Sandia Aerospace		Model: STX 165	Test Number:	110206		
MPE Calculator	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^2					
		Transmitter maximum Peak Output power 278 Watts				
	Power output operation for 0.008%		2.2 Watts	Antenna Gain (dBi)		2
		Output Power		dBd + 2.17 = dBi	dBi to dBd	2.2
Tx Frequency (MHz)	1090	Maximum (Watts)	2.2000	Antenna Gain (dBd)		-0.17
Cable Loss (dB)	0.0	(dBm)	33.42	Antenna minus cable (dBi)		2.00
Calculated ERP (mw)		2115.547		EIRP = Po(dBM) + Gain (dB)		
Calculated EIRP (mw)		3486.765		Radiated (EIRP) dBm		35.424
				ERP = EIRP - 2.17 dB		
Occupational Limit		Power density (S)		Radiated (ERP) dBm		33.254
3.63333	**mW/cm²**	EIRP				
		------- = mW/cm^2				
General Public Limit		4 p r^2				
0.72667	**mW/cm²**	r (cm) EIRP (mW)				

Radio Frequency radiation exposure limits per 1.1310/RSS-102		
Frequency (MHz)	Occupational Limit	Public Limit
30-300	1	0.2
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^2)	Public Limit @ Tx Freq (mW/cm^2)
30-300	1	0.2
300-1,500	3.633333333	0.726666667
1,500-10,000	5	1

EIRP	Distance	Distance	S	Distance
milliwatts	cm	inches	mW/cm²	Feet
3486.765	50.00	19.69	0.11099	1.64
3486.765	30.00	11.81	0.30830	0.98
3486.765	20.00	7.87	0.69367	0.66
3486.765	19.50	7.68	0.72970	0.64
3486.765	19.00	7.48	0.76861	0.62
3486.765	18.00	7.09	0.85638	0.59
3486.765	17.00	6.69	0.96010	0.56
3486.765	16.00	6.30	1.08386	0.52
3486.765	15.00	5.91	1.23319	0.49
3486.765	10.00	3.94	2.77468	0.33
3486.765	9.00	3.54	3.42553	0.30
3486.765	8.75	3.44	3.62407	0.29
3486.765	8.00	3.15	4.33544	0.26
3486.765	7.00	2.76	5.66261	0.23
3486.765	5.00	1.97	11.09872	0.16

Frequency (MHz)	Occupational Limit minimum Distance (cm / inches)	Public Limit minimum distance (cm / inches)
300-1,500	8.75cm / 3.4"	19.5cm / 7.7"
1,500-10,000	N/A	N/A