

Title (en)

METHODS AND APPARATUS FOR ELECTRICAL MICRO-CURRENT STIMULATION THERAPY

Title (de)

VERFAHREN UND GERÄT ZUR THERAPEUTISCHEN ELEKTRISCHEN STIMULATION MIT MIKRO-STROM

Title (fr)

PROCEDE ET APPAREIL POUR TRAITEMENT DE STIMULATION PAR MICRO-COURANT ELECTRIQUE

Publication

EP 1096970 A4 20071212 (EN)

Application

EP 99933899 A 19990712

Priority

- US 9915685 W 19990712
- US 11481598 A 19980713
- US 34677299 A 19990707

Abstract (en)

[origin: WO0002622A1] A method, and apparatus for providing micro-current stimulation therapy to a body part, is disclosed. In one embodiment, a method allows digital control of the modulation frequency of the micro-current signal. The method includes receiving a first digital data word which is used to produce a first frequency related to the first digital data word, whereupon, a first micro-current signal at the first frequency is applied to the body part. A second digital data word is received, and used to produce a second frequency related to the second digital data word. A second micro-current signal at the second frequency is applied to the body part. In another embodiment, a method allows direct digital synthesis of the micro-current stimulation signal. A first digital data word is used to produce a first analog voltage which is applied to the body part. A second digital data word is used to produce a second analog voltage which is also applied to the body part, where the first analog voltage is different from the second analog voltage. In yet another embodiment, an apparatus (232) for providing micro-current stimulation therapy includes a digital to analog converter (208), a controller (200), and a plurality of data words (not shown). The controller (200) is coupled to the digital to analog converter (208), and supplies the digital to analog converter with digital data words from memory (204) in order to generate an electrical signal (output) for the micro-current stimulation therapy.

IPC 1-7

A61N 1/32

IPC 8 full level

A61N 1/32 (2006.01); **A61N 1/34** (2006.01)

CPC (source: EP)

A61N 1/32 (2013.01); **A61N 1/36021** (2013.01); **A61N 1/36046** (2013.01); **A61N 1/36017** (2013.01)

Citation (search report)

- [X] US 4979508 A 19901225 - BECK STEPHEN C [US]
- [X] US 5578060 A 19961126 - POHL JEFF K [US], et al
- [A] US 4989605 A 19910205 - ROSSEN JOEL [US]
- [X] US 5041974 A 19910820 - WALKER JUDITH B [US], et al
- See references of WO 0002622A1

Cited by

US11738195B2

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

WO 0002622 A1 20000120; AU 4985399 A 20000201; CA 2337214 A1 20000120; EP 1096970 A1 20010509; EP 1096970 A4 20071212

DOCDB simple family (application)

US 9915685 W 19990712; AU 4985399 A 19990712; CA 2337214 A 19990712; EP 99933899 A 19990712