Excellence in Compliance Testing

Certification Exhibit

FCC ID: S04YX110
IC ID: 5544A-YX110

FCC Rule Part: CFR 47 Part 22 Subpart H, Part 24 Subpart E
IC Radio Standard Specification: RSS-131

ACS Report Number: 07-0255-LD

Applicant: Wireless Extenders Inc.
Model(s): YX110

RF Exposure

General Information:

Applicant:	Wireless Extenders
ACS Project:	07-0255-LD
FCC ID:	SO4YX110
IC ID:	5544A-YX110
Device Category:	Mobile
Exposure Conditions:	Uncontrolled/General Population

Technical Information:

CELLULAR OPERATION:

UPLINK:

Antenna Type:	PCB Inverted F
Antenna Gain Maximum:	0dBi
Max Transmitter Output Power:	23.90dBm
Max System EIRP:	23.90dBm / 0.245W

DOWNLINK:

Antenna Type:	PCB Etched Dipole
Antenna Gain Maximum:	1dBi
Max Transmitter Output Power:	8.55dBm
Max System EIRP:	9.55dBm / 0.009W

PCS OPERATION:

UPLINK:

Antenna Type:	PCB Inverted F
Antenna Gain Maximum:	4.5dBi
Max Transmitter Output Power:	25.90dBm
Max System EIRP:	30.40dBm / 1.096W

DOWNLINK:

Antenna Type:	PCB Etched Dipole
Antenna Gain Maximum:	1dBi
Max Transmitter Output Power:	8.05dBm
Max System EIRP:	9.05dBm / 0.008W

MPE Calculation

The Power Density (mW/cm^2) is calculated as follows:

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

Where:
S = power density (in appropriate units, e.g. mW/cm2)
P = power input to the antenna (in appropriate units, e.g., mW)
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 (appropriate units, e.g., cm)

Calculations were performed at the frequencies with the highest output power as determined during testing.

Maximum Permissible Exposure (MPE) General Population/Uncontrolled Exposure								
Transmit Frequency (MHz)	**Radio Power (dBm)**	**Power Density Limit (mW/Cm2)**	**Radio Power (mW)**	**Antenna Gain (dBi)**	**Antenna Gain (mW eq.)**	**Distance (cm)**	**Power Density (mW/cm^2)**	**Configuaration**
836	23.9	0.56	245.47	0	1.000	20	0.049	Uplink
869	8.55	0.58	7.16	1	1.259	20	0.002	Downlink
1880	25.9	1.00	389.05	4.5	2.818	20	0.218	Uplink
1989	8.05	1.00	6.38	1	1.259	20	0.002	Downlink

Installation Guidelines

End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.