LIMITS™ Installation Guide
Visit YouTube channel: LIMITS

WARNINGS ⚠

- LIMITS has been designed for a maximum cyclist weight of 90kg (200lb). Cyclists over this weight risk personal injury and property damage.
- Please read this manual carefully before installing LIMITS. Incorrect installation or maintenance, especially failure to torque LIMITS or the pedal properly may lead to accidents and possible harm to persons and/or possessions. Always use calibrated torque wrench. If LIMITS shows signs of damage, cracks, loosening and/or wear it must be professionally checked. Always check carefully after fall or accident.
- If you are in doubt about your ability to install the product, seek advice from a qualified bike mechanic.
- Tighten all parts to the torques recommended in this install guide and where applicable those recommended by your pedal manufacturer.
- Do not use LIMITS with standard shoes as this may cause irreparable damage to the sensor.
- Never grip LIMITS to remove LIMITS or pedal as this may cause irreparable damage to the sensor.
- Do not pressure wash LIMITS.
- It is recommended that you consult a doctor before starting physical activity or modifying your training routine.

1. PACKAGE CONTENTS

❶ - 1x Left LIMITS.
❷ - 1x 9mm to 8mm hex reducer.
❸ - 2x Pedal washers.
❹ - 2x 8mm to 6mm hex reducer.
❺ - 1x 8mm to 6mm hex extender.
❻ - 1x Spanner adaptor release tool.
❼ - 2x battery end caps (spares).
❽ - 2x SR44 Batteries
1x Right Non Sensing Unit.
Thankyou card.
Cycling Analytics free trial.

2. REQUIRED TOOLS

- Torque wrench, minimum 40Nm.
- 8mm hex driver.
- Bike grease

3. QUICK START

1. Remove left pedal using a pedal spanner or hex driver.
2. Fit LIMITS to left crank and torque via 9mm hex to 40Nm.
   a. If you do not have a 9mm hex driver use the 8mm to 9mm hex reducer provided.
3. Fit pedal to LIMITS.
4. Tighten pedal to manufacturers recommended torque.
5. Repeat for right non sensing unit.

4. LIMITS INSTALLATION

4.1 Install the left side first

1. Remove the left pedal from crankarm using a spanner or hex key.
2. Clean the pedal threads and apply a thin layer of grease on the pedal spindle and the surface where it contacts LIMITS.

ⓘ Note the left side has a left-hand (reverse) thread

4.2 Fit LIMITS

Apply a thin layer of grease on the LIMITS spindle and the surface where it contacts the crankarm.

Manually tighten LIMITS ❶ to crankarm.
⚠**Do not use torque wrench for this operation until you determine if a washer is required.**

LIMITS should only contact the crank arm at the metal mounting face. If the plastic housing contacts the crank arm it may fracture when torqued.
⚠**If the plastic housing contacts the crankarm use one or two washers as provided ❸. Do not use more than two washers.**

Using a 9mm hex driver and torque wrench tighten LIMITS ❶ to 40nM.
If you do not have a 9mm hex driver fit the 9mm to 8mm hex reducer ❷ provided to the LIMITS.

4.3 Fit Spanner Compatible Pedals

Manually tighten pedal to LIMITS ❶.
Using 15mm spanner tighten pedal.

4.4 Fit Hex Compatible Pedals

⚠**Fit 8mm to 6mm hex reducer ❹ to pedal before fitting pedal.**

Manually tighten pedal to LIMITS ❶.
Fit 8mm to 6mm hex extender ❺to 8mm hex driver.
Tighten pedal to manufacturers recommended torque.

4.5 Non Sensing Right Side

Repeat the above steps to fit the right non sensing unit.

5. LIMITS REMOVAL

⚠**Never grip LIMITS during removal**

5.1 LIMITS Removal – Spanner Pedal

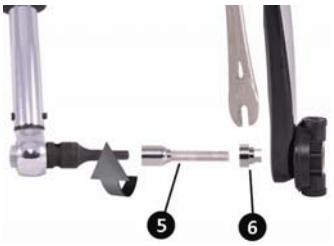
Using a 9mm hex driver and torque wrench hold LIMITS ❶ in place.
If you do not have a 9mm hex driver fit the 9mm to 8mm hex reducer ❹ provided to the LIMITS.

Using a 15mm spanner remove the pedal.
Using a 9mm hex driver and torque wrench remove LIMITS ❶.

5.2 LIMITS Removal – Hex Pedal

Fit the spanner adaptor release tool ❻ into the LIMITS ❶.
Fit 8mm to 6mm hex extender ❺to 8mm hex driver of torque wrench.
Insert hex extender ❺ into the LIMITS ❶.

Hold LIMITS ❶ in place using 15mm spanner on spanner adaptor release tool ❻.
Remove pedal using torque wrench.
Remove LIMITS ❶ using spanner and spanner adaptor release tool ❻.



6. FITTING BATTERIES

Remove battery end caps ❼ by rotating clockwise. Take care when removing to avoid damage or loss of battery end cap.
Fit SR44 batteries ❽.
Replace the battery end caps pre-aligning and turning anticlockwise to tighten, stop at second click.

⚠ **Note direction arrow for removing battery end caps.**
⚠ **It is recommended to use a coin to open and close the battery end caps.**
⚠ **Overtightening the battery end caps past the end stops will cause irreparable damage.**
⚠ **Note battery polarity. If batteries are installed incorrectly it will not damage LIMITS.**
ⓘ Always ensure battery end cap seals are clean and free from grit.

7. LED SATUS

Powering On – Solid Blue for 30seconds
Calibrating – Blink Green
Error – Solid Red

8. COMPATIBLE BICYCLE COMPUTERS

LIMITS is compatible with all ANT+™ bicycle computers
LIMITS is compatible with all Bluetooth compatible bicycle computers

9. PAIRNG TO A BICYCLE COMPUTER

The ANT+™ ID number is shown on the exterior of the packaging.
Turn the pedals 2 or 3 times to wake up LIMITS.
To automatically or manually pair with LIMITS read the manual provided with your bicycle computer.

ⓘ Make sure there are no other ANT+™ power meters within 10m.
ⓘ Make sure LIMITS is within 2m of the bicycle computer.

10. CONFIGURING BICYCLE COMPUTER

After pairing with the bicycle computer, read the bicycle computer manual. It is recommended the bicycle headset is configured as follows:
3 second power.
30 second power.
Cadence.

ⓘ Disable or remove third party cadence sensors.

11. CONFIGURING CRANKARM LENGTH ON BICYCLE COMPUTER

Set the correct crankarm length, read the bicycle computer manual.

12. CALIBRATION

Preform a calibration before starting to cycle.
Turn the pedals until LIMITS is in the 3 o'clock position.

Perform a calibration, read the bicycle computer manual

ⓘ Carry out calibration with bike on level surface. Ensure bike is vertical and not leaning at an angle. It is recommended that after first fitting the LIMITS you carry out a 10min ride to bed-in LIMITS then recalibrate. For accuracy you should calibrate LIMITS before each ride.

13. INSPECTION AND MAINTENANCE

⚠ Carefully inspect LIMITS before starting a cycling session, check all parts for damage, cracks, loose parts and signs of wear. Do not use the product unless you have carefully checked and replaced any worn or damaged parts.
⚠ The use of LIMITS not in perfect condition may cause accidents and may cause possible damage to possessions and/or injury as well as early degradation to the products and its performance.

Clean LIMITS with a damp cloth and remove debris with care.
Do not clean with chemicals. Do not use high pressure cleaners. Do not immerse the product. Periodically check the product is torqued correctly. Do not attempt to open or disassemble the product as you may damage it. If the product is not used for a long time it is advisable to remove LIMITS and store in its original packaging in an environment where temperatures are not high and humidity is not excessive.

14. DISPOSAL OF PRODUCT

At the end of its useful life, the product should be disposed of in an environmentally compatible way, using its parts and recycling components and materials.

15. DECLARATION OF CONFORMITY

Hereby, LIMITS Technology Ltd declares that the radio equipment type "LIMITS" is in compliance with directive 2014/53/EU and 2011/65/EU.

FCC STATEMENT

1. 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.
2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital, pursuant to Part 15 or 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 casue harmful interference to radio communications, However, there is no guarantee that interference will not occur in a particular installation. If the 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.

16. LIMITATIONS OF LIABILITY

LIMITS Technology Ltd, in general, cannot be held liable for any damage, direct or indirect, regardless of its nature, resulting from the information given in this document or from the product that it describes.