

MPE Calculator	Garmin Int.	IPH-01748	Test 100510			
MPE uses EIRP for calculation. EIRP is based on TX power added to the antenna gain in dBi.						
dBi = dB gain compared to an isotropic radiator.						
S = power density in mW/cm <sup>2</sup>				Antenna Gain (dBi)	0	
Output Power dBd + 2.17 = dBi				dBi to dBd	2.17	
Tx Frequency (MHz)	154.600	(Watts)	2.0000	Antenna Gain (dBd)	-2.17	
		(dBm)	33.01			
Cable Loss (dB)	0.0				Antenna minus cable (dBi)	0.00
Calculated ERP (mw)		1213.473	EIRP = Po(dBM) + Gain (dB)			
Calculated EIRP (mw)		2000.000	Radiated (EIRP) dBm		33.010	
			ERP = EIRP - 2.17 dB			
<b>Occupational Limit</b>		<div style="border: 1px solid black; padding: 5px;">           Power density (S)            EIRP            ----- = mW/cm<sup>2</sup>  <math>4 \pi r^2</math>            r (cm) EIRP (mW)         </div>	Radiated (ERP) dBm		30.840	
0.51533 mW/cm <sup>2</sup>						
<b>General Public Limit</b>						
0.10307 mW/cm <sup>2</sup>						
FCC radio frequency radiation exposure limits per 1.1310						
Frequency (MHz)		Occupational Limit		Public Limit		
300-1,500		f/300		f/1500		
1,500-10,000		5		1		
FCC radio frequency radiation exposure limits per 1.1310						
Frequency (MHz)		Occupational Limit @ Tx Freq (mW/cm <sup>2</sup> )		Public Limit @ Tx Freq (mW/cm <sup>2</sup> )		
300-1,500		0.515333333		0.103066667		
1,500-10,000		5		1		
EIRP		Distance		Distance		
milliwatts		cm		inches		
2000.000		200.00		78.74		
2000.000		150.00		59.06		
2000.000		100.00		39.37		
2000.000		90.00		35.43		
2000.000		80.00		31.50		
2000.000		70.00		27.56		
2000.000		60.00		23.62		
2000.000		50.00		19.69		
2000.000		40.00		15.75		
2000.000		30.00		11.81		
2000.000		25.00		9.84		
2000.000		20.00		7.87		
2000.000		19.00		7.48		
2000.000		18.00		7.09		
2000.000		17.00		6.69		
2000.000		15.00		5.91		
2000.000		10.00		3.94		
2000.000		5.00		1.97		
2000.000		2.00		0.79		
2000.000		2.00		39.78874		
FCC radio frequency radiation exposure limits per 1.1310						
Frequency (MHz)		Occupational Limit minimum Distance (cm)		General Public Limit minimum distance (cm)		
300-1,500		18.00		40.00		
1,500-10,000		N/A		N/A		