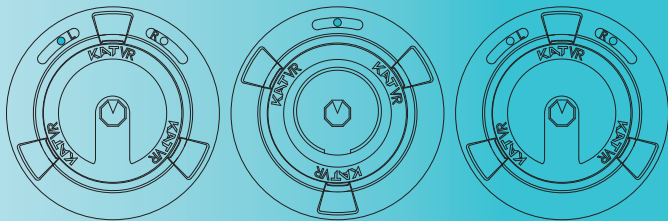


KAT Ioco OWNER'S MANUAL



This product is for home use ONLY and NOT for the commercial use.

Thank you for purchasing our product!

Please read this instruction manual carefully and keep it safely stored for future use.

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| First & Foremost

This owner's manual contains all the information you need to install and use KAT loco.

This product is for home use ONLY and NOT for the commercial use.

The following symbols are used to indicate useful and important information:



This symbol is a precaution: It usually provides additional information to help with a task, as well as information that only applies to a certain situation.



This symbol is a hint, letting you know what might be helpful at that particular point.



This symbol is important: You must complete one or more of hardware or software installations or settings as described in the manual.

Declaration


KATVR It is the trademark of Hangzhou Virtual and Reality Technology Co., Ltd. All trademarks, product identification and trade names of other companies appearing in this manual belong to their respective owners. No parts or content of this manual may be copied or reproduced without the written permission of the company, and may not be shared in any form or used for any commercial or profitable purpose.

The contents of this manual are subject to change due to product upgrades or other reasons. Our company reserves the right to modify the contents of this manual without any notice or prompt. This manual is intended as a guide only. We do our best to provide accurate information in this manual but we do not guarantee that the contents of this manual are completely error free. Statements, information, and recommendations provided in this manual do not constitute any warranty, express or implied.



For the latest information, please feel free to check out our official website: www.katvr.com

Safety Instructions

-  To avoid personal injuries or damage to the product, read and follow all product safety and operation instructions before using KAT loco. Pay special attention to safety warnings. If you allow others to use the product, you are responsible for ensuring that each user knows and follows all product safety and operation instructions.
To avoid injuries, read and follow all instructions before using the product.

- **Suitable users:** The device is intended for use by healthy people aged 14 to 60. During the use of this device by minors, a guardian should always be present to ensure that they follow all safety instructions and do not experience any discomfort.
- **VR headset:** Make sure to read and follow all product instructions and warnings of the VR headset of your choice.
- **Spatial safety:** Remember, when using this product with a VR headset on, you can't see your actual surroundings. Images and events displayed in your VR Headset do not match the real world. Make sure to only use this product in a safe area with no obstacles. Do not use it near stairs, wide windows, heat sources, reservoirs and water tanks, outdoors or nearby any other objects that might pose a threat to your safety. Please, make sure that there are no people, furniture or any other things that hinder your movement in the selected play area. Pay special attention to children and pets.
- **objects that might pose a threat to your safety:** Please, make sure that there are no people, furniture or any other things that hinder your movement in the selected play area. Pay special attention to children and pets.
- **Repetitive strain injuries:** Please use this product in your comfortable position. When using this product, a single action might be repeated for a long time, what might result in nerves, tendon or muscle damage. If you experience pain, numbness, weakness, swelling, burning or stiffness, stop using the product and consult your doctor.
- **Choking hazard:** Do not leave small components that pose a suffocation hazard to children or pets in easily accessible places where they can reach.

- **Product use:** Keep the product safely away from liquids or containers holding liquids.
Do not place the product near fire or heat sources, nor leave it directly exposed to the sun.
Do not insert items into any openings of the product.
Do not disassemble or modify this product or its accessories.
To avoid mechanical damage, do not throw this product or its accessories.
If the product overheats, gets damaged or cannot be used according to the safety instructions of this user's manual, please contact our technicians or your local distributor.
Avoid using this product after a rapid temperature change.
If the product is moved between environments with widely varying temperature or humidity level, condensation might cause water to form on the surface or inside the product. To avoid damage, please wait till the water evaporates before using the product.
Turn it on, only after the product adapts to the room temperature.
Before using the product, check if it's in a normal state without cracks, scratches or other abnormalities. Before connecting the product to the charger, please confirm that the actual voltage and current are the same as these mentioned in the product parameters in this manual. If the two do not match, do not connect it.
Any disassembly or modification of this product without permission will result in instant termination of the product warranty.
- **Cleaning:** Using a damp cloth or water to clean the sensor surface is forbidden. Only a dry cloth can be used for that purpose. The straps can be cleaned with a damp cloth and dried before use. If symptoms such as itching, irritation, etc. appear, stop using the product and consult your doctor.
- **Radio Frequency Interference:** This product might emit radio waves that might interfere with the operation of nearby electronic equipment. If you are wearing a pacemaker or any other implantable medical device, consult your doctor or your medical device manufacturer before using the product. In order to minimize radio frequency interference, use only accessories approved by the original manufacturer. Do not use at the same location, or together with any other antenna or transmitter.

interfere with the operation of nearby electronic equipment. If you are wearing a pacemaker or any other implantable medical device, consult your doctor or your medical device manufacturer before using the product. In order to minimize radio frequency interference, use only accessories approved by the original manufacturer. Do not use at the same location, or together with any other antenna or transmitter.

- **Avoid overuse:** Avoid using the product for long periods of time without rest. It might have a negative impact on body coordination and balance which causes other negative effects. Frequent use of this product for extended periods of time may cause fatigue or pain of your muscles, joints or other parts of your body. Please take regular breaks during the use of this product. The amount of required rest and its frequency may vary from person to person.
- **Use by children:** This product is not designed for children. Please, keep it stored in a safe place where minors cannot reach it. Do not allow young children to use this product. Children might harm themselves or others, or accidentally damage the product.
- **Battery warning:** Your product contains built-in rechargeable batteries that cannot be replaced. Battery life will vary depending on frequency and method of use. Disposal of waste batteries that reached their product life should be carried out in accordance with local laws. If the local law does not regulate this matter, please discard your product in the trash can for electronics. Improper use of the batteries might pose a risk of fire or chemical burns. Do not disassemble or expose the batteries to temperatures above 50 °C (122 ° F). Keep them away from children.

Health Warnings



The following health warnings will be updated occasionally to ensure accuracy and completeness.

- Pregnant women or those with epilepsy, cardiopulmonary diseases, history of mental illness (such as anxiety disorder, post-traumatic stress disorder etc), anemia or other serious health problems such as heart diseases, and those undergoing postoperative

recovery or physical activity difficulties are strictly prohibited from using the product.

- Because of physical limitations of human body, we do not recommend using this product for too long time without rest in order to avoid discomfort such as dazzling, dizziness or headache. Remember to take regular breaks, especially during the first use to gradually adapt to virtual reality environment and increase the length of your gaming sessions step by step. It is recommended to use the product for no longer than 1 hour without rest.
- If you feel any discomfort when using the product, stop using it immediately and do not engage in any physical activities that pose safety hazards until the symptoms completely disappear. In case they persist, do not use the product until you consult the problem with your doctor.
- In case of fatigue, illness, hangover, alcohol or drugs intoxication, or any other discomfort, it is strictly forbidden to use this product, otherwise the symptoms might be aggravated.



Anyone who uses this product is considered to have full civil capacity of conduct and must comply with the aforementioned matters. If you violate the above safety instructions or carry out other violations, it may cause personal injury or adverse consequences for which KAT VR will not be held responsible.

Laws and Regulations

● Radiation Exposure Statement

FCC Radiation Exposure Statement

(1). This product must not be co-located or used together with any other antenna or transmitter.

FCC Warnings

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.

(2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party 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.

● **FCC RF Warning Statement**

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

IC Warnings

This device complies with Industry 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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) l'appareil ne doit pas produire de brouillage, et.
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

● **EU Directives Compliance Statement**

This device complies with the 2014/53/EU Directive issued for wireless electronics by the European Electronic Communications Committee. This equipment operates in the following frequency range and the highest radio frequency power.

● **Electronic Waste and RoHS compliance**

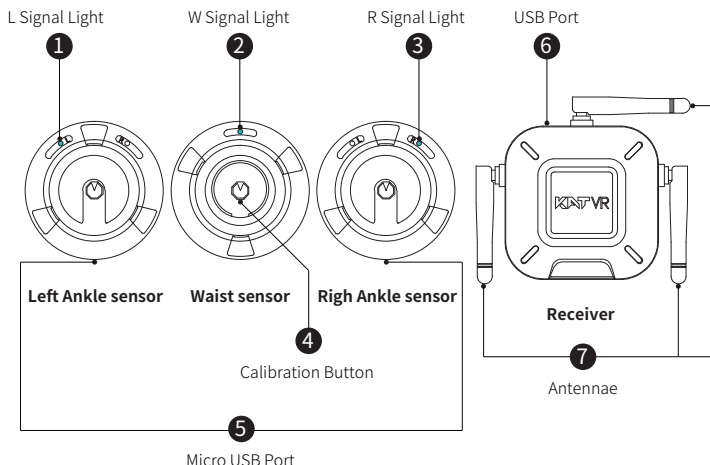
This equipment should not be disposed in a landfill. Improper disposal of electronic products or their components may harm the environment. For more information on disposal and recycling of electronic equipment, please contact your local Civic Center, your Household Waste Disposal Center, the shop where you purchased the equipment or your local dealer.

Product Introduction

Product Description

KAT loco is a foot-based VR locomotion system that gives complete physical control over lower-body actions, allowing the user to freely walk, run, and carry out just any other movement in virtual reality.

Product Appearance



Product Parameters

KAT loco	
Model	LC01
Suitable age	14-60
Connection	Bluetooth 4.2
Signal range	3m
Operating temperature	0-40°C(32°F-104°F)
Storage temperature	-5°C - 50°C(23°F-122°F)
Accepted humidity level	- 5%-95% in non-condensing state
Software	KAT Gateway
Certificates	CB, CE, FCC, WEEE, RCM, IC, MIC
Package size	230*123*60mm (L*W*H, 9.06*4.84*2.36in)
Gross weight	400g(14.11oz)

1



1. Please check our official website for the latest information.

Ankle sensor	
Model	LC011
Weight	35g(1.23oz)
Diameter	50mm(1.97in)
Total thickness	24mm(0.94in)
Battery	Lithium-ion polymer battery
Battery capacity	370mAh
Charging voltage and current	5V = 0.5A(2A MAX)
Charging time	About 1 hour
Battery life	≥10hrs
Lighting	LED
Housing material	ABS
Velcro Straps length	20cm-35cm(7.87in-13.78in)
Adjustable length for Velcro Strap	330mm±10mm(Optional accessory)










Performance of the battery might vary depending on the frequency and method of use. Excessive use will reduce the product life.

Waist sensor	
Model	LC012
Weight	35g(1.23oz)
Total thickness	24mm(0.94in)
Lithium Battery	Lithium-ion Polymer Battery
Battery capacity	370mAh
Charging voltage and current	5V = 0.5A(2A MAX)
Charging time	1 hour
Battery life	≥10hrs
Lighting	LED
Housing material	ABS

Receiver	
Model	LC013
Weight	80g(2.82oz)
Size	112*99*74mm (4.41*3.90*2.91in)
Housing material	ABS
Port	USB2.0 or above
Rated Voltage	5V

Complete list of items in a KAT loco package

List of Items		
Name	Look	Quantity
Waist Sensor		1
Ankle Sensor		2
Receiver		1
Velcro Strap		2
Multifunctional USB Wire		1
USB Cable		1
A Notification Card for Owner's Manual Download		1
KAT Gateway		1

2

3




- The difference between the three micro USB endings of the multifunctional USB wire is that the white one serves for charging as well as for data transferring, while the other two can be only used for charging.
- For KAT Gateway, the dedicated software, please refer to www.katvr.com for more information.


| Windows Based Software Description

Software Description

KAT Gateway is our comprehensive software solution dedicated to users of KAT loco for the device management, and VR games support. With Gateway you can quickly connect KAT loco to your computer to view current connection status of the device and run available VR content. Thanks to its inSteam Turbo Mode, each compatible game will be automatically launched with an optimal settings configuration.

 KAT Gateway can automatically detect compatible VR games in your Steam library, and compatible VR files with .exe extension.

You can also get access to KAT loco's control panel from either your computer screen or VR headset at any time to adjust multiple parameters to your liking, and make KAT loco a perfect VR input device for your needs.

 VR-integrated version of Gateway's control panel is only available when using SteamVR.

Software Download

Please use your browser to log in to the following website and download necessary software:

<https://www.katvr.com/pages/download>

First Use Instructions

Note: Once you receive the KAT loco, you may need this step to charge your KAT loco. Here is the instruction:

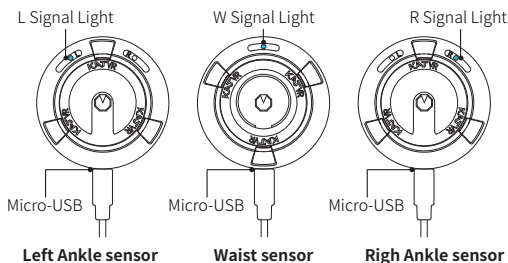
Electrical parameters: Voltage: $5V \pm 10\%$, current: at least 500mA (Computer USB 2.0 port, 5V Adapter)

Charging status indication: Recharging: diming light; Fully charged: Long bright signal
(Picture shown below)

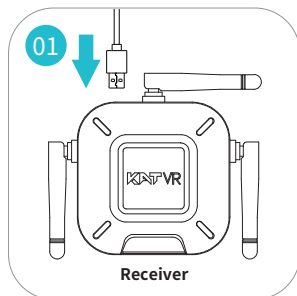
Charging time: up to 2h

Charging steps:

- KAT loco comes with a triple-ended Micro-USB wire. Connect it to a DC5V Power Supply and to all three of the KAT loco sensors.
- Watch the status of the LED lights: When it's charging, there will be a diming light; when it's fully charged, there will be a long bright signal. If lights out, it's a signal of broken.
- Disconnect the sensors once they are fully charged. It will be indicated by the continuous light signal.



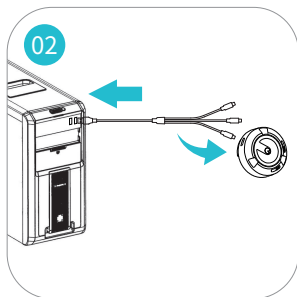
01. Connecting: Take out the USB cable and the receiver, then connect it to your PC. Verify that the receiver is in good technical condition and launch the software.



Notice about the receiver location:

It is recommended for the receiver to be placed on a table in the open space, without any metal objects or any other large items blocking the connection with the sensors.

02. Pairing: Launch KAT Gateway, click 'Device Manager', and select 'Pair Sensor'. Then, follow the instructions on the screen and connect the sensors to your PC one by one according to the prompts to complete the pairing.



The lighting signals described below signalize different operation modes of your KAT loco:

Recharging: Diming light

Fully charged: Long bright signal

Low power: Flashing with a long break

Pairing/Firmware updating: Quick flashing

Unpairing: Slow flashing

Sleep Mode/Power-off: Light off

03. Waist Sensor Mag Calibration: When used for the first time, the waist sensor requires to collect the location data to complete the calibration process. Select 'Waist Mag Calibration' in KAT Gateway and follow the instructions on the screen.

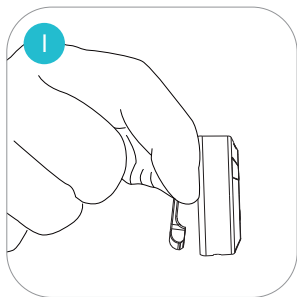


Note: 1. Magnetic calibration should be carried out at the actual location of use.

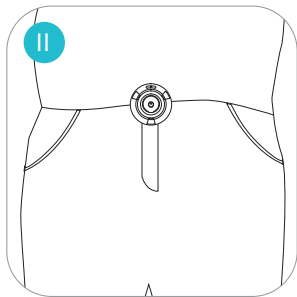
2. If you change your location, please re-calibrate the device.

04. Putting on the waist sensor:

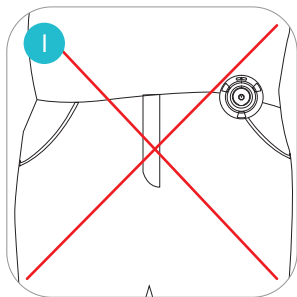
I. Gently pry open the sensor clip;



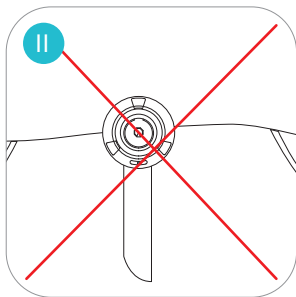
II. Clip the waist sensor in front, right in the center of your waist to ensure the correct operation of the device;



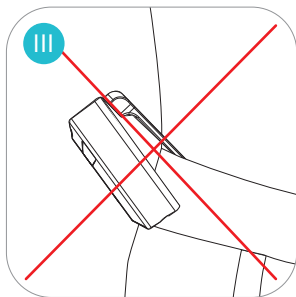
 The pictures below show improper placement of the sensor.



Skewed placement



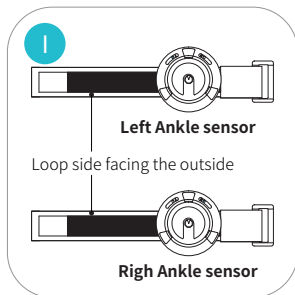
Upside down placement



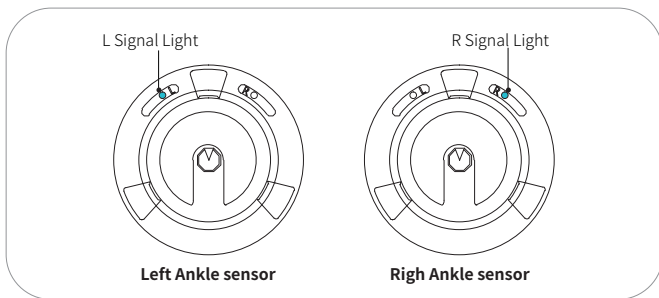
Upside down placement

05. Putting on the ankle sensors:

I. Mount the velcro straps at the backside of the sensors, making sure that the loop side faces the outside. Make sure to thread the entire strap through the buckle till its end (Otherwise, improper placement of the device on your leg might influence the length of the straps).




II. Identify the left and right sensor, Firstly, find the L/R Signs on the sensors symbolizing which leg should you put them on. The sensor with left light on should be placed on your left ankle and vice versa.

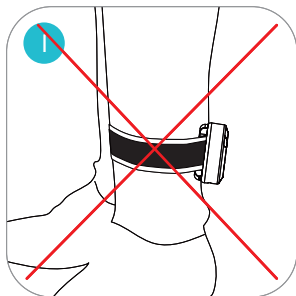


III. Put on the corresponding sensors above your right and left ankle (Make sure to fasten the velcro straps firmly to ensure a stable position of the sensor and keep it from falling). The LED lights of the sensors should be directed upwards, while the charging port should face the floor.

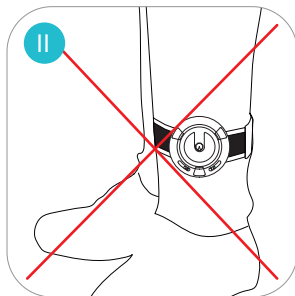


Note: The correct spot on your leg to put the sensors on: 5cm (about 3 fingers length) above your ankle.

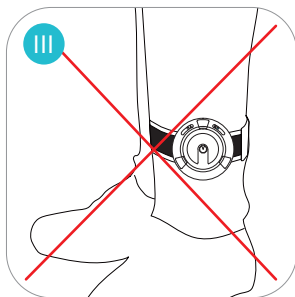
 The pictures below show improper placement of the sensor.



Skewed placement



Upside down placement

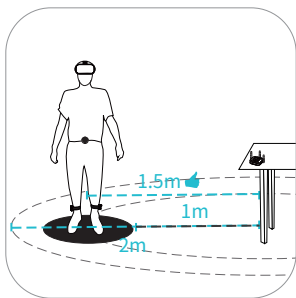


Reversed placement of
the right and left sensors

06. Choose the Play Area:

Range of Use: 1m-2m;

Recommended distance: 1.5m



Note: Make sure to only use this product in a safe indoor area with enough play space. Avoid potentially dangerous zones such as those near stairs and windows. No other objects or persons should be present in the selected play area during the use of this product.

07. Starting the games:

Select the relevant game mode in KAT Gateway and start the game.

08. Waist sensor calibration:

Start SteamVR and select the mode before choosing a game, put on your VR headset, keep your feet together and look straight to ensure the direction of your face is the same as the direction of your body. Then, press the 'Calibration Button' right at the center of the waist sensor to complete the calibration process.

08



09. **Sensor parameter adjustment:**

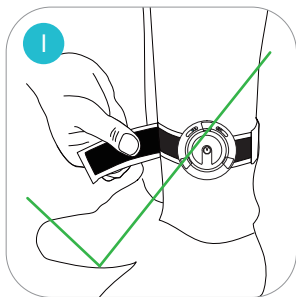
When within the game, you can adjust the parameter settings of the sensors to your liking. All adjustments such as sensor sensitivity to walking or the way of triggering special actions (such as strafing) can be made in 'Controller Options' tab of KAT Gateway.



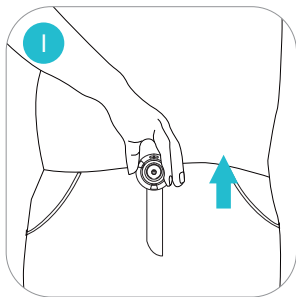
Note: If the movement direction suddenly deviates, first check if the waist sensor is still placed at its starting position. If not, re-calibrate the sensor. If you change your location, please carry out the magnetic calibration of the device again.

10. **Quit the game and take off the sensors:**

I. Unfasten the velcro straps to take off the ankle sensors;



II. Pull the waist sensor up gently to unclip it;



Note: Do not use excessive force to take off the sensors.

Contact Information

- Phone Number: +86(0)571-86105373
- E-mail Address: overseas@katvr.com
- Official Website: www.katvr.com

Product Warranty

Please check the warranty page for latest product warranty information and warranty application procedures.

Should any unforeseen technical problem appear during the warranty period, please contact KAT VR or your local distributor.

Please present the product receipt to the place of purchase or another place designated by KAT VR. KAT VR will decide whether to repair, replace or refund defective product according to circumstances.

WARRANTY CARD

Customer Information

Name: _____ Number: _____

Address: _____

Zip Code: _____

Product Information

Serial No: _____ Name: _____ Purchase Date: _____

Warranty Period: **ONE YEAR** of free repair service

Repair Records

Service Date	Device Issue	Product Condition

Check the terms and conditions of the warranty online:
<http://katvr.com/support/technical-support/>

