

## Value of the electrical stimulation for Martin System products

### Introduction

The sensation caused by an electrical stimulation is due by the current flowing through the nervous receiver under the skin.

Higher current density -> higher sensation.

To increase the current density (all other parameter equal), you can either:

- Decrease the contact area of the electrodes
- Increase the energy of the stimulation

Decreasing the contact area will concentrate the current on a smaller zone, and by the way will increase the sensation.

A possible way to measure the sensation of an impulse, is measuring the energy of the pulse through a fixed resistor of 1 ohm, resistor which is in serie with a variable resistor.

The variable resistor is resistor between the internal skin and the electrodes of the equipment.

The energy of the stimulation is:

$$E = \int R \cdot I^2 \cdot dt$$

As  $R = 1$

$$E = \int I^2 \cdot dt \text{ [A}^2\text{s or mA}^2\text{s]}$$

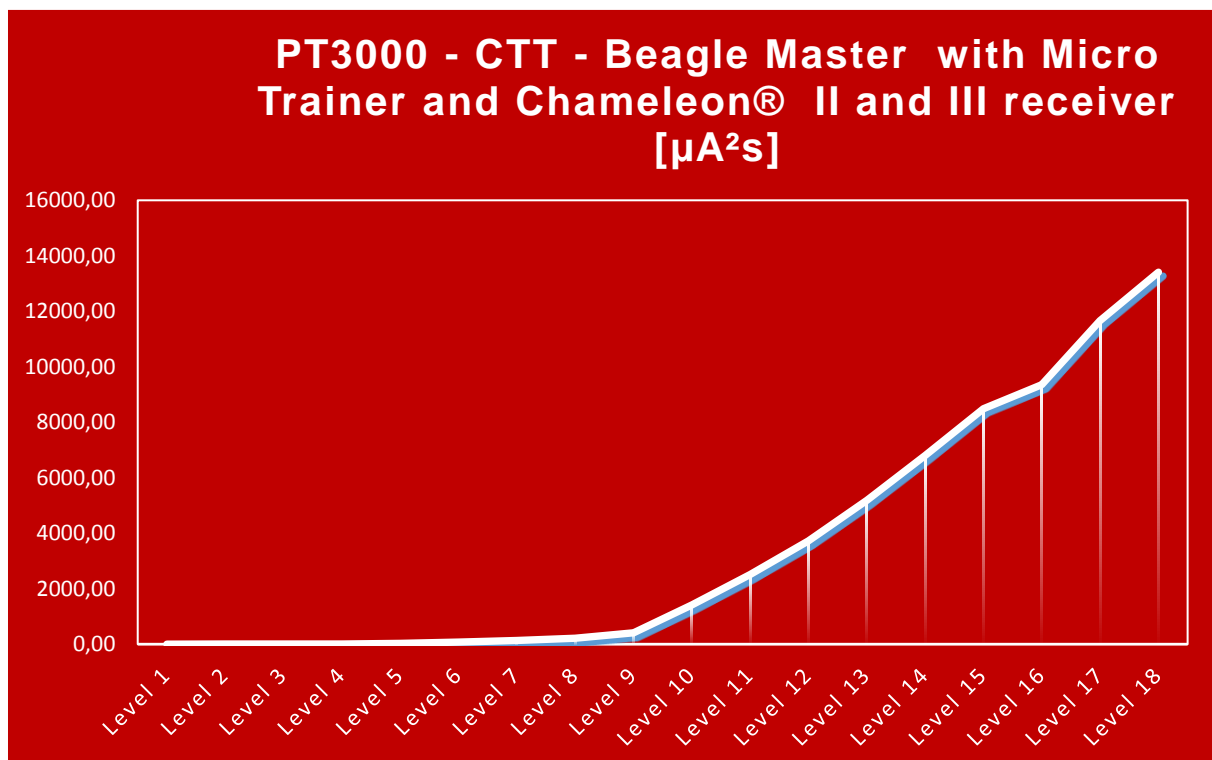
Integral during 1 sec.

With our Patented technology SSC, the current is stable even if the variable resistor change, and so, the sensation is consistent.

In next chapter, table will be shown for each remote.

## Remote Pro Trainer 3000, Beagle Master and CTT

Level	Sensation [ $\mu\text{A}^2\text{s}$ ]
Level 1	0,24
Level 2	0,54
Level 3	2,83
Level 4	8,87
Level 5	32,51
Level 6	74,09
Level 7	131,97
Level 8	209,42
Level 9	413,96
Level 10	1412,45
Level 11	2509,26
Level 12	3721,90
Level 13	5190,78
Level 14	6801,78
Level 15	8482,87
Level 16	9355,81
Level 17	11660,86
Level 18	13409,99

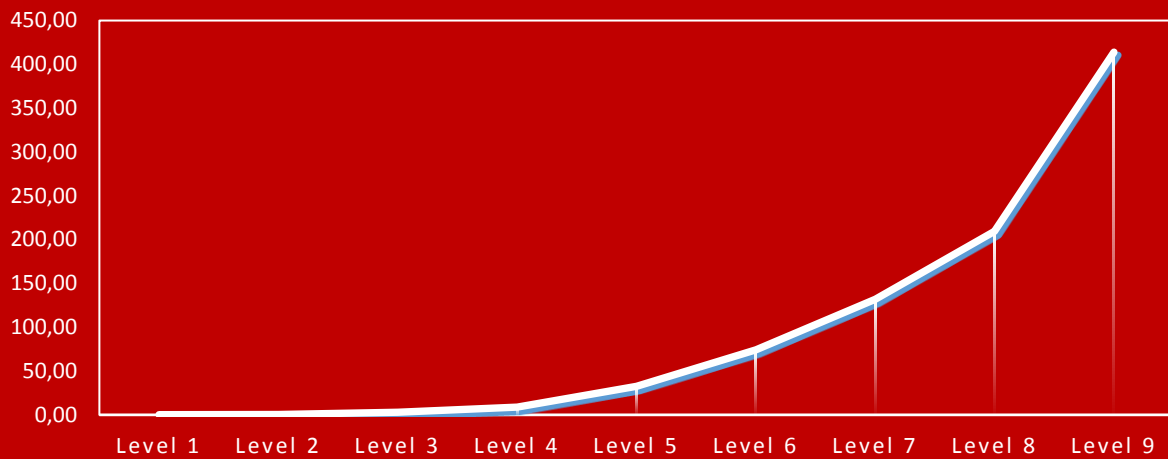


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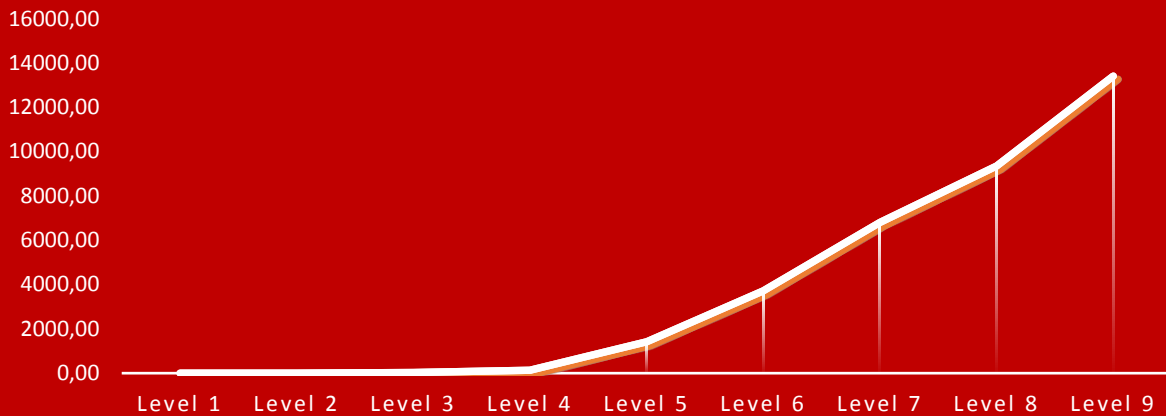
**PT3000 - CTT - Beagle Master with Micro  
Trainer and Chameleon® II and III  
receiver [ $\mu\text{A}^2\text{s}$ ]  
- ZOOM on the first 9 levels**



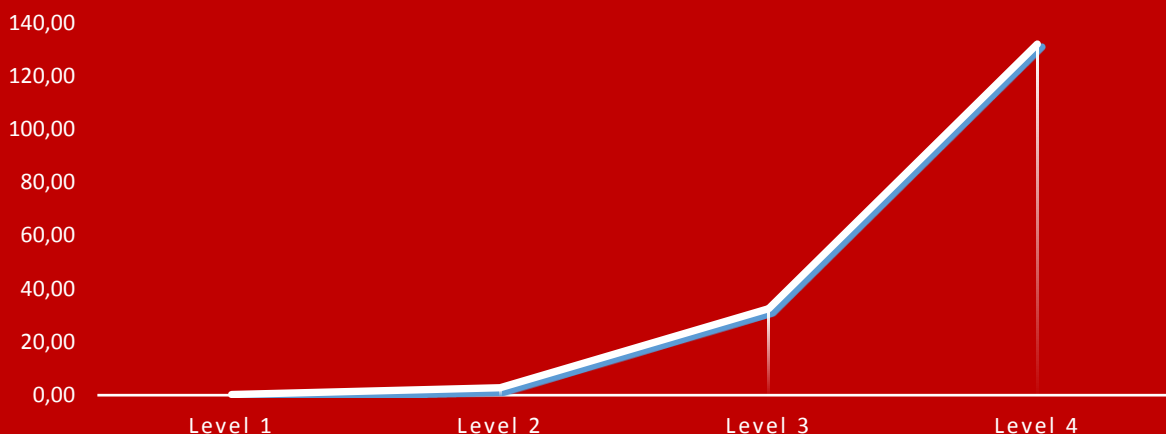
Tiny Trainer 200 – 400 – 1000 And TT4FK with High level

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### Tiny Trainer 200 - 400 - 1000 and TT4FK High Level with Micro Trainer and Chameleon® II and III receiver [ $\mu\text{A}^2\text{s}$ ]



### Tiny Trainer 200 - 400 - 1000 and TT4FK High Level with Micro Trainer and Chameleon® II and III receiver [ $\mu\text{A}^2\text{s}$ ] - ZOOM on the first 4 levels



## TT4FK with High level

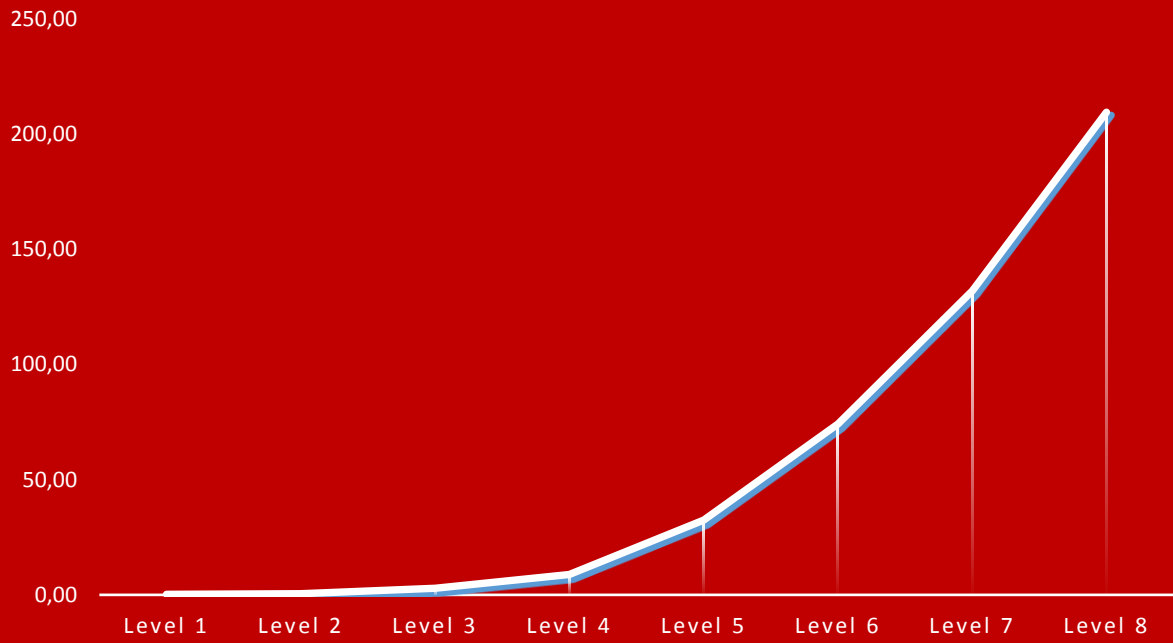
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## TT4FK Low Level with Micro Trainer and Chameleon® II and III receiver [ $\mu\text{A}^2\text{s}$ ] - Zoom on the first 8 levels



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