLETE THIS DOCUMENT IN FULL, ENTERING N/A IF THE FIELD IS NOT APPLICABLE.

**Applicant -- NOTE: This information will be input into your test report as shown below.**  
**Press the F1 key at any time to get HELP for the current field selected.**

Company: Alcohol Monitoring Systems LLC.

Address: 9135 S Ridgeline Blvd. #190  
Highlands Ranch, Colorado 80129

Contact: Jeff Hawthorne Position: Vice President of Research & Development

Phone: (303) 989-8900 Fax: (303) 791-4262

E-mail Address: jhawthorne@alcoholmonitoring.com

### General Equipment Description -- NOTE: This information will be input into your test report as shown below.

EUT Description 2 different products: 1) Modem Unit & 2) Secured Remote Alcohol Monitoring Bracelet

EUT Name 1) Smart Modem & 2) SCRAM Unit

Model No.: 1) AMS-SM01 & 2) SCRAM Serial No.: \_\_\_\_\_

Product Options: \_\_\_\_\_

Configurations to be tested: \_\_\_\_\_

### Test Objective

- EMC Directive 89/336/EEC (EMC)  FCC: Class  A  B Part 249  
Std: \_\_\_\_\_  VCCI: Class  A  B
- Machinery Directive 89/392/EEC (EMC)  BCIQ: Class  A  B  
Std: \_\_\_\_\_  Canada: Class  A  B
- Medical Device Directive 93/42/EEC (EMC)  Australia: Class  A  B  
Std: \_\_\_\_\_  Other: \_\_\_\_\_
- Vehicle Directive 72/245/EEC (EMC)  
Std: \_\_\_\_\_
- FDA Reviewers Guidance for Premarket Notification Submissions (EMC)

## EMC Test Plan and Constructional Data Form

**TÜV Product Service Certification Requested**

- |  |   |
|--|---|
| <input type="checkbox"/> Attestation of Conformity (AoC) | <input type="checkbox"/> International EMC Mark (IEM)   |
| <input type="checkbox"/> Certificate of Conformity (CoC) | <input type="checkbox"/> Compliance Document  |
| Protection Class (N/A for vehicles)                      | <input type="checkbox"/> Class I <input type="checkbox"/> Class II <input type="checkbox"/> Class III |
- (Press **F1** when field is selected to show additional information on Protection Class.)

**Attendance**

Test will be:     Attended by the customer     Unattended by the customer

**Failure - Complete this section if testing will not be attended by the customer.**

- If a failure occurs, TÜV Product Service should:
- Call contact listed above, if not available then stop testing. (After hrs phone): \_\_\_\_\_
  - Continue testing to complete test series.
  - Continue testing to define corrective action.
  - Stop testing.

**EUT Specifications and Requirements**

Length: \_\_\_\_\_ Width: \_\_\_\_\_ Height: \_\_\_\_\_ Weight: \_\_\_\_\_

**Power Requirements**

*Regulations require testing to be performed at typical power ratings in the countries of intended use. (i.e., European power is typically 230 VAC 50 Hz or 400 VAC 50 Hz, single and three phase, respectively)*

Voltage:            Modem = 110      (If battery powered, make sure battery life is sufficient to complete testing.)  
                          AC, Scram = \_\_\_\_\_  
                          Battery            \_\_\_\_\_

# of Phases: \_\_\_\_\_

Current (Amps/phase(max)): \_\_\_\_\_ Current (Amps/phase(nominal)): \_\_\_\_\_

Other \_\_\_\_\_

**Other Special Requirements**

**Typical Installation and/or Operating Environment**

(ie. Hospital, Small Business, Industrial/Factory, etc.)  
 Home use



Form

**EMC Test Plan and Constructional Data Form**



**EUT Power Cable**

- Permanent    OR     Removable                      Length (in meters): \_\_\_\_\_  
 Shielded        OR     Unshielded  
 Not Applicable

# EMC Test Plan and Constructional Data Form

EUT Interface Ports and Cables												
Interface			Shielding									
Type	Analog	Digital	Qty	Yes	No	Type	Termination	Connector Type	Port Termination	Length (in meters)	Removable	Permanent
<b>EXAMPLE:</b> RS232	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Foil over braid	Coaxial	Metallized 9-pin D-Sub	Characteristic Impedance	6	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>

## EMC Test Plan and Constructional Data Form

**EUT Software.**

Revision Level: Modem = 1.1 Scram = 3.8

Description:

**EUT Operating Modes to be Tested --** list the operating modes to be used during test. It is recommended the equipment be tested while operating in a typical operation mode. FCC testing of personal computers and/or peripherals requires that a simple program generate a complete line of upper case H's. Provide a general description of all software, firmware, and PLD algorithms used in the equipment. List all code modules as described above, with the revision level used during testing. Consult with your TÜV Product Service Representative if additional assistance is required.

- 1.
  
- 2.
  
- 3.

**EUT System Components --** List and describe all components which are part of the EUT. For FCC testing a minimum configuration is required. (ie. Mouse, Printer, Monitor, External Disk Drive, Motherboard, etc.)

Description	Model #	Serial #	FCC ID #
Modem Unit	AMS-SM01		
SCRAM Unit	SCRAM		

## EMC Test Plan and Constructional Data Form

<b>Support Equipment</b> -- List and describe all support equipment which is not part of the EUT. (i.e. peripherals, simulators, etc)			
<i>Description</i>	<i>Model #</i>	<i>Serial #</i>	<i>FCC ID #</i>
Laptop Computer	Dell 4100		

<b>Oscillator Frequencies</b>			
<i>Frequency</i>	<i>Derived Frequency</i>	<i>Component # / Location</i>	<i>Description of Use</i>

<b>Power Supply</b>			
<i>Manufacturer</i>	<i>Model #</i>	<i>Serial #</i>	<i>Type</i>
Ault Inc.			<input type="checkbox"/> Switched-mode: (Frequency) _____ <input type="checkbox"/> Linear <input checked="" type="checkbox"/> Other: <u>Class 2 power supply</u>
			<input type="checkbox"/> Switched-mode: (Frequency) _____ <input type="checkbox"/> Linear <input type="checkbox"/> Other: _____

<b>Power Line Filters</b>		
<i>Manufacturer</i>	<i>Model #</i>	<i>Location in EUT</i>




# EMC Test Plan and Constructional Data Form

Critical EMI Components (Capacitors, ferrites, etc.)				
Description	Manufacturer	Part # or Value	Qty	Component # / Location

**EMC Critical Detail --** Describe other EMC Design details used to reduce high frequency noise.

(PLEASE INSERT "ELECTRONIC SIGNATURE" BELOW IF POSSIBLE)

**Authorization Signatures**

	4/3/02
Customer authorization to perform tests according to this test plan.	Date
	4/3/02
Test Plan/CDF Prepared By (please print)	Date
	4/3/02
Reviewed by TÜV Product Service Associate	Date