HCT CO., LTD.

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EMI CERTIFICATION REPORT

Applicant:
LG Electronics Inc.
60-39, Gasan-dong, Gumchon-gu, Seoul 153-023, Korea

Date of Issue: March 22, 2011
Test Report No.: HCTE1102FE17-1
Test Site: HCT CO., LTD.
HCT FRN: 0005-8664-21

FCC ID: **BEJP920**

Rule Part(s) / Standard(s)	: FCC PART 15 Subpart B Class B
Equipment Type	: Cellular/PCS GSM/GPRS/EDGE and AWS/PCS WCDMA/HSPA Phone with Bluetooth and WLAN
Trade Name	: LG Electronics Inc
Model Name(s)	: LG-P920, P920
Port / Connector(s)	: USB Data Port / Headset Port / HDMI Port

The device bearing the trade name and model specified above, has been shown to comply with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.4-2003. (See Test Report if any modifications were made for compliance)
I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

HCT certifies that no party to application has been subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C 862

Report prepared by
: Doo Hwan Ryu
Test Engineer of EMC Team

Approved by
: Sang Jun Lee
Manager of EMC Team

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1. GENERAL INFORMATION

1.1 Product Description

Equipment Under Test (E.U.T) is **Cellular/PCS GSM/GPRS/EDGE and AWS/PCS WCDMA/HSPA Phone with Bluetooth and WLAN, Model: LG-P920** manufactured by **LG Electronics Inc.** Its basic purpose is used for communications.

Model (s)	LG-P920
Additional Model	P920
FCC ID	BEJP920
E.U.T Type	Cellular/PCS GSM/GPRS/EDGE and AWS/PCS WCDMA/HSPA Phone with Bluetooth and WLAN
TX Frequency	824.20 ㎒ to 848.80 ㎒ (GSM 850) 1 850.20 ㎒ to 1 909.80 ㎒ (GSM 1 900) 1 852.4 ㎒ to 1 907.6 ㎒ (WCDMA 1 900) 1 712.4 ㎒ to 1 752.6 ㎒(WCDMA AWS)
RX Frequency	869.20 ㎒ to 893.80 ㎒ (GSM 850) 1 930.20 ㎒ to 1 989.80 ㎒ (GSM 1 900) 1 932.4 ㎒ to 1 987.6 ㎒ (WCDMA 1 900) 2 112.4 ㎒ to 2 152.6 ㎒(WCDMA AWS)

1.2 Related Submittal(s) / Grant(s)

Original submittal only.

1.3 Tested System Details

All equipment descriptions used in the tested system (including inserted cards) are:

Device Type	Manufacturer	Model Number/ Serial Number	FCC ID / DoC	Connected To
Cellular/PCS GSM/ GPRS/EDGE and AWS/PCS WCDMA/ HSPA Phone with Bluetooth and WLAN	LG	LG-P920	BEJP920	Notebook PC TV monitor
Notebook PC	LG	X140-02 *009QTAF022208*	DoC	E.U.T
Notebook PC adaptor	DELTA (JIANG SU)	ADP-40PH AD *EAY60725501*	-	Notebook PC
Mouse	Microsoft	Intellimouse optical USB and PS/2 compatible *3902B008*	DoC	Notebook PC
TV monitor	LG	W2261Vp-PF *912NDDM0C242*	-	E.U.T
Headset	-	-	-	E.U.T
USB cable	-	-	-	E.U.T Notebook PC
SD card (2 GB)	SanDisk	-	-	E.U.T
HDMI cable				E.U.T TV monitor

1.4 Cable Description

Product Name	Port	Power Cord Shielded (Y/N)	I/O Cable Shielded (Y/N)	Length (m)
Cellular/PCS GSM/ GPRS/EDGE and AWS/PCS WCDMA/ HSPA Phone with Bluetooth and WLAN	Headset jack	-	N	(D)1.2
	USB data	Y	Y	(P,D)1.2
	HDMI	N	Y	(D)2.0
Notebook PC	USB (Mouse)	-	Y	(D)1.8

* The marked "(D)" means the data cable and "(P)" means the power cable.

1.5 Noise Suppression Parts on Cable. (I/O cable)

Product Name	Port	Ferrite Bead (Y/N)	Location	Metal Hood (Y/N)	Location
Cellular/PCS GSM/ GPRS/EDGE and AWS/PCS WCDMA/ HSPA Phone with Bluetooth and WLAN	Headset jack	N	-	Y	E.U.T End
	USB data	N	-	Y	Both End
	HDMI	N	-	Y	Both End
Notebook PC	USB (Mouse)	Y	Notebook PC End	Y	Notebook PC End

1.6 Test Methodology

Both Conducted and Radiated testing was performed according to the procedures in ANSI C63.4/2003. Radiated testing was performed at an antenna to E.U.T distance of 3 ㎙

1.7 Test Facility

The 10 m semi anechoic chamber used to collect the radiated data is located at the 105-1, Jangam-Ri, Majang-Myeon, Icheon-Si, Kyoungki-Do, South Korea, and the conducted measurement facility used to measure the conducted data are located at San 136-1, Ami-Ri Bubal-Eup, Icheon-Si, Kyoungki-Do, 467-701, South Korea. Those measurement facilities are constructed in conformance with the requirements of ANSI C63.4 and CISPR Publication 22. Detailed description of test facilities was submitted to the Commission and accepted dated Sep. 03, 2010 (Registration Number: 90661)

1.8 Frequency Range of Radiated Measurements

An unintentional radiator, including a digital device, the spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which a Radiated Emission limit is specified, up to the frequency shown in the following table

Highest frequency generated or used in the device or on which the device operates or tunes (㎒)	**Upper frequency of measurement range** (㎒)
Below 1.705	30
1.705 to 108	1 000
108 to 500	2 000
500 to 1 000	5 000
Above 1 000	5^{th} harmonic of the highest frequency or 40 ㎓, whichever is lower

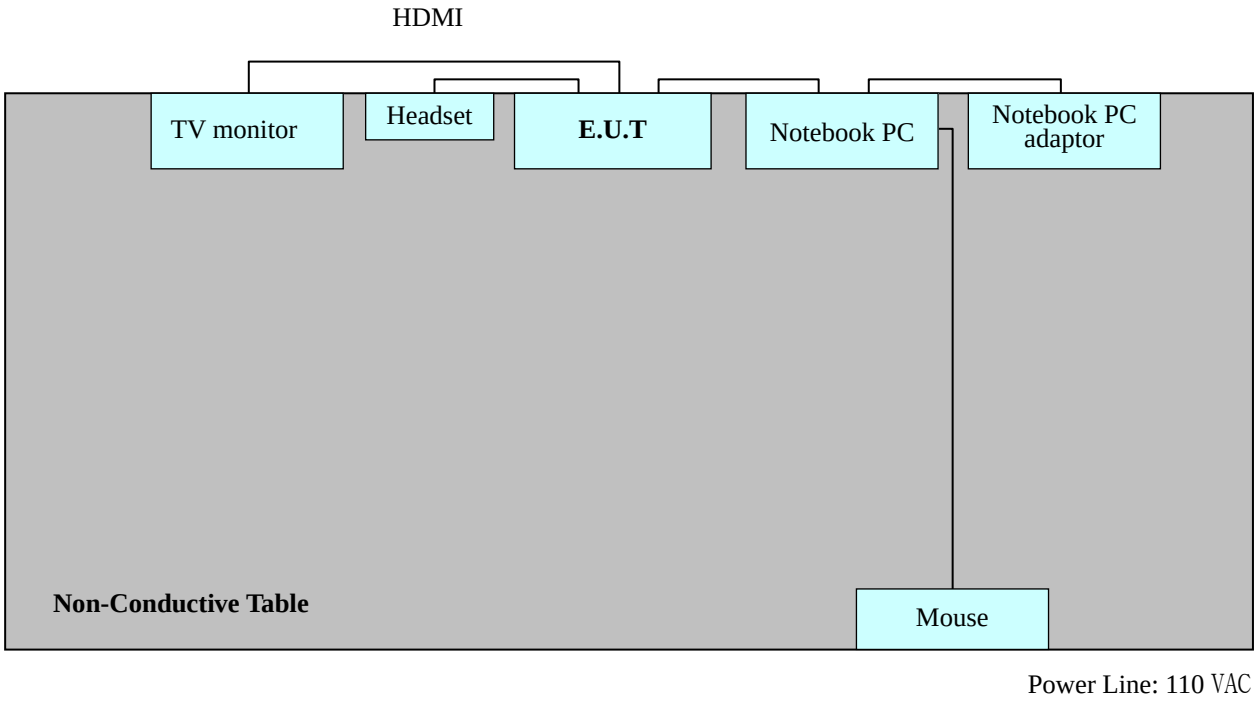
2. SYSTEM TEST CONFIGURATION

2.1 Configuration of Test System

Power Line Conducted test : E.U.T was connected to LISN via Notebook PC adaptor. Preliminary Power Line Conducted Emission tests were performed by using the procedure in ANSI C63.4/2003 7.2.3 to determine the worst operating conditions.

Radiated Emission test : Preliminary Radiated Emission tests were performed by using the procedure in ANSI C63.4/2003 8.3.1.1 to determine the worst operating condition. Final Radiated Emission tests were performed at 3 m semi-anechoic chamber.

[Configuration of Tested System]



Power Line: 110 VAC

3. PRELIMINARY TEST

3.1 Conducted Emission Test

■ Test E.U.T with Data Communication mode, after connecting all peripheral devices.

During preliminary tests, the following operating mode was investigated:

Operation Mode	The Worst Operating Condition
Data Communication	○

3. 2 Radiated Emission Test

■ Test E.U.T with Data Communication mode, after connecting all peripheral devices.

During preliminary tests, the following operating mode was investigated:

Operation Mode	The Worst Operating Condition
Data Communication	○

4. CONDUCTED AND RADIATED EMISSION TEST SUMMARY

4.1 Conducted Emission Test

The following table shows the highest levels of conducted emissions on both polarization of hot and neutral line.

Limit apply to	: FCC PART 15 Subpart B Class B
Detector	: Quasi-Peak, Average (6 ㏈ Bandwidth: 9 ㎑)
Temperature	: 23.5 °C
Humidity level	: 40.1 %
Test date	: February 22, 2011

※ **NOTE:** Refer to page 10 to page 13 for details.

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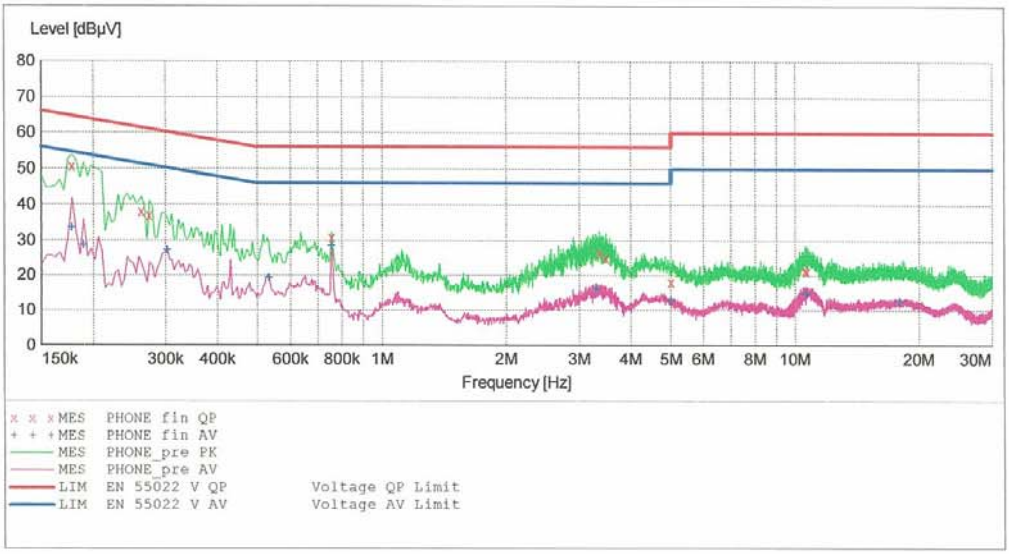
EUT: P920
Manufacturer: LG
Operating Condition: DATA MODE
Test Site: SHIELD ROOM
Operator: DH-RYU
Test Specification: FCC PART 15 CLASS B
Comment: H

SCAN TABLE: "FCC PART 15 CLASS B"

Short Description: FCC PART 15 CLASS B

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	500.0 kHz	4.0 kHz	MaxPeak Average	10.0 ms	9 kHz	None
500.0 kHz	5.0 MHz	4.0 kHz	MaxPeak Average	10.0 ms	9 kHz	None
5.0 MHz	30.0 MHz	4.0 kHz	MaxPeak Average	10.0 ms	9 kHz	None



MEASUREMENT RESULT: "PHONE_fin QP"

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Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.178010	50.60	10.1	65	14.0	---	---
0.262010	38.10	10.1	61	23.3	---	---
0.274010	37.10	10.1	61	23.8	---	---
0.756000	31.00	10.1	56	25.0	---	---
3.360000	26.50	10.4	56	29.5	---	---
3.492000	25.00	10.4	56	31.0	---	---
5.000000	18.30	10.5	56	37.7	---	---
10.604000	21.60	10.8	60	38.4	---	---
10.672000	21.30	10.8	60	38.7	---	---

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MEASUREMENT RESULT: "PHONE_fin AV"

2/22/2011 6:36PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.178010	33.60	10.1	55	20.9	---	---
0.190010	28.70	10.1	54	25.3	---	---
0.302010	27.20	10.1	50	23.0	---	---
0.532000	19.30	10.1	46	26.7	---	---
0.756000	28.60	10.1	46	17.4	---	---
3.296000	16.20	10.4	46	29.8	---	---
5.000000	12.80	10.5	46	33.2	---	---
10.660000	14.80	10.8	50	35.2	---	---
17.892000	12.60	11.4	50	37.4	---	---

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HCT

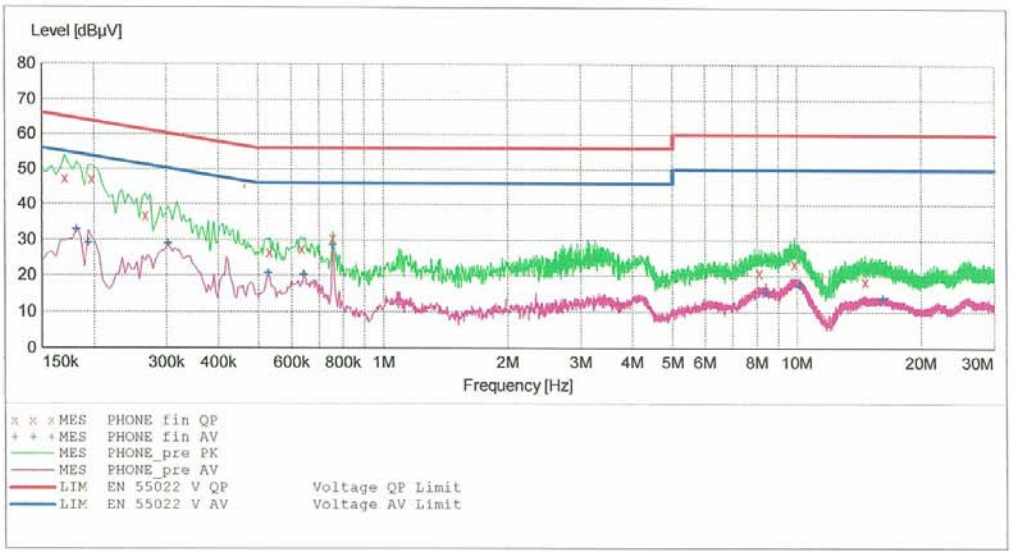
EMC

EUT: P920
Manufacturer: LG
Operating Condition: DATA MODE
Test Site: SHIELD ROOM
Operator: DH-RYU
Test Specification: FCC PART 15 CLASS B
Comment: N

SCAN TABLE: "FCC PART 15 CLASS B"

Short Description: FCC PART 15 CLASS B

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	500.0 kHz	4.0 kHz	MaxPeak Average	10.0 ms	9 kHz	None
500.0 kHz	5.0 MHz	4.0 kHz	MaxPeak Average	10.0 ms	9 kHz	None
5.0 MHz	30.0 MHz	4.0 kHz	MaxPeak Average	10.0 ms	9 kHz	None



MEASUREMENT RESULT: "PHONE_fin QP"

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Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.170010	47.20	10.1	65	17.8	---	---
0.198010	47.10	10.1	64	16.5	---	---
0.266010	36.80	10.1	61	24.4	---	---
0.532000	26.70	10.1	56	29.3	---	---
0.636000	27.50	10.1	56	28.5	---	---
0.756000	30.60	10.1	56	25.4	---	---
8.108000	21.00	10.7	60	39.0	---	---
9.868000	23.40	10.8	60	36.6	---	---
14.652000	18.70	11.1	60	41.3	---	---

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MEASUREMENT RESULT: "PHONE_fin AV"

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Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.182010	32.80	10.1	54	21.6	---	---
0.194010	29.10	10.1	54	24.7	---	---
0.302010	28.90	10.1	50	21.2	---	---
0.528000	20.70	10.1	46	25.3	---	---
0.644000	20.40	10.1	46	25.6	---	---
0.756000	28.50	10.1	46	17.5	---	---
8.408000	15.40	10.7	50	34.6	---	---
10.156000	17.50	10.8	50	32.5	---	---
16.128000	13.70	11.3	50	36.3	---	---

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4.2 Radiated Emission Test

The following table shows the highest levels of Radiated Emissions on both polarization of horizontal and vertical.

Limit apply to	: FCC PART 15 Subpart B Class B
Detector	: Quasi-Peak (6 ㏈ Bandwidth: 120 ㎑)
Temperature	: 21.0 °C
Humidity level	: 41.5 %
Test date	: February 21, 2011

※ **NOTE:**

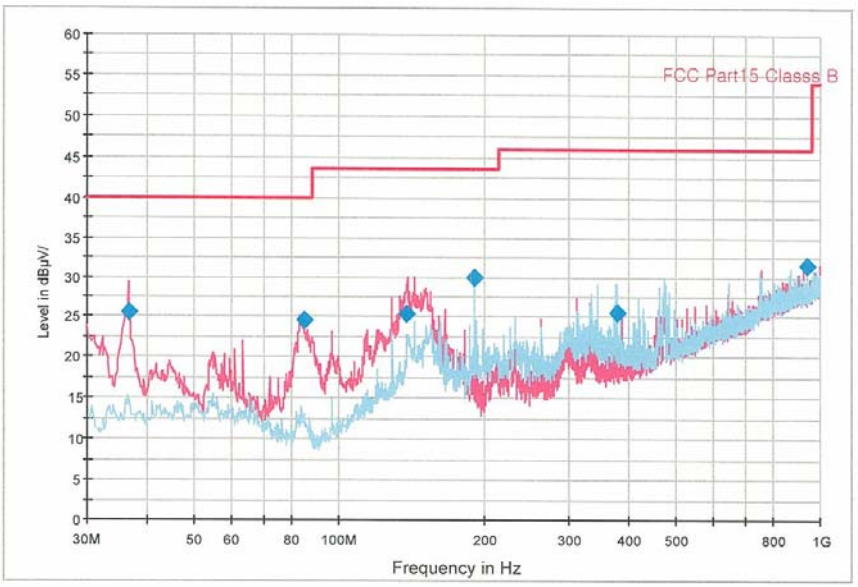
1. Refer to page 15 for details
2. For measurement above 1 ㎓, noise level is more than 14 ㏈ below the limit, specified in FCC Part 15.35

HCT Test Report

Common Information

EUT Name:	LG-P920
Test Description:	DATA
Operator Name:	
Environment Conditions:	PHONE + HEADSET+ NOTEBOOK(LG) + MONITOR
Comment:	

FCC Part15 Class B



Final Result 1

Frequency (MHz)	QuasiPeak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBuV/m)	Comment
36.775700	25.5	122.0	V	133.0	12.7	14.5	40.0	
84.762400	24.5	100.0	V	293.0	9.1	15.5	40.0	
138.553700	25.2	100.0	V	284.0	14.2	18.3	43.5	
191.990300	29.8	122.0	H	181.0	12.3	13.7	43.5	
377.923600	25.6	173.0	V	24.0	17.6	20.4	46.0	
937.070700	31.5	100.0	V	223.0	27.7	14.5	46.0	

5. FIELD STRENGTH CALCULATION

The field strength is calculated by adding the antenna factor and cable factor.
The basic equation with a sample calculation is as follows:

FS = RA + AF + CF

Where FS = Field Strength

RA = Receiver Amplitude

AF = Antenna Factor

CF = Cable Attenuation Factor

Assume a receiver reading of 21.5 dBμV is obtained. The antenna factor of 7.4 dB/m and a cable factor of 1.1 dB are added. The 30 dBμV/m value is mathematically converted to its corresponding level in μV/m.

FS = 21.5 + 7.4 + 1.1 = 30 dBμV/m

[Radiated Emission Limits]

Frequency of Emission (㎒)	Field Strength	
	μV/m	dBμV/m
30 to 88	100	40.0
88 to 216	150	43.5
216 to 960	200	46.0
Above 960	500	54.0

6. TEST EQUIPMENT

	Type	Manufacturer	Model Number	Serial Number	Next CAL Date
	Conducted Emission				
☒	EMI Test Receiver	Rohde & Schwarz	ESCI	100584	2011.05.28
☒	LISN	Rohde & Schwarz	ESH3-Z5	100282	2012.02.01
☒	LISN	Rohde & Schwarz	ENV216	3560.6550.02	2011.04.05
☒	Attenuator	Rohde & Schwarz	ESH3-Z2	357.8810.52	2011.10.25
	Radiated Emission				
☐	EMI Test Receiver	Rohde & Schwarz	ESI40	831564103	2011.10.29
☒	EMI Test Receiver	Rohde & Schwarz	ESU26	100241	2011.09.01
☒	Trilog Antenna	Schwarzbeck	VULB9160	3301	2012.09.13
☒	Antenna master	INNCO Systems	MA4000-EP	MA4000/283	-
☒	Turn Table	INNCO Systems	DT3000-3T	DT3000/69	-
☒	Communication Antenna	Schwarzbeck	USLP9142	9142-248	-
☐	RF-Amplifier	MITEQ	AMF-6D-0010 1800-35.20P.PS	-	2011.05.20
☐	Base Station	Rohde & Schwarz	CMU 200	1100000802	2012.02.16

7. CONCLUSION

The data collected shows that the **Cellular/PCS GSM/GPRS/EDGE and AWS/PCS WCDMA/ HSPA Phone with Bluetooth and WLAN, Model: LG-P920, FCC ID: BEJP920** complies with §15.107 and §15.109 of the FCC rules.