

# Instruction Manual

Model: TRIO-02-2G

## 1. Switches & Indication Lights

- Power Switch (P) – for turning power on/off, checking battery status, toggling between activity modes, etc.
- Mode Switch (M) – for selecting and checking activity modes, etc.
- 6-colored indication lights (blue, green, yellow/red, amber, red) for indication of charging status, battery level, activity modes, heart rate zones, etc.



## 2. Charging

- Connect magnetic charging dock to a USB power source. Then attach sensor on the dock to start charging.
- During charging, the indication lights will flash in different color combinations (from blue to red) to indicate charge level. The more lights mean closer to full. Yellow light only indicates 95-100% full. All lights will switch off after the unit is fully charged and stop further charging.

## 3. Power On/Off

- Press P continuously for 2 seconds until all indication lights turn on, then blue light will start flashing.
- To power off, press P continuously for 2 seconds until yellow light flashes for 3 seconds.

## 4. Battery Level Indication

- At any time while the unit is On, press P once and release. The following light combinations will be on for 2 seconds depending on battery level:
  - i. Yellow light only – full or close to full
  - ii. Blue, green, yellow, amber, red – 81-100%

- iii. Blue, green, yellow, amber – 61-80%
- iv. Blue, green, yellow – 41-60%
- v. Blue, green – 21-40%
- vi. Blue – 1-20%

#### 5. Bluetooth Connection

- When the unit is in search of BT connection, one of the indication lights (color depending on HR zone, as below) flashes at high speed.
- Once BT connection is established, flash speed will turn to low.
- ANT+ is in “always on” mode after the unit is powered On. There is no indication of ANT+ connection.

#### 6. Activity Mode Selection

- Press M continuously for 3 seconds (if there is no selection within 60 seconds, the selection mode will be automatically aborted).
- Press P to toggle between different activity modes, then press M to confirm selection. The indication light of the corresponding mode will flash 3 times to confirm.
- Each activity mode is represented by the following indication color:
  - i. Running – blue
  - ii. Outdoor cycling – green (default mode)
  - iii. Heart rate only - yellow
  - iv. Indoor cycling – amber
  - v. RRI in best precision – red (RRI at different levels of precision can also be turned on with an app. For details, pls see document “Instructions for RRI(R1-20170110).docx”)

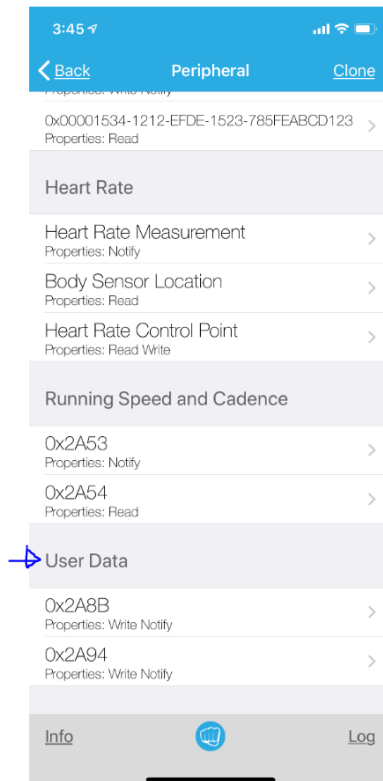
#### 7. Activity Mode Checking

- At any time while the unit is On, press M once and release.
- The indication light of the corresponding activity mode will be on for 1 second.

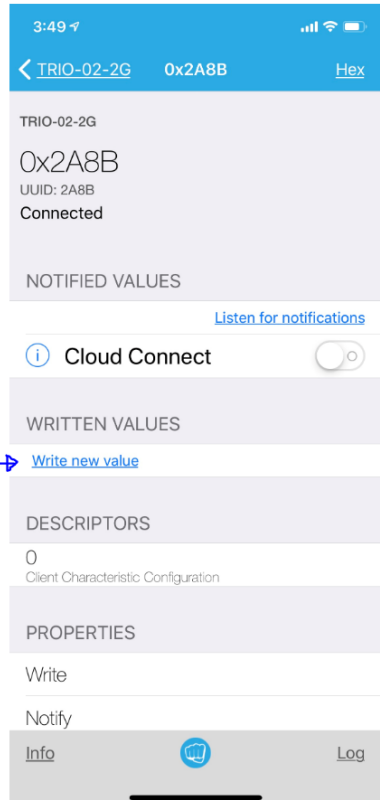
#### 8. Heart Rate Zone Setting

- HR zone limits setting can only be done via an app.
- The unit supports both 3 zone and 5 zone heart rate limits setting according to the following Bluetooth GATT characteristics:
  - i. 5 zone – 0x2A8B  
([https://www.bluetooth.com/specifications/gatt/viewer?attributeXmlFile=org.bluetooth.characteristic.five\\_zone\\_heart\\_rate\\_limits.xml](https://www.bluetooth.com/specifications/gatt/viewer?attributeXmlFile=org.bluetooth.characteristic.five_zone_heart_rate_limits.xml))
  - ii. 3 zone – 0x2A94  
([https://www.bluetooth.com/specifications/gatt/viewer?attributeXmlFile=org.bluetooth.characteristic.three\\_zone\\_heart\\_rate\\_limits.xml](https://www.bluetooth.com/specifications/gatt/viewer?attributeXmlFile=org.bluetooth.characteristic.three_zone_heart_rate_limits.xml))
- Before your app is ready, the following simple utilities/steps can be used for setting HR limits on the unit for testing purposes:
  - i. Download the LightBlue Explorer app (<https://itunes.apple.com/us/app/lightblue-explorer/id557428110?mt=8>)
  - ii. Power on the sensor unit, then open LightBlue

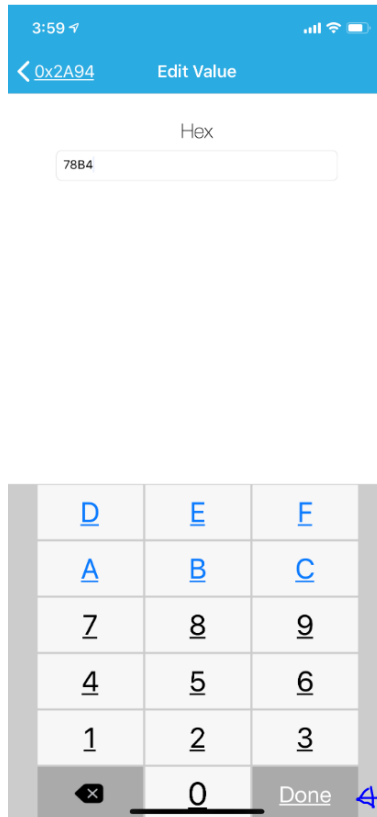
- iii. Select “TRI” or “TRIO-02-2G”, and LightBlue will connect to the sensor unit
- iv. Scroll down to User Data section
- v. Select either 0x2A8B or 0x2A94



- vi. Select “Write new value” in the next screen



- vii. Then input the HR limits in HEX format (4 limits for 5 zone; 2 limits for 3 zone). For conversion from decimal to HEX, you may use this website: <https://www.binaryhexconverter.com/decimal-to-hex-converter>. The following is an example (HR limits at 120 and 180 bpm):



viii. Hit “Done”, then the setting is made.

ix. This setting will be loss after the unit is powered off (settings in memory will be supported in later versions of firmware).

- Indication lights for 3 zone:



- Indication lights for 5 zone:



#### 9. Auto Power Off

- To conserve power, the sensor unit will automatically power off after 5 minutes under the following conditions:
  - i. The unit is not connected to any Bluetooth devices; AND
  - ii. The unit has detected off-skin signals.

## FCC statement

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 limits are designed to provide reasonable protection against harmful interference 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 radio communications. However, there is no guarantee that interference will not occur in particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more 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.

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

### FCC Radiation Exposure Statement

This device complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

## Industry Canada Notice

This device complies with Industry Canada licence-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 présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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