GENERAL INFORMATION REQUIREMENTS

Paragraph 2.983(a)

Name of Applicant:	Golden Eagle
Address of Applicant:	16/F Southeast Ind. Bldg. 611-619 Castle Peak Road Tsuen Wan, Hong Kong
Name of Manufacturer:	Golden Eagle
Address of Manufacturer:	16/F Southeast Ind. Bldg. 611-619 Castle Peak Road Tsuen Wan, Hong Kong

Paragraph 2.983(b)

Equipment	
Identification:	FCC ID: BFV5M-3-6-8

Paragraph 2.02(c)(1)

Necessary Bandwidth Determination:

The necessary bandwidth was calculated utilizing the following formula:

$B_n = 2M + 2D$	M = 3.0 kHz		
	D =1.9 kHz		

 $B_n = 2(3.0) + 2(1.9) = 9.8 \text{ kHz}$

Power Output, Effective Radiated Power

POWER OUTPUT, EFFECTIVE RADIATED POWER(Para. 2.1046)

A. Measurement Procedure:

The transmitter under test was placed on an 80 cm. high non metallic table on the Open Air Test Site with it's antenna polarized vertically. A receive dipole antenna was placed three meters away from the transmitter. The turntable was rotated 360 degrees and the receive antenna was raised and lowered from 1 to 4 meters until a maximum reading was obtained. This reading was recorded. The transmitter under test was replaced with a dipole and signal generator. The signal generator was set to the frequency of the transmitter under test. The level of the signal generator was increased until the level was equal to that previously measured. The required input level from the signal generator in dBm was recorded and converted into milliwatts. This was the Effective Radiated Power of the transmitter. These measurements were recorded for the vertical and horizontal polarizations of the antenna.

Setup of the test is shown below:



B. Test Results:

The results for the above test are shown on a single data sheet that is being submitted as a separate attachment file named erpdata.pdf.

Modulation Characteristics

MODULATION CHARACTERISTICS (2.1047)

A. Measurement Procedure:

An Audio Oscillator was coupled to the Audio Input of the transmitter under test. The RF Output at the antenna terminals was loosely coupled to a modulation meter as shown below. The Audio Input level was adjusted from -60dBm to 0dBm at each frequency listed herein. At each test frequency and level, the FM modulation was recorded.

Setup of the above test is shown below:



B. Test Results:

The test data for this method can be found on a total of three data sheets (1 for Audio Frequency Response and 2 for Modulation Characteristics). These data sheets are being submitted as separate attachments, which are named afrdata.pdf (Audio Frequency Response), and modchardat1.pdf and modchardat2.pdf (Modulation Characteristics).

Occupied Bandwidth

OCCUPIED BANDWIDTH (PARA.2.1049)

A. Measurement Procedure:

An audio signal was electrically coupled to the audio input terminals of the test sample. The RF output was monitored using a deviation meter. The audio input level was increased to produce 50% modulation. The RF output was then loosely coupled through external attenuators to a spectrum analyzer and the audio level was increased by 16 dB. The occupied bandwidth of the RF carrier, modulated at 50% plus 16 dB, was then measured. The above procedure was performed with the audio input frequencies of 1000, 2500, and 3125 kHz. The modulated signal must be within the template as specified by the applicable paragraph in Part 95. The above was performed at the low and high frequencies.



B. Test Results:

The results for the above test are shown on six data sheets that are submitted as separate attachments named as follows: occbw1.pdf, occbw2.pdf, occbw3.pdf, occbw4pdf, occbw5.pdf and occbw6.pdf.

Para. 2.1053

Field Strength of Spurious Radiation

FIELD STRENGTH OF SPURIOUS RADIATION (PARA 2.1053)

A. Measurement Procedure:

The test sample was then placed on an 80cm high wooden test stand which was located three meters from the test antenna on an FCC listed test site. The frequency range scanned was from the lowest frequency generated by the test sample to its tenth harmonic. In order to maximize the level of each emission observed from the test sample, the broadband antenna was tuned to the frequency of each emission and the test sample was rotated 360 degrees. To further maximize the each emission observed, the test antenna was both horizontally and vertically polarized, and then was raised and lowered from one to four meters from the ground plane. The limits for all of the spurious emissions was calculated utilizing the measured output power and the following equation:

Limit $\langle dB: V/M \rangle = 20 \log [\{(49.2 \text{ x } P_T)^{\frac{1}{2}}/3\} \text{ x } 10^6] - (43 + 10 \log P_T)$

The above procedure was performed at the lower and upper frequencies of the device's range.

Setup of the test is shown below:



B. Test Results: The results for the above test are shown on the following single data sheet.

Test Method:		Spurious Emissions									
Customer:		Golden Eagle Electronics Manufactory LTD				Job No.	R-8151				
Test Sample: 462		462 MH	62 MHz Family Radio Service Transmitter			FCC ID	BFV5M-3-6-8				
Model No.: 5M-3-6-8			Serial No.	N/A							
Operating I	Mode	EUT co	ntinuously trans	mitting a CW	signal at cent	ter frequency s	pecified below.				
Test Specification FCC Part 95 Personal Radio Services; Subpart E: Technical Regulations.											
Technician	:	Dennis	Cortes			Date:	July 20, 1999				
Notes:	Test Distance: 3 Meters Limit= <u>49.2 x Output Power</u> – (43+10 log Output Power)										
Detector: Peak D											
	Ante	enna	EUT	Meter	Correction	Corrected	Converted				
Test Freq.	Pol./F	leight	Orientation	Reading	Factor	Reading	Reading	Limit			
Mhz	(V/H) /	Meters	Degrees	dBuv	dB	dBuv/m	uv/m	uv/m			
Centor	Free	ienav.	462 68					16596			
Center		<u></u>	102.00								
925.3	V	1.3	045	56.3	7.3	63.6	1513.6				
1388.0	V-1.2		000	63.3	-1.8	61.5	1188.5				
1850.7	V	1.0	000	58.8	1.6	60.4	1047.1				
2313.3	V-1.3		000	52.2	-0.8	51.4	371.5				
2776.1	V-1.4		180	56.3	1.6	57.9	785.2				
3238.8	V-1.3		135	48.0	3.9	51.9	393.6				
3701.6	V-1.4		135	51.4	7.4	58.8	871.0				
Center	Freque	ncy: 4	467.6 Mhz								
935.2	V-*	1.2	068	56.1	7.5	63.6	1513.6				
1403.0	V-*	1.3	023	61.0	-1.8	59.2	912.0				
1870.6	V-*	1.0	000	56.3	1.7	58.0	794.3				
2338.2	V-*	1.3	023	53.2	-0.6	52.6	426.6				
2805.8	V-*	1.2	203	54.5	1.5	56.0	631.0				
3273.4	V-*	1.0	135	49.9	4.1	54.0	501.2	V			
3741.0	V-*	1.3	135	49.6	7.4	57.0	707.9	16596			
	The EUT was scanned from 30 Mhz to 5 Ghz										
	The emissions observed from the EUT do not exceed the specified limits.										
	All emissions not recorded were more than 20dB below the specified limit.										

Frequency Stability

FREQUENCY STABILITY MEASUREMENTS

A. Measurement Procedure (Frequency vs. Voltage):

The RF output of the test sample was coupled to a frequency counter through external attenuation. Using a Variable power supply and voltmeter, the input voltage was varied.Measurements were taken with the device being supplied with 85, 100, and 115 percent of its rated input voltage and set to transmit the unmodulated carrier frequency.

Setup of the test is shown below:



B. Test Results:

The results for the above test are shown on a single data sheet that is being submitted as a separate attachment named frstf-v.pdf.

FREQUENCY STABILITY MEASUREMENTS (PARA 2.995)

A. Measurement Procedure (Frequency vs. Temperature)

The RF output of the test sample was coupled to a frequency counter through external attenuators. With the counter connected, the test sample was activated and placed into a temperature chamber. The temperature was then programmed to start at -30 degrees Celsius and reach +50 degrees Celsius in 10 degrees increments. Each increment was held for 30 minutes in order to let the test sample stabilize at that temperature.

Setup of the test is shown below:



B. Test Results:

The results for the above test are shown on a single data sheet that is being submitted as a separate attachment named frstf-t.pdf.

This device contains a thermal switch, which shuts the transmitter off below -10°C.