GPS Re-radiating Information & Calculations		
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Site Information		
1) Facility Name and Address	New York Citation Service Center, Stewart Int'l Airport, 3 Express Drive, Newburgh, NY 12550	
2) Point Of Contact Name & Phone	Wayne Stevens: Phone 845-567-9210	
3) Location of switch & shutoff instructions	20 feet below rerad at eye level. Remove plug from 115 VAC outlet to shut-off.	
4) Coordinates, NAD 83, ddd-mm-ss.s	41-30-31.8N, 74-05-40.3 W	
5) Coordinate Description	Southeastern corner of hangar.	
6) Ground Elevation (ft)	491	
Antenna - Receiving (RX)		
7) Make and Model	GPS Networking L1GPSA-10	
8) Gain (dBi)	38	35 dB Typ LNA gain + 3 dB antenna gain
Antenna - Re-radiating (TX)		
9) Make and Model	L1RRKPA-S (Passive)	
10) Gain (dBi) @L1	3	Used in calculations below
11) Distance to nearest outer wall (meters)	0.635	Used in calculations below
12) Location Description	Southeastern corner of hangar.	
13) Antenna Height AGL (meters)	7.6	
Free Space Loss @ L1 @ 30m beyond nearest external wall	66.11	=20*LOG10(1575.42)+20*(LOG10((B16+30)/1000))+32.44
Amplifier		
14) Make and Model	GPS Networking LA20	
15) Gain (Typical in dB)	24.5	Used in calculations below
Coax - RX Antenna to Amp		
16) Type or Description	RG-213	
17) Attenuation @1575 MHz (dB/100 ft)	11	
18) Length (ft)	20	
Coax Loss - RX Antenna to Amp (dB)	2.2	Used in calculations below
Coax - Amp to TX Antenna		
19) Type or Description	RG-213	
20) Attenuation @1575 MHz (dB/100 ft)	11	
21) Length (ft)	1	
Coax Loss - Amp to TX Antenna (dB)	0.11	Used in calculations below
Attenuator		
22) Make & Model	GPS Networking Inc. AttenPDC-N	
23) Attenuation @1575 MHz (dB)	11	Used in calculations below
Calculated Signal Strength 100 ft Outside Building (dBm)*	-141.42	=-127.5+B12+B15-B19+B22-B27-B32-B35
Max Permissible EIRP Level P_{Tmax} (dBm)	-73.88	=-140+20*LOG10(1575.42)+20*LOG10(30+B16)-27.55
Max Permissible ERP Level P_{Tmax} (with antenna gain) (dBm)	-76.03	=B37-2.15
Transmitter Power at Terminals ahead of antenna (dBm)	-78.31	=-127.5+B12+B22-B27-B32-B35
Transmitter Power at Terminals ahead of antenna (pW)	14.76	=10^(B39/10+9)
Calculated ERP Level (dBm) **	-77.46	=-127.5+B12+B15+B22-B27-B32-B35-2.15
Calculated ERP Level (pW) **	17.94733627	=10^(B41/10+9)

*** This value MUST be less than negative 140 dBm**
**** Includes antenna gain**