DECLARATION OF COMPLIANCE
MPE EVALUATION REPORT

Test Lab

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Applicant Information

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FCC Rule Part(s):	**47 CFR §90; §2.1091; §1.1310**
IC Rule Part(s):	**RSS-119 Issue 6; RSS-102 Issue 1 (Provisional)**
FCC Classification:	**Licensed Non-Broadcast Station Transmitter (TNB)**
IC Classification:	**Land Mobile Radio Transmitter**
Device Type:	**Rugged Laptop PC with RIM 902 Mobitex Radio Modem, Vehicle Cradle, & (3) Mobile Vehicle-Mount Antennas**
FCC ID:	**KBCIX260RIM902**
Model(s):	**IX260**
Tx Frequency Range:	**896.0 - 901.0 MHz**
Max. RF Conducted Power:	**33.1 dBm (Peak)**
Source Based Time Aver. Pwr.:	**27.1 dBm (Conducted)**
Max. Duty Cycle:	**25%**
Antenna Type(s):	**Mobile Vehicle-Mount - Unity Gain (MaxRad Model: Z563)** **Mobile Vehicle-Mount - 5 dB Gain (MaxRad Model: Z567)** **Mobile Vehicle-Mount - 5 dB Gain (MaxRad Model: Z573)**

This transmitter has been shown to be compliant for localized Maximum Permissible Exposure (MPE) for Uncontrolled Exposure / General Population limits specified in FCC 47 CFR §1.1310 & RSS-102 Issue 1 (Provisional) of Industry Canada, and has been evaluated in accordance with the procedures specified in FCC OET Bulletin 65, Edition 97-01, Health Canada's Safety Code 6, ANSI / IEEE C95.1-1992, and ANSI / IEEE C95.3-1992.

I attest to the accuracy of data. All measurements and/or calculations 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.

Russell Pipe
Senior Compliance Technologist
Celltech Labs Inc.

1.1 MPE Calculation Data

1. MaxRad Z563 Unity Gain Antenna


Z563

Tx Frequency:	900.00	(MHz)
Source Based Time Averaged Power at Antenna Input Terminal:	27.10	(dBm)
Antenna gain (typical)+9dB for 8-element array:	2.14	(dBi)

S=	0.60	(mW/cm^2)
P=	512.8614	(mW)
G=	1.64	(numeric)

R = 10.55 (cm)

2. MaxRad Z567 & Z573 5 dBd Gain Antennas


Z567


Z573

Tx Frequency:	900.00	(MHz)
Source Based Time Averaged Power at Antenna Input Terminal:	27.10	(dBm)
Antenna gain (typical)+9dB for 8-element array:	7.14	(dBi)

S=	0.60	(mW/cm^2)
P=	512.8614	(mW)
G=	5.18	(numeric)

R = 18.76 (cm)

2.1 Calculation to determine MPE

$$S = \frac{PG}{4\pi R^2}$$

$$R = \sqrt{\frac{PG}{4\pi S}}$$

S= power density
P= power input to the antenna
G= power gain of the antenna in the direction of interest relative to an isotropic radiator
R= distance to the center of radiation of the antenna

3.1 MPE Limits

According to FCC 47 CFR 1.1310: The criteria listed in the following table shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b).

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Average Time (minutes)
(A)Limits For Occupational / Control Exposures				
30-300	61.4	0.163	1.0	6
300-1500	...	...	F/300	6
1500-100,000	...	...	5	6
(B)Limits For General Population / Uncontrolled Exposure				
30-300	27.5	0.073	0.2	30
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

4.1 Summary

The Maximum Permissible Exposure (MPE) limit for the frequency range in the Mobitex band (900MHz) is F/300 ($3mW/cm^{\wedge 2}$) for the General Population / Uncontrolled Exposure environment. The data in this report demonstrates that this device complies with the Maximum Permissible Exposure (MPE) requirements set forth in FCC §2.1091, §1.1310, OET Bulletin 65 (Edition 97-01), and Health Canada's Safety Code 6 for the General Population / Uncontrolled Exposure environment using the specific antenna(s) at the minimum distance(s) described in this report.