Heavy bag with punch tracking Sensor

USER MANUAL

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<u>**FCC/IC Compliance Statement:**</u>

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
 (1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limitsare designed to provide reasonable protection against harmfulinterference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radiocommunications. However, there is no guarantee that interference will notoccur in a particular installation. If this equipment does cause harmfulinterference to radio or television reception, which can be determined byturning the equipment off and on, the user is encouraged to try to correctthe interference by one of the following measures:

• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help.

Caution:

 Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:
(1) this device may not cause interference, and
(2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présentappareilestconforme aux CNR d'Industrie Canada applicables aux appareilsradio exempts de licence. L'exploitationestautorisée aux deuxconditionssuivantes :
(1) l'appareil ne doit pas produire de brouillage, et
(2) l'utilisateur de l'appareildoit accepter tout brouillage radioélectriquesubi, mêmesi le brouillageest susceptible d'encompromettre le fonctionnement.

Overview

Heavy bag with punch tracking Sensors based on low powernrfmodule ,Heavy bag with punch tracking Sensor incorporates accelerometer and a microprocessor, which work together to record the number of punches delivered within a given time, along with the force of each one. That information is sent by Bluetooth to a nearby computer or smartphone, where the stats are displayed on-screen for analysis.

After each session, users are presented not only with the total number of hits and the force of each one, but also their average punching power, and the numerical value of the single most powerful hit. In subsequent training sessions, they can then try to beat some or all of those figures. Also, if a change in their weight, diet or training has had an effect on their performance, that should be reflected in their numbers.

Version update records

Version number	File date	Updatecontent
V2.1		Thefirstrelease

Moduleparameters:

- Flexible Power Management
  - Supply voltage range 3.3 V to 3.6 V
  - 2.5 µs wake-up using 16 MHz RCOSC
  - 0.4 µA @ 3 V OFF mode
  - 0.5 µA @ 3 V in OFF mode + 1 region RAM retention
  - 2.3 µA @ 3 V ON mode, all blocks IDLE

- Working FrequencyBand: 2400～2483.5MHz

- Max launch power: +5 dBm（normal 0 dBm output）

- 2.4 GHz transceiver
  - -93 dBm sensitivity in Bluetooth® low energy mode
  - 250 kbps, 1 Mbps, 2 Mbps supported data rates
  - TX Power -20 to +4 dBm in 4 dB steps
  - TX Power -30 dBm Whisper mode
  - 13 mA peak RX, 10.5 mA peak TX (0 dBm)
  - RSSI (1 dB resolution

- Working temperature：   -20℃～ +85℃
- Storage temperature：   -50℃～ +125℃

How to Connect:

Power On the Heavy bag with punch tracking Sensor and open iOS app
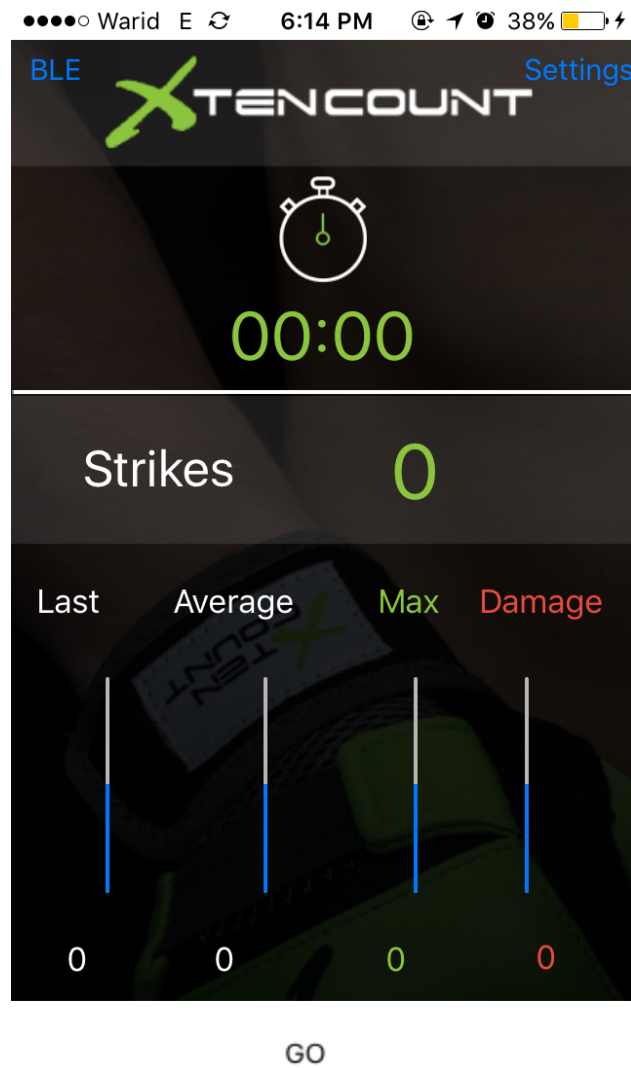
Asshowninfigure1showsthemain screen of app.

Press BLE tab on upper left corner. Here you can see the active Tencount device. Select one device and connect to it. After successful connection you can see text"Connected"

After connection and timer when you controller see strike changing. successful press Go button will start and move the board you can number start

Recommended operating conditions:

Function in operation conditions outside the limits of the parameter value in the following form does not guarantee its performance, beyond the limit of operation for a long time more or less affect the long-term reliability of the module.

Note:
(1)Operatingtemperatureisrestrictedbythechangeofthecrystalfrequency；
(2)ToensurethewirelessRFperformance,rippleofthepowersupplymustbeless   than ±300mV

Identification	Minivalue	Typicalvalue	Maxvalue	unit
PowersupplyandIO	3.1	3.3	3.6	V
Operation temperature	-40	25	85	℃
Environment hotplace	-20		20	℃

Electrostatic discharge caution:

Module will be damaged by electrostatic discharge, RFSTAR recommends that all the module should be dealt with under the following three preventive measure:

1. Must follow the anti-static measures, cannot barely hand module.

2. Module must be placed in the storage area to prevent electrostatic.

3. Anti-static circuit of high voltage input or high frequency input should be considered during the product design.

To the result of the static electricity may result in minor performance degradation on to the failure of the entire equipment. Due to the parameters of the very small changes can lead to the value of the equipment does not meet the certification requirements, thereby module will be more vulnerable to damage