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Subject: RF MPE EXPOSURE

Re: FCC ID: PWO275370

To Whom It May Concern:

The MPE calculations for model 275370 signal booster were done for each frequency band: 700 MHz, 800 MHz, and 1900 MHz. For each band two calculations were done; these included the different possibilities of antennas that may be connected to this signal booster: fixed outside and inside antennas. The order of the attached calculations is as follows:

700 MHz band:

1. Fixed Outside Antenna
2. Inside Antenna

800 MHz band:

3. Fixed Outside Antenna
4. Inside Antenna

1900 MHz band:

5. Fixed Outside Antenna
6. Inside Antenna

The results of these calculations determine the safe distances and gains for antennas that may be connected to this signal booster as summarized below:

	Fixed Outside Antenna	Inside Antenna
Maximum Gain less Cable Loss (dBi)	15	8.6
Minimum Distance from All People (inches/centimeters)	23/56	8/21

Sincerely,

Patrick L. Cook

Senior Research and Development Engineer



Minimum Safe Distance From Antennas

Based upon FCC OET Bulletin 65 and other FCC Sources

INPUT DATA

Frequency MHz	698
Pout Watts	0.47900
Duty Cycle Percent	100.0%
Ant. Gain dBi	15.00
Coax Loss dB	0.00
Distance From Antenna In cm	51.0

RESULTS OF CALCULATIONS

Ant. Gain less Coax Loss dBi	15.00
Distance From Antenna In Inches	20.08
ERP (Watts)	9.2362
EIRP (Watts)	15.1473
FCC Power Density Limit (mw/cm ²)	0.47
Calculated Power Density (mw/cm ²)	0.46

REFERENCE DATA

Pout dBm	26.80
Antenna Gain (non-log)	31.62
Coax loss (non-log)	1.00
General FCC Limit (mw/cm ²)	f/1500



Minimum Safe Distance From Antennas

Based upon FCC OET Bulletin 65 and other FCC Sources

INPUT DATA

Frequency MHz	728
Pout Watts	0.30900
Duty Cycle Percent	100.0%
Ant. Gain dBi	9.00
Coax Loss dB	0.00
Distance From Antenna In cm	20.1

RESULTS OF CALCULATIONS

Ant. Gain less Coax Loss dBi	9.00
Distance From Antenna In Inches	7.91
ERP (Watts)	1.4966
EIRP (Watts)	2.4545
FCC Power Density Limit (mw/cm ²)	0.49
Calculated Power Density (mw/cm ²)	0.48

REFERENCE DATA

Pout dBm	24.90
Antenna Gain (non-log)	7.94
Coax loss (non-log)	1.00
General FCC Limit (mw/cm ²)	f/1500



Minimum Safe Distance From Antennas

Based upon FCC OET Bulletin 65 and other FCC Sources

INPUT DATA

Frequency MHz	824
Pout Watts	0.67600
Duty Cycle Percent	100.0%
Ant. Gain dBi	15.00
Coax Loss dB	0.00
Distance From Antenna In cm	55.9

RESULTS OF CALCULATIONS

Ant. Gain less Coax Loss dBi	15.00
Distance From Antenna In Inches	22.01
ERP (Watts)	13.0348
EIRP (Watts)	21.3770
FCC Power Density Limit (mw/cm ²)	0.55
Calculated Power Density (mw/cm ²)	0.54

REFERENCE DATA

Pout dBm	28.30
Antenna Gain (non-log)	31.62
Coax loss (non-log)	1.00
General FCC Limit (mw/cm ²)	f/1500



Minimum Safe Distance From Antennas

Based upon FCC OET Bulletin 65 and other FCC Sources

INPUT DATA

Frequency MHz	869
Pout Watts	0.33880
Duty Cycle Percent	100.0%
Ant. Gain dBi	8.60
Coax Loss dB	0.00
Distance From Antenna In cm	20.0

RESULTS OF CALCULATIONS

Ant. Gain less Coax Loss dBi	8.60
Distance From Antenna In Inches	7.87
ERP (Watts)	1.4966
EIRP (Watts)	2.4544
FCC Power Density Limit (mw/cm ²)	0.58
Calculated Power Density (mw/cm ²)	0.49

REFERENCE DATA

Pout dBm	25.30
Antenna Gain (non-log)	7.24
Coax loss (non-log)	1.00
General FCC Limit (mw/cm ²)	f/1500



Minimum Safe Distance From Antennas

Based upon FCC OET Bulletin 65 and other FCC Sources

INPUT DATA

Frequency MHz	1850
Pout Watts	0.85100
Duty Cycle Percent	100.0%
Ant. Gain dBi	15.00
Coax Loss dB	0.00
Distance From Antenna In cm	46.4

RESULTS OF CALCULATIONS

Ant. Gain less Coax Loss dBi	15.00
Distance From Antenna In Inches	18.27
ERP (Watts)	16.4091
EIRP (Watts)	26.9110
FCC Power Density Limit (mw/cm ²)	1.00
Calculated Power Density (mw/cm ²)	0.99

REFERENCE DATA

Pout dBm	29.30
Antenna Gain (non-log)	31.62
Coax loss (non-log)	1.00
General FCC Limit (mw/cm ²)	1.00



Minimum Safe Distance From Antennas

Based upon FCC OET Bulletin 65 and other FCC Sources

INPUT DATA

Frequency MHz	1930
Pout Watts	0.33110
Duty Cycle Percent	100.0%
Ant. Gain dBi	11.70
Coax Loss dB	0.00
Distance From Antenna In cm	20.0

RESULTS OF CALCULATIONS

Ant. Gain less Coax Loss dBi	11.70
Distance From Antenna In Inches	7.87
ERP (Watts)	2.9862
EIRP (Watts)	4.8973
FCC Power Density Limit (mw/cm ²)	1.00
Calculated Power Density (mw/cm ²)	0.97

REFERENCE DATA

Pout dBm	25.20
Antenna Gain (non-log)	14.79
Coax loss (non-log)	1.00
General FCC Limit (mw/cm ²)	1.00