

# RF Exposure Evaluation declaration

Product Name : Iqua Vizor  
Model No. : PHF-602  
FCC ID : TUFPHF-602

Applicant : Iqua Ltd.  
Address : Kimmeltie 3, 02110 Espoo, Finland

Date of Receipt : 2007/06/20  
Issued Date : 2007/07/10  
Report No. : 076S055-RF-US

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

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**1. RF Exposure Evaluation**

**1.1. Limits**

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

**LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)**

| Frequency Range (MHz)  | Electric Field Strength (V/m) | Magnetic Field Strength (A/m) | Power Density (mW/cm <sup>2</sup> ) | Average Time (Minutes) |
|--|-------------------------------|-------------------------------|-------------------------------------|------------------------|
| <b>(A) Limits for Occupational/ Control Exposures</b>            |                               |                               |                                     |                        |
| 300-1500   | --                            | --                            | F/300                               | 6                      |
| 1500-100,000   | --                            | --                            | 5                                   | 6                      |
| <b>(B) Limits for General Population/ Uncontrolled Exposures</b> |                               |                               |                                     |                        |
| 300-1500   | --                            | --                            | F/1500                              | 6                      |
| 1500-100,000   | --                            | --                            | 1                                   | 30                     |

F= Frequency in MHz

**Friis Formula**

Friis transmission formula:  $Pd = (Pout \cdot G) / (4 \cdot \pi \cdot r^2)$

Where

Pd = power density in mW/cm<sup>2</sup>

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

Pd is the limit of MPE, 1 mW/cm<sup>2</sup>. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

## 1.2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

The temperature and related humidity: 18°C and 78% RH.

## 1.3. Test Result of RF Exposure Evaluation

|           |   |                        |
|-----------|---|------------------------|
| Product   | : | Iqua Vizor             |
| Test Item | : | RF Exposure Evaluation |
| Test Site | : | AC-3                   |
| Test Mode | : | Mode 1: Transmitter    |

### Antenna Gain:

Antenna Gain: The maximum Gain measured in fully anechoic chamber is -3.5dBi or 0.45 in linear scale.

### Output Power Into Antenna & RF Exposure Evaluation Distance:

| Channel | Channel Frequency (MHz) | Output Power to Antenna (mW) | Power Density at R = 20 cm (mW/cm <sup>2</sup> ) |
|---------|-------------------------|------------------------------|--|
| 00      | 2402.00                 | 0.5598                       | 0.000050   |
| 39      | 2441.00                 | 0.6237                       | 0.000055   |
| 78      | 2480.00                 | 0.7345                       | 0.000065   |

### Note:

The power density Pd (4th column) at a distance of 20 cm calculated from the Friis transmission formula is far below the limit of 1 mW/cm<sup>2</sup>.