

Downstairs, 1227.6MHz

Change the values in the yellow boxes to calculate required readings						
-140 or less at a range of 100 feet to meet NTIA regulations						
Receive Ant Gain	Ant Cable Insertion Loss	Repeater Amp Gain	Repeater Ant Gain Best Case	Range in Feet	Repeated Signal Power @ Range	In dBm
38	-5	24	3	159	-140.96	
GPS Carrier Frequency MHz		Total System Gain		Range in Miles	Total Signal Power @ Range in Watts	
1227.6		60		0.03	8.0E-18	
Avg Receive Power L1 dBm North America				Range in Meters	Radiated Power dBm	
-133				49.56	-73	
Free Space loss with Isotropic Antennas				Range in Kilometer:	Transmitted Power (W)	
-67.96				0.05	25.1E-12	
					Effective Radiated Power (W)	
					50.1E-12	
					Effective Radiated Power (dBW)	
					-103	

Downstairs, 1575MHz

Change the values in the yellow boxes to calculate required readings						
-140 or less at a range of 100 feet to meet NTIA regulations						
Receive Ant Gain	Ant Cable Insertion Loss	Repeater Amp Gain	Repeater Ant Gain Best Case	Range in Feet	Repeated Signal Power @ Range	In dBm
38	-5	24	3	159	-140.12	
GPS Carrier Frequency MHz		Total System Gain		Range in Miles	Total Signal Power @ Range in Watts	
1575		60		0.03	9.7E-18	
Avg Receive Power L1 dBm North America				Range in Meters	Radiated Power dBm	
-130				49.56	-70	
Free Space loss with Isotropic Antennas				Range in Kilometer:	Transmitted Power (W)	
-70.12				0.05	50.1E-12	
					Effective Radiated Power (W)	
					100.0E-12	
					Effective Radiated Power (dBW)	
					-100	

Upstairs 1227.6MHz

Change the values in the yellow boxes to calculate required readings						
-140 or less at a range of 100 feet to meet NTIA regulations						
Receive Ant Gain	Ant Cable Insertion Loss	Repeater Amp Gain	Repeater Ant Gain Best Case	Range in Feet	Repeated Signal Power @ Range	In dBm
38	-3	22	3	159	-140.96	
GPS Carrier Frequency MHz			Total System Gain	Range in Miles	Total Signal Power @ Range in Watts	
1227.6			60	0.03	8.0E-18	
Avg Receive Power L1 dBm North America				Range in Meters	Radiated Power dBm	
-133				49.56	-73	
Free Space loss with Isotropic Antennas				Range in Kilometer:	Transmitted Power (W)	
-67.96				0.05	25.1E-12	
					Effective Radiated Power (W)	
					50.1E-12	
					Effective Radiated Power (dBW)	
					-103	

Upstairs 1575MHz

Change the values in the yellow boxes to calculate required readings						
-140 or less at a range of 100 feet to meet NTIA regulations						
Receive Ant Gain	Ant Cable Insertion Loss	Repeater Amp Gain	Repeater Ant Gain Best Case	Range in Feet	Repeated Signal Power @ Range	In dBm
38	-3	22	3	159	-140.12	
GPS Carrier Frequency MHz			Total System Gain	Range in Miles	Total Signal Power @ Range in Watts	
1575			60	0.03	9.7E-18	
Avg Receive Power L1 dBm North America				Range in Meters	Radiated Power dBm	
-130				49.56	-70	
Free Space loss with Isotropic Antennas				Range in Kilometer:	Transmitted Power (W)	
-70.12				0.05	50.1E-12	
					Effective Radiated Power (W)	
					100.0E-12	
					Effective Radiated Power (dBW)	
					-100	