

# RF EXPOSURE ANALYSIS

**Product** Radio Tracking Transmitter

The product has been designed to be used as a transmitter wear by a dog. The transmitter sends a radio signal to the receiver held by the owner of the dog to indentify the location of the dog.

This transmitter is designed to be wear by the animal and persons must keep a separation distance of at least 20 cm while it is in operation.

### **Analysis for FCC**

The equipment transmits in the 902 – 916 MHz frequency range and therefore the applicable threshold is calculated as stated in FCC document KDB 447498 by using the formula  $\frac{60}{f}$  (where f is a highest frequency

in used) 
$$\frac{60}{0.916} = 65.5 mW$$

# **Output power considerations:**

Max. E.I.R.P value: 30.48 dBm = 1116.86 mW

(Value is taken from the test report number: 257712-5. Value contains conducted output power and antenna gain.)

## RF exposure evaluation:

$$S = \frac{P * G}{4\pi R^2} = \frac{E.I.R.P}{4\pi R^2}$$

E.I.R.P (dB)	E.I.P.R (mW)	Evaluation distance (cm)	S – power density (mW/cm²)
30.48	1116.86	20	0.222

#### **Analysis for IC**

According to standard RSS-102 RF exposure analysis is required for devices operating below 1.5 GHz if the maximum E.I.R.P. of the device is 2.5 W or more. Therefore RF exposure analysis is not required for this device.

### Result:

Equipment complies with the FCC and IC limits for maximum permissible exposure