

Fliiiiight

***User
Manual***



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1 INTRODUCTION

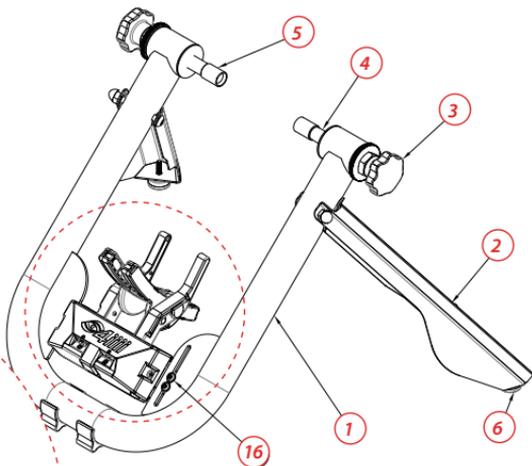
1.1 What's in the Box?

1. *Fliiiight Smart Trainer*
2. Trainer skewer
3. Speed index
4. USB type C charging cable
5. Manual

1 INTRODUCTION

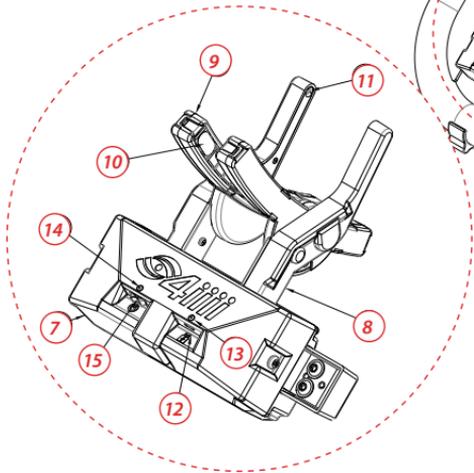
Frame:

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



Resistance Unit:

- | | |
|------------------------|--------------------------|
| 7. Electronics case | 12. Charging port |
| 8. Calipers | 13. Charging port light |
| 9. Magnet array | 14. Trainer status light |
| 10. Anti-wear stickers | 15. Power switch |
| 11. Speed sensor | 16. Mounting bolts |



2 INTRODUCTION TO SMART TRAINERS

Brand new to smart trainers?

Get the complete orientation online at www.4iiii.com/support

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

2.1 Compatible devices

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.

2 INTRODUCTION TO SMART TRAINERS

2.2 Compatible Apps

Fliiiight has been tested to be compatible with:

- TrainerRoad
- Zwift

There are many other compatible apps out there. 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 INTRODUCTION TO SMART TRAINERS

2.3 Smart trainer modes

There are two main types of smart trainer workouts.

ERG mode

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 mode

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

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, being especially careful to check opposite the valve stem. If the wheel is compatible, the magnet will not stick anywhere on the flat surface of the wheel rim. 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.

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

3 GETTING STARTED

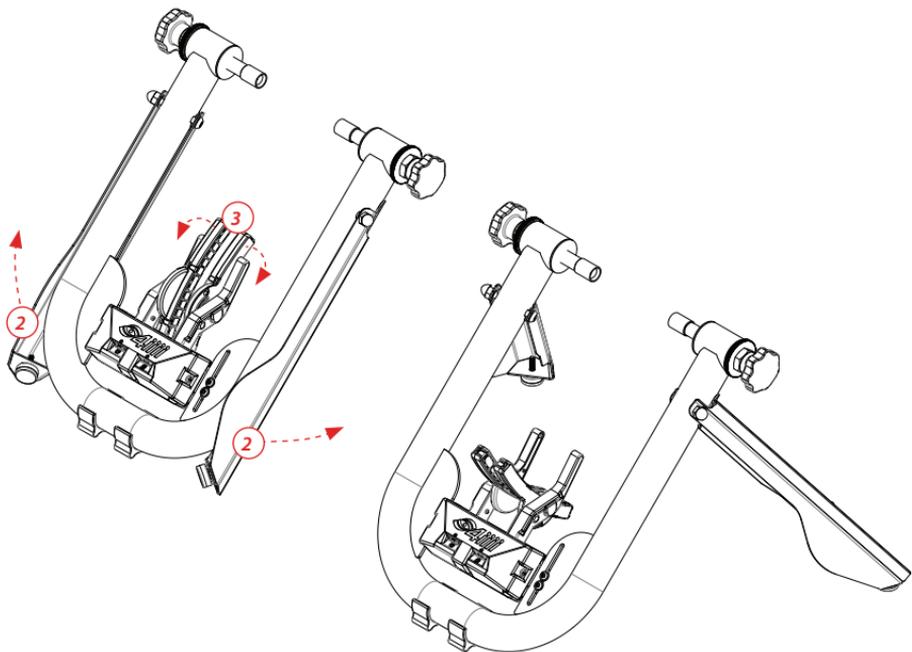
3.2 Installing the bike in the trainer: first time set-up

1. Install the speed index on a spoke. Slide the index towards the rim.



3 GETTING STARTED

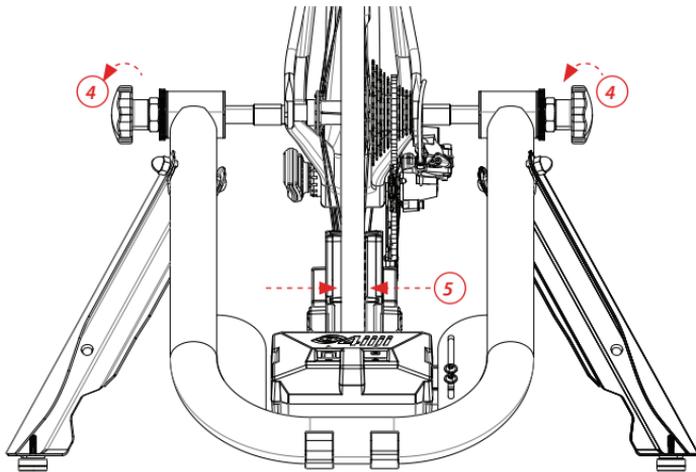
2. Open the legs to full extension and place the trainer flat on the floor.
3. Rotate the magnet arrays so they are parallel with your wheel rim.



3 GETTING STARTED

4. Turn the threaded rods counter clockwise to retract them. Retract one completely, and the other by $\frac{3}{4}$.
5. Back the bike into the trainer frame, aiming the wheel between the magnet arrays.

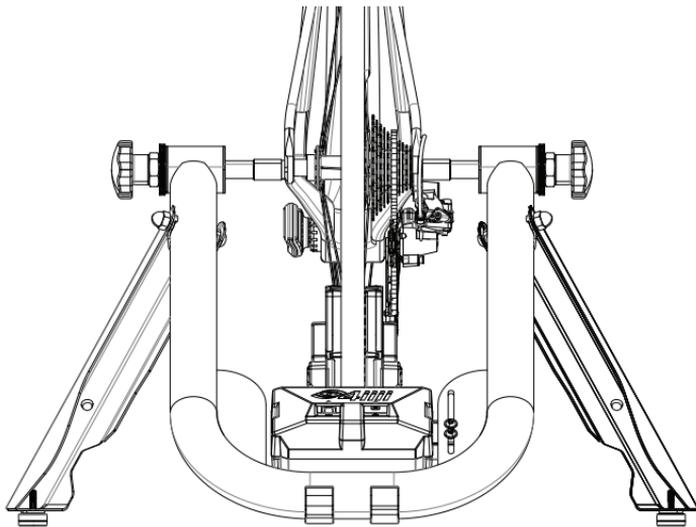
Tip: *If the magnet arrays are not far enough apart to allow for easy installation of the bike, you can pull them open gently by hand while the trainer is off.*



3 GETTING STARTED

6. Lift one skewer end into the innermost skewer cup. Hold the other end parallel
7. Tighten the other knob until both skewer cups firmly secure the trainer skewer.

Final set-up



3 GETTING STARTED

3.3 Activating the trainer

1. Flip the “ON” switch. The magnet arrays will close on your wheel in order to center themselves. Keep the wheel still until they release.
2. Pedal to start your ride.

Tip: *Until the trainer receives a command from the controlling app, it will default to 36% resistance.*

Tip: *Don't forget to turn the trainer off when not in use.*

3 GETTING STARTED

3.4 Regular set-up

Leave one threaded rod in place to easily remove or install your bike.

3.4.1 Removing the bike from the trainer

1. Turn off the trainer.
2. Loosen one knob to release the bike from the trainer.

3.4.2 Installing the bike on the trainer

1. Re-install the speed index if you've removed it.
2. Back the bike into the frame and insert the skewer in the innermost skewer cup.
3. Tighten the other knob until both skewer cups secure the trainer skewer.
4. Turn the trainer on.

3.5 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 recalibrations.

4 CONNECTING TO AN APP

Check the app's support resources for more assistance navigating your individual app.

1. Bluetooth Smart or ANT+ must be enabled on your device before connecting to the trainer.

Android or iOS smartphone, tablet, Macbook or Apple TV with Bluetooth Smart

Make sure Bluetooth and location services are enabled on your device.

Windows PC, Windows Laptop or Macbook with an ANT+ dongle

Plug the ANT+ dongle into a USB port.

Android device with native ANT+

[ANT Radio Service](#) and [ANT+ Plugins](#) may come pre-installed on your device, or you may need to download them from Google Play.

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.
5. Connect to the trainer.
6. Navigate to your workout.
7. Pedal to start your workout.

4 CONNECTING TO AN APP

Once you have paired with the trainer, many apps will pair with it automatically next time you start up the app and trainer.

Tip: Find more Bluetooth and ANT+ troubleshooting assistance online at 4iiii.com/support.

5 *4iiii APP*

The free app is available for Android and iPhone.

iPhone: Download the *4iiii* iOS app in [App Store](#)

Android: Download the *4iiii* Android app in [Play Store](#)

Tip: *You will need to update older iPhones to iOS 11 or later in order to download the app.*

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

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.

5 *4iiii APP*

5.1 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 the devices tab. Connect to the trainer.
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

6 CHARGING AND STORING Fliiiight

6.1 Charging

When fully charged, **Fliiiight** allows over 2 hours of wireless riding.

Tips:

- 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 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 Fliiiiight

6.2 View your battery level

Check battery level in the app

1. Download the **4iiii** app.
2. Sign in. If this is your first time, sign up for an account.
3. Select the devices tab. Connect to the trainer. You should now see the battery level in the device information.

When the trainer is low on batteries, the status light will appear yellow.

Yellow, alternating with other colors	Low battery, advanced warning
Yellow	Low battery, charge trainer

6 CHARGING AND STORING Fliiiiight

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

Yellow	Battery very low
Red	Battery charging
Blue	Battery charged

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% before storing. Store in a dry, temperature controlled location.

7 TROUBLESHOOTING

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

7.1 What is the status LED 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 <i>4iiii</i> app.
Yellow, alternating with other colors	Low battery advanced warning.
Yellow	Low battery, charge trainer.

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. Select the *devices* icon. 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.

7.3 Troubleshoot your connection over Bluetooth or ANT+

My app can't find my trainer when it scans

- Press re-scan.
- **Bluetooth**
 - 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.

7 TROUBLESHOOTING

- **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.

Interference and signal dropping

- If the trainer is low on batteries, this will affect the range of its broadcasts. Charge the trainer.
- ANT+ and Bluetooth Smart are short-range, low-power protocols. Try moving your device closer to the trainer and moving any metal objects between your trainer and your device.
- **ANT+**
 - Use a USB Type A extensions 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" MTB 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 lower or higher as needed.
2. Re-tighten the mounting bolts.
3. Recheck the height.

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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 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
RF Specifications	RF operating frequency: 2402-2480 MHz Operating temperature: 5°C to 45°C (41°F to 114°F) Maximum radiated power: +10dB

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DETAILED SPECIFICATIONS

Supported applications	Applications 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	Aluminium alloy rims with a welded or aluminium 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.
- If the battery is completely depleted, charge it as soon as possible. Batteries left

9 SAFETY INFORMATION

in a depleted state will deteriorate faster.

- Do not expose the battery to temperatures below -20°C (-4°F). Doing so will degrade the battery.
- Do not expose the battery to temperatures 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*.

11

REGULATORY COMPLIANCE

FCC ID: ZZN-ST100
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. The device can be used in portable exposure condition without restriction.

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.

ISED Certification Number: 9896A-ST100
Model: ST100

Statement: This device complies with Innovation, Science and Economic Development 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. 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 être 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.



**FOR TECHNICAL SUPPORT PLEASE CONTACT
YOUR 4iiii AUTHORIZED DEALER.**

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