



FCC CLASS B COMPLIANCE TEST REPORT

CFR 47, Part 15, Subpart B

for

Electromagnetic Emissions

of

LGC WIRELESS DISTRIBUTED ANTENNA SYSTEM

Model Number: LG Cell DAS19M-4-X

Serial Number: Prototype

MJO#: SN9I-009

Prepared for:

LGC WIRELESS, INCORPORATED

585 East Brokaw Road

San Jose, CA 95112

Prepared by:

EMC Technology Services, Incorporated

49000 Milmont Drive

Fremont, CA 94538

(510) 440-3838

REPORT DATE: OCTOBER 14, 1999

**FCC CLASS B
COMPLIANCE TEST REPORT
CFR 47, Part 15, Subpart B**




FOR

**LGC WIRELESS DISTRIBUTED ANTENNA SYSTEM
MODEL LG Cell DAS19M-4-X**

Prepared for:

LGC WIRELESS, INCORPORATED
San Jose, CA 95112

Prepared by: EMC Technology Services, Inc.

| | Signature | Date |
|--------------------------------|--|----------------|
| TEST TECHNICIAN |  _____ Dominic Griego | <u>11-3-99</u> |
| TEST SUPERVISOR |  _____ Daryl Smith | <u>11-3-99</u> |
| Q.C. MANAGER/ FINAL RELEASE |  _____ Susan Pelletier | <u>11-3-99</u> |

LIST OF REVISIONS

| <u>REVISION NUMBER AND DATE</u> | <u>PAGE CHANGED</u> | <u>PAGE SUBSTITUTED</u> | <u>PAGE ADDED</u> |
|--|--------------------------------|------------------------------------|------------------------------|
|--|--------------------------------|------------------------------------|------------------------------|

REPRODUCTION CLAUSE

Any reproduction of this document must be done in full. No single part of this document may be reproduced without written permission of EMC Technology Services, Inc., 49000 Milmont Drive, Fremont, CA 94538.

TABLE OF CONTENTS

| <u>TITLE</u> | <u>PAGE</u> |
|----------------------------------|-------------------------------------|
| TITLE PAGE..... | 1 |
| SIGNATURE PAGE..... | Error! Bookmark not defined. |
| LIST OF REVISIONS..... | 3 |
| REPRODUCTION CLAUSE..... | 4 |
| TABLE OF CONTENTS..... | 5 |
| VERIFICATION OF COMPLIANCE..... | 7 |
| GENERAL INFORMATION..... | 8 |
| DEVIATIONS..... | 8 |
| TEST RESULTS..... | 8 |
| SYSTEM DESCRIPTION..... | 9 |
| PRODUCT INFORMATION..... | 10 |
| CUSTOMER INFORMATION..... | 13 |
| SUPPORT EQUIPMENT..... | 16 |
| PRODUCT CABLING INFORMATION..... | 17 |
| SUMMARY..... | 19 |

TABLE OF CONTENTS (continued)

| <u>SECTION</u> | <u>TITLE</u> | <u>PAGE</u> |
|-----------------------|-------------------------------------|--------------------|
| APPENDIX A | PHOTOGRAPHS AND BLOCK DIAGRAMS..... | 21 |
| APPENDIX B | TEST FACILITY | 27 |
| APPENDIX C | TEST EQUIPMENT..... | 29 |
| APPENDIX D | TEST METHODS..... | 32 |
| APPENDIX E | CLASS TYPES AND LIMITS | 35 |
| APPENDIX F | LABELING REQUIREMENTS | 37 |
| APPENDIX G | DATA READINGS | 42 |
| APPENDIX H | DoC INFORMATION..... | 46 |
| APPENDIX I | TEST PROCEDURES..... | 52 |

VERIFICATION OF COMPLIANCE

Equipment Under Test: LGC Wireless Distributed Antenna System

Model Number: LG Cell DAS19M-4-X

Serial Number: Prototype

Company: LGC Wireless, Inc.
585 E. Brokaw Rd.
San Jose, CA 95112

Test Standard: CFR 47, Part 15, Subpart B-1998 (ANSI C63.4-1992), Class B

Type of Test: Conducted 450 kHz - 30 MHz
Radiated 30 MHz - 1 GHz

Performance Criteria: For Line Conducted test, emissions must not exceed the limits stated in CFR 47, Part 15, Subpart B, Section 107-(a).
For Radiated test, emissions must not exceed the limits stated in CFR 47, Part 15, Subpart B, Section 109-(a).

Date Tested: September 27, 1999 - Radiated
September 30, 1999 - Line Conducted

Test Technician: Dominic Griego

The above equipment was tested by EMC Technology Services, Inc., for compliance with the requirements set forth in the CFR 47, Class B Rules and Regulations. This said equipment in the configuration described in the report shows, that maximum emission levels emanating from the equipment are within the compliance requirements.

GENERAL INFORMATION

Customer: LGC Wireless, Inc.
585 E. Brokaw Rd.
San Jose, CA 95112

Contact Person: John Dorsey

Phone Number: (408) 487-2400

Equipment Under Test: LGC Wireless Distributed Antenna System

Model Number: LG Cell DAS19M-4-X

Serial Number: Prototype

Test Standard: CFR 47, Part 15, Subpart B-1998 (ANSI C63.4-1992), Class B

Type of Test: Conducted 450 kHz - 30 MHz
Radiated 30 MHz - 1 GHz

Performance Criteria: For Line Conducted test, emissions must not exceed the limits stated in CFR 47, Part 15, Subpart B, Section 107-(a).
For Radiated test, emissions must not exceed the limits stated in CFR 47, Part 15, Subpart B, Section 109-(a).

Deviation: None

Test Results: Line Conducted--Line conducted scans ranged from 450 kHz to 30 MHz on both Line 1 (hot side) and Line 2 (neutral side) in accordance with CFR 47 Class B test standard. All line conducted emissions were within the CFR 47 Class B requirements for compliance.
Radiated--Radiated scans ranged from 30 MHz to 1 GHz in both the horizontal and the vertical antenna polarization. All radiated emissions were within the CFR 47 Class B requirements for compliance.

SYSTEM DESCRIPTION

Equipment Under Test

LGC Wireless Distributed Antenna System

Support Equipment

Signal Generator

EUT Test Program: Idle State

PRODUCT INFORMATION

Description of Equipment Under Test: The LGC Wireless Distributed Antenna System consists of the following six (6) modules:

1) Main Hub:

Housing Type: Metal

AC Power Requirements: 110-250 VAC, 50/60 Hz

Power Supply Model Number: Astec International Ltd., Type LPS43

Serial Number: 2400106

Power Cable: Unshielded

Length: 1.5 m

Gauge: 18

I/O PORT TYPE

TERMINATED TO

| | |
|--------------------------------|----------------|
| 1) 9-pin Diagnostic Dsub Port | Unterminated |
| 2) 25-pin Diagnostic Dsub Port | Unterminated |
| 3) Reverse Power | Unterminated |
| 4) Forward Power | Unterminated |
| 5) Duplex | Unterminated |
| 6) Fiber Ports (×4) Uplink | Terminated (1) |
| 7) Fiber Ports (×4) Downlink | Terminated (1) |

PRODUCT INFORMATION (continued)

2) Expansion Hub:

Housing Type: Metal

AC Power Requirements: 110-240 VAC, 47-63 Hz

Power Supply Model Number: International Power Sources Inc., Model UP0651S-02

Serial Number: 2400106

Power Cable: Unshielded

Length: 1.5 m

Gauge: 18

I/O PORT TYPE

TERMINATED TO

1) RJ45 Antenna Ports (×2)

Fiber Uplink Port

2) RJ45 Antenna Ports (×2)

Fiber Downlink Port

PRODUCT INFORMATION (continued)

3) Antenna Unit #1:

Model Number: DAS19A-4

Serial Number: 2400157

I/O PORT TYPE

TERMINATED TO

Expansion Hub

Port #1

4) Antenna Unit #2:

Model Number: DAS19A-4

Serial Number: 2400161

I/O PORT TYPE

TERMINATED TO

Expansion Hub

Port #2

5) Antenna Unit #3:

Model Number: DAS19A-4

Serial Number: 2400158

I/O PORT TYPE

TERMINATED TO

Expansion Hub

Port #3

6) Antenna Unit #4:

Model Number: DAS19A-4

Serial Number: 2400149

I/O PORT TYPE

TERMINATED TO

Expansion Hub

Port #4

CUSTOMER INFORMATION

LGCell 1900 MHz CDMA Hybrid/Fiber Twisted Pair Microcellular Distributed Antenna System Specifications

Typical RF Specifications (@ 25°C) w/ 1km of fiber and 50m of TP cables

| Parameters | Downlink | Uplink |
|---|-----------------------|----------------------|
| Frequency (MHz) | 1930-1975 | 1850-1895 |
| Bandwidth ¹ | 15 MHz | 15 MHz |
| Filter Attenuation (dB) | -40 @ +16.5 MHz | -40 @ +11 MHz |
| Nominal System Gain (dB)(Duplex / Simplex Port) | +40 / 0 | +40 / 0 ² |
| Variation to Nominal System Gain (dB) | ≤ ±2.5 | ≤ ±2.5 |
| Gain Flatness (dB) | ≤ ±2.5 | ≤ ±2.5 |
| Third Order Intercept (dBm) (duplex/simplex port) | +29 / +29 | +15 / -25 |
| Nominal Noise Figure (dB) | - | 18 ³ |
| 1dB Compression Point (dBm) | +19 | - |
| Maximum Radiated Power Per CDMA Carrier (dBm) | 5dBm, 3 CDMA carriers | - |
| Waveform Quality (ρ) (at maximum power) | > 0.96 | > 0.96 |
| Spurious Emissions (BW = 30kHz) | -45dBc @ +/- 885kHz | -45dBc @ +/- 885kHz |
| System Group Delay (not including cable) (μs) | < 0.5 | < 2 |

¹ Customer specifies the center frequency of the passband. ² For input signal ≤ -40dBm. AGC engaged at input higher than -40dBm.

³ For a system with 1 Main Hub, 1 Expansion Hub and 4 Remote Antennas

Absolute Maximum Ratings (@ 25°C)

| Parameters | Ratings |
|--|-----------|
| Main Hub Composite RF Input (downlink) Power (dBm) (duplex/simplex port) | -20 / +20 |
| Antenna RF Input (uplink) Power (dBm) | +15 |

Environmental Specifications

| Parameters | Ratings |
|--|----------|
| Operating Temperature (°C) | 0 to +45 |
| Operating Humidity; non-condensing (%) | 5 to 95 |

Physical Specifications

| Parameters | Main Hub | Expansion Hub | Remote Antenna Unit |
|--|--|--------------------------------------|------------------------------|
| RF Connectors | (3) N-female (Duplex, Forward & Reverse) | (4) RJ-45 | (1) RJ-45 / (1) SMA |
| Remote Alarm Connector (contact closure) | (1) 9-pin D-sub (1) 25-pin D-sub | - | - |
| ST Multi-mode Fiber Connectors | (4) Pair | (1) Pair | - |
| LED Alarm & Status Indicators | Power On; Sync; Port Fault; Connect | Power On; Sync; Port Fault; Connect | Power On; Alarm |
| AC Power (Volts) / (current) (50-400 Hz) | 85-264V / 1.5A | 85-264V / 1.6A | - |
| Maximum heat dissipation (W) | 20 | 20 | 7.5 |
| Enclosure Dimensions ⁴ (inch) height x width x depth (mm) | 1.75 x 17.25 x 9 44.5 x 438 x 229 | 1.75 x 17.25 x 9 44.5 x 438 x 229 | 1.3x5.5x5.6 33x 140 x 142 |
| Weight (kg) | < 3 | < 3 | < 0.3 |
| MTBF (hours) | 298,000 | 461,000 | 965,000 |

⁴ Excluding angle-brackets for 19" rack-mounting of hubs.

CUSTOMER INFORMATION (continued)

LGCell 1900 MHz TDMA {IS-136} Hybrid/Fiber Twisted Pair Microcellular Distributed Antenna System Specifications

Typical RF Specifications (@ 25°C)

| Parameters | Downlink | Uplink |
|---|-------------------|----------------------|
| Frequency (MHz) | 1930-1990 | 1850-1910 |
| Bandwidth ¹ | 15 MHz | 15 MHz |
| Filter Attenuation (dB) | -40 @ ±16.5 MHz | -40 @ ±11 MHz |
| Nominal System Gain (dB)(Duplex / Simplex Port) | +40 / 0 | +40 / 0 ² |
| System Gain Variation (dB) | ≤ ±2.5 | ≤ ±2.5 |
| Gain Flatness (dB) | ≤ ±2.5 | ≤ ±2.5 |
| Third Order Intercept (dBm) (duplex/simplex port) | +29 / +29 | +15 / -25 |
| Nominal Noise Figure (dB) | - | 18 ³ |
| 1dB Compression Point (dBm) | +20 | - |
| Maximum Radiated Power Per TDMA Carrier (dBm) with Spurious and inter-modulation < -13dBm | 3.5dBm, 8carriers | - |
| System Group Delay (not including cable) (µs) | < 0.5 | < 2 |

¹ Customer specifies the center frequency of the passband. ² For input signal ≤ -40dBm. AGC engaged at input higher than -40dBm.

³ For a system with 1 Main Hub, 1 Expansion Hub and 4 Remote Antennas

Absolute Maximum Ratings (@ 25°C)

| Parameters | Ratings |
|--|-----------|
| Main Hub Composite RF Input (downlink) Power (dBm) (duplex/simplex port) | -20 / +20 |
| Antenna RF Input (uplink) Power (dBm) | +15 |

Environmental Specifications

| Parameters | Ratings |
|--|----------|
| Operating Temperature (°C) | 0 to +45 |
| Operating Humidity; non-condensing (%) | 5 to 95 |

Physical Specifications

| Parameters | Main Hub | Expansion Hub | Remote Antenna Unit |
|--|--|--------------------------------------|-----------------------------------|
| RF Connectors | (3) N-female (Duplex, Forward & Reverse) | (4) RJ-45 | (1) RJ-45 / (1) SMA |
| Remote Alarm Connector (contact closure) | (1) 9-pin D-sub (1) 25-pin D-sub | - | - |
| ST Multi-mode Fiber Connectors | (4) Pair | (1) Pair | - |
| LED Alarm & Status Indicators | Power On; Sync; Port Fault; Connect | Power On; Sync; Port Fault; Connect | Power On; Alarm |
| AC Power (Volts) / (current) (50-400 Hz) | 85-264V / 1.5A | 85-264V / 1.6A | - |
| Maximum heat dissipation (W) | 20 | 20 | 7.5 |
| Enclosure Dimensions ⁴ (inch) height x width x depth (mm) | 1.75 x 17.25 x 9 44.5 x 438 x 229 | 1.75 x 17.25 x 9 44.5 x 438 x 229 | 1.4 x 4.3 x 5.5 36 x 110 x 140 |
| Weight (kg) | < 3 | < 3 | < 0.3 |
| MTBF (hours) | 298,000 | 461,000 | 965,000 |

⁴ Excluding angle-brackets for 19" rack-mounting of hubs.

CUSTOMER INFORMATION (continued)

LGCell 1900 MHz GSM Hybrid/Fiber Twisted Pair Microcellular Distributed Antenna System Specifications

Typical RF Specifications (@ 25°C)

| Parameters | Downlink | Uplink |
|--|-----------------|----------------------|
| Frequency (MHz) | 1930-1990 | 1850-1910 |
| Bandwidth ¹ | 15 MHz | 15 MHz |
| Filter Attenuation (dB) | -40 @ +16.5 MHz | -40 @ +11 MHz |
| Nominal System Gain (dB)(Duplex / Simplex Port) | +40 / 0 | +40 / 0 ² |
| System Gain Variation (dB) | ≤ ±2.5 | ≤ ±2.5 |
| Gain Flatness (dB) | ≤ ±2.5 | ≤ ±2.5 |
| Third Order Intercept (dBm) (duplex/simplex port) | +29 / +29 | +15 / -25 |
| Nominal Noise Figure (dB) | - | 18 ³ |
| 1dB Compression Point (dBm) | +20 | - |
| Maximum Radiated Power Per GSM Carrier (dBm) with Spurious and inter-modulation < -13dBm | 0dBm, 8carriers | - |
| System Group Delay (not including cable) (μs) | < 0.5 | < 2 |

¹ Customer specifies the center frequency of the passband. ² For input signal ≤ -40dBm. AGC engaged at input higher than -40dBm.

³ For a system with 1 Main Hub, 1 Expansion Hub and 4 Remote Antennas

Absolute Maximum Ratings (@ 25°C)

| Parameters | Ratings |
|--|-----------|
| Main Hub Composite RF Input (downlink) Power (dBm) (duplex/simplex port) | -20 / +20 |
| Antenna RF Input (uplink) Power (dBm) | +15 |

Environmental Specifications

| Parameters | Ratings |
|--|----------|
| Operating Temperature (°C) | 0 to +45 |
| Operating Humidity; non-condensing (%) | 5 to 95 |

Physical Specifications

| Parameters | Main Hub | Expansion Hub | Remote Antenna Unit |
|--|--|--------------------------------------|-----------------------------------|
| RF Connectors | (3) N-female (Duplex, Forward & Reverse) | (4) RJ-45 | (1) RJ-45 / (1) SMA |
| Remote Alarm Connector (contact closure) | (1) 9-pin D-sub (1) 25-pin D-sub | - | - |
| ST Multi-mode Fiber Connectors | (4) Pair | (1) Pair | - |
| LED Alarm & Status Indicators | Power On; Sync; Port Fault; Connect | Power On; Sync; Port Fault; Connect | Power On; Alarm |
| AC Power (Volts) / (current) (50-400 Hz) | 85-264V / 1.5A | 85-264V / 1.6A | - |
| Maximum heat dissipation (W) | 20 | 20 | 7.5 |
| Enclosure Dimensions ⁴ (inch) height x width x depth (mm) | 1.75 x 17.25 x 9 44.5 x 438 x 229 | 1.75 x 17.25 x 9 44.5 x 438 x 229 | 1.4 x 4.3 x 5.5 36 x 110 x 140 |
| Weight (kg) | < 3 | < 3 | < 0.3 |
| MTBF (hours) | 298,000 | 461,000 | 965,000 |

⁴ Excluding angle-brackets for 19" rack-mounting of hubs.

SUPPORT EQUIPMENT

Equipment Type: Signal Generator

Model Number: SMIQ-03

Serial Number: DE23533

FCC ID Number: None

Manufacturer: Rohde and Schwarz

Power Line Cord Type: Unshielded

I/O PORT TYPE

Output

TERMINATED TO

Antenna 4

Note: This device was used to generate the signal to the EUT.

PRODUCT CABLING INFORMATION

Equipment Under Test (EUT): LGC Wireless Distributed Antenna System

Cable: Antenna #1

Unshielded

Used From: Port #1

Port On: Expansion Hub

To: Input

Port On: Antenna #1

Connector Type: RJ45

Length: 50 meters

Cable used during test was coiled.

Cable: Antenna #2

Unshielded

Used From: Port #2

Port On: Expansion Hub

To: Input

Port On: Antenna #2

Connector Type: RJ45

Length: 50 meters

Cable used during test was coiled.

Cable: Antenna #3

Unshielded

Used From: Port #3

Port On: Expansion Hub

To: Input

Port On: Antenna #3

Connector Type: RJ45

Length: 50 meters

Cable used during test was coiled.

PRODUCT CABLING INFORMATION

Equipment Under Test (EUT): LGC Wireless Distributed Antenna System

| | |
|-----------------------------|-------------------------------|
| Cable: Antenna #4 | Unshielded |
| Used From: Port #4 | Port On: Expansion Hub |
| To: Input | Port On: Antenna #4 |
| Connector Type: RJ45 | Length: 50 meters |

Cable used during test was coiled.

| | |
|------------------------------|-------------------------------|
| Cable: Fiber #1 | Unshielded |
| Used From: Uplink | Port On: Expansion Hub |
| To: Uplink | Port On: Main Hub |
| Connector Type: Fiber | Length: 50 meters |

Cable used during test was coiled.

| | |
|------------------------------|-------------------------------|
| Cable: Fiber #2 | Unshielded |
| Used From: Downlink | Port On: Expansion Hub |
| To: Downlink | Port On: Main Hub |
| Connector Type: Fiber | Length: 50 meters |

Cable used during test was coiled.

SUMMARY

Company: LGC Wireless

Equipment Under Test: LGC Wireless Distributed Antenna System

Model Number: LG Cell DAS19M-4-X

Test Standard: CFR 47, Part 15, Subpart B, Class B DoC

Test Type: Line Conducted

Location: Lab #2

Test Technician: Dominic Griego

EUT was scanned in the following setup(s): Mode: Idle **Configuration:** Standard

The highest emissions recorded were in the Main Hub.

Support Equipment: Signal Generator

EUT Power: 110 VAC/60 Hz

Power Cord: Unshielded

Modification(s) made to EUT: None

Test Results: Passed

(The chart below shows the six highest readings taken from the final data)

| FREQ MHz | CORR'D dB μ V | SITE CF | LIMIT | | MARGIN | | LINE |
|-------------|----------------------|------------|-------|-----|--------|-----|------|
| | | | QP | AVG | QP | AVG | |
| 0.679 | 26.0 PK | 6.0 | 48.0 | | -22.0 | | L1 |
| 23.010 | 20.7 PK | 6.0 | 48.0 | | -27.3 | | L1 |
| 0.683 | 25.6 PK | 6.0 | 48.0 | | -22.4 | | L2 |
| 15.160 | 33.1 PK | 6.0 | 48.0 | | -14.9 | | L2 |
| 17.880 | 19.9 PK | 6.0 | 48.0 | | -28.1 | | L2 |
| 22.900 | 24.0 PK | 6.0 | 48.0 | | -24.0 | | L2 |

L1 = Line One (hot side)/**L2** = Line Two (neutral side)

SUMMARY

Company: LGC Wireless

Equipment Under Test: LGC Wireless Distributed Antenna System

Model Number: LG Cell DAS19M-4-X

Test Standard: CFR 47, Part 15, Subpart B, Class B DoC

Test Type: Radiated

Location: 3 Meter Test Site #2

Test Technician: Dominic Griego

EUT was scanned in the following setup(s): Mode: Idle **Configuration:** Standard

The highest emissions recorded were in the Idle Mode.

Support Equipment: Signal Generator

EUT Power: 120 VAC/60 Hz

Power Cord: Unshielded

Modification(s) made to EUT: None

Test Results: Passed

(The chart below shows the two highest readings taken from the final data)

| FREQ MHz | CORR'D dB μ V/m | SITE CF | LIMIT | | MARGIN | | NOTE |
|-------------|------------------------|------------|-------|-----|--------|-----|------------|
| | | | QP | AVG | QP | AVG | |
| 111.73 | +38.9 | +14.8 | 43.5 | | -4.6 | | Horizontal |
| 111.73 | +34.2 | +14.8 | 43.5 | | -9.3 | | Vertical |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

APPENDIX A

PHOTOGRAPHS AND BLOCK DIAGRAM





Figure A-2
Back View
Equipment Under Test (EUT)
Page 23 of 53



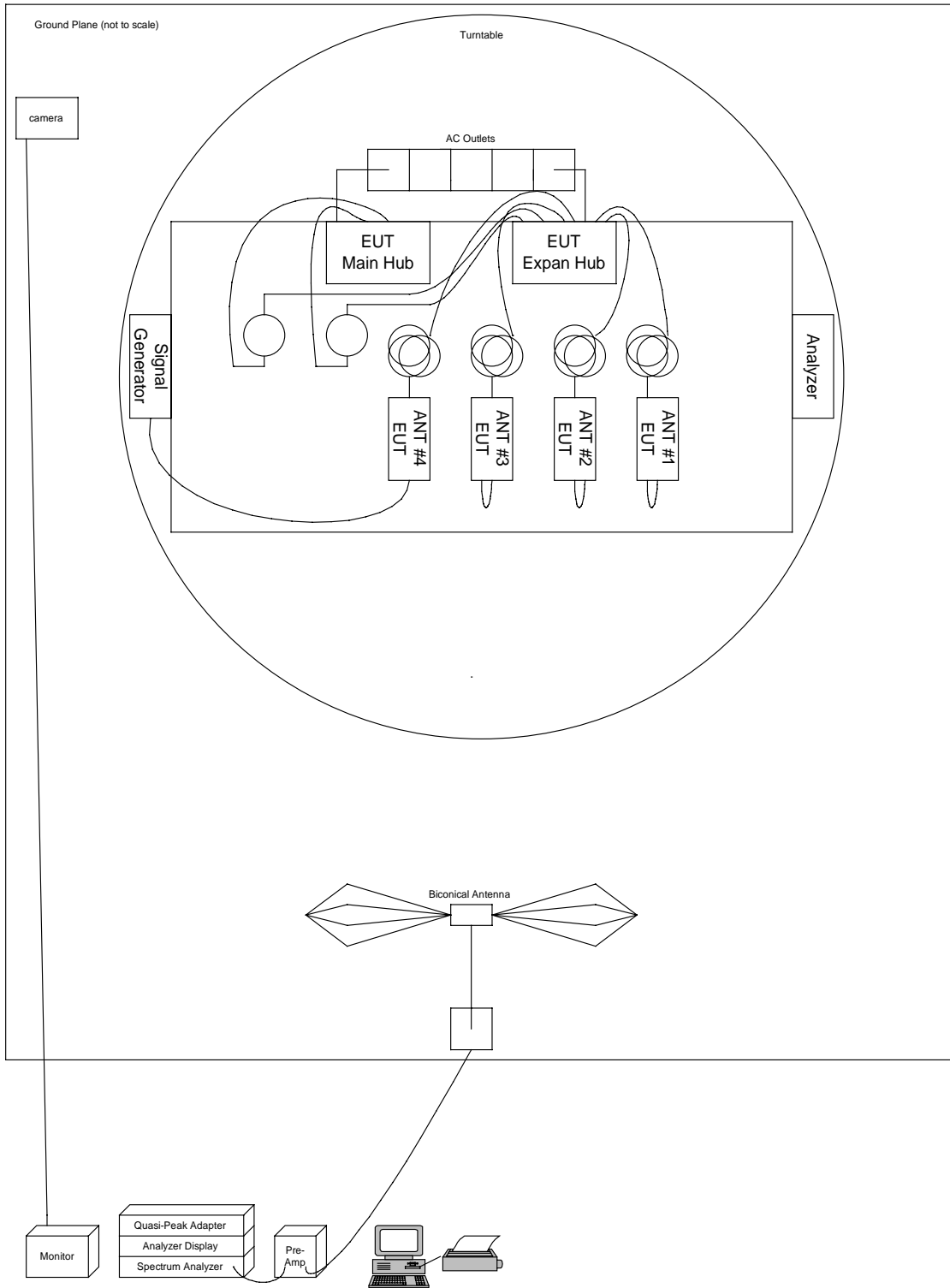




Figure A-5

Three Meter Open Field Test Site

Page 26 of 53



APPENDIX B

TEST FACILITY

TEST FACILITY

Location: 11825 Niles Canyon Road
Sunol, CA 94586

Description: At the Sunol facility, there are four 3/10 m open area test sites, two line conducted labs and two indoor conducted/radiated engineering labs. The OATS and the LC labs are constructed and calibrated to meet the FCC requirements in documents OST-55/MP-4 and ANSI C63.4 1992.

Accreditation: EMC Technology Services, Inc. has been accredited by A2LA to do EMC testing, including FCC DoC testing on personal computers and their peripherals.

FCC has also accepted EMC Technology Services, Inc. facility site for filing applications for certification and notification.

Certification: EMC Technology Services, Inc. has the following test/lab sites certified by VCCI and Industry Canada (IC):

Open Area Test Site #1: VCCI No. R-802 and IC 2816-1

Open Area Test Site #2: VCCI No. R-376 and IC 2816-2

Open Area Test Site #3: VCCI No. R-377 and IC 2816-3

Open Area Test Site #4: VCCI No. R-378 and IC 2816-4

Line Conducted Lab #1: VCCI No. C-392

Line Conducted Lab #2: VCCI No. C-427

APPENDIX C

TEST EQUIPMENT

MEASURING INSTRUMENT SETTINGS

| TEST TYPE | DETECTOR | FREQUENCY RANGE | RESOLUTION BANDWIDTH | VIDEO BANDWIDTH |
|-----------|-------------|-----------------|----------------------|-----------------|
| Conducted | Peak/Avg | 10 kHz-150 kHz | 300 Hz/3 kHz | 100 kHz/3 kHz |
| Conducted | Peak/QP/Avg | 150 kHz-30 MHz | 10 kHz/100 kHz | 100 kHz |
| Radiated | Peak/Avg | 60 Hz-1 kHz | 10 Hz | 100 kHz |
| Radiated | Peak/Avg | 1 kHz-10 kHz | 100 Hz | 100 kHz |
| Radiated | Peak/Avg | 10 kHz-150 kHz | 300 Hz | 100 kHz/300 Hz |
| Radiated | Peak/QP/Avg | 150 kHz-30 MHz | 10 kHz | 100 kHz/10 kHz |
| Radiated | Peak/QP/Avg | 30 MHz-1 GHz | 100 kHz | 100 kHz/10 kHz |
| Radiated | Peak/Avg | Above 1 GHz | 1 MHz | 1 MHz/300 kHz |

Note: All readings on data pages are taken with the detector in peak mode unless otherwise stated.

TEST EQUIPMENT LIST

| EQUIPMENT TYPE | * MFR | MODEL NUMBER | SERIAL NUMBER | LAST ** CAL. | CAL. DUE |
|-----------------------|-------------------|---------------------|----------------------|---------------------|-----------------|
| Horn Antenna | EMCO | 3115 | 9104-3647 | 08-10-99 | 08-10-00 |
| LISN | Fischer Customs | LISN-2 | F001 | 08-20-99 | 08-20-00 |
| Preamplifier | Hewlett Packard | 8449B | 3008A00272 | 02-17-99 | 02-17-00 |
| Spectrum Analyzer | Tektronix | 2782 | B020370 | 06-18-99 | 06-18-00 |
| Spectrum Analyzer | Hewlett Packard | 8564E | 00199/ 3810A01214 | 02-22-99 | 02-22-00 |
| Biconical Antenna | Compliance Design | B100 | B3 | 09-01-99 | 09-01-00 |
| Biconical Antenna | Compliance Design | B200 | 128 | 09-01-99 | 09-01-00 |
| Biconical Antenna | Compliance Design | B300 | MB2 | 09-01-99 | 09-01-00 |
| Receiver RF Section | Hewlett Packard | 85462A | 3807A00457 | 07-29-99 | 07-29-00 |
| RF Filter Section | Hewlett Packard | 85460A | 3704A00420 | 07-29-99 | 07-29-00 |

* **MFR** = Manufacturer

** **CAL.** = Calibration

APPENDIX D

TEST METHODS

TEST METHODS (LINE CONDUCTED TEST)

- 1) The equipment will be set up according to the test standard to simulate typical actual usage. When the EUT is a table-top system, a wooden table with a height of 0.8 meters is used which is placed on the ground plane according to the test standard. When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm covering to insulate the EUT from the ground plane.
- 2) Support equipment, if needed, will be placed according to the test standard.
- 3) All I/O cables are positioned to simulate typical actual usage according to the test standard.
- 4) The EUT receives AC power through a Line Impedance Stabilization Network (LISN) which is grounded to the ground plane.
- 5) Support equipment, if used, will receive AC power through a second LISN.
- 6) Emissions are measured on each current carrying line of the EUT using a spectrum analyzer connected to the LISN powering the EUT.
- 7) During the emission measurement, the I/O cable placement position is adjusted in order to maximize the emission measurement level.
- 8) Emission frequency and amplitude are recorded into a computer in which correction factors are used to calculate the emission level and compare the reading to the applicable limit.

Data Sample:

| Freq. MHz | Corr'd dB μ V | Site CF | Limit dB μ V | Margin dB μ V | Line |
|--------------|----------------------|------------|---------------------|----------------------|------|
| 2.47 | 46.0 | 6.0 | 48.0 | -2.0 | L1 |

Freq. = Emission frequency in MHz
 Corr'd dB μ V = RAW reading converted to dB μ V and CF added
 Site CF = Correction Factors for pad/cable losses
 Limit dB μ V = Limit stated in standard
 Margin dB μ V = Reading in reference to limit
 Note = Current carrying line of reading

TEST METHODS (RADIATED TEST)

- 1) The equipment will be set up according to the test standard to simulate typical actual usage. When the EUT is a table-top system, a wooden table with a height of 0.8 meters is used which is placed on the ground plane according to the test standard. When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm covering to insulate the EUT from the ground plane.
- 2) Support equipment, if needed, will be placed according to the test standard.
- 3) All I/O cables are positioned to simulate typical actual usage according to the test standard.
- 4) The antenna is placed at some given distance away from the EUT as stated in the test standard. The antenna connects to the analyzer via a cable and at times a preamp is used.
- 5) Emissions are scanned and measured rotating the EUT to 360 degrees, positioning cable placement, and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarizations in order to maximize the emission reading level.
- 6) Emission frequency, amplitude, antenna position, polarization, and table position are recorded into a computer in which correction factors are used to calculate the emission level and compare the reading to the applicable limit.

Data Sample:

| Freq. MHz | Corr'd dB μ V | Site CF | Limit dB μ V | Margin dB μ V | Table Pos. | Ant Pos. |
|--------------|----------------------|------------|---------------------|----------------------|---------------|-------------|
| 76.57 | 44.2 | -12.8 | 40.0 | -5.3 | 180 | 1.5V |

| | |
|-------------------|--|
| Freq. | = Emission frequency in MHz |
| Corr'd dB μ V | = RAW reading converted to dB μ V and CF added |
| Site CF | = Correction Factors for pad/cable losses |
| Limit dB μ V | = Limit stated in standard |
| Margin dB μ V | = Reading in reference to limit |
| Table Position | = EUT placement in reference to antenna |
| Antenna Position | = Antenna polarization and height above ground plane |

APPENDIX E

CLASS TYPES AND LIMITS

FCC CLASS TYPES AND LIMITS

CLASS A COMPUTING DEVICE

A computing device which is marketed for use in a commercial or business environment; exclusive of a device which is marketed for use by the general public, or which is intended to be used in the home. Reference: Section 15.3 (h).

CLASS B COMPUTING DEVICE

A computing device that is marketed for use in a residential environment notwithstanding use in a commercial, business, or industrial environment. Examples of such devices include, but are not limited to: electronic games, personal computers, calculators, and similar devices that are marketed for the general public. Reference: Section 15.3 (i).

NOTE: A manufacturer may also qualify a device intended to be marketed in a commercial, business, or industrial environment as a Class B computing device, and in fact is encouraged to do so, provided the device complies with the technical standards for a Class B computing device. In the event that a particular type of device has been found to repeatedly cause harmful interference to radio communications, the Commission may classify such a computing device as a Class B computing device, regardless of its intended use.

APPENDIX F

LABELING REQUIREMENTS

FCC CLASS A LABELING REQUIREMENT

Section 15.19 of the Code of Federal Regulation

- A) The Class A computing device subject to **verification** by the Commission shall be identified pursuant to par. 2.925 et seq of this Chapter. In addition, the label shall include the following statement:

THIS DEVICE COMPLIES WITH PART 15 OF THE
FCC RULES. OPERATION IS SUBJECT TO THE
FOLLOWING TWO CONDITIONS:
(1) THIS DEVICE MAY NOT CAUSE HARMFUL
INTERFERENCE, AND (2) THIS DEVICE MUST
ACCEPT ANY INTERFERENCE RECEIVED,
INCLUDING INTERFERENCE THAT MAY CAUSE
UNDESIRE OPERATION.

- B) Where a device is constructed in two or more sections connected by wires and marketed together, the statement specified in this section is required to be affixed only to the main control unit.
- C) When the device is so small or for such use that it is not practicable to place the statement specified in this section on it, the information required by these paragraphs shall be placed in a prominent location in the instruction manual or pamphlet supplied to the user or, alternatively, shall be placed on the container in which the device is marketed. However, the FCC identifier or the unique identifier, as appropriate, must be displayed on the device.
- D) The label shall not be a stick-on paper label. The label on these products shall be permanently affixed to the product and shall be readily visible to the purchaser at the time of purchase. "Permanently affixed" means that the label is etched, engraved, stamped, silkscreened, indelibly printed, or otherwise permanently marked on a permanently attached part of the equipment or a nameplate of metal, plastic, or other material fastened to the equipment by welding, riveting, or use of a permanent adhesive. The label must be designed to last the expected lifetime of the equipment in the environment in which the equipment may be operated and must not be readily detachable.

FCC CLASS B LABELING REQUIREMENT

Section 15.19 of the Code of Federal Regulation

- A) The Class B computing device subject to **certification** by the Commission shall be identified pursuant to par. 2.925 et seq of this Chapter. In addition, the label shall include the following statement:

FCC ID: XXXXXXXXXXXXXXXXXXXX

THIS DEVICE COMPLIES WITH PART 15 OF THE
FCC RULES. OPERATION IS SUBJECT TO THE
FOLLOWING TWO CONDITIONS:


(1) THIS DEVICE MAY NOT CAUSE HARMFUL
INTERFERENCE, AND (2) THIS DEVICE MUST
ACCEPT ANY INTERFERENCE RECEIVED,
INCLUDING INTERFERENCE THAT MAY CAUSE
UNDESIRE OPERATION.

- B) Where a device is constructed in two or more sections connected by wires and marketed together, the statement specified in this section is required to be affixed only to the main control unit.
- C) When the device is so small or for such use that it is not practicable to place the statement specified in this section on it, the information required by these paragraphs shall be placed in a prominent location in the instruction manual or pamphlet supplied to the user or, alternatively, shall be placed on the container in which the device is marketed. However, the FCC identifier or the unique identifier, as appropriate, must be displayed on the device.
- D) The label shall not be a stick-on paper label. The label on these products shall be permanently affixed to the product and shall be readily visible to the purchaser at the time of purchase. "Permanently affixed" means that the label is etched, engraved, stamped, silkscreened, indelibly printed, or otherwise permanently marked on a permanently attached part of the equipment or a nameplate of metal, plastic, or other material fastened to the equipment by welding, riveting, or use of a permanent adhesive. The label must be designed to last the expected lifetime of the equipment in the environment in which the equipment may be operated and must not be readily detachable.

DoC LABELING REQUIREMENTS

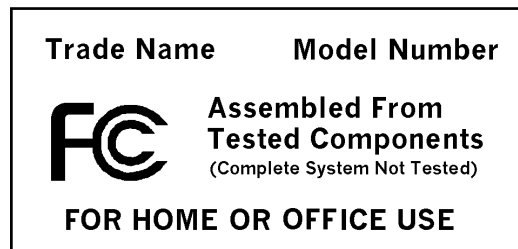
- A) The Class B computing device, subject to authorization under a **Declaration of Conformity (DoC)**, shall be labeled in a conspicuous location on the device and shall contain the following information:

Use the following label if product is authorized based on testing of the product or system:

| | |
|---|--|
| Trade Name | Model Number |
|  | Tested To Comply With FCC Standards |
| FOR HOME OR OFFICE USE | |

DoC LABELING REQUIREMENTS (continued)

Use the following label if product is based on assembly using separately authorized components and the resulting product is not separately tested:



- B)** When a device is so small or for such use that it is not practicable to place the statement specified on it, such as for a CPU board or plug-in circuit board peripheral device, the text associated with the logo may be placed in a prominent location in the instruction manual or pamphlet supplied to the user. However, the unique identification (trade name and model number) and the logo must be displayed on the device.
- C)** The label shall not be a stick-on paper label. The label on these products shall be permanently affixed to the product and shall be readily visible to the purchaser at the time of purchase. "Permanently affixed" means that the label is etched, engraved, stamped, silkscreened, indelibly printed, or otherwise permanently marked on a permanently attached part of the equipment or a nameplate of metal, plastic, or other material fastened to the equipment by welding, riveting, or use of a permanent adhesive. The label must be designed to last the expected lifetime of the equipment in the environment in which the equipment may be operated and must not be readily detachable.

APPENDIX G

DATA READINGS

**FCC CLASS B
LINE CONDUCTED DATA**

COMPANY: LGC Wireless Inc
 EQUIP. UNDER TEST: LGC Wireless Distributed Antenna System
 (Idle Mode)
 MODEL NUMBER: DAS19M-4
 TEST PROCEDURE: FCC Class B
 MEASUREMENT SETUP: LISN #823 120Vac 60Hz
 SUPPORT EQUIPMENT:

TESTED BY: Dominic Griego

TIME: 3:30pm Control Rm Temp: 72 Deg.F Humidity: 23 %RH
 EUT Room Temp: 72 Deg.F Humidity: 23 %RH

| FREQ MHz | RAW dBm | SITE CF | CORR'D dBuV | LIMIT | | EUT MARGIN | | NOTE |
|-----------------------|------------|------------|----------------|-------|------|------------|-------|------|
| | | | | A | B | A | B | |
| LGCell Expansion Hub. | | | | | | | | |
| 0.460 | -87.8PK | 6.0 | 25.2 | 60.0 | 48.0 | -34.8 | -22.8 | L1 |
| 0.685 | -85.2PK | 6.0 | 27.8 | 60.0 | 48.0 | -32.2 | -20.2 | L1 |
| 7.550 | -95.0PK | 6.0 | 18.0 | 69.5 | 48.0 | -51.5 | -30.0 | L1 |
| 9.700 | -97.0PK | 6.0 | 16.0 | 69.5 | 48.0 | -53.5 | -32.0 | L1 |
| 19.320 | -92.0PK | 6.0 | 21.0 | 69.5 | 48.0 | -48.5 | -27.0 | L1 |
| 30.000 | -93.0PK | 6.0 | 20.0 | 69.5 | 48.0 | -49.5 | -28.0 | L1 |
| 0.460 | -87.8PK | 6.0 | 25.2 | 60.0 | 48.0 | -34.8 | -22.8 | L2 |
| 0.681 | -89.0PK | 6.0 | 24.0 | 60.0 | 48.0 | -36.0 | -24.0 | L2 |
| 6.980 | -97.0PK | 6.0 | 16.0 | 69.5 | 48.0 | -53.5 | -32.0 | L2 |
| 9.800 | -98.4PK | 6.0 | 14.6 | 69.5 | 48.0 | -54.9 | -33.4 | L2 |
| 18.150 | -97.0PK | 6.0 | 16.0 | 69.5 | 48.0 | -53.5 | -32.0 | L2 |
| 30.000 | -92.1PK | 6.0 | 20.9 | 69.5 | 48.0 | -48.6 | -27.1 | L2 |

L1 = LINE ONE (HOT SIDE)
 L2 = LINE TWO (NEUTRAL SIDE)

=====
 ===== END OF CONDUCTED TEST =====
 =====

**FCC CLASS B
LINE CONDUCTED DATA**

COMPANY: LGC Wireless Inc
 EQUIP. UNDER TEST: LGC Wireless Distributed Antenna System
 (Idle Mode)
 MODEL NUMBER: DAS19M-4
 TEST PROCEDURE: FCC Class B
 MEASUREMENT SETUP: LISN #823 120Vac 60Hz
 SUPPORT EQUIPMENT:

TESTED BY: Dominic Griego

TIME: 4:00pm Control Rm Temp: 72 Deg.F Humidity: 23 %RH
 EUT Room Temp: 72 Deg.F Humidity: 23 %RH

| FREQ MHz | RAW dBm | SITE CF | CORR'D dBuV | LIMIT | | EUT MARGIN | | NOTE |
|------------------|------------|------------|----------------|-------|------|------------|-------|------|
| | | | | A | B | A | B | |
| LGCell Main Hub. | | | | | | | | |
| 0.679 | -87.0PK | 6.0 | 26.0 | 60.0 | 48.0 | -34.0 | -22.0 | L1 |
| 7.550 | -95.2PK | 6.0 | 17.8 | 69.5 | 48.0 | -51.7 | -30.2 | L1 |
| 13.810 | -98.0PK | 6.0 | 15.0 | 69.5 | 48.0 | -54.5 | -33.0 | L1 |
| 16.350 | -97.2PK | 6.0 | 15.8 | 69.5 | 48.0 | -53.7 | -32.2 | L1 |
| 17.660 | -95.1PK | 6.0 | 17.9 | 69.5 | 48.0 | -51.6 | -30.1 | L1 |
| 23.010 | -92.3PK | 6.0 | 20.7 | 69.5 | 48.0 | -48.8 | -27.3 | L1 |
| 0.683 | -87.4PK | 6.0 | 25.6 | 60.0 | 48.0 | -34.4 | -22.4 | L2 |
| 7.580 | -96.9PK | 6.0 | 16.1 | 69.5 | 48.0 | -53.4 | -31.9 | L2 |
| 15.160 | -79.9PK | 6.0 | 33.1 | 69.5 | 48.0 | -36.4 | -14.9 | L2 |
| 17.880 | -93.1PK | 6.0 | 19.9 | 69.5 | 48.0 | -49.6 | -28.1 | L2 |
| 22.900 | -89.0PK | 6.0 | 24.0 | 69.5 | 48.0 | -45.5 | -24.0 | L2 |

L1 = LINE ONE (HOT SIDE)
 L2 = LINE TWO (NEUTRAL SIDE)

=====
 ===== END OF CONDUCTED TEST =====
 =====

**FCC CLASS B
 RADIATED EMISSION DATA**

COMPANY: LGC Wireless Inc
 EQUIP. UNDER TEST: LGC Wireless Distributed Antenna System
 (Idle Mode)
 MODEL NUMBER: DAS19M-4
 TEST PROCEDURE: FCC Class B
 SUPPORT EQUIPMENT:

TESTED BY: Dominic Griego TEST SITE 2
 DATE: September 27 1999

TIME: 9:50am Control RM Temp: 71 Deg.F Humidity: 20 %RH
 EUT Room Temp: 75 Deg.F Humidity: 15 %RH

30MHz TO 200MHz Biconical Antenna at 3 meters Horz.

| FREQ MHz | RAW dBuV | SITE CF | CORR'D dBuV/m | LIMIT | | EUT MARGIN | | POSITION | |
|-------------|-------------|------------|------------------|-------|------|------------|------|----------|------|
| | | | | A | B | A | B | TBL | ANT |
| 111.73 | +24.1PK | +14.8 | 38.9 | 54.0 | 43.5 | -15.1 | -4.6 | 280 | 2.50 |

30MHz TO 200MHz Biconical Antenna at 3 meters Vert.

| | | | | | | | | | |
|--------|---------|-------|------|------|------|-------|------|----|------|
| 111.73 | +19.4PK | +14.8 | 34.2 | 54.0 | 43.5 | -19.8 | -9.3 | 45 | 1.50 |
|--------|---------|-------|------|------|------|-------|------|----|------|

Completed Scan from 30Mhz-1Ghz Horizontal and Vertical.

=====
 ===== END OF RADIATED TEST =====
 =====

APPENDIX H

DoC INFORMATION

SUBMITTAL TO FCC

Documentation (DoC): The party responsible for ensuring compliance will be required to submit, upon request, documentation verifying compliance, including test reports, to the Commission within 14 days of such request.

Certification: In case there is a requirement for FCC certification such as a contract calling for an FCC ID Number, the FCC will accept applications. The procedures are the same: a written application, a test report, and FCC fees are required.

RESPONSIBLE PARTY

The following parties are responsible for the compliance of radio-frequency equipment with the applicable standards in the case of equipment subject to authorization under the DoC procedure:

- 1) The **manufacturer**, or if the equipment is assembled from individual component parts and the resulting system is subject to authorization under a DoC, the **assembler**.
- 2) If the equipment by itself is subject to a DoC and that equipment is imported, the **importer**.

The responsible party shall retest equipment to demonstrate continued compliance with the applicable technical standard, if any modifications or changes were made that could adversely affect the emanation characteristics of the equipment that are made by the responsible party. The responsible party bears responsibility for the continued compliance of subsequently produced equipments.

RETENTION OF RECORDS

The responsible party as shown on the DoC shall maintain the records listed below for two years after the manufacture or assembly, as appropriate, if said equipment has been permanently discontinued, or until the conclusion of an investigation, or a proceeding, if the responsible party is officially notified that an investigation or any other administrative proceeding involving the equipment has been instituted. Requests for the records described in this section and for sample units also are covered under the provisions of Section 2.946 of this part.

- 1) A record of the original design drawings, standards, and all changes that have been made that may affect compliance with the requirements of Section 2.1073 of this part.
- 2) A record of the procedures used for production inspections and testing (if tests were performed) to ensure the conformance required by Section 2.1073 of this part (statistical production line emission testing is not required).
- 3) Test report which must meet all the requirements of Section 2.1075(a)(3).
- 4) Copy of compliance information and DoC.

COMPLIANCE INFORMATION

Before the marketing of the product described in this report can take place, test data must confirm that said product is in compliance with the required standards and a statement entitled a "Declaration of Conformity (DoC)" must be completed.

The DoC must be included along with the equipment literature furnished by the manufacturer or equipment supplier. The DoC can be a separate document or may be included in the user's manual supplied with the product.

The DoC must contain all the following information:

- 1) Identification of the specific product covered by the declaration such as by trade name and model number.
- 2) A statement that said product complies with Part 15 of the FCC rules.
- 3) The identification, by name, address, and telephone number, of the responsible party. The responsible party must be located in the United States.

If product is assembled from modular components that, by themselves, are authorized under a Declaration of Conformity and/or certification, and the assembled product is also subject to authorization under a DoC but, in accordance with the applicable regulations does not require additional testing, the product shall be supplied, at time of marketing or importation, with a compliance information statement containing the following information:

- 1) Identification of the modular components used in the assembly. A modular component authorized under a Declaration of Conformity shall be identified as stated above.
- 2) A statement that said product complies with Part 15 of the FCC rules.
- 3) The identification, by name, address, and telephone number, of the responsible party who assembled the product from modular components. The responsible party for a Declaration of Conformity must be located in the United States.
- 4) Copies of the compliance information statements of each modular component used in the system that is authorization under a Declaration of Conformity.

Note: See sample DoC with Warning Statements.

WARNING STATEMENTS

(Sections 15.19, .21, .27, .105)

For a digital or peripheral, the instructions furnished the user shall include the following or similar statements, placed in a prominent location in the text of the manual:

Note: This equipment complies with Part 15 of the FCC rules. **Operation** is subject to the following two conditions: **1)** This equipment may not cause harmful interference, and **2)** This equipment must accept any interference received, including interference that may cause undesired operation.

For a Class B digital or peripheral, the following must be included along with the above:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio-frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- * Reorient or relocate the receiving antenna.
- * Increase the separation between the equipment and the receiver.
- * Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- * Consult the dealer or an experienced radio/TV technician for assistance.

- Notes:**
- 1.** Any changes or modifications made to this product not expressly approved by the responsible party for compliance could void the user's authority to operate this product.
 - 2.** If shielded interface cables are used, the need to install an external RF bead over the cable or if any other special needs for compliance are necessary, then the user should be aware of this, and the manual would be a good location to place the necessary information.

**FCC DECLARATION of CONFORMITY
(SAMPLE)
LGC WIRELESS DISTRIBUTED ANTENNA SYSTEM**

This equipment complies with Part 15 of the FCC rules. **Operation** is subject to the following two conditions: **1)** This equipment may not cause harmful interference, and **2)** This equipment must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio-frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- * Reorient or relocate the receiving antenna.
- * Increase the separation between the equipment and the receiver.
- * Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- * Consult the dealer or an experienced radio/TV technician for assistance.

Notes: 1. Any changes or modifications made to this product not expressly approved by the responsible party for compliance could void the user's authority to operate this product.

2. If shielded interface cables are used, the need to install an external RF bead over the cable or if any other special needs for compliance are necessary, then the user should be aware of this, and the manual would be a good location to place the necessary information.

Responsible Party:

Company Name: LGC Wireless, Inc.
Street Address: 585 E. Brokaw Rd.
City, State Zip Code: San Jose, CA 95112
Phone Number: (408) 487-2431

APPENDIX I

TEST PROCEDURES

For a Copy, Contact:

LGC WIRELESS, INC.
585 E. Brokaw Rd.
San Jose, CA 95112