*EXHIBIT D*

CKC TEST REPORT

5473A CLOUDS REST • MARIPOSA, CALIFORNIA 95338 • (209) 966-5240 • FAX (209) 966-4257

FCC ID: K3N5000

CKC LABORATORIES, INC. Testing the Future

ACCREDITED

# CERTIFICATION TEST REPORT

## FOR THE

## 2-WAY PAGER, ACCESSLINK II

## FCC PART 24.132 & FCC PART 24.133

**DATE OF ISSUE: MARCH 16, 1998**

**PREPARED FOR:**

Wireless Access
2101 Tasman Drive
Santa Clara, CA 95054

P.O. No: 026217

W.O. No: 68,048

Report No: **FCTA98-002**

Date of test: February 9, 1998

**PREPARED BY:**

Monika Lopez
CKC Laboratories, Inc.
5473A Clouds Rest
Mariposa, CA 95338

**DOCUMENTATION CONTROL:**

Tracy Phillips

**APPROVED BY:**

Dennis Ward
Director of Laboratories
CKC Laboratories

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## ADMINISTRATIVE INFORMATION

| | |
|---|---|
| **DATE OF TEST:** | February 9, 1998 |
| **PURPOSE OF TEST:** | To demonstrate the compliance of the 2-Way Pager, AccessLink II, with the requirements for FCC Part 24.132 & FCC Part 24.133. |
| **MANUFACTURER:** | Wireless Access<br>2101 Tasman Drive<br>Santa Clara, CA 95054 |
| **REPRESENTATIVE:** | Robert Hill |
| **TEST LOCATION:** | CKC Laboratories, Inc.<br>1653 Los Viboras Road<br>Hollister, CA 95023 |
| **TEST PERSONNEL:** | Art Rice |
| **TEST METHOD:** | FCC Part 24.132 & FCC Part 24.133 |
| **FREQUENCY RANGE TESTED:** | 30MHz – 9.012 GHz |
| **EQUIPMENT UNDER TEST:** | **2-Way Pager**<br>Manuf: Wireless Access<br>Model: AccessLink II<br>Serial: LII01<br>FCC ID: |



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## SUMMARY OF RESULTS

The Wireless Access 2-Way Pager, AccessLink II was tested in accordance with Part 24 for compliance with the requirements of the FCC Part 24 Rules.

As received, the above equipment was found to be fully compliant with the limits of FCC Part 24.132 & FCC Part 24.133.

## EQUIPMENT UNDER TEST (EUT) DESCRIPTION

The 2-Way Pager, AccessLink II.

## MEASUREMENT UNCERTAINTY

Associated with data in this report is a $\pm$4dB measurement uncertainty.

## PERIPHERAL DEVICES

The EUT was not tested with peripheral devices.



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## REPORT OF MEASUREMENTS

The following tables report the highest emissions levels recorded during the tests performed on the 2-Way Pager, AccessLink II. The data sheets from which these tables were compiled are contained in Appendix B.

**Table 1 Power Output Emission Levels**

| FREQUENCY MHz | METER READING dBµV | CORRECTION FACTORS Ant dB | Amp dB | Cable dB | dBm f dB | CORRECTED READING dBm | SPEC LIMIT dBm | MARGIN dB | NOTES |
|---|---|---|---|---|---|---|---|---|---|
| 901.256 | 109.2 | 22.8 | -26.9 | 8.0 | -107 | 6.1 | 16.2 | -10.1 | V |
| 901.219 | 93.2 | 22.8 | -26.9 | 8.0 | -107 | -9.9 | 16.2 | -26.1 | H |

Test Method: Part 24.132
Spec Limit : Part 24.132
Test Distance: 10 Meters

NOTES:
H = Horizontal Polarization
V = Vertical Polarization
N = No Polarization
D = Dipole Reading
Q = Quasi Peak Reading
A = Average Reading

COMMENTS: Pager is on the test table in position 3 (display facing forward, antenna end up). This position was determined to be the worst case by previous testing. Pager is in transmit mode. Checked fundamental transmit frequency of 901.20625 MHz, using 120 kHz bandwidth. NOTE: Spec limit is equivalent to 7 watts ERP, and is in dBm.



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**Table 2: Six Highest Radiated Emission Levels (30MHz-1000MHz)**

| FREQUENCY MHz | METER READING dBµV | CORRECTION FACTORS Ant dB | Amp dB | Cable dB | dBm f dB | CORRECTED READING dBm | SPEC LIMIT dBm | MARGIN dB | NOTES |
|---|---|---|---|---|---|---|---|---|---|
| 249.990 | 32.9 | 18.0 | -26.4 | 3.7 | -107 | -78.8 | -42.2 | -36.6 | V |
| 349.999 | 31.9 | 16.5 | -26.6 | 4.4 | -107 | -80.8 | -42.2 | -38.6 | V |
| 550.012 | 33.1 | 18.9 | -27.6 | 6.2 | -107 | -76.4 | -42.2 | -34.2 | V |
| 749.993 | 33.5 | 21.4 | -27.4 | 7.2 | -107 | -72.3 | -42.2 | -30.1 | V |
| 752.251 | 34.0 | 21.4 | -27.4 | 7.2 | -107 | -71.8 | -42.2 | -29.6 | V |
| 949.999 | 33.1 | 23.8 | -26.5 | 7.8 | -107 | -68.8 | -42.2 | -26.6 | V |

Test Method: Part 24.133
Spec Limit : Part 24.133
Test Distance: 10 Meters

NOTES:
H = Horizontal Polarization
V = Vertical Polarization
N = No Polarization
D = Dipole Reading
Q = Quasi Peak Reading
A = Average Reading

COMMENTS: Pager is on the test table in position 3 (display facing forward, antenna end up). This position was determined to be the worst case by previous testing. Pager is in transmit mode. Fundamental transmit frequency of 901.20625 MHz, using 120 kHz bandwidth. Checked for spurious signals between 30 and 1000 MHz. NOTE: Spec limit is in dBm and is relative to measured maximum ERP of device tested.



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| Table 3: Six Highest Radiated Emission Levels (1000MHz-9012MHz) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| FREQUENCY MHz | METER READING dBµV | CORRECTION FACTORS Ant dB | Amp dB | Cable dB | dBm f dB | CORRECTED READING dBm | SPEC LIMIT dBm | MARGIN dB | NOTES |
| 1802.441 | 57.5 | 28.0 | -38.2 | 10.2 | -107 | -49.5 | -42.2 | -7.3 | H |
| 2703.542 | 60.3 | 25.6 | -37.9 | 12.7 | -107 | -46.3 | -42.2 | -4.1 | H |
| 3604.778 | 54.0 | 25.6 | -38.0 | 14.9 | -107 | -50.5 | -42.2 | -8.3 | V |
| 4505.969 | 52.0 | 12.9 | -37.0 | 16.9 | -107 | -48.3 | -42.2 | -6.1 | V |
| 8110.909 | 32.8 | 37.3 | -36.0 | 23.2 | -107 | -49.7 | -42.2 | -7.5 | V |
| 9012.035 | 32.7 | 36.1 | -36.0 | 25.1 | -107 | -49.1 | -42.2 | -6.9 | V |

Test Method: Part 24.133
Spec Limit : Part 24.133
Test Distance: 10 Meters

NOTES:
H = Horizontal Polarization
V = Vertical Polarization
N = No Polarization
D = Dipole Reading
Q = Quasi Peak Reading
A = Average Reading

COMMENTS: Pager is on the test table in position 3 (display facing forward, antenna end up). This position was determined to be the worst case by previous testing. Pager is in transmit mode. Checked to 10th harmonic of transmit frequency 901.20625 MHz. Using 1 MHz bandwidth. Checked for spurious signals between 1.0 and 9.012 GHz. Used attenuation in front of the preamp, or no preamp, for measurements to avoid false readings caused by overdriving the test equipment. NOTE: Spec Limit is in dBm, and is relative to measured maximum ERP of device tested.



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## TABLE A

## LIST OF TEST EQUIPMENT

## VCCI Acceptance No. R-306 & C-319

1. EMI Receiver, Hewlett Packard, Model No. 8574A, S/N 2724A00601. Calibration date: March 1, 1997. Calibration due date: March 1, 1998.

2. Preamp, Hewlett Packard, Model No. 8447D, S/N 2944A06739. Calibration date: May 31, 1997. Calibration due date: May 31, 1998.

3. High Frequency Preamp, Hewlett Packard, Model No. 8447F, S/N 2944A03850. Calibration date: April 10, 1997. Calibration due date: April 10, 1998.

4. Biconical Antenna, EMCO, Model No. 3104, S/N 2683. Calibration date: February 20, 1997. Calibration due date: February 20, 1998.

5. Log Periodic Antenna, A & H Systems, Model No. SAS 200/512, S/N 288. Calibration date: August 21, 1997. Calibration due date: August 21, 1998.

6. Horn Antenna, ARA, Model No. DRG-118A, S/N 1064. Calibration date: December 11, 1997. Calibration due date: December 11, 1998.

7. LISN, Solar Electronics, Model No. 8028-50-TS-24-BNC, S/N 9212105. Calibration date: February 20, 1997. Calibration due date: February 20, 1998.

8. LISN, EMCO, Model No. 3816NM, S/N 9408-1006. Calibration date: February 6, 1997. Calibration due date: February 6, 1998.

9. Hollister site B calibration date: May 2, 1997. Hollister site B calibration due date: May 2, 1998.

10. Test software, EMI Test 2.86.



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## EUT SETUP

The equipment under test (EUT) listed was setup in a manner that represented its normal use, as shown in the setup photographs in Appendix A. Any special conditions required for the EUT to operate normally are identified in the comments that accompany Table 1 for power output emission levels & Table 2 and 3 for radiated emissions.

During radiated emissions testing, the EUT was mounted on a nonconductive, rotating table 1 meter above the conductive grid. The nonconductive table dimensions were 1 meter by 1.5 meters. This configuration is typical for radiated emissions testing for these type of devices.

## TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed in Table A were used to collect the radiated emissions data for the 2-Way Pager, AccessLink II. For radiated measurements below 300 MHz, the biconical antenna was used. For frequencies from 300 to 1000 MHz, the log periodic antenna was used. For frequencies from 1000 MHz to 9012 MHz, the horn antenna was used. All antennas were located at a distance of 3 meters from the edge of the EUT.

The HP spectrum analyzer was used for all measurements. Table B shows the analyzer bandwidth settings that were used in designated frequency bands. During radiated testing, the measurements were made with 0 dB of attenuation, a reference level of 97 dBμV, and a vertical scale of 10 dB per division.

TABLE B : ANALYZER BANDWIDTH SETTINGS PER FREQUENCY RANGE

| TEST | BEGINNING FREQUENCY | ENDING FREQUENCY | BANDWIDTH SETTING |
|---|---|---|---|
| RADIATED EMISSIONS | 30 MHz | 1000 MHz | 120 kHz |
| RADIATED EMISSIONS | 1000 MHz | 9012 MHz | 1 MHz |



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## SPECTRUM ANALYZER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in Tables 1, 2 and 3 indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "Peak" mode. Whenever a "Quasi-Peak" or "Average" reading is listed as one of the six highest readings, this is indicated as a "Q" or an "A" in Table 1, Table 2 or Table 3. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data for the 2-Way Pager, AccessLink II.

### Peak

In this mode, the Spectrum Analyzer or test engineer recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature of the analyzer called "peak hold," the analyzer had the ability to measure transients or low duty cycle transient emission peak levels. In this mode the analyzer made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

### Quasi-Peak

When the true peak values exceeded or were within 2 dB of the specification limit, quasi-peak measurements were taken using the HP 85650A Quasi-Peak Adapter for the HP 8568B Spectrum Analyzer. The detailed procedure for making quasi peak measurements contained in the HP Quasi-Peak Adapter manual were followed.

### Average

When the frequencies exceed 1 GHz, average measurements may be made using the spectrum analyzer. To make these measurements, the test engineer reduces the video bandwidth on the analyzer until the modulation of the signal is filtered out. At this point the analyzer is set into the linear mode and the scan time is reduced.



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## TEST METHODS

The radiated and conducted emissions data of the 2-Way Pager, AccessLink II, was taken with the HP Spectrum Analyzer. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in the "Sample Calculations". The corrected data was then compared to the FCC Part 24 emissions limits to determine compliance.

Preliminary and final measurements were taken in order to better ensure that all emissions from the EUT were found and maximized.

### Radiated Emissions Testing

During the preliminary radiated scan, the EUT was powered up and operating in its defined FCC test mode facing the antenna. The frequency range of 30 MHz - 88 MHz was then scanned with the biconical antenna located about 1.5 meter above the ground plane in the vertical configuration. During this scan, the turntable was rotated and all peaks which were at or near the limit were recorded. The frequency range of 100 - 300 MHz was scanned in the same manner, using the biconical antenna, and the peaks recorded. Lastly, a scan of the FM band from 88 - 110 MHz was made, using a reduced resolution bandwidth and a reduced frequency span. The biconical antenna was changed to the horizontal polarity and the above steps were repeated. After changing to the log periodic antenna in the horizontal configuration, the frequency range of 300 - 1000 MHz was scanned. The log periodic antenna was changed to the vertical polarity and the frequency range of 300 - 1000 MHz was again scanned. The horn antenna was used to scan the frequency range of 1000 MHz - 9012 MHz. Care was taken to ensure that no frequencies were missed within the FM and TV bands. An analysis was performed to determine if the signals that were at or near the limit were caused by an ambient transmission. If unable to determine by analysis, the equipment was powered down to make the final determination if the EUT was the source of the emission.

For the final radiated scan, the equipment was again positioned facing the antenna. A thorough scan of all frequencies was manually made using a small frequency span, rotating the turntable as needed. Comparison with the previously recorded measurements was then made.

Using the peak readings from both scans as a guide, the test engineer then maximized the readings with respect to the table rotation and antenna height. Maximizing of the EUT was achieved by monitoring the spectrum analyzer on a closed circuit television monitor while the EUT was being moved and rearranged on the EUT table for maximum emissions. Photographs showing the final worst case configuration of the EUT are contained in Appendix A.



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## SAMPLE CALCULATIONS

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in Tables 1, 2 and 3. For radiated emissions in dBm, the spectrum analyzer reading in dBµV was corrected by using the following formula:

Meter reading (dBµV)
+ Antenna Factor (dB)
+ Cable Loss (dB)
- Distance Correction (dB)
- Pre-amplifier Gain (dB)
-dBm Factor (dB)

= Corrected Reading(dBm)

This reading was then compared to the applicable specification limit to determine compliance.

| # | Freq MHz | Rdng dBµV | Amp I/ HFamp | Bicon | LOGB9 | Horn | Cb13/Cb14/ Cable | Dist | Corr dBm | dBm f | Spec | Margin | Polar |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

# means reading number
**Freq MHz** is the frequency in MHz of the obtained reading.
**Rdng dBµV** is the reading obtained on the spectrum analyzer in dBµV.
**PreAmp/HFamp** is short for the preamplifier factor or gain in dB.
**Horn** is the Horn Antenna factor in dB.
**Bicon** is the Biconical antenna factor in dB.
**LOGB9** is the Log Periodic Antenna factor in dB.
**Cb13/Cb14/Cable** are the cable loss factor in dB of the coaxial cable at the 10 meter stub-up position on the OATS.
**Dist** is the distance factor (in dB). It is used when testing at a different test distance than the one stated in the spec.
**Corr dBm** is the Corrected reading which is now in dBm (field strength).
**Spec** is the Specification limit (dB) stated in the agency's regulations.
**Margin** is the closeness to the specified limit in dB; + is over and - is under the limit.
**Polar** is the Polarity of the antenna with respect to earth.
**dBm f** is the conversion factor from dBuV/m to dBm (–107).



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**FCC Part 24.132 - Power Output**

**Frequency of Transmitter: 901.20625 MHz**

The output power was measured via an open field test site at a distance of 10 meters.

| Frequency | Measurement in dBμV | Gain of Antenna | Test Distance | Calculated ERP |
|---|---|---|---|---|
| 901.256 MHz | 113 | 1 | 10 meters | 0.665 Watts |

dBV/m = inv log (113/20) * 0.000001
dBV/m = 0.0.44684

ERP = $(Ed)^2/30(G)$
ERP = $[(0.0.44684)(10)]^2/[(30)(1)]$
19.9526/30
**ERP = 0.665 Watts**

**SPECIFICATION LIMITS & CALCULATIONS**

| | |
|---|---|
| Name of Spec Limit | FCC 24.133 TX Limit |
| Spec Limit Type | Quasi Peak Limit |
| Spec Limit Units | dBm |
| Spec Limit Distance | 10 Meters |
| Spec Limit Bandwidth | Narrowband |

Notes: Limit is in dBm. Transmitter spurious limits are relative to transmitter power and frequency away from channel edges.

limit ≤ 40 kHz outside channel
10 log (.665) = -1.77
43 + (-1.77) = **41.23 dB below carrier**

limit ≥ 40 kHz outside channel
50 + (-1.77) = **48.23 dB below carrier**

Limits are in dBm

| **Frequency** | **Amplitude** | **FCC Part 24.133 (i) or (ii)** |
|---|---|---|
| 30.000 MHz | -42.2 | Part 24.133 (i) |
| 901.141 MHz | -42.2 | Part 24.133 (i) |
| 901.141 MHz | -35.3 | Part 24.133 (ii) |
| 901.181 MHz | -35.3 | Part 24.133 (ii) |
| 901.206 MHz | -6.1 | Fundamental |
| 901.231 MHz | -35.3 | Part 24.133 (ii) |
| 901.271 MHz | -35.3 | Part 24.133 (ii) |
| 901.271 MHz | -42.2 | Part 24.133 (i) |
| 9012.063 MHz | -35.2 | Part 24.133 (ii) |



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# APPENDIX A

# INFORMATION ABOUT THE EQUIPMENT UNDER TEST



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| INFORMATION ABOUT THE EQUIPMENT UNDER TEST | |
|---|---|
| Test Software/Firmware: | **V O.11** |
| LCD was displaying: | **Diagnostics** |
| Power supply Manufacturer: | **WAI Proprietary** |
| The EUT is battery operated. | |
| | |

| CRYSTAL OSCILLATORS | |
|---|---|
| Type | Freq In MHz |
| Sine Wave | 9.6 |

| PRINTED CIRCUIT BOARDS | | | | |
|---|---|---|---|---|
| Function | Model & Rev | Clocks, MHz | Layers | Location |
| Baseband | 3000-1034, Rev 3 | | 6 | Internal |
| RF | 3000-1021, Rev 8 | 9.6<br>600 kHz<br>60 kHz<br>48 kHz | 6 | Internal |
| Keypad | 3000-1035, Rev 4 | | 2 | Internal |

| REQUIRED EUT CHANGES TO COMPLY: |
|---|
| None. |



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# APPENDIX B

# MEASUREMENT DATA SHEETS



5473A CLOUDS REST • MARIPOSA, CALIFORNIA 95338 • (209) 966-5240 • FAX (209) 966-4257

Test Location: CKC Laboratories, Inc. • 1653 Los Viboras Rd. Site B • Hollister, CA 95023 • 408-637-1051

Customer: **Wireless Access**
Specification: **FCC 24.132 TX Limit**
Test Type: **Maximized Emissions**
Equipment: **2-way Pager**
Manufacturer: Wireless Access
Model: AccessLink II
S/N: LII01

Date: Feb-09-98
Time: 12:37
Sequence#: 4

Tested By: Art Rice

***Equipment Under Test*** **(* = EUT):**

| Function | Manufacturer | Model # | S/N |
|---|---|---|---|
| 2-way Pager* | Wireless Access | AccessLink II | LII01 |

***Support Devices:***

| Function | Manufacturer | Model # | S/N |
|---|---|---|---|
| None | | | |

***Test Conditions / Notes:***

Pager is on the test table in position 3 (display facing forward, antenna end up). This position was determined to be the worst case by previous testing. Pager is in transmit mode. Checked fundamental transmit frequency of 901.20625 MHz, using 120 kHz bandwidth. NOTE: Spec limit is equivalent to 7 watts ERP, and is in dBm.

***Measurement Data:*** Sorted by Margin Test Distance: 10 Meters

| # | Freq MHz | Rdng dBµV | Amp 1 Cable dB | dB | LOGB9 dB | dBm f dB | Dist dB | Corr dBm | Spec dBm | Margin dB | Polar |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 901.256 | 109.2 | -26.9 +8.0 | | +22.8 | -107.0 | +0.0 | 6.1 | 16.2 | -10.1 | Vert |
| | Receive antenna height at 1.5m | | | | | | | | | | |
| 2 | 901.219 | 93.2 | -26.9 +8.0 | | +22.8 | -107.0 | +0.0 | -9.9 | 16.2 | -26.1 | Horiz |



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Test Location: CKC Laboratories, Inc. • 1653 Los Viboras Rd. Site B • Hollister, CA 95023 • 408-637-1051

Customer: **Wireless Access**
Specification: **FCC 24.133 TX @ 10m**
Test Type: **Maximized Emissions**
Equipment: **2-way Pager**
Manufacturer: Wireless Access
Model: AccessLink II
S/N: LII01

Date: Feb-09-98
Time: 14:52
Sequence#: 5

Tested By: Art Rice

***Equipment Under Test*** **(* = EUT):**

| Function | Manufacturer | Model # | S/N |
|---|---|---|---|
| 2-way Pager* | Wireless Access | AccessLink II | LII01 |

***Support Devices:***

| Function | Manufacturer | Model # | S/N |
|---|---|---|---|
| None | | | |

***Test Conditions / Notes:***

Pager is on the test table in position 3 (display facing forward, antenna end up). This position was determined to be the worst case by previous testing. Pager is in transmit mode. Fundamental transmit frequency of 901.20625 MHz, using 120 kHz bandwidth. Checked for spurious signals between 30 and 1000 MHz. NOTE: Spec limit is in dBm and is relative to measured maximum ERP of device tested.

***Measurement Data:*** Sorted by Margin Test Distance: 10 Meters

| # | Freq MHz | Rdng dBµV | Amp 1 Cable dB | Bicon dB | LOGB9 dB | dBm f dB | Dist dB | Corr dBm | Spec dBm | Margin dB | Polar |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 949.999 | 33.1 | -26.5 +7.8 | +0.0 | +23.8 | -107.0 | +0.0 | -68.8 | -42.2 | -26.6 | Vert |
| | Ambient noise floor. | | | | | | | | | | |
| 2 | 752.251 | 34.0 | -27.4 +7.2 | +0.0 | +21.4 | -107.0 | +0.0 | -71.8 | -42.2 | -29.6 | Vert |
| | Ambient noise floor. | | | | | | | | | | |
| 3 | 749.993 | 33.5 | -27.4 +7.2 | +0.0 | +21.4 | -107.0 | +0.0 | -72.3 | -42.2 | -30.1 | Vert |
| | Ambient noise floor. | | | | | | | | | | |
| 4 | 514.899 | 36.0 | -27.5 +5.9 | +0.0 | +18.0 | -107.0 | +0.0 | -74.6 | -42.2 | -32.4 | Vert |
| | Ambient | | | | | | | | | | |
| 5 | 514.928 | 34.6 | -27.5 +5.9 | +0.0 | +18.0 | -107.0 | +0.0 | -76.0 | -42.2 | -33.8 | Horiz |
| | Ambient | | | | | | | | | | |
| 6 | 550.012 | 33.1 | -27.6 +6.2 | +0.0 | +18.9 | -107.0 | +0.0 | -76.4 | -42.2 | -34.2 | Vert |
| | Ambient noise floor. | | | | | | | | | | |
| 7 | 249.990 | 32.9 | -26.4 +3.7 | +18.0 | +0.0 | -107.0 | +0.0 | -78.8 | -42.2 | -36.6 | Vert |
| | Ambient noise floor. | | | | | | | | | | |



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| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 249.999 | 31.1 | -26.4<br>+3.7 | +18.0 | +0.0 | -107.0 | +0.0 | -80.6 | -42.2 | -38.4 | Horiz |
| | Ambient noise floor. | | | | | | | | | | |
| 9 | 349.999 | 31.9 | -26.6<br>+4.4 | +0.0 | +16.5 | -107.0 | +0.0 | -80.8 | -42.2 | -38.6 | Vert |
| | Ambient noise floor. | | | | | | | | | | |
| 10 | 150.028 | 34.6 | -26.9<br>+2.6 | +13.5 | +0.0 | -107.0 | +0.0 | -83.2 | -42.2 | -41.0 | Horiz |
| | Ambient noise floor. | | | | | | | | | | |
| 11 | 149.990 | 32.1 | -26.9<br>+2.6 | +13.5 | +0.0 | -107.0 | +0.0 | -85.7 | -42.2 | -43.5 | Vert |
| | Ambient noise floor. | | | | | | | | | | |



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Test Location: CKC Laboratories, Inc. • 1653 Los Viboras Rd. Site B • Hollister, CA 95023 • 408-637-1051

Customer: **Wireless Access**
Specification: **FCC 24.133 TX @ 10m**
Test Type: **Maximized Emissions**
Equipment: **2-way Pager**
Manufacturer: Wireless Access
Model: AccessLink II
S/N: LII01

Date: Feb-09-98
Time: 18:21
Sequence#: 7

Tested By: Art Rice

***Equipment Under Test*** **(* = EUT):**

| Function | Manufacturer | Model # | S/N |
|---|---|---|---|
| 2-way Pager* | Wireless Access | AccessLink II | LII01 |

***Support Devices:***

| Function | Manufacturer | Model # | S/N |
|---|---|---|---|
| None | | | |

***Test Conditions / Notes:***

Pager is on the test table in position 3 (display facing forward, antenna end up). This position was determined to be the worst case by previous testing. Pager is in transmit mode. Checked to 10th harmonic of transmit frequency 901.20625 MHz. Using 1 MHz bandwidth. Checked for spurious signals between 1.0 and 9.012 GHz. Used attenuation in front of the preamp, or no preamp, for measurements to avoid false readings caused by overdriving the test equipment. NOTE: Spec Limit is in dBm, and is relative to measured maximum ERP of device tested.

***Measurement Data:*** Sorted by Margin Test Distance: 10 Meters

| # | Freq MHz | Rdng dBµV | Cbl3 dBm f dB | Cbl4 dB | Horn dB | HFamp dB | Dist dB | Corr dBm | Spec dBm | Margin dB | Polar |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2703.542 | 60.3 | -9.7 -107.0 | +3.0 | +25.6 | -37.9 | +0.0 | -46.3 | -42.2 | -4.1 | Horiz |
| 2 | 4505.969 | 52.0 | +12.9 -107.0 | +4.0 | +26.8 | -37.0 | +0.0 | -48.3 | -42.2 | -6.1 | Vert |
| 3 | 9012.035 | 32.7 | +18.7 -107.0 | +6.4 | +36.1 | -36.0 | +0.0 | -49.1 | -42.2 | -6.9 | Vert |
| 4 | 1802.441 | 57.5 | +7.8 -107.0 | +2.4 | +28.0 | -38.2 | +0.0 | -49.5 | -42.2 | -7.3 | Horiz |
| 5 | 8110.909 | 32.8 | -17.5 -107.0 | +5.7 | +37.3 | -36.0 | +0.0 | -49.7 | -42.2 | -7.5 | Vert |
| 6 | 3604.778 | 54.0 | +11.5 -107.0 | +3.4 | +25.6 | -38.0 | +0.0 | -50.5 | -42.2 | -8.3 | Vert |
| 7 | 6308.497 | 40.0 | +15.6 -107.0 | +5.0 | +30.5 | -34.8 | +0.0 | -50.7 | -42.2 | -8.5 | Vert |
| 8 | 7209.703 | 32.3 | +16.7 -107.0 | +5.6 | +36.9 | -35.4 | +0.0 | -50.9 | -42.2 | -8.7 | Vert |
| 9 | 3604.838 | 48.2 | +11.5 -107.0 | +3.4 | +25.6 | -38.0 | +0.0 | -56.3 | -42.2 | -14.1 | Horiz |



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| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 4506.044 | 43.7 | +12.9<br>-107.0 | +4.0 | +26.8 | -37.0 | +0.0 | -56.6 | -42.2 | -14.4 | Horiz |
| 11 | 5407.211 | 31.5 | +14.3<br>-107.0 | +4.4 | +29.3 | -36.6 | +0.0 | -64.1 | -42.2 | -21.9 | Vert |
| 12 | 2703.672<br>Average | 22.2 | +9.7<br>-107.0 | +3.0 | +25.6 | -37.9 | +0.0 | -84.4 | -42.2 | -42.2 | Vert |
| 13 | 1802.456<br>Average | 22.1 | +7.8<br>-107.0 | +2.4 | +28.0 | -38.2 | +0.0 | -84.9 | -42.2 | -42.7 | Vert |



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# ADDENDUM TO FCTA98-002

## Measured Data for FCC Testing Provided By Wireless Access For the AccessLink II 2-Way Pager Device

- Occupied Bandwidth Plot: FCC Code Part 24, Subpart D, Section 24.131
- Modulation Characteristics Plot: FCC Code Part 24, Subpart D, Section 24.131
- Frequency Stability vs Temperature Plot: FCC Code Part 24, Subpart D, Section 24.135

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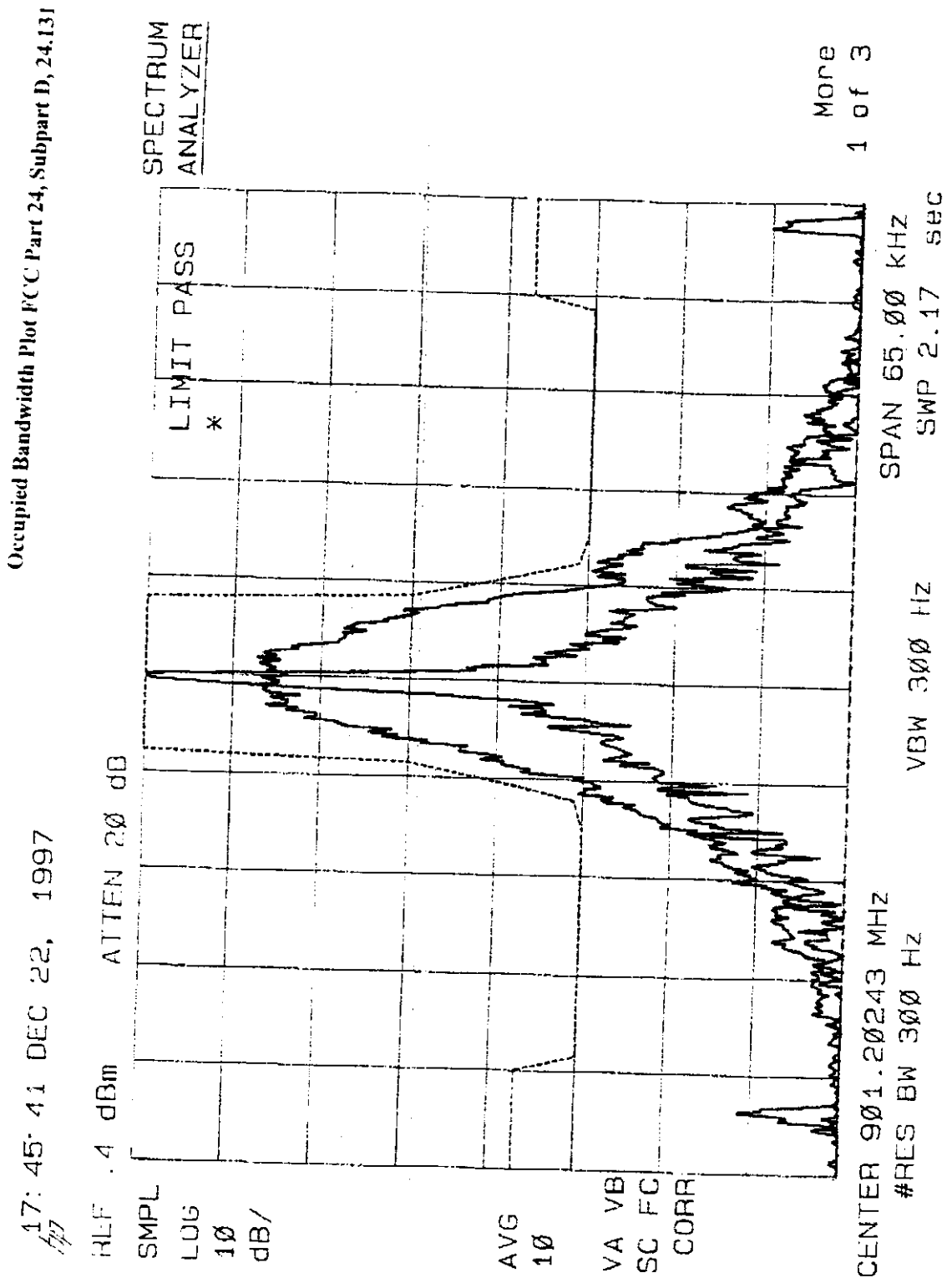
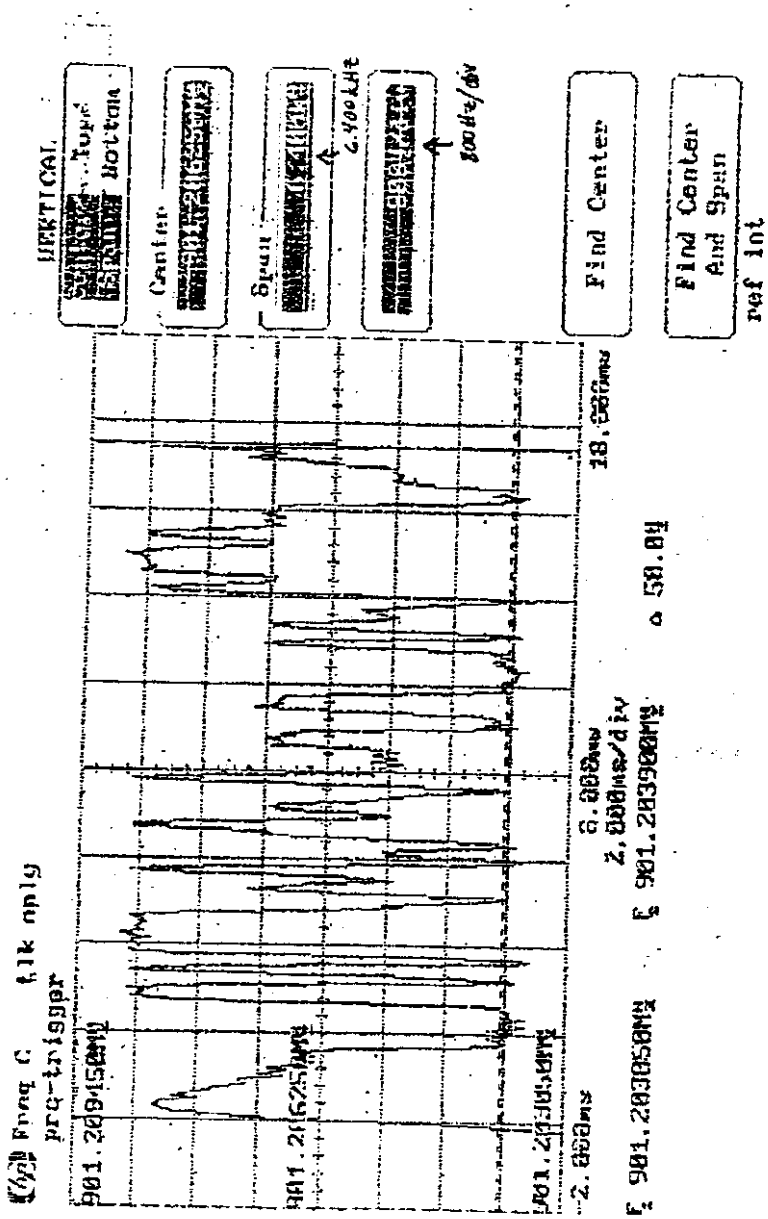
**Occupied Bandwidth Plot FCC Part 24, Subpart D, 24.131**



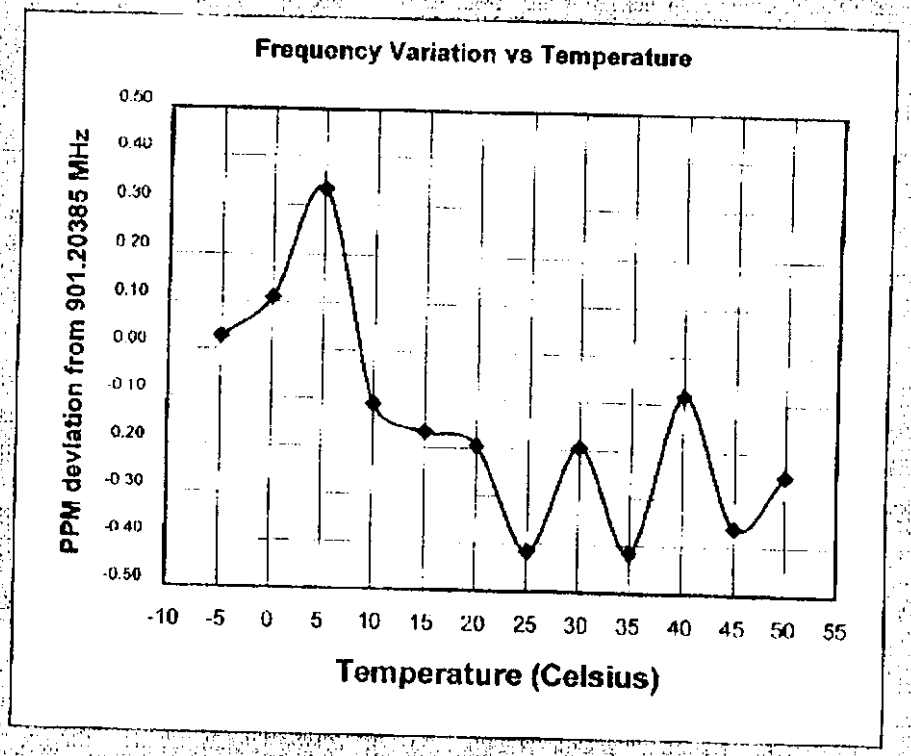
**Modulation Characteristics FCC Part 24, Subpart D, 24.131**




12/22/97

Wireless Access

| Celsius | PPM | Hz dev |
|---|---|---|
| -5 | 0.03 | 25 |
| 0 | 0.11 | 100 |
| 5 | 0.33 | 300 |
| 10 | -0.11 | -100 |
| 15 | -0.17 | -150 |
| 20 | -0.19 | -175 |
| 25 | -0.42 | -375 |
| 30 | -0.19 | -175 |
| 35 | -0.42 | -375 |
| 40 | -0.08 | -75 |
| 45 | -0.36 | -325 |
| 50 | -0.25 | -225 |




Tested by R Hill on 12/23/97

FCC Part 24, Subpart D, Section 24.135

fcc_part_24.135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Verification Data for receiver portion FCC ID: K3N5000

CKC LABORATORIES, INC. Testing the Future

ACCREDITED

# VERIFICATION TEST REPORT

# FOR THE

# 2-WAY PAGER, ACCESSLINK II

# FCC PART 15, SUBPART B

# CLASS B COMPLIANCE

**DATE OF ISSUE: MARCH 16, 1998**

**PREPARED FOR:**

Wireless Access
2101 Tasman Drive
Santa Clara, CA 95054

P.O. No: 026217

W.O. No: 68,048

Report No: **FB98-047**

Date of test: February 9, 1998

**PREPARED BY:**

Monika Lopez
CKC Laboratories, Inc.
5473A Clouds Rest
Mariposa, CA 95338

**APPROVED BY:**

Dennis Ward
Director of Laboratories
CKC Laboratories

**DOCUMENTATION CONTROL:**

Tracy Phillips

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## ADMINISTRATIVE INFORMATION

| | |
|---|---|
| **DATE OF TEST:** | February 9, 1998 |
| **PURPOSE OF TEST:** | To demonstrate the compliance of the 2-Way Pager, AccessLink II, with the FCC Part 15, Subpart B requirements for Class B devices. |
| **MANUFACTURER:** | Wireless Access<br>2101 Tasman Drive<br>Santa Clara, CA 95054 |
| **REPRESENTATIVE:** | Robert Hill |
| **TEST LOCATION:** | CKC Laboratories, Inc.<br>1653 Los Viboras Road<br>Hollister, CA 95023 |
| **TEST PERSONNEL:** | Art Rice |
| **TEST METHOD:** | ANSI C63.4 1992 |
| **FREQUENCY RANGE TESTED:** | 30MHz – 9012MHz |
| **EQUIPMENT UNDER TEST:** | **2-Way Pager**<br>Manuf: Wireless Access<br>Model: AccessLink II<br>Serial: LII01 |



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## SUMMARY OF RESULTS

The Wireless Access 2-Way Pager, AccessLink II, was tested in accordance with ANSI C63.4 1992 for compliance with the Class B requirements of Part 15, Subpart B of the FCC Rules.

As received, the above equipment was found to be fully compliant with the Class B limits of FCC Part 15, Subpart B for both radiated and conducted emissions.

## EQUIPMENT UNDER TEST (EUT) DESCRIPTION

The 2-Way Pager, AccessLink II.

## MEASUREMENT UNCERTAINTY

Associated with data in this report is a ±4dB measurement uncertainty.

## PERIPHERAL DEVICES

The EUT was not tested with peripheral devices.



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## REPORT OF MEASUREMENTS

The following table reports the six highest radiated emissions levels recorded during the tests performed on the 2-Way Pager, AccessLink II. The data sheets from which these tables were compiled are contained in Appendix B.

**Table 1: Six Highest Radiated Emission Levels**

| FREQUENCY MHz | METER READING dBµV | CORRECTION FACTORS Ant dB | Amp dB | Cable dB | Dist dB | CORRECTED READING dBµV/m | SPEC LIMIT dBµV/m | MARGIN dB | NOTES |
|---|---|---|---|---|---|---|---|---|---|
| 50.157 | 38.8 | 10.9 | -27.2 | 1.5 | | 24.0 | 40.0 | -16.0 | V |
| 480.004 | 28.7 | 17.7 | -27.4 | 5.6 | | 24.6 | 46.0 | -21.4 | H |
| 518.411 | 27.4 | 18.1 | -27.5 | 5.9 | | 23.9 | 46.0 | -22.1 | V |
| 528.002 | 28.7 | 18.3 | -27.5 | 6.0 | | 25.5 | 46.0 | -20.5 | H |
| 752.211 | 36.6 | 21.4 | -27.4 | 7.2 | | 37.8 | 46.0 | -8.2 | V |
| 936.401 | 27.8 | 23.5 | -26.6 | 7.8 | | 32.5 | 46.0 | -13.5 | H |

Test Method: ANSI C63.4 1992
Spec Limit : FCC Class B
Test Distance: 3 Meters

NOTES:
H = Horizontal Polarization
V = Vertical Polarization
N = No Polarization
D = Dipole Reading
Q = Quasi Peak Reading
A = Average Reading

COMMENTS: The table above was compiled from a combination of the following test conditions:

- Pager is on the test table in position 1 (sitting with display facing the sky). Pager is in continuous awake mode and waiting for messages. Checked 752.18 MHz oscillator. Note: Receiving at 940.22 MHz.
- Pager is on test table in position 2 (sitting with battery down). Pager is in continuous awake mode and waiting for messages. Checked 752.18 MHz oscillator. Note: Receiving at 940.22 MHz.
- Pager is on the test table in position 3 (antenna is facing up ). Position 3 was determined to be the worst case in anechoic chamber tests. Pager is in continuous awake mode and waiting for messages. Checked harmonics of 9.6 MHz and 752.18 MHz oscillators. Note: Receiving at 940.22 MHz.



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## TABLE A

## LIST OF TEST EQUIPMENT

## VCCI Acceptance No. R-306 & C-319

1. EMI Receiver, Hewlett Packard, Model No. 8574A, S/N 2724A00601.
2. Preamp, Hewlett Packard, Model No. 8447D, S/N 2944A06739.
3. Biconical Antenna, EMCO, Model No. 3104, S/N 2683.
4. Log Periodic Antenna, A & H Systems, Model No. SAS 200/512, S/N 288.
5. Horn Antenna, ARA, Model No. DRG-118A, S/N 1064.
6. LISN, Solar Electronics, Model No. 8028-50-TS-24-BNC, S/N 9212105.
7. LISN, EMCO, Model No. 3816NM, S/N 9408-1006.
8. Hollister site B calibration date: May 2, 1997.
9. Test software, EMI Test 2.86.



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## EUT SETUP

The equipment under test (EUT) listed was setup in a manner that represented their normal use, as shown in the setup photographs in Appendix A. Any special conditions required for the EUT to operate normally are identified in the comments that accompany table 1 for radiated emissions.

During radiated emissions testing, the EUT was mounted on a nonconductive, rotating table 1 meter above the conductive grid. The nonconductive table dimensions were 1 meter by 1.5 meters. This configuration is typical for radiated emissions testing of table top devices.

## TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed in Table A were used to collect the radiated emissions data for the 2-Way Pager, AccessLink II. For radiated measurements below 300 MHz, the biconical antenna was used. For frequencies from 300 to 1000 MHz, the log periodic antenna was used. For frequencies above 1000 MHz, the horn antenna was used. All antennas were located at a distance of 3 meters from the edge of the EUT.

The HP spectrum analyzer was used for all measurements. Table B shows the analyzer bandwidth settings that were used in designated frequency bands. During radiated testing, the measurements were made with 0 dB of attenuation, a reference level of 97 dBμV, and a vertical scale of 10 dB per division.

TABLE B : ANALYZER BANDWIDTH SETTINGS PER FREQUENCY RANGE

| TEST | BEGINNING FREQUENCY | ENDING FREQUENCY | BANDWIDTH SETTING |
|---|---|---|---|
| RADIATED EMISSIONS | 30 MHz | 1000 MHz | 120 kHz |
| RADIATED EMISSIONS | 1000 MHz | 9012 MHz | 1 MHz |



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## SPECTRUM ANALYZER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in table 1 indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "Peak" mode. Whenever a "Quasi-Peak" or "Average" reading is listed as one of the six highest readings, this is indicated as a "Q" or an "A" in table 1. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data for the 2-Way Pager, AccessLink II.

### Peak

In this mode, the Spectrum Analyzer or test engineer recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature of the analyzer called "peak hold," the analyzer had the ability to measure transients or low duty cycle transient emission peak levels. In this mode the analyzer made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

### Quasi-Peak

When the true peak values exceeded or were within 2 dB of the specification limit, quasi-peak measurements were taken using the HP 85650A Quasi-Peak Adapter for the HP 8568B Spectrum Analyzer. The detailed procedure for making quasi peak measurements contained in the HP Quasi-Peak Adapter manual were followed.

### Average

When the frequencies exceed 1 GHz, average measurements may be made using the spectrum analyzer. To make these measurements, the test engineer reduces the video bandwidth on the analyzer until the modulation of the signal is filtered out. At this point the analyzer is set into the linear mode and the scan time is reduced.



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## TEST METHODS

The radiated and conducted emissions data of the 2-Way Pager, AccessLink II, was taken with the HP Spectrum Analyzer. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in the "Sample Calculations". The corrected data was then compared to the FCC Part 15, Subpart B, Class B emissions limits to determine compliance.

Preliminary and final measurements were taken in order to better ensure that all emissions from the EUT were found and maximized.

### Radiated Emissions Testing

During the preliminary radiated scan, the EUT was powered up and operating in its defined FCC test mode facing the antenna. The frequency range of 30 MHz - 88 MHz was then scanned with the biconical antenna located about 1.5 meter above the ground plane in the vertical configuration. During this scan, the turntable was rotated and all peaks which were at or near the limit were recorded. The frequency range of 100 - 300 MHz was scanned with the biconical antenna in the same manner, and the peaks recorded. Lastly, a scan of the FM band from 88 - 110 MHz was made, using a reduced resolution bandwidth and a reduced frequency span. The biconical antenna was changed to the horizontal polarity and the above steps were repeated. After changing to the log periodic antenna in the horizontal configuration, the frequency range of 300 - 1000 MHz was scanned. The log periodic antenna was changed to the vertical polarity and the frequency range of 300 - 1000 MHz was again scanned. The horn antenna was used to scan for frequencies above 1000 MHz. Care was taken to ensure that no frequencies were missed within the FM and TV bands. An analysis was performed to determine if the signals that were at or near the limit were caused by an ambient transmission. If unable to determine by analysis, the equipment was powered down to make the final determination if the EUT was the source of the emission.

For the final radiated scan, the equipment was again positioned facing the antenna. A thorough scan of all frequencies was manually made using a small frequency span, rotating the turntable as needed. Comparison with the previously recorded measurements was then made.

Using the peak readings from both scans as a guide, the test engineer then maximized the readings with respect to the table rotation, antenna height and configuration of the EUT. Maximizing of the EUT was achieved by monitoring the spectrum analyzer on a closed circuit television monitor while the EUT was being moved and rearranged on the EUT table for maximum emissions. Photographs showing the final worst case configuration of the EUT are contained in Appendix A.



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## SAMPLE CALCULATIONS

The basic spectrum analyzer reading was converted using correction factors as shown in the six highest emissions readings in table 1. For radiated emissions in dBμV/m, the spectrum analyzer reading in dBμV was corrected by using the following formula:

Meter reading (dBμV)
+ Antenna Factor (dB)
+ Cable Loss (dB)
- Distance Correction (dB)
- Pre-amplifier Gain (dB)

= Corrected Reading(dBμV/m)

This reading was then compared to the applicable specification limit to determine compliance.



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# APPENDIX A

## INFORMATION ABOUT THE EQUIPMENT UNDER TEST



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| INFORMATION ABOUT THE EQUIPMENT UNDER TEST | |
|---|---|
| Test Software/Firmware: | **V O.11** |
| LCD was displaying: | **Diagnostics** |
| Power supply Manufacturer: | **WAI Proprietary** |
| The EUT is battery operated. | |
| | |

| CRYSTAL OSCILLATORS | |
|---|---|
| Type | Freq In MHz |
| Sine Wave | 9.6 |

| PRINTED CIRCUIT BOARDS | | | | |
|---|---|---|---|---|
| Function | Model & Rev | Clocks, MHz | Layers | Location |
| Baseband | 3000-1034, Rev 3 | | 6 | Internal |
| RF | 3000-1021, Rev 8 | 9.6<br>600 kHz<br>60 kHz<br>48 kHz | 6 | Internal |
| Keypad | 3000-1035, Rev 4 | | 2 | Internal |

| REQUIRED EUT CHANGES TO COMPLY: |
|---|
| None. |



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## APPENDIX B

## MEASUREMENT DATA SHEETS



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Test Location: CKC Laboratories, Inc. • 1653 Los Viboras Rd. Site B • Hollister, CA 95023 • 408-637-1051

Customer: **Wireless Access**
Specification: **FCC B RADIATED**
Test Type: **Maximized Emissions**
Equipment: **2-way Pager**
Manufacturer: Wireless Access
Model: AccessLink II
S/N: LII01

Date: Feb-09-98
Time: 10:30
Sequence#: 1

Tested By: Art Rice

***Equipment Under Test*** **(* = EUT):**

| Function | Manufacturer | Model # | S/N |
|---|---|---|---|
| 2-way Pager* | Wireless Access | AccessLink II | LII01 |

***Support Devices:***

| Function | Manufacturer | Model # | S/N |
|---|---|---|---|
| None | | | |

***Test Conditions / Notes:***

Pager is on the test table in position 3 (antenna is facing up ). Position 3 was determined to be the worst case in anechoic chamber tests. Pager is in continuous awake mode and waiting for messages. Checked harmonics of 9.6 MHz and 752.18 MHz oscillators. Note: Receiving at 940.22 MHz.

***Measurement Data:*** Sorted by Margin Test Distance: 3 Meters

| # | Freq MHz | Rdng dBµV | Amp 1 dB | Bicon dB | LOGB9 dB | Cable dB | Dist dB | Corr dBµV/m | Spec dBµV/m | Margin dB | Polar |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 752.211 | 36.6 | -27.4 | +0.0 | +21.4 | +7.2 | +0.0 | 37.8 | 46.0 | -8.2 | Vert |
| 2 | 752.217 | 32.0 | -27.4 | +0.0 | +21.4 | +7.2 | +0.0 | 33.2 | 46.0 | -12.8 | Horiz |
| 3 | 936.401 | 27.8 | -26.6 | +0.0 | +23.5 | +7.8 | +0.0 | 32.5 | 46.0 | -13.5 | Horiz |
| | Ambient noise floor. | | | | | | | | | | |
| 4 | 50.157 | 38.8 | -27.2 | +10.9 | +0.0 | +1.5 | +0.0 | 24.0 | 40.0 | -16.0 | Vert |
| 5 | 528.002 | 28.7 | -27.5 | +0.0 | +18.3 | +6.0 | +0.0 | 25.5 | 46.0 | -20.5 | Horiz |
| 6 | 480.004 | 28.7 | -27.4 | +0.0 | +17.7 | +5.6 | +0.0 | 24.6 | 46.0 | -21.4 | Horiz |
| | Ambient noise floor. | | | | | | | | | | |
| 7 | 518.411 | 27.4 | -27.5 | +0.0 | +18.1 | +5.9 | +0.0 | 23.9 | 46.0 | -22.1 | Vert |
| | Ambient noise floor. | | | | | | | | | | |
| 8 | 355.195 | 26.7 | -26.6 | +0.0 | +16.7 | +4.5 | +0.0 | 21.3 | 46.0 | -24.7 | Vert |
| | Ambient noise floor. | | | | | | | | | | |



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| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 307.203 | 26.5 | -26.3 | +0.0 | +15.1 | +4.1 | +0.0 | 19.4 | 46.0 | -26.6 | Horiz |
| | Ambient noise floor. | | | | | | | | | | |
| 10 | 998.400 | 25.9 | -26.6 | +0.0 | +24.6 | +0.0 | +0.0 | 23.9 | 54.0 | -30.1 | Vert |
| | Ambient noise floor. | | | | | | | | | | |



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Test Location: CKC Laboratories, Inc. • 1653 Los Viboras Rd. Site B • Hollister, CA 95023 • 408-637-1051

Customer: **Wireless Access**
Specification: **FCC B RADIATED**
Test Type: **Maximized Emissions**
Equipment: **2-way Pager**
Manufacturer: Wireless Access
Model: AccessLink II
S/N: LII01

Date: Feb-09-98
Time: 10:39
Sequence#: 2

Tested By: Art Rice

***Equipment Under Test*** **(* = EUT):**

| Function | Manufacturer | Model # | S/N |
|---|---|---|---|
| 2-way Pager* | Wireless Access | AccessLink II | LII01 |

***Support Devices:***

| Function | Manufacturer | Model # | S/N |
|---|---|---|---|
| None | | | |

***Test Conditions / Notes:***

Pager is on the test table in position 2 (sitting with battery down). Pager is in continuous awake mode and waiting for messages. Checked 752.18 MHz oscillator. Note: Receiving at 940.22 MHz.

***Measurement Data:*** Sorted by Margin Test Distance: 3 Meters

| # | Freq MHz | Rdng dBµV | Amp 1 dB | dB | LOGB9 dB | Cable dB | Dist dB | Corr dBµV/m | Spec dBµV/m | Margin dB | Polar |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 752.211 | 33.7 | -27.4 | | +21.4 | +7.2 | +0.0 | 34.9 | 46.0 | -11.1 | Vert |
| 2 | 752.220 | 32.1 | -27.4 | | +21.4 | +7.2 | +0.0 | 33.3 | 46.0 | -12.7 | Horiz |



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Test Location: CKC Laboratories, Inc. • 1653 Los Viboras Rd. Site B • Hollister, CA 95023 • 408-637-1051

Customer: **Wireless Access**
Specification: **FCC B RADIATED**
Test Type: **Maximized Emissions**
Equipment: **2-way Pager**
Manufacturer: Wireless Access
Model: AccessLink II
S/N: LII01

Date: Feb-09-98
Time: 10:50
Sequence#: 3

Tested By: Art Rice

***Equipment Under Test* (* = EUT):**

| Function | Manufacturer | Model # | S/N |
|---|---|---|---|
| 2-way Pager* | Wireless Access | AccessLink II | LII01 |

***Support Devices:***

| Function | Manufacturer | Model # | S/N |
|---|---|---|---|
| None | | | |

***Test Conditions / Notes:***

Pager is on the test table in position 1 (sitting with display facing the sky). Pager is in continuous awake mode and waiting for messages. Checked 752.18 MHz oscillator. Note: Receiving at 940.22 MHz.

***Measurement Data:*** Sorted by Margin Test Distance: 3 Meters

| # | Freq MHz | Rdng dBµV | Amp 1 dB | dB | LOGB9 dB | Cable dB | Dist dB | Corr dBµV/m | Spec dBµV/m | Margin dB | Polar |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 752.218 | 34.5 | -27.4 | | +21.4 | +7.2 | +0.0 | 35.7 | 46.0 | -10.3 | Vert |
| 2 | 752.202 | 34.1 | -27.4 | | +21.4 | +7.2 | +0.0 | 35.3 | 46.0 | -10.7 | Horiz |



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