

Exhibit G: Fundamental Emissions

FCC ID: CGGAA2

Justification

The individuals and/or the organization requesting the test provided the modes, configurations and settings available to evaluate. While scanning the radiated emissions, all of the EUT parameters listed below were investigated. This includes, but may not be limited to, antennas, tuned transmit frequency ranges, operating modes, and data rates.

Channels in Specified Band Investigated:

Single

Operating Modes Investigated:

Typical

Data Rates Investigated:

Typical

Output Power Setting(s) Investigated:

N/A

Power Input Settings Investigated:

12VDC

Other Settings Investigated:

RCR-A (35ft range)

RCR-50 (50ft range, no change in output power – just a change pulse width)

Software\Firmware Applied During Test

Exercise software	Standard Production Software	Version	RCR Build 8
Description			
Firmware			

Equipment Modifications

No EMI suppression devices were added or modified. The EUT was tested as delivered.

EUT and Peripherals

Description	Manufacturer	Model/Part Number	Serial Number
EUT #2	Interlogix Inc.	RCR-50	n/a
EUT #1	Interlogix Inc.	RCR-A	n/a
DC Power Supply	Topward	TPS-2000	946425

Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC Power	No	2.0	No	EUT	Power Supply

PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.

Measurement Equipment

Description	Manufacturer	Model	Identifier	Last Cal	Interval
Spectrum Analyzer	Hewlett-Packard	8566B	AAL	03/19/2002	12 mo
Quasi-Peak Adapter	Hewlett-Packard	85650A	AQF	03/19/2002	12 mo
Antenna, Horn	EMCO	3115	AHC	08/24/2001	12 mo
Pre-Amplifier	Miteq	AMF-4D-005180-24-10P	APC	11/26/2001	12 mo

Test Description

Requirement: The field strength of the fundamental (transmit) frequency shall meet the limits as defined in 47 CFR 15.249. If average emission measurements are employed, the provisions in 15.35 for averaging pulsed emissions and for limiting peak emissions apply.

Configuration: The EUT was configured for continuous modulated operation at its single transmit frequency.

The field strength of the transmit frequency was maximized by rotating the EUT, adjusting the measurement antenna height and polarization, and manipulating the EUT in 3 orthogonal planes (per ANSI C63.4:1992).

To derive average emission measurements, a pulse desensitization factor of -20 dB was utilized. This is the same factor that was used for the original application. The theoretical basis is explained in Hewlett Packard Application Note 150-2, "Spectrum Analysis...Pulsed RF". Since no changes have been made to duty cycle of the pulse modulation used in this device, the -20 dB factor still applies.

The pulse desensitization factor of -20 dB was added to the peak readings to mathematically derive the average levels. Peak measurements were made with a resolution bandwidth of 1 MHz and a video bandwidth of 1 MHz.

Completed by:



NORTHWEST

EMC

REV
df1.87
03/21/2002

EUT: RCR-A

Serial Number: n/a

Customer: Interlogix Inc.

Attendees: Fred Eggers, Feng Tang

Cust. Ref. No.: 274

Work Order: ILGX0247

Date: 4/19/02 11:47

Temperature:

Humidity: 0%

Job Site:

Tested by:

Power: 12 Vdc

TEST SPECIFICATIONS

Specification: FCC 15.249

Method: ANSI C63.4

Year: 2001

Year: 2000

SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

COMMENTS

EUT OPERATING MODES

DEVIATIONS FROM TEST STANDARD

No deviations.

RESULTS

Test Distance (m)

Run #

Pass

3

2

Other

Tested By:

dBuV/m

120.0

100.0

80.0

60.0

40.0

20.0

0.0

4000.000

4500.000

5000.000

5500.000

6000.000

6500.000

7000.000

MHz

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Pulse Desensitization Factor	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
5769.000	69.4	7.1	13.0	1.2	20.0	0.0	V-Horn	AV	0.0	56.5	94.0	-37.5
5769.000	55.3	7.1	49.0	1.6	20.0	0.0	H-Horn	AV	0.0	42.4	94.0	-51.6
5769.000	69.4	7.1	13.0	1.2	0.0	0.0	V-Horn	PK	0.0	76.5	114.0	-37.5
5769.000	55.3	7.1	49.0	1.6	0.0	0.0	H-Horn	PK	0.0	62.4	114.0	-51.6

NORTHWEST

EMC

REV
df1.87
03/21/2002

EUT: RCR-50

Serial Number: n/a

Customer: Interlogix Inc.

Attendees: Fred Eggers, Feng Tang

Cust. Ref. No.: 274

Work Order: ILGX0247

Date: 4/19/02 13:37

Temperature: 72

Humidity: 35%

Job Site: EV01

Tested by: Greg Kiemel

Power: 12 Vdc

TEST SPECIFICATIONS

Specification: FCC 15.249

Method: ANSI C63.4

Year: 2001

Year: 2000

SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

COMMENTS

EUT OPERATING MODES

DEVIATIONS FROM TEST STANDARD

No deviations.

RESULTS

Test Distance (m)

Run #

Pass

3

3

Other

Tested By:

dBuV/m

120.0

100.0

80.0

60.0

40.0

20.0

0.0

4000.000

4500.000

5000.000

5500.000

6000.000

6500.000

7000.000

MHz

Freq (MHz)

Amplitude (dBuV)

Factor (dB)

Azimuth (degrees)

Height (meters)

Pulse Desensitization Factor

External Attenuation (dB)

Polarity

Detector

Distance Adjustment (dB)

Adjusted dBuV/m

Spec. Limit dBuV/m

Compared to Spec. (dB)

5784.500

80.1

7.1

9.0

1.5

20.0

0.0

V-Horn

AV

0.0

67.2

94.0

-26.8

5784.500

65.6

7.1

16.0

1.5

20.0

0.0

H-Horn

AV

0.0

52.7

94.0

-41.3

5784.500

80.1

7.1

9.0

1.5

0.0

0.0

V-Horn

PK

0.0

87.2

114.0

-26.8

5784.500

65.6

7.1

16.0

1.5

0.0

0.0

H-Horn

PK

0.0

72.7

114.0

-41.3



