VANTAGE USER MANUAL

Warnings & Notifications:

This system is to be powered ONLY with the power supply provided.
The rechargeable batteries in the Vantage Harness and Zin Tool are not user replaceable.
The Vantage Harness and ZIN uses batteries that may need charged before use.

Power Supply Connection:
Connect the detachable power supply cord to the wall power outlet.
Connect the attached power supply cord to the rear of the sensor at the location marked DC Power In.

USB Dongle Connection:
Ensure that your computer is connected to the Internet before plugging in the USB Dongle for the first time.
Plug the USB wireless device into your computer USB port.

Vantage Harness or Zin Charger Connection:
Connect the black power supply cord to the wall power outlet.
Connect the black/red power supply cord with circular connector to the circular port on the side of the wireless harness or Zin body.

Computer Requirements:
Windows Operating System (Windows 7, Vista, or XP SP3)
Running Windows on a Mac via Fusion or Parallels is possible, but may yield issues when attempting to use the Retül software version 5 video functionality due to file-saving speeds.
3 x USB ports for communication with Retül, webcam (optional accessory), and Powerbeam trainer (optional accessory)

Technical Information:
Supply Input Voltage: 100-240 V ~
Supply Input Amperage: 0.5-0.3 A
Supply Input Frequency: 50-60 Hz
Supply Ouput Characteristics: 15W Max, 12V DC, 1.25A
Operating Temperature: 0° C to 60° C
Operating Relative Humidity: 5% to 95% non-condensing
Storage Temperature: 0° C to 60° C

Primary Operation Section:

Set up the Vantage Sensor on the tripod provided and position it 2 meters from the rider or bicycle to be measured. Make sure all direct sunlight is shielded from the front of the Vantage Sensor and that no other bright lights (indoor or outdoor) are in direct view of the front of the Vantage Sensor. Make sure the position of the rider, Vantage and support computer are such that you have no line of sight obstructions and can navigate around the area without bumping into any equipment.

Affix the Vantage Harness to the rider with the LED pods facing the Vantage Sensor and using the included Velcro dots.

Install the Retül software provided on CD and run the software.

Set up the Vantage system, rider information, resistance unit (if used) and your company information in the software.

Turn ON all of the equipment you will be using and record your data in the software. Add any notes you may wish in the Notes section.

If you experience interference, change to a different channel in the software with the equipment ON. If the interference is from another Vantage system, turn it OFF and change channels on your equipment, then you can use the other Vantage system without interference. Channels available are 0 – 15.

When you are done recording data, turn OFF all the equipment and remove the Vantage Harness from the rider.

If you are using the ZIN to capture a point cloud on bicycle part and/or frame, use the ZIN Points section in the software and press the momentary button on the ZIN to record points and release the button when you are moving the ZIN to a new recording position. The button can be held to continuously record surface contours. The button can be pressed, then released between measurements of distance (no contour capturing movements).

Troubleshooting Section:

No image in the software – Check physical connections of Dongle to computer and power supply to Sensor. Check the orientation of the rider LEDs and the Sensor as they must be directly facing each other. Recharge your instrument batteries.

ZIN points not recording – Check physical connections of Dongle to computer and power supply to Sensor. Check the orientation of the ZIN LEDs and the Sensor as they must be directly facing each other. Recharge your instrument batteries. Check the distance from the Sensor to the LEDs on the rider as it should be within 3 meters max and 1.5 meters minimum. Check for other light sources that may interfere. Change channels on the instruments.

Image data flaky, or erratic - Check physical connections of Dongle to computer and power supply to Sensor. Check the orientation of the rider LEDs and the Sensor as they must be directly facing each other. Recharge your instrument batteries. Check the distance from the Sensor to the LEDs on the rider as it should be within 3 meters max and 1.5 meters minimum. Check for other light sources that may interfere. Change channels on the instruments.

Radio Frequency Safety Information for the Retül Vantage System

FCC Guidelines

The Vantage System contains FCC ID: R3J-VANRF2012 / IC ID: 10732A-VANRF2012 in the camera/sensor bar, each system instrument and the USB dongle for data communication purposes. The following information should be read and understood before operation.

This equipment is for use by Retül customers and clients only for the Retül Vantage System and *must not be incorporated into any other device or system*. This device may not be sold separately to the general public. FCC approval of this device only covers the original configuration of this device as supplied. Any modifications to this product/device may violate the rules of the Federal Communications Commission and Industry Canada and make operation of the product unlawful.

FCC Labeling

FCC labels are physically located on the modules and the USB Dongle.

47 C.F.R. Sec.15.19

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

47 C.F.R. Sec.15.21

There are no user serviceable parts inside the Vantage System or its modules and any attempt to dissemble, reverse engineer, repair, or otherwise interfere with the normal operation of the equipment Is strictly prohibited, voids any warranty on the equipment and the user's authority to operate the equipment. Any repair, maintenance, or replacement of the unit should be handled by authorized Retül personnel only.

47 C.F.R. Sec.15.105(b)

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 USB/RF dongle.
- Increase the separation between the equipment and receiver.
- Connect the affected equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer if further assistance is necessary.

Regulatory Approval For Canada

This Class B digital apparatus complies with Canadian ICES-003 and RSS 210, Issue 7.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

RSS-GEN Sec.7.1.3

Cet appareil est conforme avec Industrie Canada exempts de licence standard RSS (s). Son fonctionnement est soumis aux deux conditions suivantes: (1) cet appareil ne doit pas provoquer d'interférences et (2) cet appareil doit accepter toute interférence, y compris celles pouvant causer un mauvais fonctionnement de l'appareil.

This device complies with Industry 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.