MPE Calculator	Digital Ally		Test 080814			
	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				Antenna Gain (dBi)	6
	S = power density in mW/cm^2				dBd + 2.17 = dBi	
		Output Power			dBi to dBd	2.17
Tx Frequency (MHz)	915	(Watts)	1.0000		Antenna Gain (dBd)	3.83
		(dBm)	30.00			
Cable Loss (dB)	0.0				Antenna minus cable (dBi)	6.00
Calculated ERP (mw)	2415.461	ERP = EIRP - 2.17 dB			Radiated (ERP) dBm	33.830
Calculated EIRP (mw)	3981.072	EIRP = Po(dBM) + Gain (dB)				
					Radiated (EIRP) dBm	36.000

Occupational Limit
3.05000 mW/cm^2

Power density (S)
EIRP
$$\frac{\text{EIRP (mW)}}{4\,p\,r^2} = \text{mW/cm}^2$$
r (cm)   EIRP (mW)

General Public Limit
0.61000 mW/cm^2

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		
	Occupational Limit @ Tx	Public Limit @ Tx Freq
Frequency (MHz)	Freq (mW/cm^2)	(mW/cm^2)
300-1,500	3.05	0.61
1,500-10,000	5	1

EIRP	Distance	Distance	S
milliwatts	cm	inches	mW/cm^2
3981.072	200.00	78.74	0.008
3981.072	150.00	59.06	0.014
3981.072	100.00	39.37	0.032
3981.072	90.00	35.43	0.039
3981.072	80.00	31.50	0.050
3981.072	70.00	27.56	0.065
3981.072	60.00	23.62	0.088
3981.072	58.00	22.83	0.094
3981.072	50.00	19.69	0.127
3981.072	40.00	15.75	0.198
3981.072	30.00	11.81	0.352
3981.072	25.00	9.84	0.507
3981.072	26.00	10.24	0.469
3981.072	23.00	9.06	0.599
3981.072	20.00	7.87	0.792
3981.072	10.20	4.02	3.045
3981.072	8.10	3.19	4.829

Frequency (MHz)	Occupational Limit minimum Distance cm (inches)	General Public Limit minimum Distance cm / (inches)	
300-1,500	10.2 / (4.02")	23 / (9.06")	
1,500-10,000	N/A	N/A	