Straubing, October 13, 2000

Supplement F to Test Report

No. 50118-00241-2

for

WIMAN II FHSS RF Modem

Applicant: Airdata WIMAN Systems Inc.

Purpose of testing: To show compliance with

FCC Code of Federal Regulations,
Part 15 Subpart C, Section §15.247

The following information has been submitted by the applicant:

Part 15.247(a)

Pseudo Random Frequency Hopping Sequence

The hopping sequence is generated by a specific software which selects a channel out of a given set of channels using a random function and fulfilling the two criteria:
(a) the selected channel has not been selected previously,
(b) the number of the selected channel differs from the number of the predecessor channel of at least 14.

An example of a hopping sequence is listed below:

Index	Channel-No.	Index	Channel-No.	Index	Channel-No.	Index	Channel-No.	Index	Channel-No.	Index	Channel-No.	Index	Channel-No.	Index	Channel-No.
1	40	11	63	21	78	31	6	41	13	51	48	61	11	71	72
2	5	12	20	22	32	32	59	42	71	52	14	62	80	72	26
3	23	13	53	23	60	33	28	43	9	53	55	63	41	73	68
4	56	14	33	24	18	34	52	44	62	54	35	64	77	74	45
5	2	15	75	25	74	35	29	45	1	55	17	65	3	75	21
6	22	16	50	26	8	36	61	46	46	56	51	66	42	76	67
7	66	17	30	27	39	37	44	47	7	57	10	67	12	77	16
8	15	18	49	28	76	38	25	48	24	58	54	68	36	78	37
9	65	19	73	29	31	39	70	49	43	59	34	69	64	79	58
10	27	20	19	30	69	40	47	50	4	60	57	70	38	80	79

Equal hopping frequency use

The hopping pattern of the WIMAN system consists of 80 channels. As described above each channel number is only selected once within one single pattern.
If a con tinuous stream of data is to be sent over the air interface, subsequent packets will be transmitted using subsequent channels in the hopping pattern. After the final channel of the pattern has been used the next packet will be transmitted using the first channel of the same pattern and so forth.

System Receiver Input Bandwidth

The frequency hopping receiver complies with the provisions of this chapter as the receiver frequency is strictly coupled to the transmit frequency selection. The receiver's input bandwidth is approximately 1 MHz which almost exactly matches the transmit channel spacing.

System Receiver Hopping Capability

WIMAN transceivers may be configured either as an RF-master or RF-slave. An RF-master will follow a certain hopping pattern defined by a configurable parameter 'NetId'. A fixed time slot length will be maintained by an internal crystal oscillator.
An RF-slave which is configured with a certain 'NetId' will begin its operation while listening into the spectrum, seeking for a signal transmitted by a master having the same 'NetId'.
After receiving such a signal, the slave will synchronize on this packet and follow the same internal hopping pattern.
Synchronization is maintained by the slave by re-adjusting the internal slot timer every time a packet transmitted by the master has been received.

Section 15.247(b) Manual

(a) correct peak output power
See copied instructions from the manual

(b) point-to-point operation
- will be introduced later -

(c) RF exposure compliance
- not applicable due to low transmit power reasons -

Section 15.247(g)

WIMAN transceivers will divide continuous data streams into subsequent packets each of them having a limited packet length.
Following in internal hopping pattern which is defined by a configurable paramteter 'NetId' the data will be transmitted packet by packet, each of them using subsequent channels as defined by the pattern.
The internal slot-timing is system software controlled but not configurable by the user.

Section 15.247(h)

After booting each WIMAN system randomly chooses an initial channel within its own hopping pattern (defined by the parameter 'NetId'). Thus, multiple transmitters operating within the same area will accidently occupy frequency channels simultaneously.
External synchronization provides a facility to force collocated transmitters to receive and transmit simultaneously. This burst synchronization does, however, not affect the random choice of channels according to the initial startup conditions.