BT-ZYLY-D

Bluetooth module

Jiangxi Zhongyang Electrical Co. Ltd.

User manual

Version's history

Date	Version	Remarks
2020/8/11	1.0	

一、 Module overview

1. Chip introduction

The module uses the AC6926A chip of Zhuhai Jerry Technology Co., Ltd. as the core. It is a high-performance 32-bitRISC CPU that supports a maximum operating frequency of 160MHz.

The chip integrates 128KB of SRAM, 10KB of MASKROM, and 16K 4-Way Icache.

64 interrupt sources, 4-level programmable interrupt priority; support 16 external I/O interrupts; with soft interrupt function.

1 full-speed USB 2.0 OTG controller

1 sound interface, support IIS, left, right and DSP modes

4 multiplex 16-bit timers, support capture and PWM modes

1 16-bit active parallel port

1 full duplex basic UART

2 full-duplex advanced UART

1 SPI interface, supporting host and device modes

2 SD card host controllers

1 I2C interface, supporting host and device modes

16-bit stereo audio DAC, support direct push headset

12-bit precision 1-channel stereo audio ADC with MIC amplifier circuit

-89dBm receiving sensitivity

2. Main features

Bluetooth version: V5.0+BR+EDR+BLE Specification

Output power: <=+3.0dbm

Operating Voltage: 2.2-5.5V

Bus interface: UART

3. Scope of application

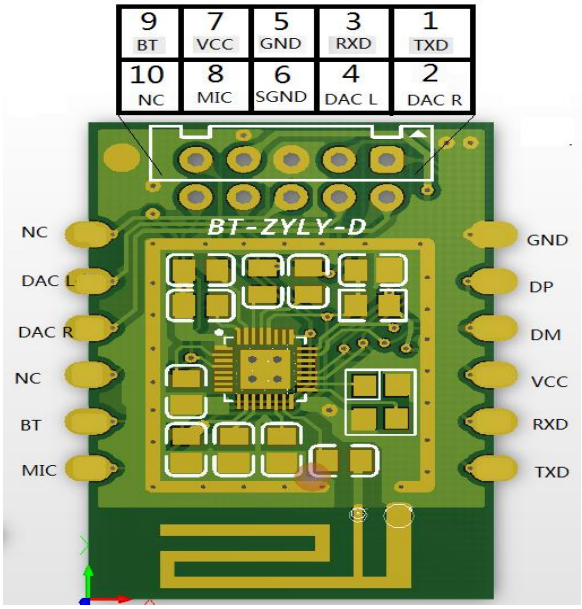
Bluetooth to serial port products: data transmission connection between treadmill and Kinomap APP or Zwift APP

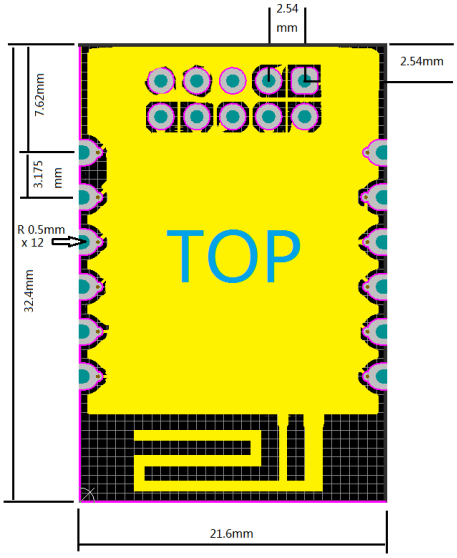
4. Interface Protocol

UART

5. Pin Definition

Dimensions: 21.59mm x 32.4mm x 10mm





PIN No.	Name	I/O Type	Other Function
1	TXD	I/O	Serial port for communication with product main controller (using text protocol)
2	DACR	I/O	Audio output
3	RXD	I/O	Serial port for communication with product main controller (using text protocol)
4	DACL	I/O	Audio output
5	GND	--	GROUND
6	SGND	--	No answer
7	VCC	POWER	3.3V~5.0V power input
8	MIC	I/O	Microphone input
9	BT	I/O	Reserved
10	NC	--	-
Test PIN 1	DP	I/O	Reserved test port (drop-down by default)
Test PIN 2	DM	I/O	Reserved test port (drop-down by default)

二、 Bluetooth connection instructions

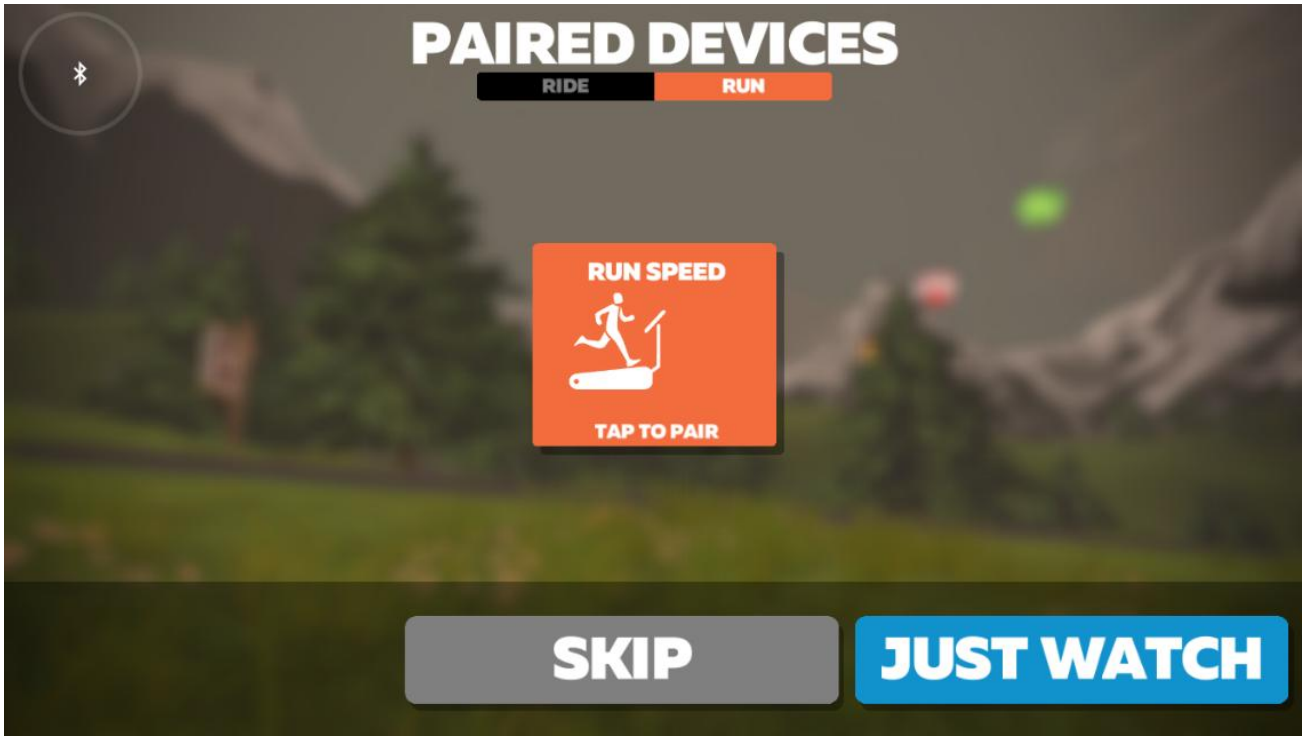
an example: Zwift APP

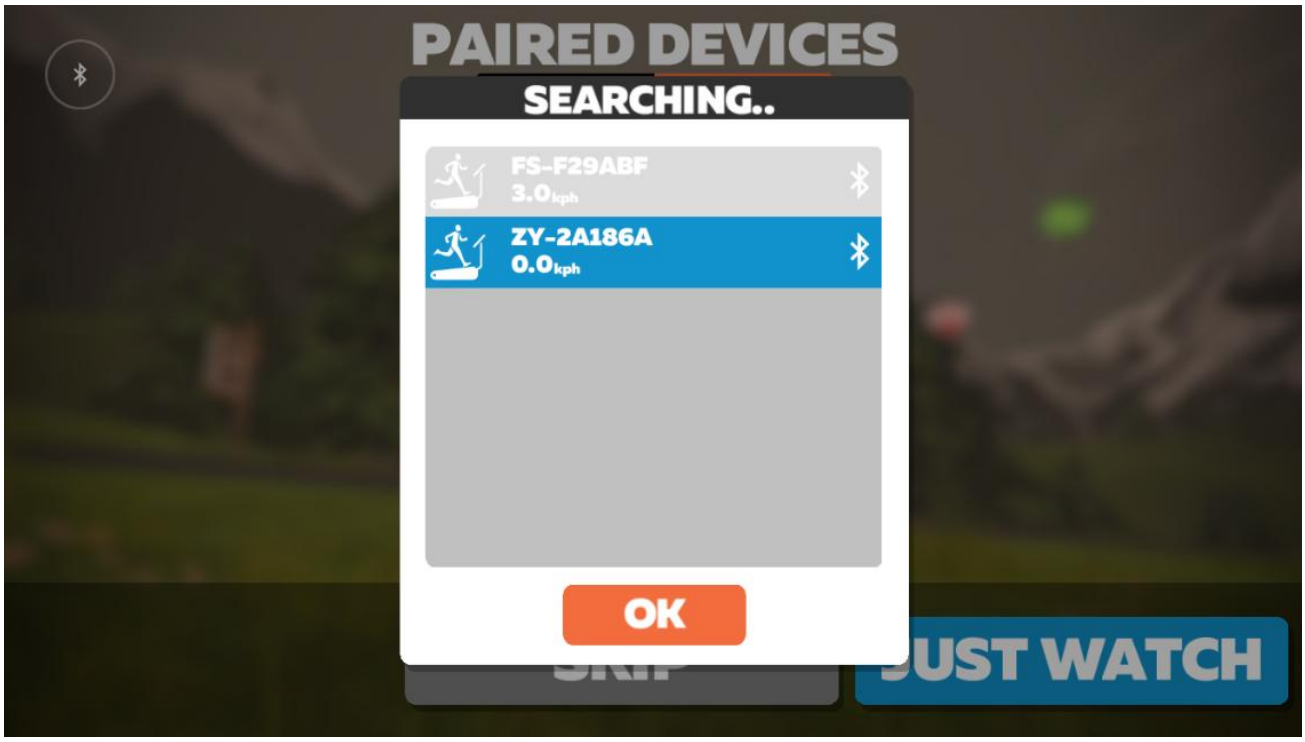
1. Find Zwift APP on your phone:

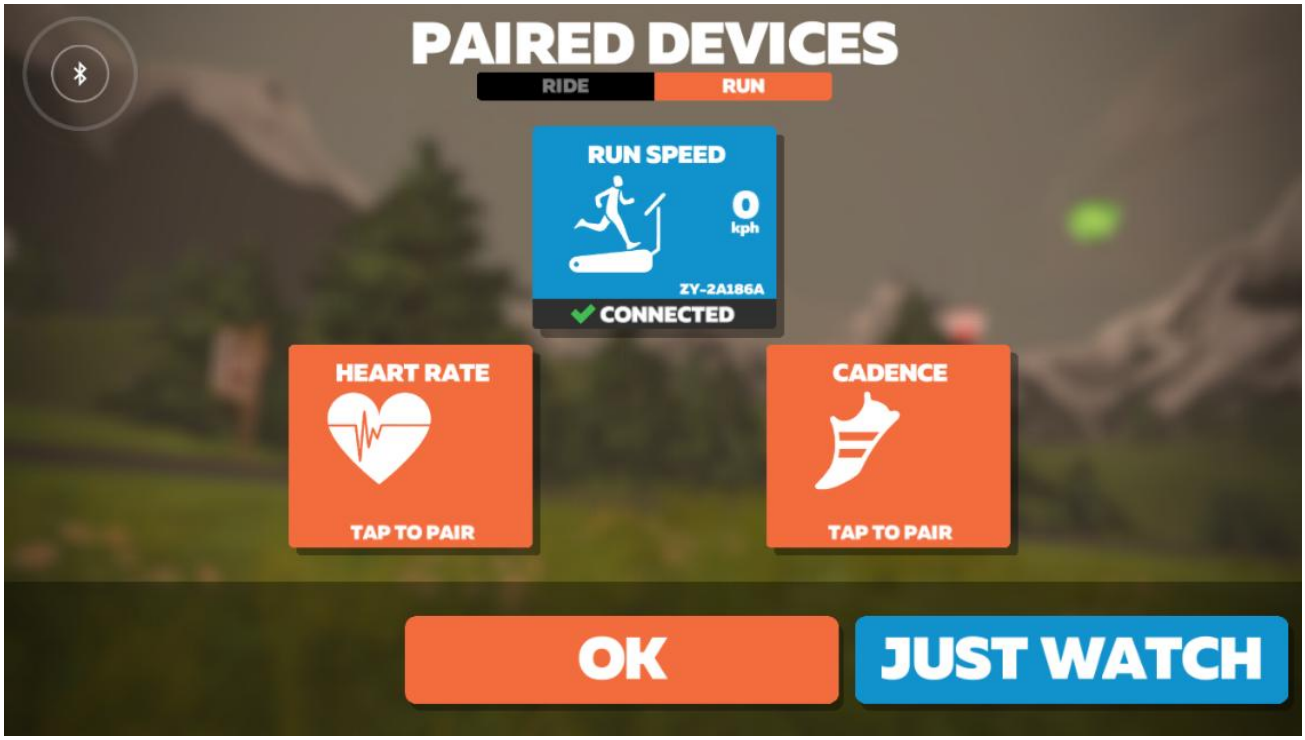
2. Run Zwift APP:

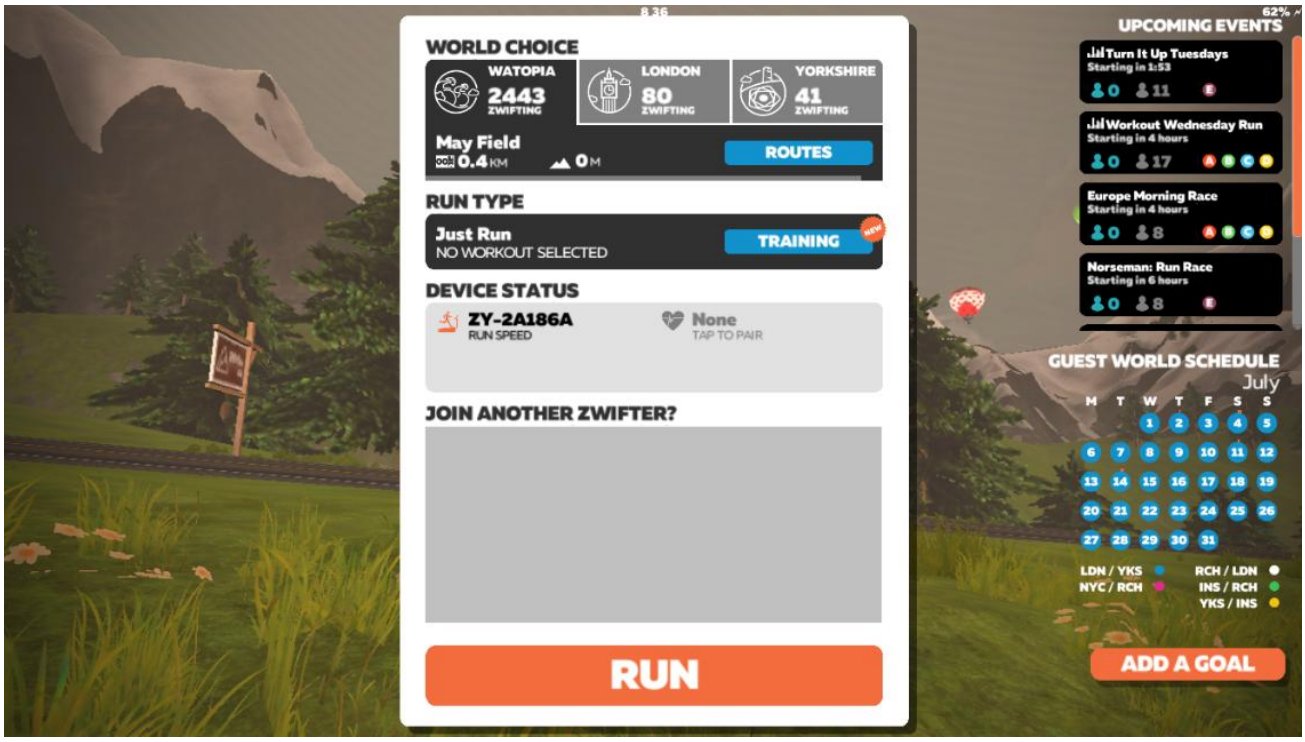
3. Select account login:

4. Select treadmill Bluetooth pairing:

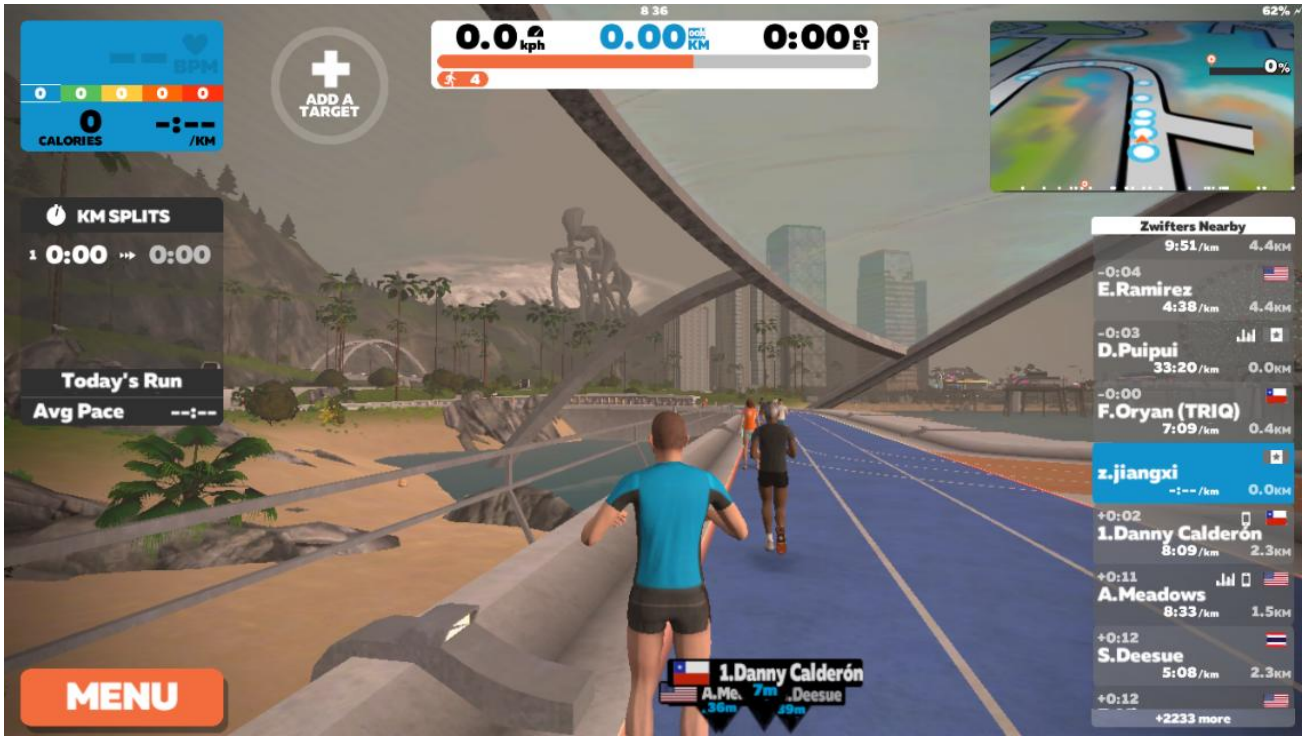

PAIRED DEVICES
RIDE
RUN
RUN SPEED
TAP TO PAIR
SKIP
JUST WATCH


PAIRED DEVICES
SEARCHING..
FS-F29ABF
3.0kph
ZY-2A186A
0.0kph
OK
JUST WATCH

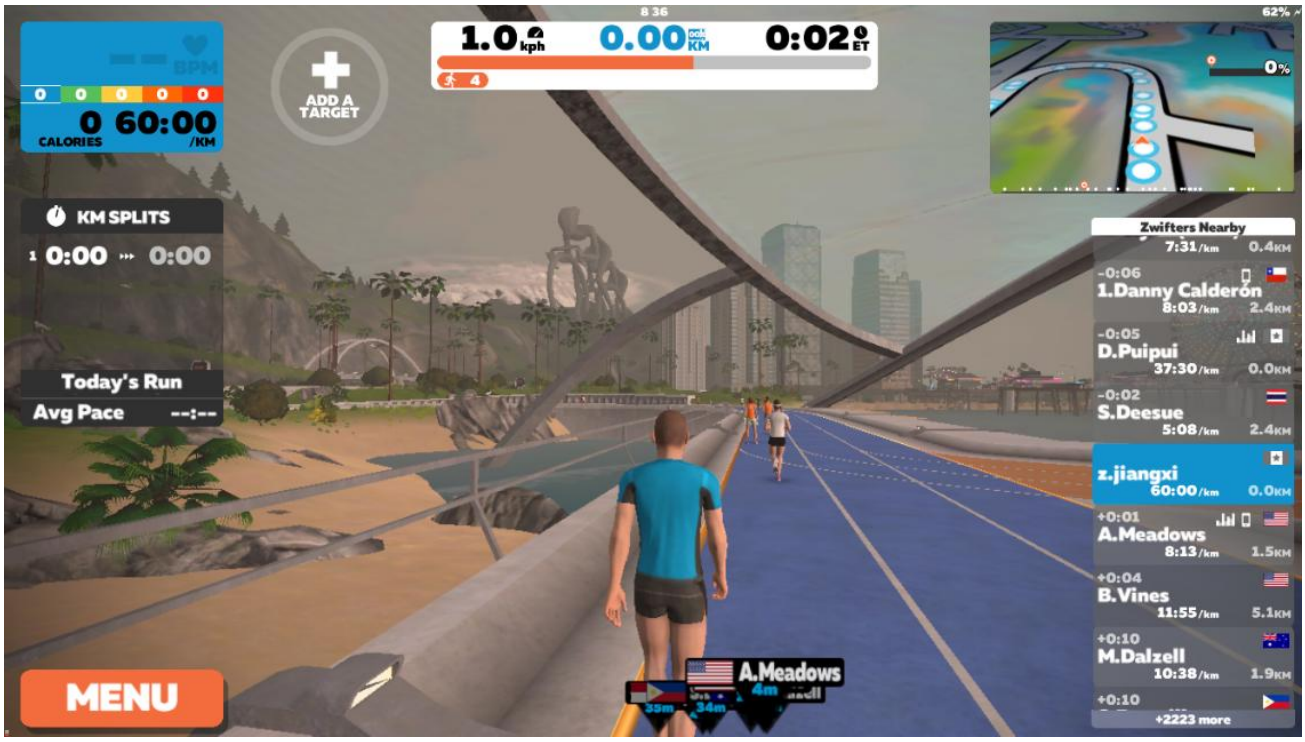




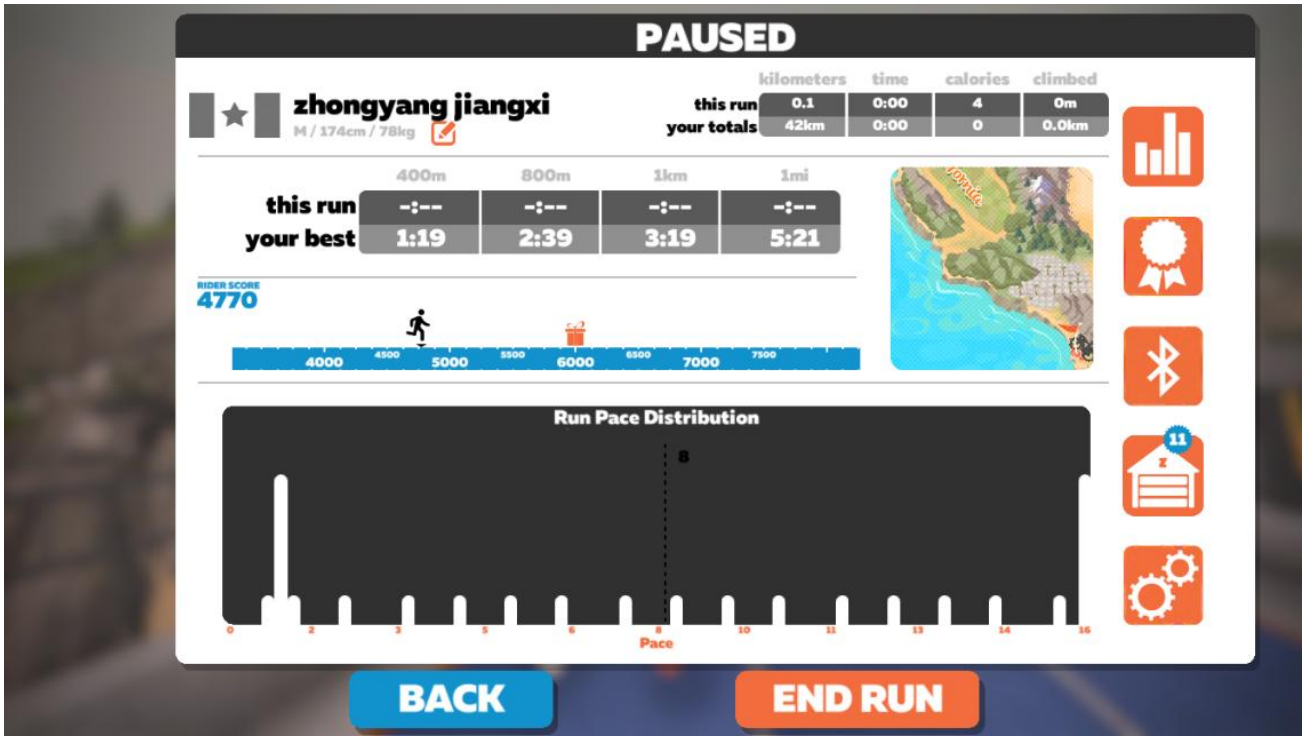
5. Click "RUN" to enter the running interface:

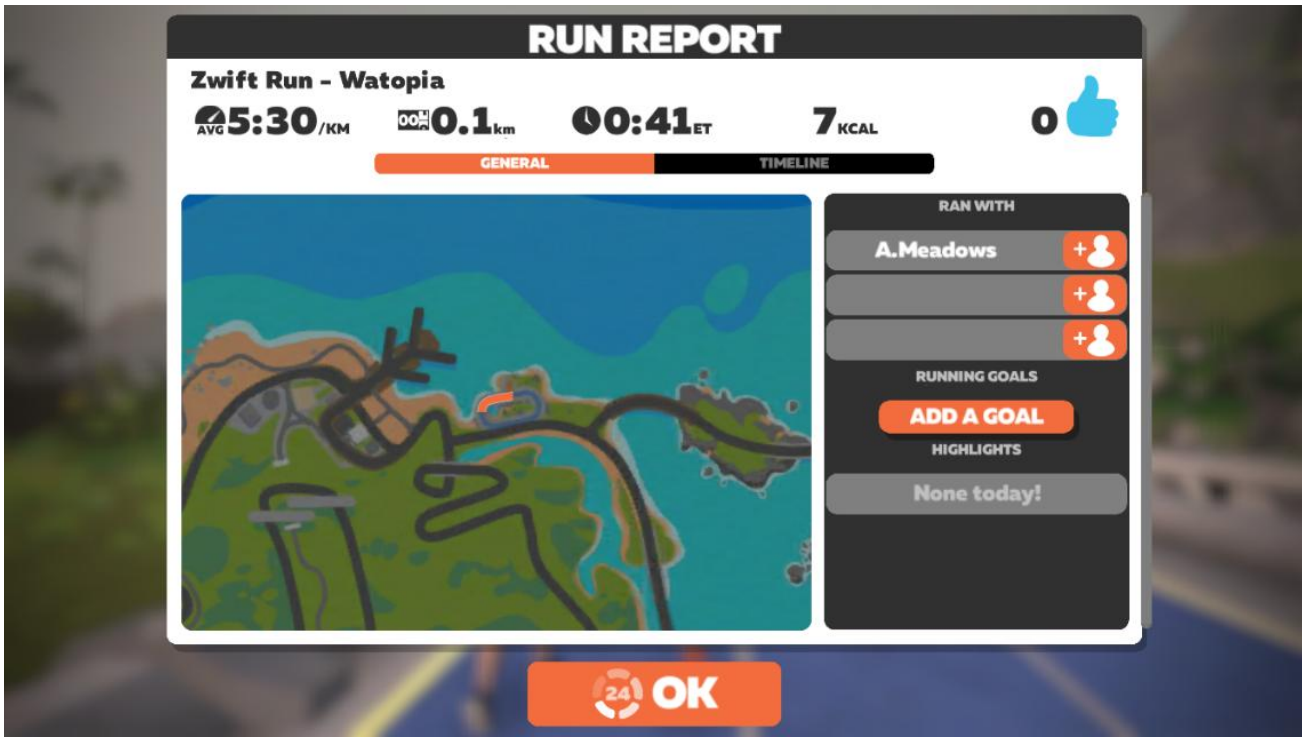


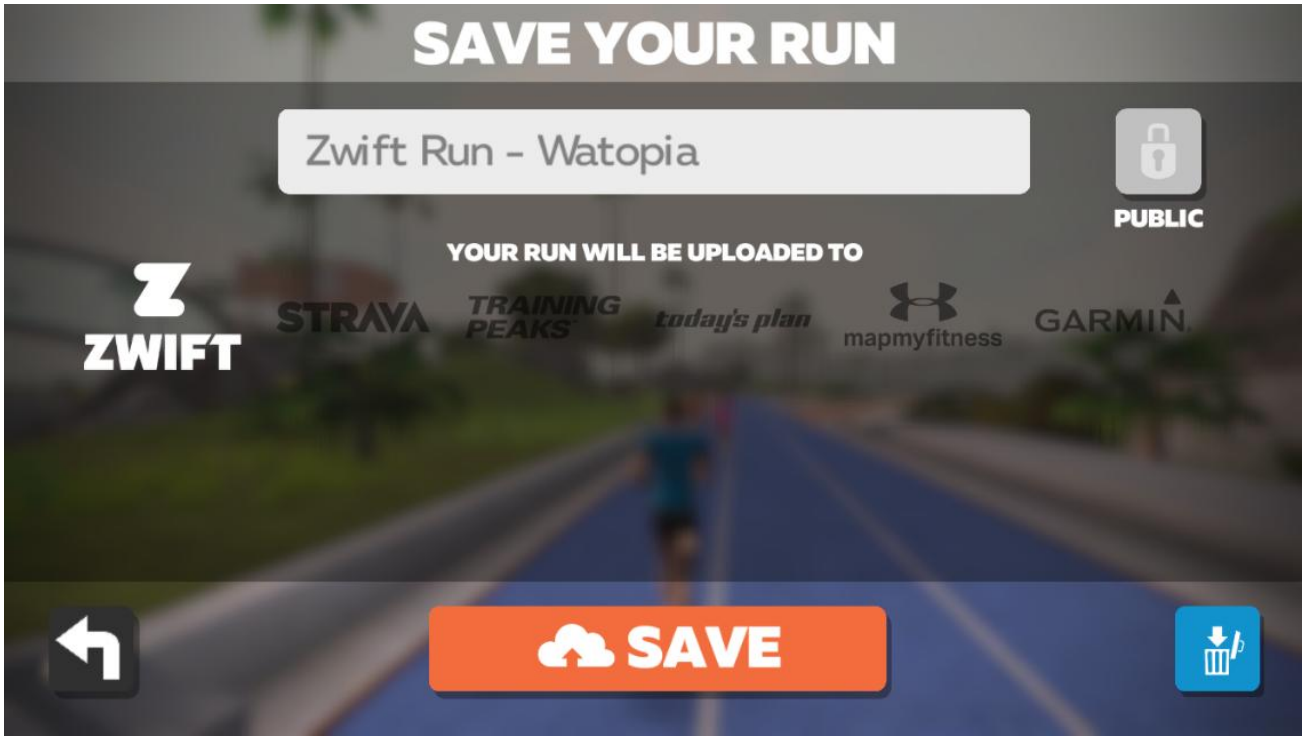
6. After starting the treadmill, adjust the speed:



7. End running on the app:


PAUSED
zhongyang jiangxi
M / 174cm / 78kg
kilometers time calories climbed
this run 0.1 0:00 4 0m
your totals 42km 0:00 0 0.0km
400m 800m 1km 1mi
this run -:-- -:-- -:-- -:--
your best 1:19 2:39 3:19 5:21
RIDER SCORE
4770
4000 4500 5000 5500 6000 6500 7000 7500
Run Pace Distribution
8
0 2 3 5 6 8 10 11 13 14 16
Pace
BACK
END RUN


RUN REPORT
Zwift Run - Watopia
AVG 5:30/KM
0.1km
0:41ET
7KCAL
0
GENERAL
TIMELINE
RAN WITH
A.Meadows
RUNNING GOALS
ADD A GOAL
HIGHLIGHTS
None today!
OK



FCC Statement

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

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

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 i n a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not instal led and used in accordance with the instructions, may cause harmful interference to radio communications. Howe ver, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and o n, 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 important announcement

Important Note:

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance

0cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Country Code selection feature to be disabled for products marketed to the US/Canada.

This device is intended only for OEM integrators under the following conditions:

1. The antenna must be installed such that 20 cm is maintained between the antenna and users, and
2. The transmitter module may not be co-located with any other transmitter or antenna,

As long as the two conditions above are met, further transmitter testing will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed.

Important Note:

In the event that these conditions cannot be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

End Product Labeling

The final end product must be labeled in a visible area with the following" Contains FCC ID: **2AXTXBT-ZYLY-D** "

Manual Information to the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module.

The end user manual shall include all required regulatory information/warning as show in this manual.

Integration instructions for host product manufacturers according to KDB 996369 D03 OEM Manual v01

2.2 List of applicable FCC rules

CFR 47 FCC PART 15 SUBPART C has been investigated. It is applicable to the modular transmitter

2.3 Specific operational use conditions

This module is stand-alone modular. If the end product will involve the Multiple simultaneously transmitting condition or different operational conditions for a stand-alone modular transmitter in a host, host manufacturer have to consult with module manufacturer for the installation method in end system.

2.4 Limited module procedures

This module is Limited single modular without shielding, host manufacturer have to consult with module manufacturer for the module limiting conditions when integrate the module in the host. module manufacturer should reviews detailed test data or host designs prior to giving the host manufacturer approval.

2.5 Trace antenna designs

Not applicable

2.6 RF exposure considerations

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

2.7 Antennas

This radio transmitter **2AXTXBT-ZYLY-D** has been approved by Federal Communications Commission to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Model	Type	Connector	Peak gain (dBi)				
			2400-2483.5 MHz	5150-5250 MHz	5250-5350 MHz	5470-5725 MHz	5725-5850 MHz
2400-2483.5 MHz	PCB Antenna	/	-0.58dBi	/	/	/	/

2.8 Label and compliance information

The final end product must be labeled in a visible area with the following" Contains FCC ID:2AXTXBT-ZYLY-D".

2.9 Information on test modes and additional testing requirements

Host manufacturer which install this modular with limit modular approval should perform the test of radiated emission and spurious emission according to FCC part 15C:15.231 and 15.209 requirement, only if the test result comply with FCC part 15.231 and 15.209 requirement, then the host can be sold legally.

2.10 Additional testing, Part 15 Subpart B disclaimer

Host manufacturer is responsible for compliance of the host system with module installed with all other applicable requirements for the system such as Part 15 B.