GPS Power Control Re-radiating Worksheet Antenna A1				
	L1 (1575.42 MHz)			
Site Information				
Antenna ID	A1			
Location Description	South Antenna			
Coordinates, NAD 83, ddd-mm-ss.s	37-38-46.1N; 097-25-06.3W			
Antenna - Receiving (RX)				
Make and Model	GPS Source L1A-PM-N(f)			
Gain (dBi) @ L1 (LNA included)	38			
Coax				
Type or Description	LMR-400			
Antenna - Re-radiating (TX)				
Make and Model	GPS Source L1P Passive Antenna			
Antenna Height AGL (ft)	25			
Gain (dBi) @ L1	3.	0 Used in calculations below		
Distance to nearest outer wall (meters)	16.	2 Used in calculations below		
Free Space Loss @ L1	69.6	8 =20*LOG10(1575.42)+20*(LOG10((B17+30)/1000))+32.44		
Amplifier - Gain Control				
	GPS Source GPSRKXLV-P110/5-NF (L1,			
Make and Model	Oscillation Detect, Antenna Alarm Monitor)			
Max Permissible EIRP Level PTmax (dBm)	-70.3	1 =-140+20*LOG10(1575.42)+20*LOG10(30+B17)-27.55		
Max Permissible ERP Level PTmax (with antenna	-72.4	6		
gain) (dBm)		=B21-2.15		
Controller Programmed ERP Setting (includes	-76	5		
antenna gain) (dBm) Must be less than Max		Value is programmed into the controller and is the ERP level		
Permissible ERP Level		radiated from the antenna connected to the amplifier		
Controller Programmed ERP Setting (includes	13.5	0		
antenna gain) converted to pW		=10*(B23/10+9)		
Controller Programmed Setting (includes antenna	-74.3	5		
gain) converted to EIRP dBm		=B23+2.15		
Transmitter Power at Controller Terminals (dBm)	-77.3	5		
ahead of antenna		=B25-B16		
Transmit Power at Controller Terminals (pW)	12.6	5 =10*(B26/10+9)		
Calculated Signal Strength 30 meters Outside				
Building (dBm EIRP)	-144.0	4 =B25-20*LOG10(1575.42)-20*LOG10(30+B17)+27.55		

GPS Power Control Re-radiating Worksheet Antenna A2				
	L1 (1575.42 MHz)			
Site Information				
Antenna ID	A2			
Location Description	North Antenna			
Coordinates, NAD 83, ddd-mm-ss.s	37-38-46.9N; 097-25-06.3W			
Antenna - Receiving (RX)				
Make and Model	GPS Source L1A-PM-N(f)			
Gain (dBi) @ L1 (LNA included)	38			
Coax				
Type or Description	LMR-400			
Antenna - Re-radiating (TX)				
Make and Model	GPS Source L1P Passive Antenna			
Antenna Height AGL (ft)	25			
Gain (dBi) @ L1		3.0	Used in calculations below	
Distance to nearest outer wall (meters)		16.2	Used in calculations below	
Free Space Loss @ L1	69	9.68	=20*LOG10(1575.42)+20*(LOG10((B17+30)/1000))+32.44	
Amplifier - Gain Control				
	GPS Source GPSRKXLV-P110/5-NF (L1,			
Make and Model	Oscillation Detect, Antenna Alarm Monitor)			
Max Permissible EIRP Level PTmax (dBm)	-7(0.31	=-140+20*LOG10(1575.42)+20*LOG10(30+B17)-27.55	
Max Permissible ERP Level PTmax (with antenna	-72	2.46		
gain) (dBm)			=B21-2.15	
Controller Programmed ERP Setting (includes	-7	76.5		
antenna gain) (dBm) Must be less than Max			Value is programmed into the controller and is the ERP level	
Permissible ERP Level			radiated from the antenna connected to the amplifier	
Controller Programmed ERP Setting (includes	13	3.50		
antenna gain) converted to pW			=10*(B23/10+9)	
Controller Programmed Setting (includes antenna	-74	4.35		
gain) converted to EIRP dBm			=B23+2.15	
Transmitter Power at Controller Terminals (dBm)	-77	7.35		
ahead of antenna			=B25-B16	
Transmit Power at Controller Terminals (pW)	12	2.65	=10*(B26/10+9)	
Calculated Signal Strength 30 meters Outside				
Building (dBm EIRP)	-144	4.04	=B25-20*LOG10(1575.42)-20*LOG10(30+B17)+27.55	