

## ADDENDUM TO THE AIRPRO-SE USER MANUAL

### TRANSMITTER POWER SETTINGS

The maximum output power allowed by FCC Rule Part 15 depends on power spectral density (PSD) at a given output power setting, on antenna gain, and on the amplitude of emission bandedge energy in restricted bands starting at 2483.5 MHz and 2390 MHz.

#### Data Rate: 19.2 kB/s

Frequency/Channel (MHz, Plan, Channel)	Maximum Ouput Power			
	0 dBi	8 dBi	15 dBi	24 dBi
2401.868, P3, C1 (lowest)	23 dBm	23 dBm	23 dBm	23 dBm
2478.227, P3, C48	23 dBm	23 dBm	15 dBm	5 dBm
2479.851,P3, C49	23 dBm	8 dBm	0 dBm	not used
2481.476,P3, C50 (highest)	23 dBm	0 dBm	not used	not used
All others not listed	23 dBm	23 dBm	23 dBm	23 dBm

#### Data Rate: 64 kB/s

Frequency/Channel (MHz, Plan, Channel)	Maximum Ouput Power			
	0 dBi	8 dBi	15 dBi	24 dBi
2404.468, P2, C1 (lowest)	26 dBm	26 dBm	26 dBm	24 dBm
2474.652, P1, C14	25 dBm	25 dBm	25 dBm	23 dBm
2478.552, P2, C20	16 dBm	0 dBm	not used	not used
2479.851,P3, C49 (highest)	3 dBm	8 dBm	0 dBm	not used
All others not listed	25 dBm	25 dBm	25 dBm	25 dBm

#### Data Rate: 128 kB/s

Frequency/Channel (MHz, Plan, Channel)	Maximum Ouput Power			
	0 dBi	8 dBi	15 dBi	24 dBi
2407.067, P1, C1 (lowest)	27 dBm	26 dBm	26 dBm	24 dBm
2472.053, P3, C7 (highest)	25 dBm	25 dBm	23 dBm	15 dBm
All others not listed	28 dBm	28 dBm	27 dBm	24 dBm

#### Data Rate: 256 kB/s

Frequency/Channel (MHz, Plan, Channel)	Maximum Ouput Power			
	0 dBi	8 dBi	15 dBi	24 dBi
2411.446,P1, C1 (lowest)	25 dBm	23 dBm	23 dBm	8 dBm
2461.476, P1, C6	26 dBm	26 dBm	23 dBm	17 dBm
2472.107, P3, C4 (highest)	8 dBm	not used	not used	not used
All others not listed	28 dBm	28 dBm	27 dBm	24 dBm

## **Compliance with RF Exposure Guidelines in FCC Rule para. 1.1307(b)1**

The AIRPRO transmitter must meet the RF exposure requirements described in paragraph 1.1307(b)1 of FCC's Rules. The specific requirement for a transmitter of this type is that the maximum permissible exposure level (MPE) meets the limits for "General Population/Uncontrolled Exposure" (Table 1, para. 1.1310). The required MPE is 1.0 mW/cm<sup>2</sup>.

For each antenna used with the AIRPRO transmitter, the antenna gain and maximum output power are used to calculate the distance from the antenna at which MPE is exceeded. The installer shall take all reasonable steps to maintain this separation distance between the antenna and personnel.

### **Calculating Minimum Separation Distances to meet MPE Requirements**

$$E^2/377 = S, \text{ W/m}^2$$

$$\text{Specification: } 1 \text{ mW/cm}^2 = 10 \text{ W/m}^2, \quad E_{\text{max}} = 61.4 \text{ V/m}$$

$$E_{\text{v/m}} = (30 * P * G)^{0.5} / d, \quad P = \text{power in watts}, \quad G = \text{ant. gain over isotropic}, \quad d = \text{distance, meters}$$

$$d = (30 * P * G)^{0.5} / 61.4$$

<b>Ant Gain, dBi</b>	<b>RF In, dBm</b>	<b>Minimum Dist, cm</b>
0.0	28.0	7.1
8.0	28.0	17.8
15.0	27.0	35.5
24.0	24.0	70.9