RF Exposure Statement

FCC LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $|E|^2$, $|H|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $|E|^2$, $|H|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz *Plane-wave equivalent power density

NOTE 1: See Section 1 for discussion of exposure categories.

NOTE 2: The averaging time for General Population/Uncontrolled exposure to fixed transmitters is not applicable for mobile and portable transmitters. See 47 CFR §§2.1091 and 2.1093 on source-based time-averaging requirements for mobile and portable transmitters.

1. Standard Applicable

According to 1.1307 (b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

This device is fixed mount outside the fuselage.

2. Measurement Result:

$S = (P X G) / (4 X \text{Pie} X 20^{2})$

where:

S = power density
P = transmitter conducted power in (W)
G = antenna numeric gain
d = distance to radiation center (cm^2)

This is a mobile device and the average output power is 33 dBm + antenna gain of 5.8 dBi = 38.8 dBm (7.586 Watts).

$$(7586 \text{ mW X } 1) / (4 X \pi X 32^2) = .5898 \text{ mW/cm}^2$$

This was measured at 894.75 MHz

Lower than the low threshold f/1500 = (.5965 mW/cm^2),

NOTE:

The Airborne Air-to-ground Communications Unit, Model Number AACU is mounted in the fuselage of the aircraft with the antenna located outside the aircraft fuselage. Because the antenna mounting location is outside the fuselage, the 46cm will be maintained from the passengers and crew.

To determine the worst case level to be use for the RF exposure statement, when possible we will make RF conducted at the antenna terminal measurements and EIRP measurements. The higher of the two measurements will be used. If using the RF conducted method, the antenna gain is added.