

# XPEDO THRUST E XRF12

User's Manual



This product is ANT+ certified and complies with the bicycle power ANT+ Device Profile. For a complete listing of ANT+ Certified Products and their specific interoperability, please visit [www.thisisant.com](http://www.thisisant.com)

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## ATTENTION!

- Before beginning a power-based training program, be sure to consult your physician.
- If you use a pacemaker or implanted electronic device, please consult your physician before using.
- When using the THRUST E pedals for the first time, please be sure to practice engaging and disengaging in a safe and secure environment.
- Please read "Battery Information" carefully before using THRUST E rechargeable batteries.
- Carefully read the manual and follow instructions to prevent accidents and possible injury.

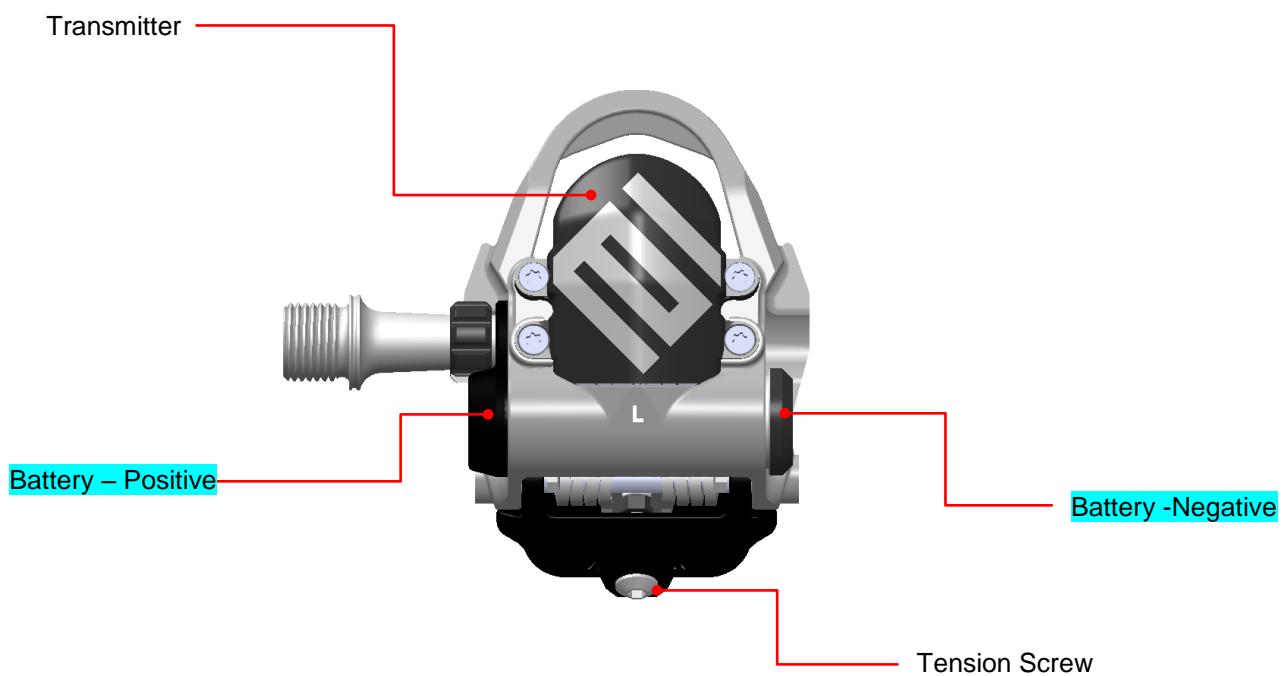
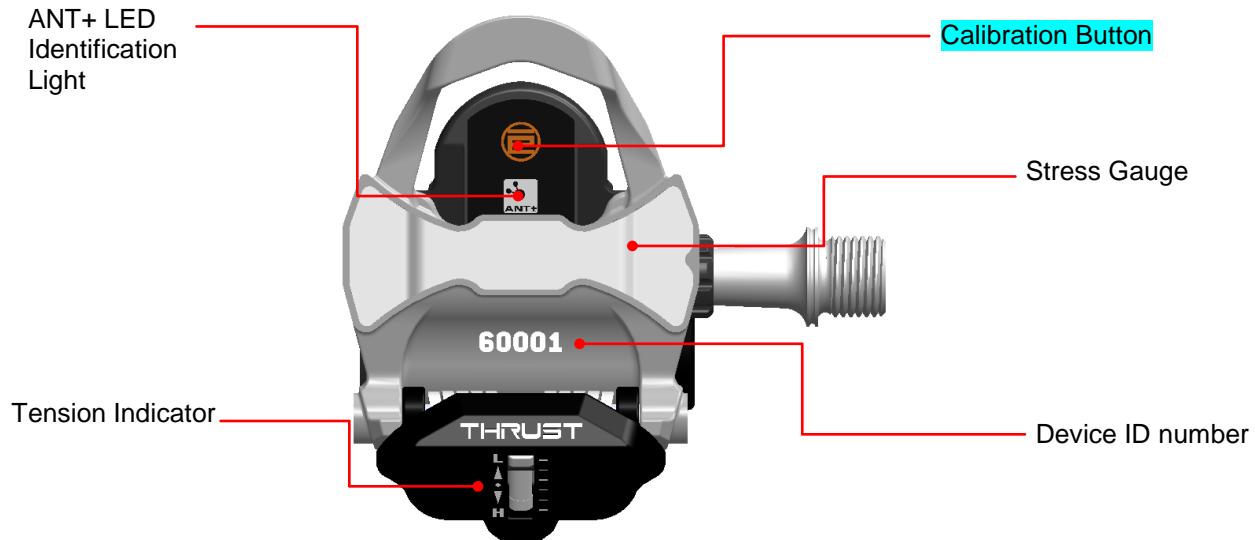
### **Warranty Info**

XPEDO THRUST E is warrantied to be free from defects in materials or workmanship for one year from the date of purchase. Within this period, XPEDO will, at its discretion, repair or replace any components that fail in normal use. Repairs or replacement will be made at no charge to the customer for parts or labor. Customer shall be responsible for any necessary shipping costs to warranty center. This warranty does not apply to: (i) cosmetic damage, such as scratches and nicks; (ii) damage caused by improper installation by an unauthorized dealer; (iii) damage caused by a crash, accident, abuse, misuse, fire, or other external causes; (iv) damage caused by service performed by anyone who is not an authorized XPEDO dealer; or (v) damage to a product that has been modified or altered without the written permission of XPEDO. Additionally, XPEDO reserves the right to refuse warranty claims against products or services that it deems fraudulent.

## PACKAGE CONTENTS

<b>THRUST E Pedals</b> <ul style="list-style-type: none"><li>• Right pedal (1)</li><li>• Left pedal (1)</li></ul>	
<b>Cleats</b> <ul style="list-style-type: none"><li>• THRUST 7 6° (red)(2)</li><li>• THRUST 7 Fixed (black)(2)</li></ul>	
<b>Cleat Hardware</b> <ul style="list-style-type: none"><li>• 11mm cleat bolts (6)</li><li>• 13mm cleat bolts (6)</li><li>• Cleat washer (12)</li></ul>	

## THRUST E ANATOMY

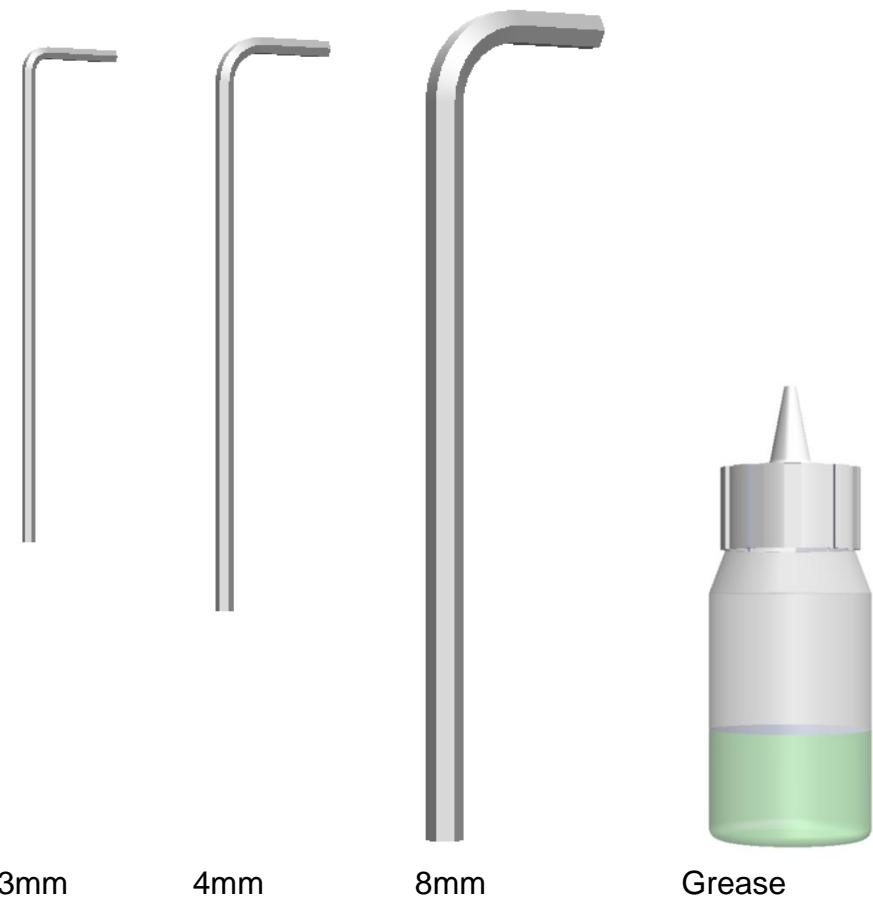


## INSTALLATION OVERVIEW

1. Pre Installation ( make sure the battery power is higher than 1.2V )
2. Pair THRUST E with a ANT<sup>+</sup> or BLE4.0 compatible console.
3. Install THRUST E pedals on your bike
4. Install cleats to the shoes
5. Ride

Tools Needed:

1. 8mm allen wrench for pedal installation and battery cap placement
2. 4mm allen wrench for cleat installation
3. 3mm allen wrench for tension adjustment
4. Grease

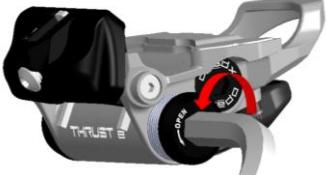
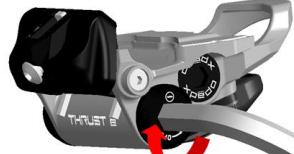
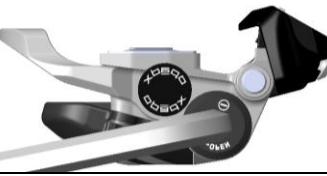


## PAIRING

### Ant+ pairing steps:

We recommend pairing the THRUST E prior to mounting them on the bicycle. Before pairing the THRUST E to a console, make sure you are at least 10 meters (30 feet) from any other ANT+™ device. This will avoid any accidental pairing to another ANT+ device.

### Steps:

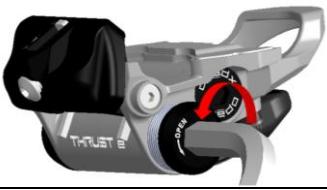
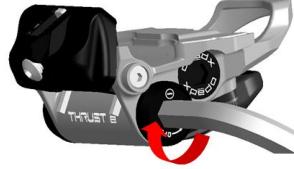
1) Remove the battery cap on the right pedal with 8mm allen wrench.	
2) Insert battery into the THRUST E right pedal with the + side first.	
3) Tighten the battery cap with 8mm allen wrench (Torque: 2-3Nm).	
4) Turn on ANT+ compatible console and refer to the console's manual to add a Power device.	
5) Verify the pairing is complete by making sure the device ID number on the console matches with the number on the THRUST E right pedal.	
6) Repeat the step 1 to 3 to insert battery into THRUST E left pedal.	

Notice: 1. Insert battery into the THRUST E right pedal first and finished pairing steps, then left pedal and pairing steps.

## PAIRING

### BLE pairing steps:

We recommend pairing the THRUST E prior to mounting them on the bicycle, before connecting the THRUST E and your compatible console, make sure your console has BLE 4.0 functionality and your compatible console could receive power information; THRUST E only could pairing single console at the same time.

1) Remove the battery cap on the right pedal with 8mm allen wrench.	
2) Insert battery into the THRUST E right pedal with the + side first.	
3) Tighten the battery cap with 8mm allen wrench (Torque: 2-3Nm).	
4) Turn on BLE compatible console and refer to the console's manual to add a Power device for your own THRUST E device number.	
5) Verify the pairing is complete by making sure the device ID number on the console matches with the number on the THRUST E right pedal.	
6) Repeat the step 1 to 3 to insert battery into THRUST E left pedal.	

Notice: 1. The left / right side pedals can be insert battery at the same time.  
 2. Select the device number of either foot pedal to pairing your BLE console.

## LED LIGHTS

If have no riding within 3 seconds, the LED lights will turn off and THRUST E will into sleep mode. Pedal few circles to wake the THRUST E up.

Disconnected (ANT and BLE)

Flashes per 5 seconds

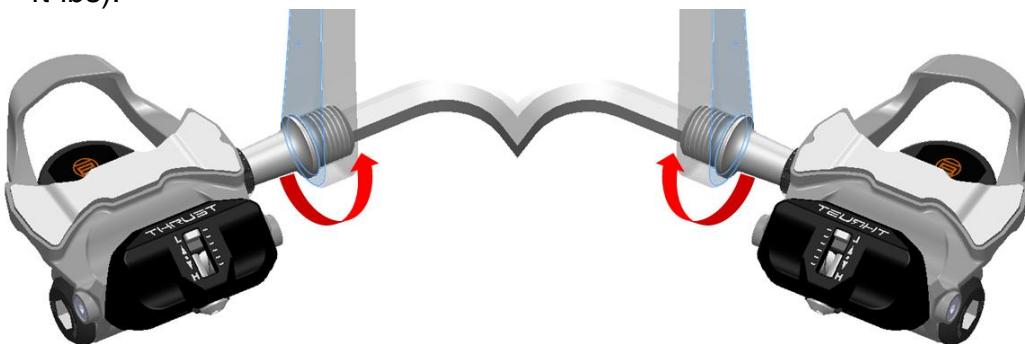
Connected (ANT or BLE)

Flashes per 10 seconds

Above flashes will turn off if THRUST E has been stationary for 4 minutes or after riding 1 minute.

## INSTALLING THE PEDALS

- 1) Apply a thin layer of grease on the spindle threads. Install the right pedal to the right crank and left pedal to the left crank. The right pedal will have a "R" on the underside of the pedal body and the left pedal will have a "L" on the underside of the pedal body. If the crank arms are recessed, make sure to use 1mm pedal washers.
- 2) Tighten the pedals using a 8mm wrench (Recommended torque 35Nm or 25 ft-lbs).



Note: The left pedal spindle is a reverse thread (counter clockwise to tighten)

## INSTALLING THE CLEATS

- 1) Apply a thin layer of grease on the bolt threads.
- 2) Place cleat on shoe with the washers and bolts.
- 3) Position the cleat in desired location and tighten the bolts using a 4mm allen wrench (Recommended torque 5Nm or 45 in-lbs).



Note: Red cleat is 6° float and black cleat is fixed (no float)

## CALIBRATION

### The timing for performing the calibration

First time use THRUST E

Shoes, cleat, battery has been changed.

Adjust tension screw.

Assemble THRUST E to another bike.

Pedal damaged by impact

- 1) Make sure your bike is stable on the ground if with kickstand.
- 2) Assemble pedal to the correct crank thread.
- 3) Adjust the tension screw to your own suitable clip/release power, make sure clip/release function is workable.
- 4) Make sure left and right pedal has inserted battery with correct battery polarity.
- 5) Turn on your compatible console.
- 6) Adjust derailleur to middle/light gear; take the 11-speed derailleur as an example.
  - Crankset 39T with freewheel 14T or 15T
  - Crankset 36T with freewheel 14T or 15T
  - Crankset 34T with freewheel 14T or 15T
- 7) From low cadence step up to 75 ~ 85RPM and keep pedaling more than 30 seconds, please do not pulling up on the pedal.

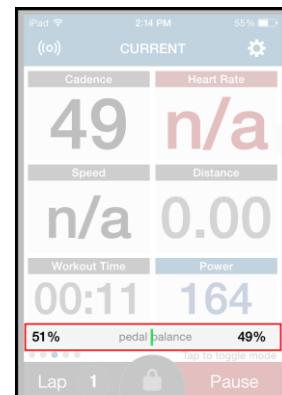
Notice : 1. Performing the calibration when you insert battery,

2. Adjust the tension screw to your own suitable clip/release power before calibration

3. Data will be incorrect if calibration failed, please take out batteries of left and right pedal then inserts batteries and performing the calibration again. If calibration still failed, please refer the Troubleshooting at page 11.

## RIDE

Clip into pedals and start pedaling. Console will display the power (watts), cadence and left-right % balance. Different consoles will display the data differently on the screen. Please refer to the console user manual to properly display this data.



## MAINTENANCE AND CARE

- Wipe down the contact plate on the pedal. Do no use harsh chemicals or pressure washer to clean pedals
- Periodically check the battery compartment for any moisture or corrosion
- Power pedals will turn off after 4 minutes of no activity

## TROUBLESHOOTING

THRUST E does not pair with the console

- Make sure the batteries are voltage sufficient.
- Make sure inserted battery with correct battery polarity.
- Make sure the end cap of battery was tightened.
- Make sure you are least 3 feet away from another ANT+ device
- Make sure your console is BLE 4.0 or higher.
- Make sure the software, APP, and console are created and collocated.
- Wireless signals may be distorted or unacceptable due to interference from security requirements in each country.
- Make sure THRUST E did not connecting other ANT or BLE consoles.
- If unable to connecting console, please make sure as below:
  - Make sure console has ANT+ Power Wireless.
  - Make sure console has turn on the Power Sensor.
  - If above two points are set correctly, please update firmware of console. Please noted that updating firmware may completely erase your riding history, Please backup the important information if needs.
  - Make sure console has activated BLE 4.0 (or higher).
  - Please contact your console distributor to help you fix the problem if pairing still failed after updating console.

ANT+ compatible console show multiple devices information when auto search THRUST E device.

- Take out the battery of left pedal and use console auto pairing to make sure the device number is as same as right THRUST E pedal.
- Type in left or right THRUST E pedal device number into console to pairing, do not use auto pairing.
- Make sure you are at least 10 meters (30 feet) from any other ANT+™ device.

Only show single side data

- Make sure the batteries are voltage sufficient.
- Repeat pairing step

Have no power data

- Repeat pairing step
- Repeat calibration step.

Power data has lots difference compared to conventional training as before

- Data was not accuracy or been error that caused by accidental impact, please repeat calibration step; please contact your distributor for Original Refurbishment Service if data still not accuracy or been error.
- If the temperature of using environment was higher or lower than recommended temperature, it might let the data inaccurate. (Recommended temperature -10~50°C)

## FIRMWARE UPDATE

Pedal THRUST E can be updated with BLE on a smart mobile device. Make sure your smart mobile device is connected to the network and make sure that THRUST E is fully charged. Details and content of the update please go to XPEDO official website to understand more.

Notice :

1. Do not disconnect the power of THRUST E pedal and network of the smart mobile device during firmware update, or the update will be aborted and the pedal may be malfunctioned.
2. Updating is required for both left and right THRUST E pedal. If only update single pedal will let the data has difference or could not displayed properly.
3. Please contact local distributor if THRUST E pedal are fault caused by updating failed.

## SPECIFICATIONS

- Data Transmitting: Power / Cadence / Balance / Battery Level
- Pedal Body: 6061 anodized aluminum
- Pedal Spindle: CroMo
- Bearing: 3 sealed bearings
- Q-Factor: 53+/-0.5mm
- Release Torque: Between 10~18 Nm
- Cleats: THRUST 7 Cleat System (6° float or fixed)
- Weight: 385g/pr (with battery)
- Water Resistance: IPX7 (Note: Do not submerge or pressure wash the components)
- Operation Temperature Range: From -10° to 50°
- Charging Temperature Range: From 0° to 40°
- Radio Frequency/Protocol: 2.4GHz ANT+ wireless communication protocol
- Accuracy : ±2% (Indoor testing)
- Hibernate Mode: 4 minutes of pedal inactivity
- Battery Specification: 1.5V of AA Zinc-carbon battery / 1.5V of AA Alkaline battery (Recommended Alkaline battery)

## **Federal Communications Commission (FCC) Statement**

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

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 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 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.

**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 of the device.

### **FCC RF Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.