Fliiiight

Owner's Manual

4iiii

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1 INTRODUCTION

1.1 What's in the box?

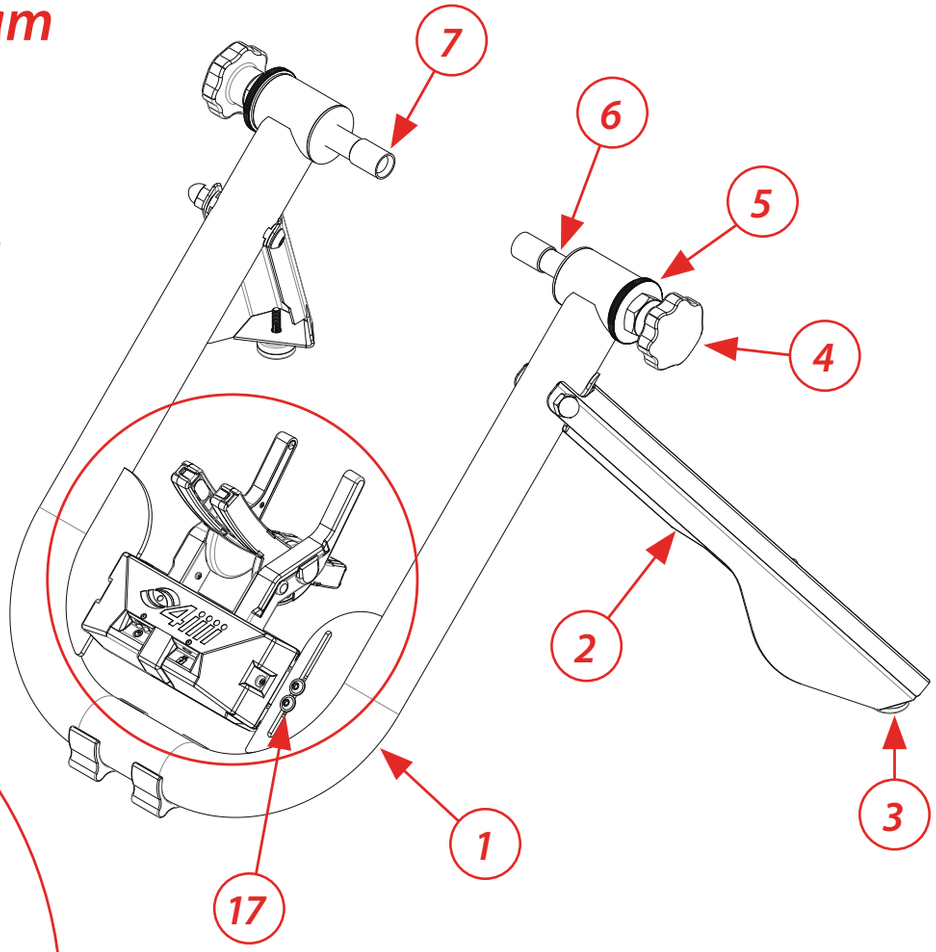
1x *Fliiiight* Smart Trainer
1x Trainer skewer
3x Speed index
1x USB type C charging cable
1x Quick start guide

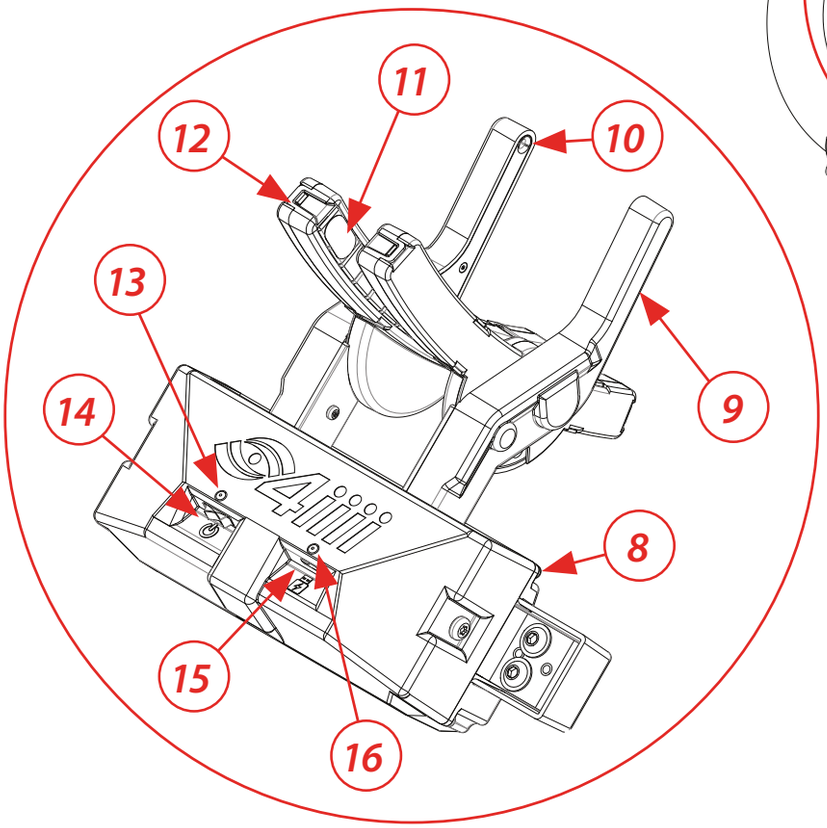
1 INTRODUCTION

1.2 Trainer component diagram

Frame:

1. Frame
2. Legs
3. Adjustable foot
4. Knobs
5. Lock nuts
6. Threaded rods
7. Skewer cups





Resistance Unit:

8. Electronics case
9. Caliper arms
10. Speed sensor
11. Anti-wear stickers
12. Magnet array
13. Status light
14. Power switch
15. Charging port
16. Charging light
17. Mounting bolts

2 INTRODUCTION TO SMART TRAINERS

2.1 Compatible devices

In order to control your smart trainer, you'll need a **smart training app**, running on a **device** such as a smartphone or laptop.

You can run training apps on:

- Smartphones
- Tablets
- PCs
- Macbook Computers
- Laptops
- Apple TVs

Your device needs either **Bluetooth Smart** or **ANT+** in order to communicate with the trainer. Smartphones, tablets and Macbook Computers have Bluetooth built in, whereas you'll insert an ANT+ dongle in the USB port of a Windows PC or laptop to connect with it.

Brand new to smart trainers?

Get the complete orientation online at

www.4iiii.com/support

2 INTRODUCTION TO SMART TRAINERS

2.2 Compatible apps

Fliiiight has been tested to be compatible with:

- TrainerRoad (Mac, Windows, iOS, Android)
- Zwift (Mac, Windows, iOS)

In order to be compatible, an app must be capable of sending smart trainer commands using one of two standard connection protocols:

- ANT+ FE-C (Fitness Equipment Controlled)
- Bluetooth Smart [BLE] FTMS (Fitness Machine Service)

2.3 Smart trainer modes

There are three modes for smart trainer workouts.

ERG

ERG mode keeps you accountable to your interval workout, ensuring you hit your power targets by increasing resistance if you slow down, or easing up if you pedal faster. Always use your bike's fastest gear (large front chainring).

SIM

SIM mode simulates an outdoor ride: tougher on the climbs than the downhills. Use your gears like you would outdoors.

Resistance (non-smart mode)

Fliiiight also has a non-smart mode, Resistance Mode. Use the ***4iiii*** app to set the resistance level, then use your gears to adjust the difficulty.

3 GETTING STARTED

3.1 Before installing the bike in the trainer

1. Check your wheel for compatibility, if you have not done so before purchasing.
    a. Run a strong magnet around the wheel rim. If the wheel is compatible, the magnet will not stick anywhere on the flat surface of the wheel rim. Ensure you check opposite the valve stem. Do not use the trainer with an incompatible wheel. Go to 4iiii.com/support for assistance.

2. Install the included trainer skewer in your bike's rear wheel.
    a. In most cases, you do not need to remove your wheel to change the wheel skewer.

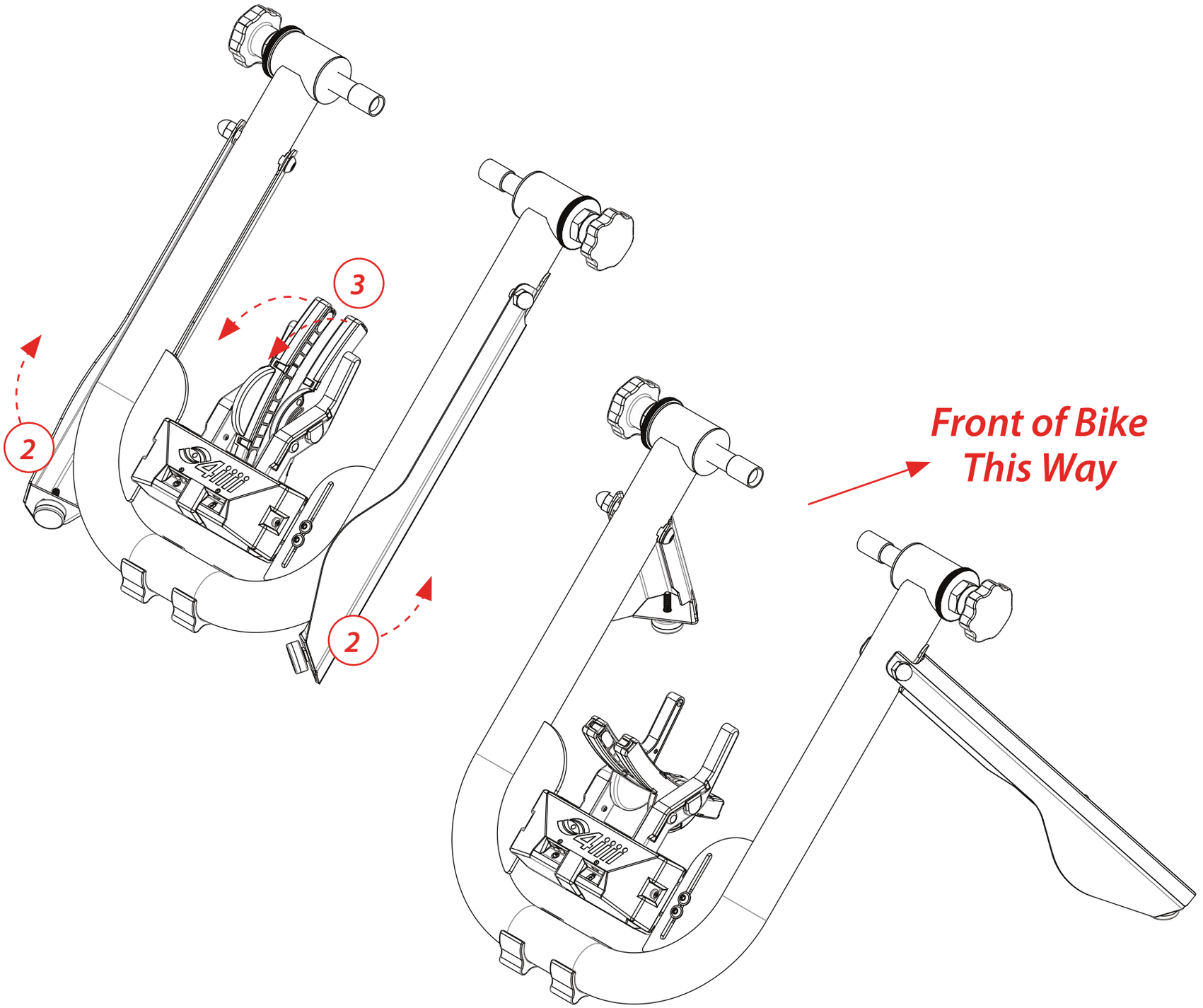
Tip

As long as it is properly installed, it is safe to leave your trainer skewer in your bike during outdoor rides.

3.2 Installing the bike in the trainer: first time set-up

1. Install one speed index on a spoke. It does not matter which spoke. Slide the index towards the rim. **DO NOT** install the spare indexes. Doing so will will affect the functionality of the unit.
2. Open ***Fliiiight's*** legs to full extension and place the trainer flat on the floor.
3. Rotate the magnet arrays so they are parallel with your wheel rim.

3 GETTING STARTED

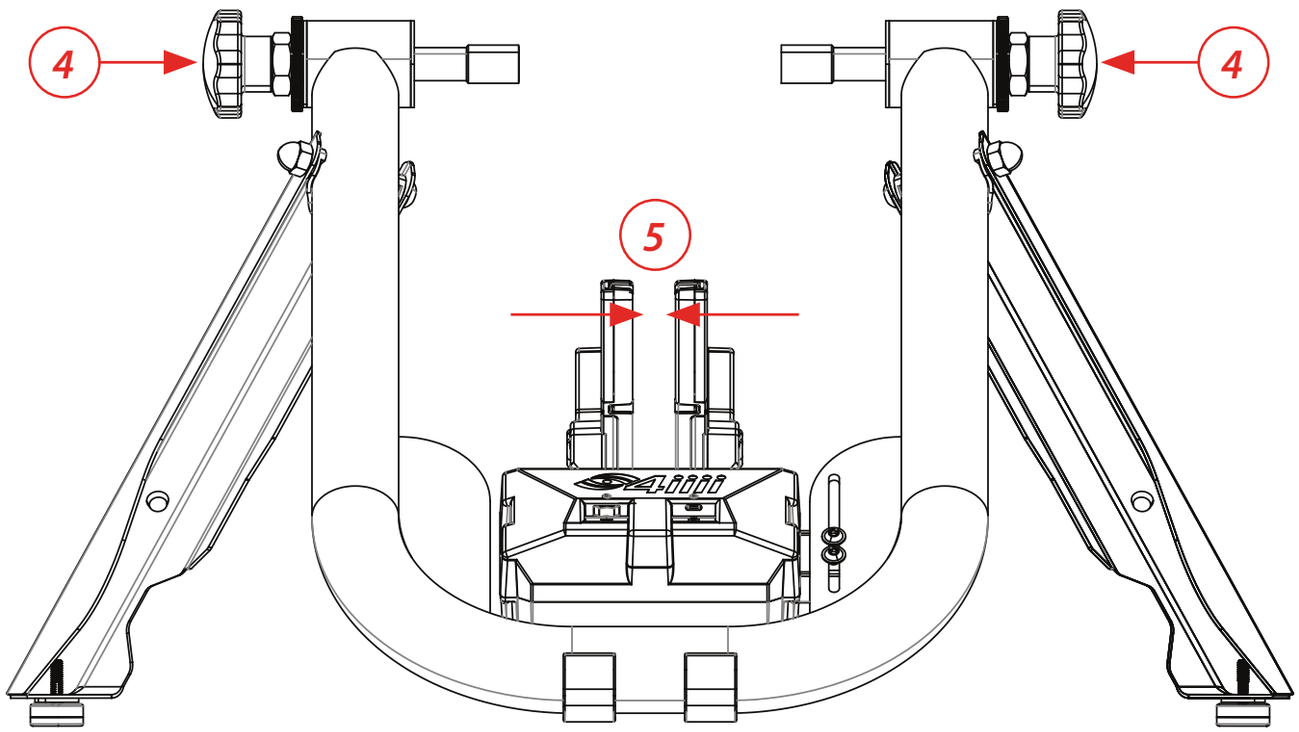


3 GETTING STARTED

4. Turn the large plastic knobs counter clockwise to retract the threaded rods. Retract one completely and the other approximately ¾ of the way. It does not matter which one is open all the way. This will open up the skewer cups enough to place the bike, and make it easier to mount.
5. Back the rear wheel of the bike into the trainer frame. Aim the wheel between the magnet arrays.

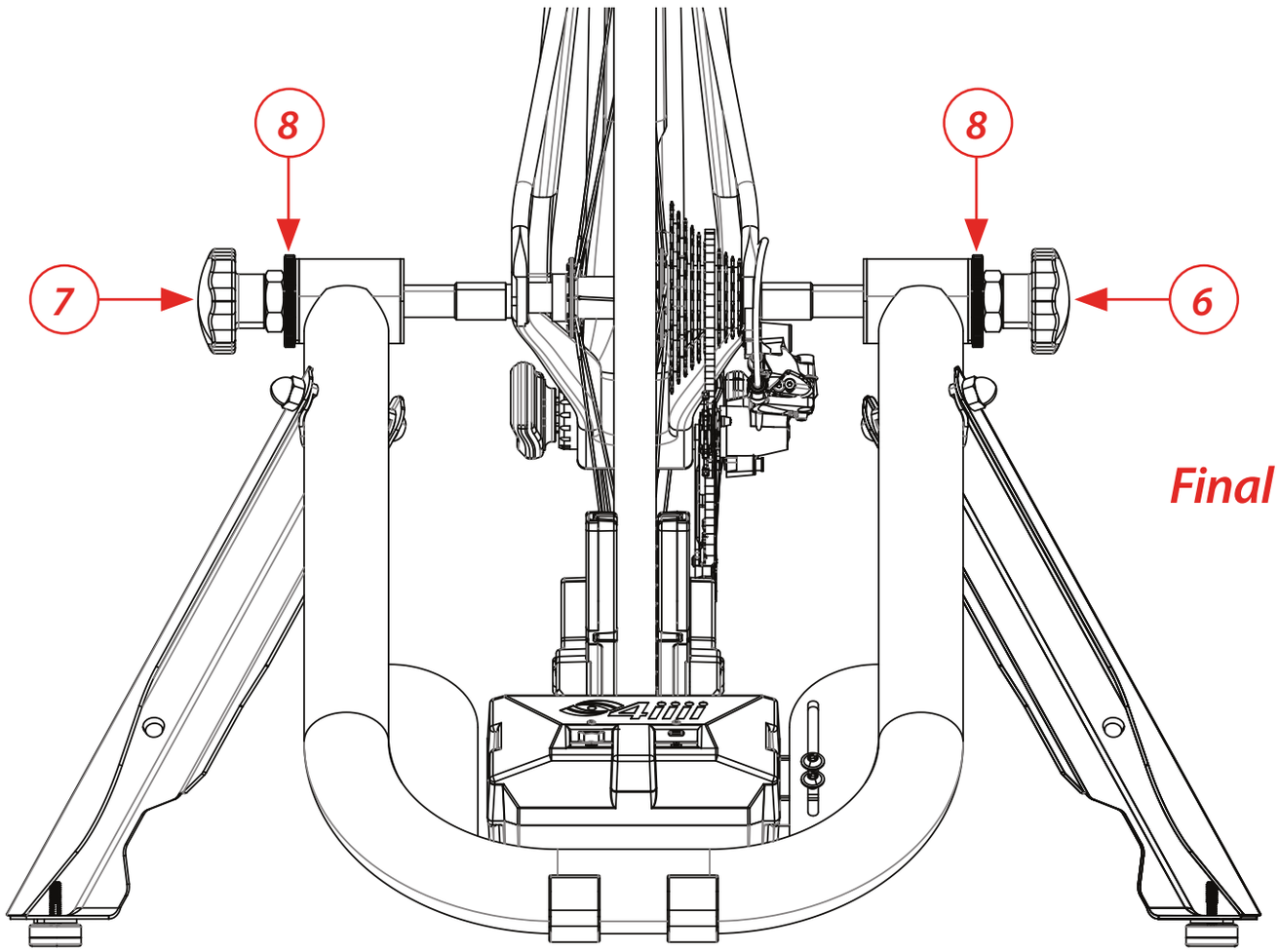
Tip

If the magnet arrays are not far enough apart for easy installation, gently pull them open by hand while the trainer is off. Pull both sides simultaneously.



3 GETTING STARTED

6. Lift the tip of the trainer skewer into the closest skewer cup. The bike should be approximately centered.
7. Keeping the bike upright, tighten the other knob until both skewer cups firmly secure the trainer skewer.
8. Tighten the lock nuts against the frame.

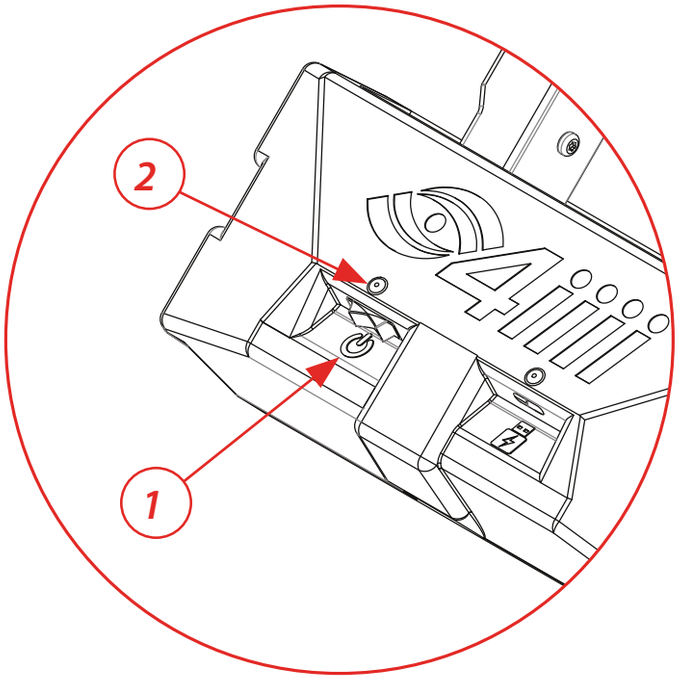


Final set-up

3 GETTING STARTED

3.3 Activating the trainer

1. Turn the power switch to “ON” (*#1 in the diagram*). The status light (*#2 in the diagram*) will be solid blue until paired with your app.
2. The magnet arrays will close on your wheel in order to center themselves. Keep the wheel still until they release.
3. Pedal to start your ride.



Tips

- ***The trainer will default to 36% resistance, until it receives a command from the app.***
- ***Don’t forget to turn the trainer off when not in use.***

3 GETTING STARTED

3.4 Calibration

Fliiiight is calibrated for a standard 700c road wheel or 29" MTB wheel. Use the ***4iiii*** app to update the wheel rim circumference if you have a different wheel size (*Section 5.1*). You will not need to do regular re-calibrations.

3.5 Removing your bike

It is not necessary to undo both threaded rods. Leave one threaded rod in place to easily remove or install your bike.

Additionally, you do not need to remove the speed index.

4 THE 4iiii APP

4.1 Download the app

The free 4iiii app is available for Android and iPhone. We highly recommend that you use compatible apps like TrainerRoad or Zwift for training, in order to experience more extensive features, graphics, and workout plans.

iPhone

Download the ***4iiii*** iOS app via the Apple App Store

Android

Download the ***4iiii*** Android app via the Play Store

Use the app to

- Calibrate the trainer for a different wheel size (*Section 5.1*)
- View your current battery level (*Section 6.2*)
- Update the trainer firmware*
- Change your trainer's Bluetooth device name*
- Set an ERG or resistance target*
- View, record, and share ride data*
- Do advanced troubleshooting (*Section 7.2*)

*Instructions available online at 4iiii.com/support

4 THE 4iiii APP

4.2 Calibrate the trainer for a smaller wheel size

Fliiiight is calibrated for a standard 700c road wheel or 29" MTB wheel. Use the app to update your wheel rim circumference value if you have a different wheel size.

1. Download the ***4iiii*** app.
2. Sign in. If this is your first time, sign up for an account.
3. Select "Add a Device." Select "Fliiiight" then press "Connect".
4. Select ">" for more options.
5. Go to "Wheel Circumference" and select your wheel from the drop down menu.

For more assistance selecting your wheel rim circumference, go to 4iiii.com/support

5 OTHER APPS

5.1 Connecting other apps

Check the app's support resources for more assistance navigating the app you have chosen to use with ***Fliiiight***.

1. If you are connecting via Bluetooth [BLE], Bluetooth and location services must be enabled on your device. Allow Bluetooth and location permissions for the app. If you are connecting via ANT+, install the ANT+ dongle in the USB port. Or, for Android devices with built in ANT+, ensure ANT Radio Service and ANT+ Plugins are installed.
2. Start up your cycling app.
3. Turn the trainer on.
4. Navigate to the app's device connection page, and search for nearby devices. Your trainer should show up as "***4iiii Fliiiight***" in the device list.
   If ***Fliiiight*** does not show up immediately, try pedaling.
5. Connect to the trainer.
6. Navigate to your workout.
7. Pedal to start your workout.

5 OTHER APPS

Tips

- ***Once you have paired with the trainer, many apps will pair with it automatically next time you start up the app and trainer.***
- ***Find more Bluetooth and ANT+ troubleshooting assistance online at 4iiii.com/support.***

6 CHARGING AND STORING

6.1 Charging

When fully charged, the ***Fliiiight*** battery will allow for a minimum of 2 hours of use.

- Use the included cable (*2A 5V type C USB charger*).
- For best results, charge from a USB wall outlet adapter.
- Batteries deteriorate more quickly when left in a fully depleted state.
  To maximize the life of your trainer, charge it regularly or plug it in during use.
- If the battery is fully drained, charge Fliiiight overnight.
- Turn the trainer off when not in use.

Warning

For safety reasons, do not charge the trainer below 5°C (41°F).
Doing so may result in damage to the lithium ion battery, explosion, or injury.

6 CHARGING AND STORING

6.2 View your battery level

The app will provide more detail than the lights provide.

1. Download the ***4iiii*** app.
2. Sign in. If this is your first time, sign up for an account.
3. Select “Add a Device.” Select “Fliiiight” then press “Connect”.You should now see the battery level in the device information.

Charging Light

The charging light is located above the charging port. It will turn on to indicate the trainer is plugged in and receiving power.

Yellow	Battery very low
Red	Battery charging
Green	Battery charged

6 CHARGING AND STORING

6.3 Storage

You can turn the trainer off and leave it set up with the bike installed, or remove the bike and store it flat. To store flat, turn off the trainer and remove the bike, fold the legs against the frame, and rotate the magnet arrays parallel with the frame. When moving the trainer, carry it by the top of the frame above the legs.

To prolong the battery life, do not store the trainer with a fully or nearly depleted battery. Ideally, charge the trainer to about 50% - 80% before storing. Store in a dry, temperature controlled location.

6.4 Longterm storage

Please ensure you have charged the trainer to between 50% and 80% if you are storing *Fliiiight* for more than a month.

7 TROUBLESHOOTING

7.1 What is the status light indicating?

Blue, solid	Bluetooth disconnected, ready to pair.
Blue, blinking	Bluetooth connected, receiving commands. A long blink will alternate with 1-3 short blinks. The number of short blinks indicates the number of Bluetooth channels that are connected.
Red, rapid blinking	Error message, check the debugging page in the ***4iiii*** app.
Yellow, alternating with Blue	Battery power is approximately 50% - 25%
Mostly Yellow	Low battery. Charge as soon as possible.
Yellow, alternating with Red	Battery drained. Will stop responding.

Please check our website for more support articles and videos: 4iiii.com/support

7 TROUBLESHOOTING

7.2 Using the 4iiii app for troubleshooting

1. Download the ***4iiii*** app.
2. Sign in. If this is your first time, select sign up for an account.
3. Connect to the trainer.
4. Select “Diagnostic Tools” and scroll down to “Trainer Sensors”.
5. This screen will give you feedback on the quality of your sensor inputs and tips for improving them.

7 TROUBLESHOOTING

7.3 Troubleshoot your connection over Bluetooth or ANT+

My app can't find my trainer when it scans

Bluetooth

- Press re-scan.
- Do not attempt to connect to the trainer in your phone's main Bluetooth connection menu. It is a different connection protocol. If you have previously tried connecting in the phone's Bluetooth menu, put the device briefly into, then out of, airplane mode and connect from within the app.
- Allow Bluetooth and location permissions for the app.
- Make sure Bluetooth and location services are enabled on your phone.

ANT+

- Remove and reinstall the ANT+ USB dongle.
- Try using a different USB port on your computer.
- Make sure no other apps are monopolizing your ANT+ dongle. Only one app can use an ANT+ dongle at a time. If you want to run two apps that use ANT+, you will need two ANT+ dongles.

7 TROUBLESHOOTING

7.3 Troubleshoot your connection over Bluetooth or ANT+

Interference and signal dropping

These are the common symptoms:

- The app repeatedly disconnects.
- *Fliiiight* does not consistently respond to changing ERG targets or hill slopes.
- Power and other readings stop populating, or “stick” at a certain value.
- During simulation, your avatar keeps stopping even if your wheel is spinning.

Things to know and check

- If the trainer is low on batteries, this will affect the range of its broadcasts. Charge the trainer.
- Try moving your device closer to the trainer and moving any metal objects between your trainer and your device. ANT+ and Bluetooth Smart are low-power and short-range communication protocols.
- If using the ***ANT+*** dongle**,** try using a USB Type A extension cord (male to female) to get the dongle closer to the trainer.

7 TROUBLESHOOTING

7.4 Alignment

Your magnet array should be level with your bike's wheel rim. The trainer is shipped aligned for a standard 700c road wheel or 29" mountain bike wheel. If you have a different wheel size, you may need to adjust the resistance unit up or down.

Possible symptoms of misalignment:

- Magnets come into contact with wheel or tire.
- The trainer is not able to hit your resistance targets.

Alignment steps

With the bike installed in the trainer, and the trainer off, push the resistance unit over to one side, until the magnet array touches the wheel rim. Check that the magnets are level with the rim. If the magnet array is sitting too low (touching the tire) or too high (partially above the wheel rim):

1. Loosen both mounting bolts and move the resistance unit as needed.
2. Re-tighten the mounting bolts.
3. Recheck the height, parallelism, and concentricity alignment.

8 DETAILED SPECIFICATIONS

Accuracy	+/-1%
Maximum watts	0 to 2200W
Medium slope	7%
Cadence accuracy range	40 - 160 RPM
Virtual flywheel	Up to 5kg (11lbs)
Noise	61.8/66.1 dBA. *Only as loud as your drive train*
Wireless riding time	2 - 6 hours
Recharge during use	Yes
Battery type	Rechargeable lithium ion pouch cell, 3000mAh
Charging cable	Type C USB, 5V 2A charging cable
Charging temperature	5°C to 45°C (41°F to 114°F)
Storage temperature	-20°C to 45°C (-4°F to 114°F)
Weather resistance	IPX2
Communication protocols	ANT+ FEC and Bluetooth Smart FTMS
Operating frequency	ANT+: 2457MHz, Bluetooth®: 2402MHz to 2480MHz

8 DETAILED SPECIFICATIONS

RF Specifications	RF operating frequency: 2402-2480 MHz Operating temp.: 5°C to 45°C (41°F to 114°F) Maximum radiated power: 0dBm
Supported apps	Apps for Windows PC (ANT+), Mac OS (ANT+ or Bluetooth Smart), iOS (Bluetooth Smart) and Android (ANT+ or Bluetooth Smart)
Firmware updates	Over the air
Compatible wheels	Aluminum alloy rims with a welded or aluminum sleeve joint
Compatible wheel sizes	650C-700C or 26”-29”
Skewer	Compatible with typical road bikes. Fits drop-out widths 130 mm to 150 mm. Thru-axles supported with adapter from Robert Axle Project.
Dimensions	Rechargeable lithium ion pouch cell, 3000mAh
Weight	Type C USB, 5V 2A charging cable

9 SAFETY INFORMATION

- Before using your trainer, consult a doctor if you or any member of your household have a medical device such as a pacemaker or ICD that can be affected by strong magnetic fields.
- Store the trainer out of reach of children and pets.
- Do not place fingers between the magnet arrays.
- Do not adjust the calipers by hand when the trainer is on.
- Do not place sensitive electronics immediately next to the magnets.
- Be careful when using metal tools near the magnets.
- When moving the trainer, carry it by the top of the frame above the legs to avoid the legs closing on your fingers.
- Use the designated charging cable (2A USB Type C charger).
- The electronics case has an IP rating of IPX2. It is resistant to dripping sweat. Do not expose to rain. Do not submerge. Do not get the charging cable wet while charging.
- Do not disassemble or modify the charging cable.
- Do not disassemble or modify the trainer electronics.
- Do not use or charge the trainer below 5 degrees Celsius (41 degrees Fahrenheit). Doing so may result in damage to the lithium ion battery, explosion, or injury.

9 SAFETY INFORMATION

- If the battery is completely depleted, charge it as soon as possible. Batteries left in a depleted state will deteriorate faster.
- Do not expose the battery to temperatures below -20°C (-4°F) or above +45 °C (+114°F). Doing so will degrade the battery.
- Lithium-ion batteries are recyclable. For information on disposal of used batteries, contact your original dealer.

10 WARRANTY

By purchasing this product you acknowledge and agree to the terms of this limited warranty.

4iiii Innovations Inc. ("4iiii") warrants this product to be free from defects in material and workmanship, under normal use, for a period of two (2) years from the date of original purchase (the invoice date) to the original purchaser. Defects that have resulted from improper or unreasonable use or maintenance, accident, excess moisture, insects, improper or inadequate packing for shipment, lightning, power surges, or unauthorized tampering, alteration or modification are not covered under the limited warranty. *4iiii* will, at its sole discretion, repair or replace the defective product with a comparable product, at no charge to the customer for parts or labor, with the customer to be responsible for all shipping and handling costs [and with return shipping and handling costs to be paid for by *4iiii* after the product has been repaired or replaced]. Replacement products may be new, refurbished or reconditioned and are warranted for the unexpired period of the original purchase, or 30 days from the date of shipment, whichever is greater. Any products replaced by *4iiii* shall be the property of *4iiii*.

WHERE PERMITTED, THE PROVISIONS OF THIS LIMITED WARRANTY ARE TO SUPERSEDE AND REPLACE ANY OTHER WRITTEN WARRANTY, WHETHER EXPRESS OR IMPLIED, WRITTEN OR ORAL, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

IN NO EVENT SHALL *4iiii* BE LIABLE FOR ANY DIRECT OR INDIRECT DAMAGES OR OTHER RELIEF ARISING FROM ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES. To obtain warranty service, email support@4iiii.com for shipping instructions and an RMA tracking number. Return your product, freight prepaid, along with the original sales receipt as a required proof of purchase for warranty repairs, with the RMA tracking number written on the outside of the package to *4iiii*.

WARNING:
This limited warranty becomes null and void if the product is repaired by anyone other than an authorized person of *4iiii*.

10 WARRANTY

FCC ID: ZZN-ST1ØØ
Model: ST100

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.

The grantee is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment.

The device has been evaluated to meet general RF exposure requirements. This transmitter must not be co-located or operating in conjunction with any antenna or transmitter. This equipment should be installed and operated with a minimum distance of 5 millimeters between the radiator and your body.

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 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.

11 REGULATORY COMPLIANCE

ISED Certification Number: 9896A-ST100
Model: ST100

Statement: This device complies with Innovation, Science and Economic Development 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. CAN ICES-3(B)/NMB-3(B)

Le présent appareil est conforme aux CNR Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) il ne doit pas produire de brouillage et (2) l'utilisateur du dispositif doit étre prêt à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif. CAN ICES-3(B)/NMB-3(B)

The device has been evaluated to meet general RF exposure requirements. The device can be used in portable exposure condition without restriction.

L'appareil a été évalué pour répondre aux exigences générales d'exposition aux radiofréquences. L'appareil peut être utilisé en condition d'exposition portable sans restriction.

12 TECHNICAL SUPPORT

Contact your local 4iiii authorized dealer.

For technical support, contact your 4iiii authorized dealer, or go to 4iiii.com/support.

4iiii International Head Office

Physical Address:

4iiii Innovations Inc.
141 2 Ave E
Cochrane, Alberta, Canada
T4C 2B9

Contact Information:

Web: 4iiii.com/support
Email: support@4iiii.com
Phone: 1.800.218.3095

Owner's Manual

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