

Technical description of the MSTU100 (BCR Premium)



The MSTU100 (BCR Premium) is a therapy system of the electrotherapy category (Biological Cell Regulation / BCR System) that uses bio-cybernetics to regulate and moderate cellular metabolism. Its applications are in the fields of Preventive Health/Wellness, Rehabilitation of pain/physical disabilities and Beauty. The device is designed for use at homes, offices, traditional & alternative therapy practitioners, physiotherapy centres, doctor's offices and hospitals.

BCR system (Biological Cell Regulation)

BCR system uses two decades of researches and discoveries in the area of neurophysiology. This bio-cybernetics system has the ability to read electrical resistance, and through this reading of electrical resistance it interprets cellular metabolic disorders, which, has a direct correlation with ailments. With this biological feedback on ailments the system uses bio-cybernetic algorithms to automatically deliver a mix of treatments that include Microcurrent, Frequency, Polarity and a special LED light.

BCR system was developed in harmony with the discoveries in bio-cybernetics and operates on the same principles, and it is applied in the area of the organism's processes of regulation and control. In order to achieve optimal results, it is necessary to apply treatments both at the cellular level and on the body's own information network, for instance by regulating the autonomic nervous system. The built in Bio-cybernetics helps reduce the need for human skill, and consequently reduces human errors.

The average human body consists of 70 trillion cells that make up the blood vessels, nerves, organs, organic systems and so on, and this vast system naturally needs to be regulated. In most traditional therapeutic approaches, illness is seen as a deviation from the system's ideal, self-regulated state, which should be restored as quickly as possible. While conventional treatment methods recognise state of ailments based on deviations from anatomical and physiological norms, the holistic approach of bio-cybernetic BCR system recognises state of ailments as disturbances in the body's self-regulatory mechanisms. Therefore BCR system treats the cause of the complaint, rather than seeking to block the symptoms. When BCR system is used, these cybernetic principles are applied to treat a range of complaints that affect the metabolism and metabolic processes inclusively, with the aim of using the body's intrinsic strengths and resources. In concrete terms, this means that if a damaged knee is treated with bio-cybernetic BCR approach, rather than primarily focusing on deviations from the structural norm, the system would examine disturbances to self-regulatory mechanisms caused by such structural deviations. The causes of this disturbance are subsequently treated by the use of other bodily strengths in order to return the knee to its normal state.

Areas of application

The MSTU100 (BCR Premium) Bio-cybernetic BCR system uses feedback mechanisms to unleash weak metabolic potential in order to influence or control processes that occur in the tissues, thereby achieving physiological metabolism. This manifests itself clinically in the form of pain reduction, cell regeneration and increased bodily function and repair. As such, in terms of applications it is quite versatile. The applications include Preventive Healthcare, Pain Therapy, Injury Healing, Rehabilitation of Physical Disabilities, Sports Injuries, Beauty, Post-Surgery, and the list goes on.

Method

The MSTU100 (BCR Premium) is unique among electronic, frequency and resonance-based therapeutic systems. A therapeutic program is developed for each individual patient, taking into account the metabolic state of their tissue. The healing and regeneration processes are activated and accelerated. Inflammatory processes are regulated and lymphatic circulation is stimulated. This strengthens the immune system and metabolic balance is restored. The body's natural cell regeneration, self-repair and pain relief processes are initiated. All these happen automatically through the bio-cybernetic system without the need to skilfully program the device.

Technical Description

The MSTU100 (BCR Premium) outputs 2 isolated (type BF – body floating) microcurrent channels and 1 Light Channel for pain relief treatment.

Every channel generates a signal with programmable parameters: current, frequency, rise time and polarity.

For different treatments the user can load therapy programs from internal memory.

Skin resist measurement helps the user to find the right therapy program.

The unit is controlled by a 32-Bit RISC microcontroller. The human machine interface is realized with capacitive touch screen and 5" Colour TFT Display.

The MSTU100 (BCR Premium) is powered by an external switch mode power supply. This adapter has a wide voltage/frequency input range and can use all over the world. Also the power supply is certified for medical equipment.

Technical Data

Measurements 173.0 x 108.8 x 27.6 (mm)

Ambient Temperature +5°C.....+40°C

Transport Temperature -10°C..... +50°C

Net Weight 0.590 kg without adapter

Adapter Input 100-240V~/50-60Hz (Switching AC Adapter) Output 5VDC/5A

Touch Current < 100µA (2 x MOPP)

Accu: Li-Ion 3.8V/3880mAh 14.7Wh Type RRC1130

2 Microcurrent Outputs 0-60VAC / 0-999µA (isolated outputs type body floating patient applied part)

1 Light Output

1 USB Port

5" TFT Display 800x480 Pixels

Processor PIC32 RISC Architecture

The object of declaration described above is in conformity with the relevant Union harmonisation legislation:

2014/30/EU The Electromagnetic Compatibility Directive

2014/35/EU The Low Voltage Directive

2011/65/EU The Restriction of Hazardous Substances Directive

Conformity is shown by compliance with the applicable requirements of the following documents:

EN 60601-1:2006 + Cor.:2010 + A1:2013

EN 60601-1-2:2015

EN 60601-1-6:2010 + A1:2015

EN 60601-1-11:2015

EN 60601-2-10:2015 + A1:2016

EN 60601-2-57:2011

EN 60529:1991/A2:2013/AC:2016-12/AC:2019-02

EN 60664-1:2007

EN 62133-2:2017

EN 62304:2006 + Cor.:2008 + A1:2015

EN 62353:2008

EN 62366-1:2015 + AC:2015

EN 15223-1:2016

EN 7010:2012

EN 10993-1:2009

EN 1041:2008 + A1:2013

EN ISO 14971:2012

EN ISO 13485:2016

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