

**REPLY TO REQUEST FOR ADDITIONAL INFORMATION
INET SPIDER II MODEM
FCC ID MIVWG9701A**

August 19, 1998

This document has been compiled to reply to a series of questions posed by the FCC as part of the Equipment Authorization Process for the Inet Spider II Modem (FCC ID MIVWG9701A). Each of the questions listed by the FCC is listed prior to the reply.

1) Please indicate whether and how a specific antenna assembly will always be used with this unit. Note that the antenna will affect the ERP and SAR results.

Answer

The Spider II will be marketed and sold with the 1/2-wave dipole antenna it was tested with. The absolute most power that can theoretically be transmitted from the unit by design is 28 dBm. There are no antennas on the market today that will attach directly to the unit other than the one tested. The antenna and the PCMCIA transmitter use a subminiature SMC type connector set which is not available as an accessory on the open (accessible by the standard consumer) market. There are a set of follow-on products which are in development at this time, but any items which can affect the radiated power of the device will be tested and submitted for authorization in accordance with Commission regulations.

2) SAR report not received by the Commission

Answer

SAR report was retransmitted to the Commission during the week of August 10, 1998

3) Please explain why for conducted power output (Pages 15 and 16) the AMPS mode is higher while for the ERP the CDPD mode is higher (Page 21).

Answer

In the case of the conducted power output data, the AMPS mode was reading an average of 1.4 dB higher than the CDPD mode. For ERP, the CDPD mode was reading an average of 2.0 dB higher than the AMPS readings. While both operational modes use the same basic RF sections (giving the same basic transmit power capability) the CDPD signal is spread/distributed differently than the AMPS signal. For the conducted power data, the reported data was derived from the occupied bandwidth plots which were made using a 300Hz/300Hz bandwidth setting. The ERP data was obtained using 100kHz/300kHz bandwidth settings. Based on tests performed on similar products, a

shift in relative power can occur between operating modes based on measurement bandwidth. Usually, this shift is 2 to 3 dB, which is on the order of the shift seen here.

4) Please send an occupied bandwidth plot for operation in the wideband data mode.

Answer

Data for the wideband data operation in AMPS mode is included with this reply. Data is also present for operation in wideband mode for signalling tone plus SAT . Data is presented for three channels across the band.

5) Please send measurement data showing modulation limiting (for voice operation).

Answer

Modulation limiting was performed using the following procedure:

"Perform this test on channel 365. Setup includes compressor enabled and SAT disabled. Input an audio signal at 1 KHz at a level to produce +/-8KHz deviation. Increase level by 20 dB (rise time <0.1 ms)."

Test was performed using an HP 8920A test set with the following results:

Peak Deviation measured = 11.9 KHz spec = 12 KHz
Steady-State Deviation measured = 11.8 KHz spec = 12 KHz

6) Please send measurement data showing compliance with the audio low pass filter specifications in Section 22.915(d)(1) of the Commissions R&R.

Answer

The low pass filter data is in paragraph 5.0 and Appendix D of the test report.

7) Your frequency stability rating of 0.0005% does not satisfy the requirement under Section 22.335 of the Commissions R&R.

Answer

The latest edition of 47 CFR owned by PTI is the October 1996 edition. Section 22.355 of this document quotes the frequency tolerance as being contained in Table C-1 of Section 22.357. While Section 22.357 references §22.359 and §22.917, there appears to be no Table C-1 in this edition of Section 22. The figure quoted in the 731 was derived from a similar application.

After doing some additional research, it appears that the frequency stability requirement as I understand it is 2.5 ppm. The Spider II easily meets this requirement. The frequency

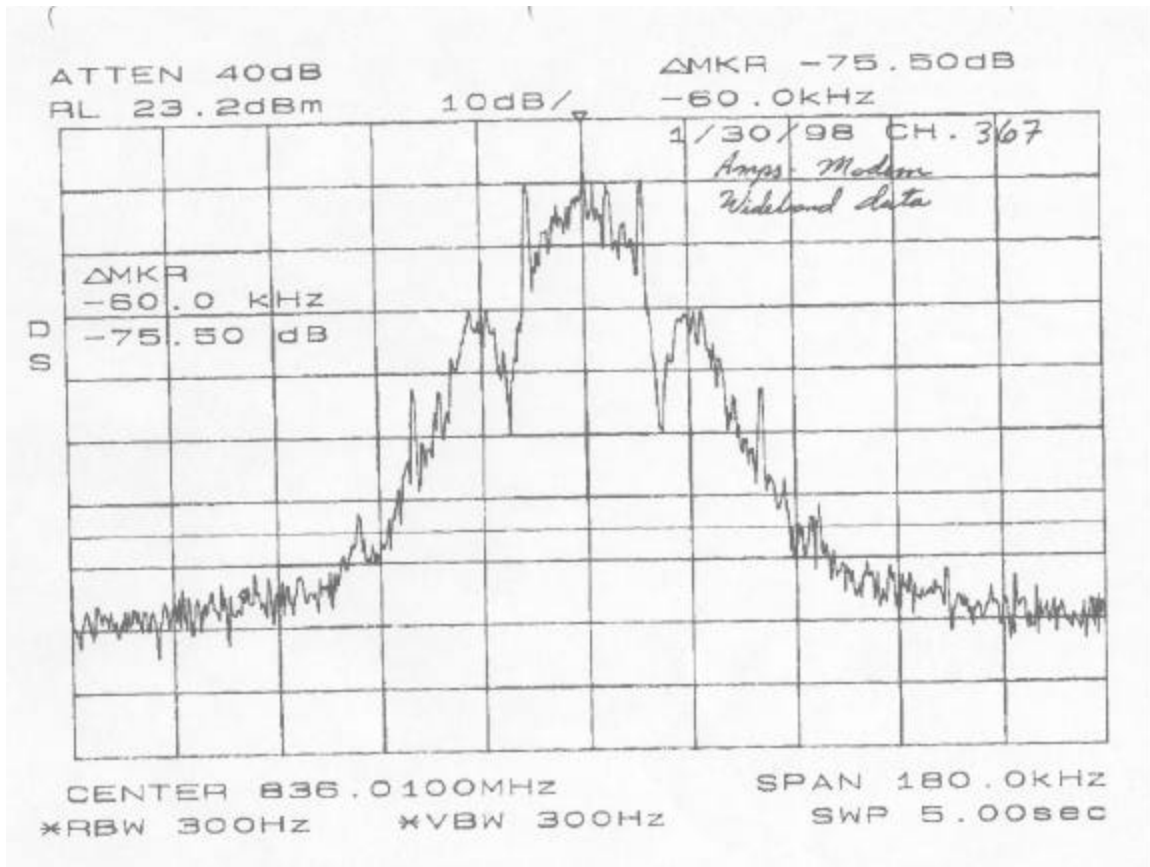
stability data for the Spider II indicates that this unit easily meets the 2.5 ppm criteria. Assuming that 2.5 ppm is the correct rating, please correct the Form 731 to this figure.

OCCUPIED BANDWIDTH DATA SHEET
INET SPIDER II WIRELESS MODEM

FCC ID MIVWG9701A

Sample: FCC #08
Test Date: August 12, 1998
Mode: Wideband Data

Port: Antenna I/O
Channel: 367



COMMENT: Center Frequency = 836.01 MHz

OCCUPIED BANDWIDTH DATA SHEET
INET SPIDER II WIRELESS MODEM

FCC ID MIVWG9701A

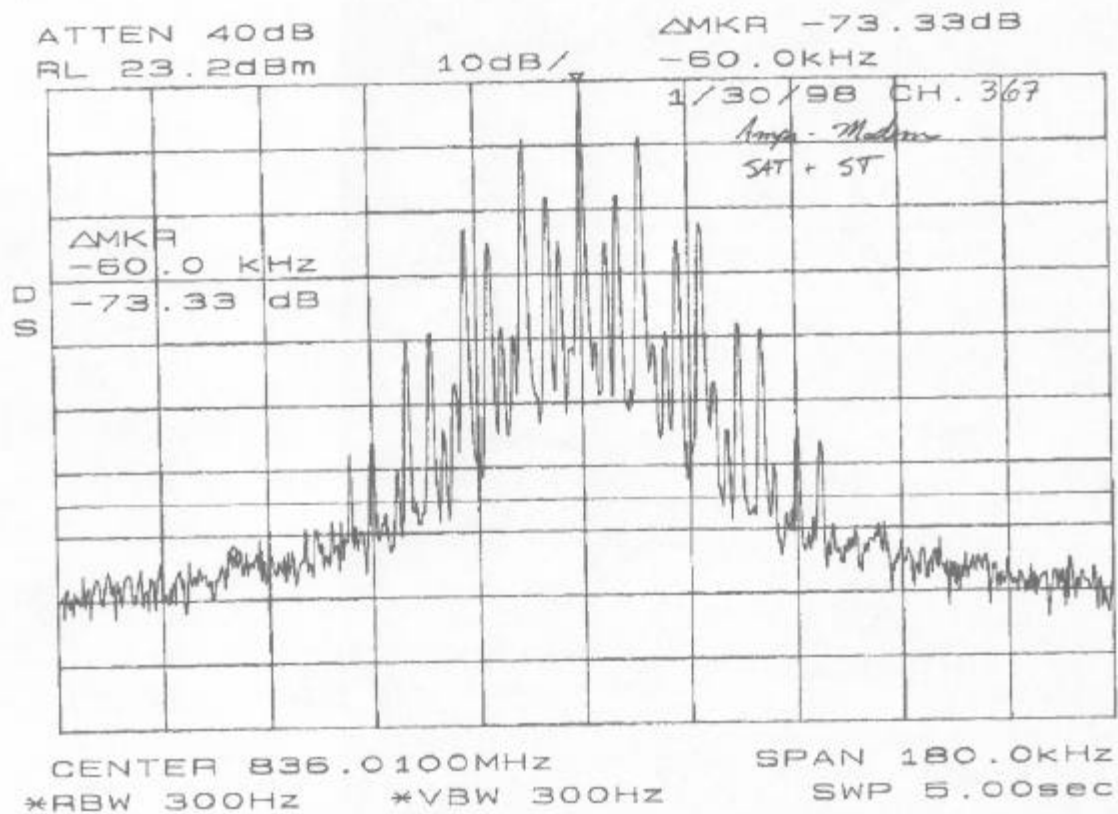
Sample: FCC #08

Test Date: August 12, 1998

Mode: Wideband Signal with SAT tone

Port: Antenna I/O

Channel: 367



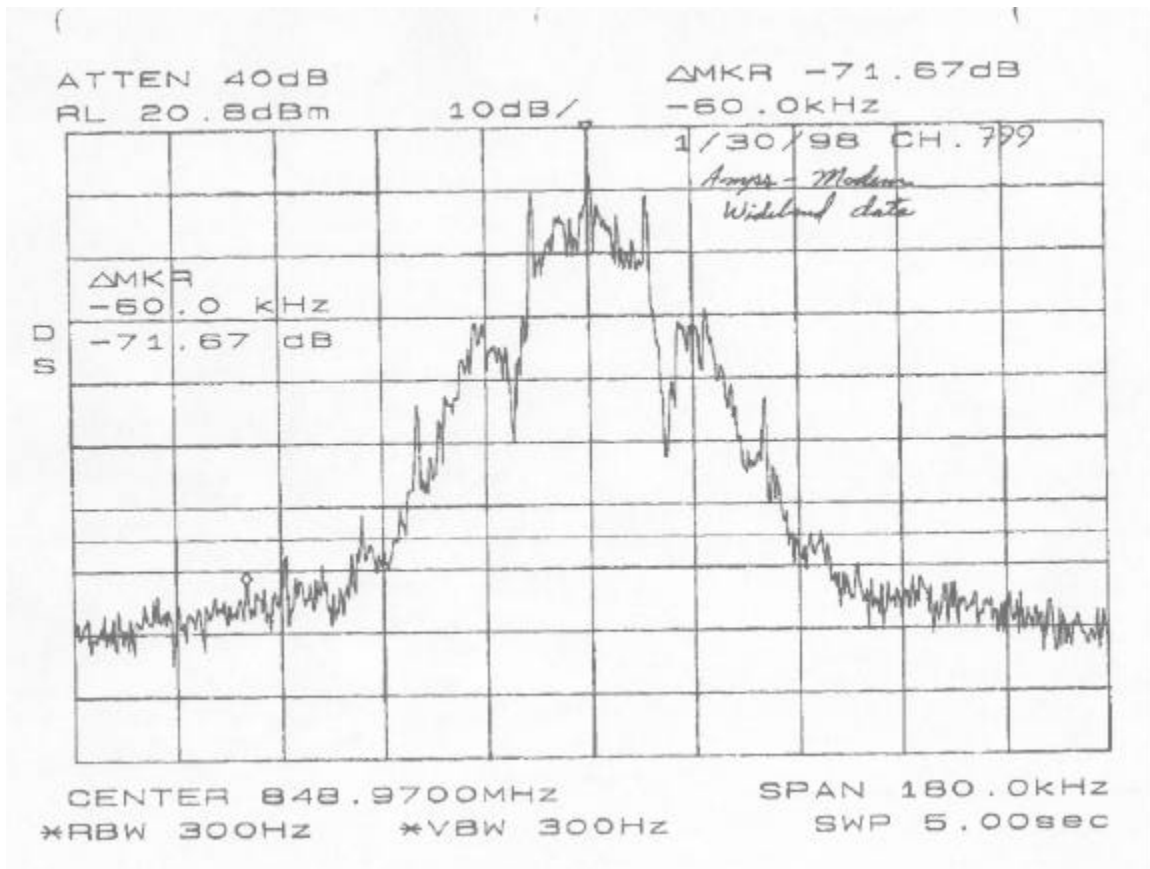
COMMENT: Center Frequency = 836.01 MHz

OCCUPIED BANDWIDTH DATA SHEET
INET SPIDER II WIRELESS MODEM

FCC ID MIVWG9701A

Sample: FCC #08
Test Date: August 12, 1998
Mode: Wideband Data

Port: Antenna I/O
Channel: 799



COMMENT: Center Frequency = 848.97 MHz

OCCUPIED BANDWIDTH DATA SHEET
INET SPIDER II WIRELESS MODEM

FCC ID MIVWG9701A

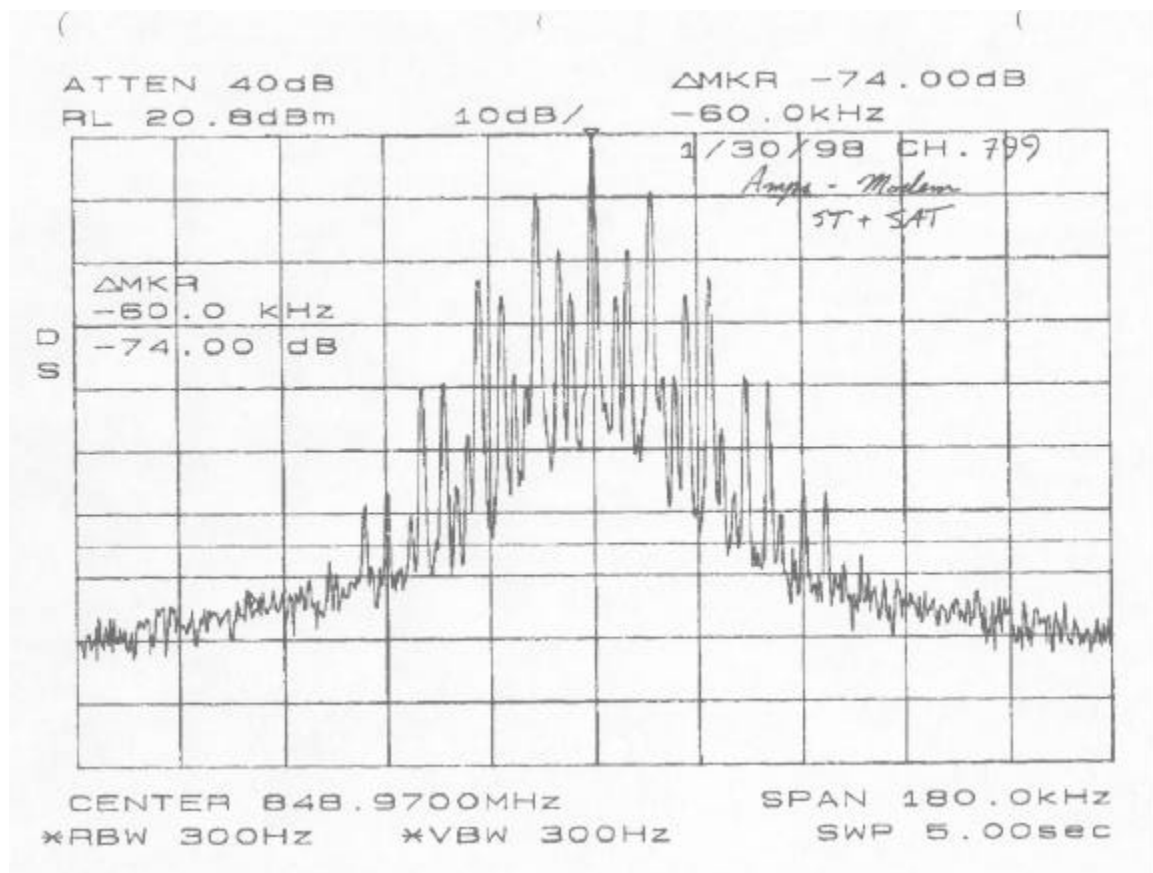
Sample: FCC #08

Test Date: August 12, 1998

Mode: Wideband Data

Port: Antenna I/O

Channel: 799



COMMENT: Center Frequency = = 848.97 MHz

OCCUPIED BANDWIDTH DATA SHEET
INET SPIDER II WIRELESS MODEM

FCC ID MIVWG9701A

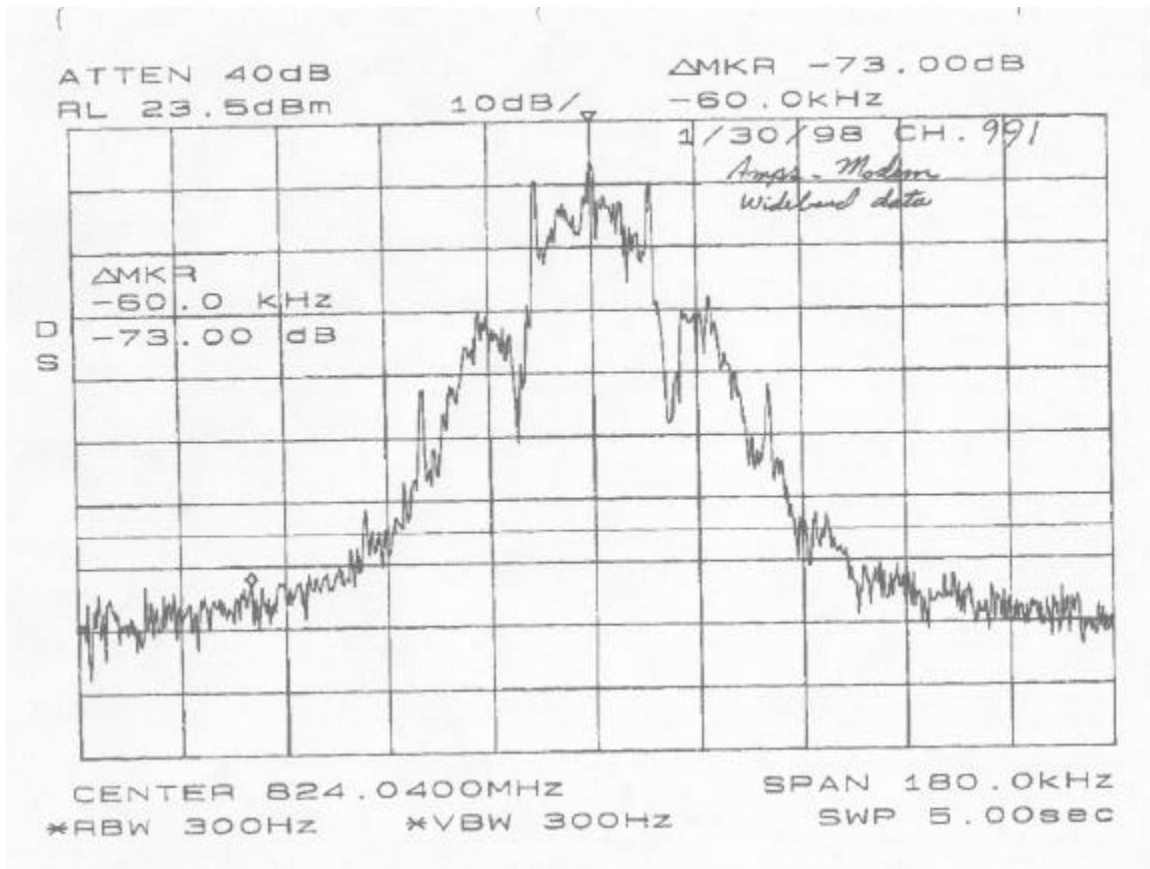
Sample: FCC #08

Test Date: August 12, 1998

Mode: Wideband Data

Port: Antenna I/O

Channel: 991



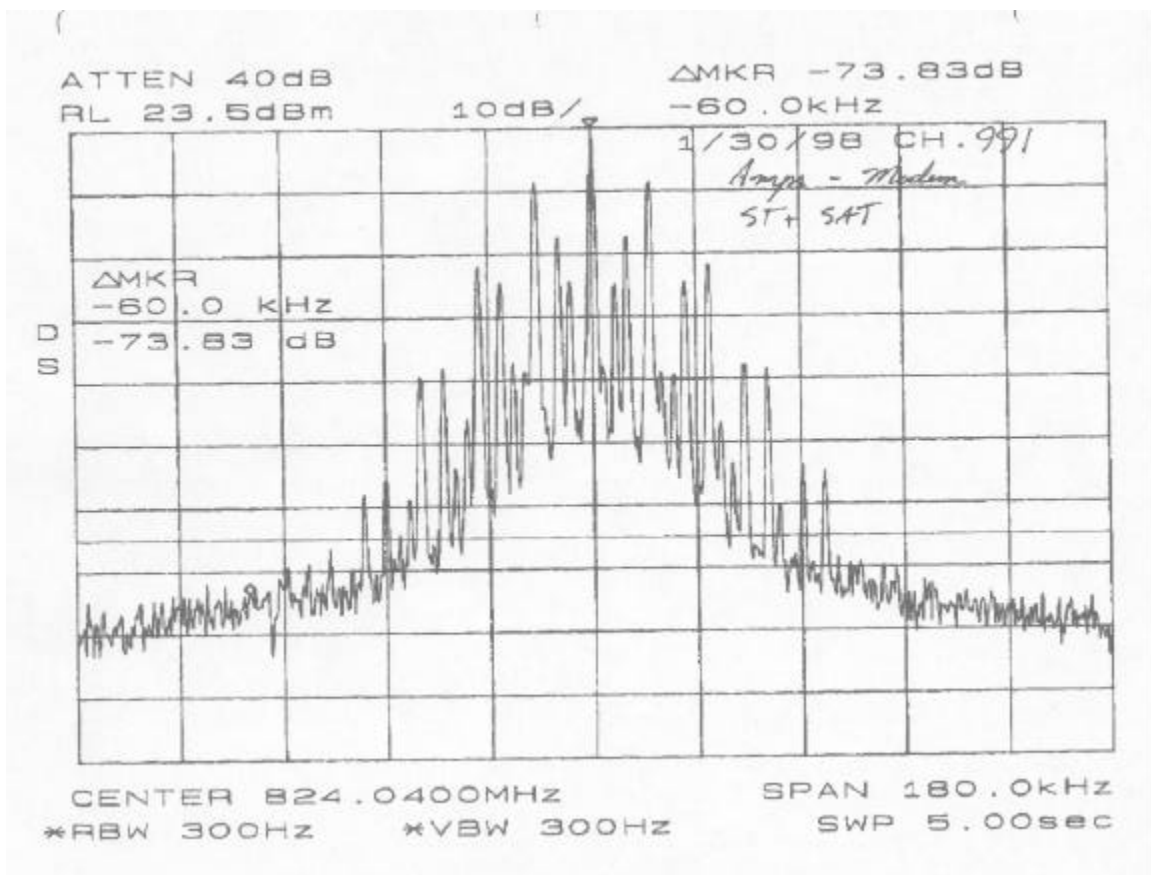
COMMENT: Center Frequency = 824.04 MHz

OCCUPIED BANDWIDTH DATA SHEET
INET SPIDER II WIRELESS MODEM

FCC ID MIVWG9701A

Sample: FCC #08
Test Date: August 12, 1998
Mode: Wideband Data

Port: Antenna I/O
Channel: 991



COMMENT: Center Frequency = = 824.04 MHz