CLAIMS

1. A method for electromagnetic stimulation of a tissue, the method comprising the steps of:

a) disposing an arrangement of electromagnetic transducers encompassing a volume containing a tissue; and

b) applying an electromagnetic field stimulus to a tissue through the arrangement of electromagnetic transducers according to an activation pattern for a determined period of time;

wherein the activation pattern makes it possible to vary the intensity and direction of an electromagnetic field vector produced by the arrangement of electromagnetic transducers.

2. The method of Claim 1, wherein, after step (b), is a step of changing the activation pattern and returning to step (b).

3. The method of Claim 2, wherein, changing the activation pattern is executed on the basis of a measurement of intensity of the electromagnetic field produced by the arrangement of electromagnetic transducers, on a tissue impedance response feedback or a combination of these.

4. The method of Claim 1, wherein, at step (a), the arrangement of electromagnetic transducers is a unitary arrangement of magnetic field transducers.

5. The method of Claim 1, wherein, at step (a), the arrangement of electromagnetic transducers has two electrical field transducers.

6. The method of Claim 1, wherein, at step (a), in the arrangement of electromagnetic transducers , the electromagnetic transducers are selected from a group consisting of engines, electrodes, photoelectric transducers, induction actuators, resistors, coils that generate magnetic fields for induction, antennas, parallel plate conductor materials, and combinations of these.

7. The method of Claim 1, wherein, at step (a), the arrangement of electromagnetic transducers is disposed over a frame encompassing the volume.

8. The method of Claim 1, wherein, at step (a), the active face of each electromagnetic transducer of the arrangement of electromagnetic transducers is in contact with the external surface of the tissue.

9. The method of Claim 1, wherein, at step (a), the active face of each electromagnetic transducer of the arrangement of electromagnetic transducers is spaced apart from the external surface of the tissue.

10. The method of Claim 1, wherein, at step (a), the active face of one of the electromagnetic transducers in the arrangement of electromagnetic transducers is spaced apart from the external surface of the tissue.

11. The method of Claim 1, wherein, at step (a), a portion of an area of the active face of the electromagnetic transducers in the arrangement of electromagnetic transducers is in contact with the external surface of the tissue.

12. The method of Claim 5, wherein, step (b) is executed in a computing unit and the activation pattern follows the steps of:

A) defining an electrical field transducers index with an initial value and a maximum number of pairs of electrical field transducers in the computing unit;

B) selecting a pair of electrical field transducers from the arrangement of electromagnetic transducers simultaneously in a position defined for the electrical field transducers index of step (A);

C) activating the pair of electrical field transducers selected in step (B) with a determined polarity such that an electrical field transducer of said pair has positive electrical potential in relation to the other electric field transducer of said pair, during a determined period of time;

E) deactivating the pair of electrical field transducers selected in step (B);

F) increasing an index for electrical field transducers and comparing the electrical field transducers index with the maximum number of pairs of electrical field transducers,

- if the electrical field transducers index is greater than the maximum number of pairs of electrical field transducers, making the index for the electrical field transducers equal to the value defined in step (A) and returning to step (B);

- if the index of the electrical field transducers is less than or equal to the maximum number of pairs of electrical field transducers, return to step (B);

wherein the electrical field transducers index is less than the maximum number of pairs of electrical field transducers, and the arrangement of electromagnetic transducers has "n" pairs of electrical field transducers with "n" being a natural number greater than two.

13. The method of Claim 12, wherein, after step (C), there is a step (D) in which the polarity of the pair of electrical field transducers selected in step (B) is inverted in relation to the polarity of step (C).

14. The method of Claim 1, wherein step (b) is executed in a computing unit and the activation pattern follows the steps of:

A) defining a magnetic transducers index and a maximum number of magnetic transducers;

B) selecting a magnetic field transducer from the arrangement of electromagnetic transducers simultaneously in a position defined for the magnetic field transducers index of step (A);

C) activating the magnetic transducer selected in step (B) for a determined period of time and going to step (D);

D) deactivating the magnetic transducer selected in step (B) and going to step (E);

E) increasing a magnetic transducers index and comparing the magnetic transducers index with the maximum number of magnetic transducers,

- if the magnetic transducers index is greater than the maximum number of magnetic transducers, make the magnetic transducers index equal to the value defined in step (A) and returning to step (B);

- if the magnetic transducers index is less than or equal to the maximum number of magnetic transducers, return to step (B);

wherein the magnetic transducers index is less than the maximum number of magnetic transducers.

15. A device for stimulating a tissue with electromagnetic fields, the device comprising:

- a computing unit;

- an external power source connected to the computing unit;

- a decoupling circuit connected to the external power source and to the computing unit;

- a switching circuit connected to the external power source, to the decoupling circuit and to the computing unit; and

- an arrangement of electromagnetic transducers connected to the computing unit and to the de switching circuit;

wherein the computing unit implements a method for electromagnetic stimulation of a tissue, the method comprising the steps of: a) disposing an arrangement of electromagnetic transducers encompassing a volume containing a tissue; and b) applying an electromagnetic field stimulus to a tissue through the arrangement of electromagnetic transducers according to an activation pattern for a determined period of time; wherein the activation pattern makes it possible to vary the intensity and direction of an electromagnetic field vector produced by the arrangement of electromagnetic transducers.

16. The device of Claim 15, wherein step (b) is executed in the computing unit and the activation pattern follows the steps of:

A) defining an electrical field transducers index with an initial value and a maximum number of pairs of electrical field transducers in the computing unit;

B) selecting a pair of electrical field transducers from the arrangement of electromagnetic transducers simultaneously in a position defined for the electrical field transducers index of step (A);

C) activating the pair of electrical field transducers selected in step (B) with a determined polarity such that an electrical field transducer of said pair has positive electrical potential in relation to the other electric field transducer of said pair, during a determined period of time;

E) deactivating the pair of electrical field transducers selected in step (B);

F) increasing an index for electrical field transducers and comparing the electrical field transducers index with the maximum number of pairs of electrical field transducers,

- if the electrical field transducers index is greater than the maximum number of pairs of electrical field transducers, making the index for the electrical field transducers equal to the value defined in step (A) and returning to step (B);

- if the index of the electrical field transducers is less than or equal to the maximum number of pairs of electrical field transducers, return to step (B);

wherein the electrical field transducers index is less than the maximum number of pairs of electrical field transducers, and the arrangement of electromagnetic transducers has "n" pairs of electrical field transducers with "n" being a natural number greater than two.

17. The device of Claim 15, wherein step (b) is executed in the computing unit and the activation pattern follows the steps of:

A) defining a magnetic transducers index and a maximum number of magnetic transducers;

B) selecting a magnetic field transducer from the arrangement of electromagnetic transducers simultaneously in a position defined for the magnetic field transducers index of step (A);

C) activating the magnetic transducer selected in step (B) for a determined period of time and going to step (D);

D) deactivating the magnetic transducer selected in step (B) and going to step (E);

E) increasing a magnetic transducers index and comparing the magnetic transducers index with the maximum number of magnetic transducers,

- if the magnetic transducers index is greater than the maximum number of magnetic transducers, make the magnetic transducers index equal to the value defined in step (A) and returning to step (B);

- if the magnetic transducers index is less than or equal to the maximum number of magnetic transducers, return to step (B);

wherein the magnetic transducers index is less than the maximum number of magnetic transducers.

18. The device of Claim 15, wherein the computing unit is a special purpose computing unit comprising a central processor unit (CPU) (21a) connected to oscillators from a first OSC 1, a second oscillator OSC 2 to an oscillator OSC "n" each oscillator having an activation signal output; wherein "n" is a natural number equal or greater than cero.

19. The device of Claim 15, wherein the central processor unit is also connected to a peripheral device selected among others, from storage devices such as a memory unit, a database and a hard drive, input devices such as a keyboard, a camera, a touchscreen display, and a scanner, output devices such as a display, and a printer.