

## Operating Instructions for the UCOWS Cow Activity Collector

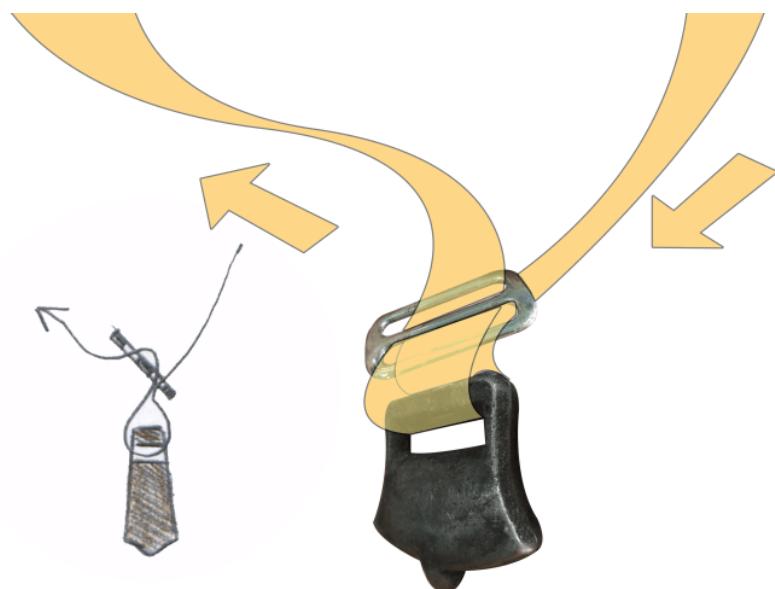
### ◆ Product Features

The UCOWS cows activity collector (hereinafter referred to as “the collector”) is a device conducting the real-time collection of a cow’s daily activity and regularly uploading the information about the cow’s daily activity to the UCOWS cow activity reader-writer via wireless technology. It uses special sensors to collect a cow’s activity information, transmits the collected information via the WIFI wireless communication technology to the back-end processing platform to achieve collection of cow activity information.

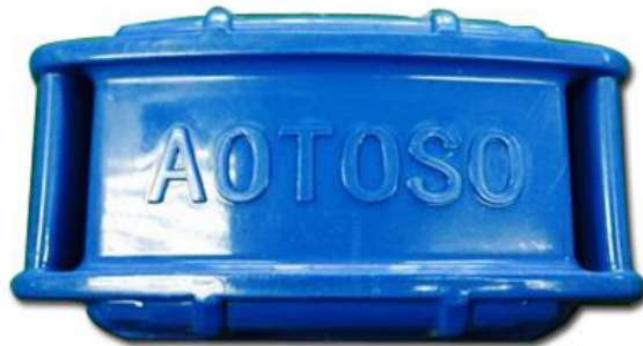
- Collector reading distance  $\geq$ 70 meters.
- Using a special sensor that can accurately collect cow activity frequency within the current one hour.
- Having the clock function so that the activity data can be accurate to one hour.
- The activity data can be stored on an hourly basis, and the data of 24 hours can be stored.
  - Strong adaptability to environment: Storage temperature:  $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$ , operating humidity:  $\leq 95\%$
  - Wide range of operating temperature:  $-30^{\circ}\text{C} \sim +45^{\circ}\text{C}$ , suitable for a variety of work environments

### ◆ Installation Instructions:

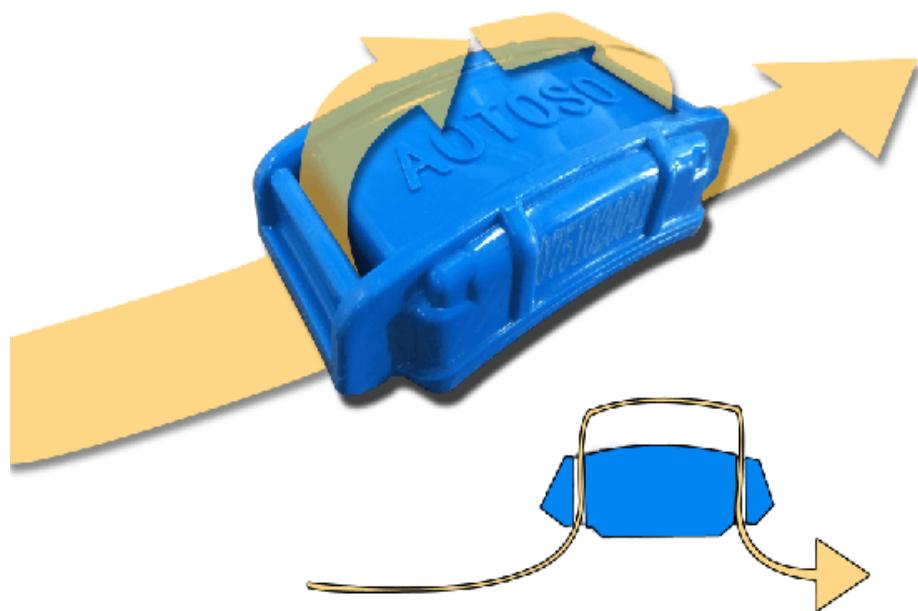
1. “日-shaped” buckles and pendants should be connected as shown in the figure below:



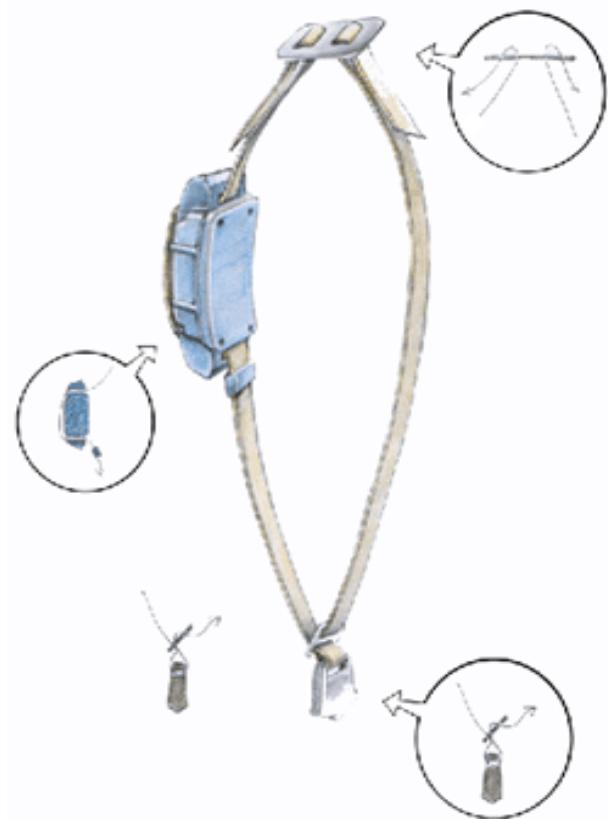
2. The UCOWS collector should be connected as shown in the figure below:



The UCOWS nylon strap should be connected as shown in the figure below:



3. “目-shaped” buckles should be connected as shown in the figure below:

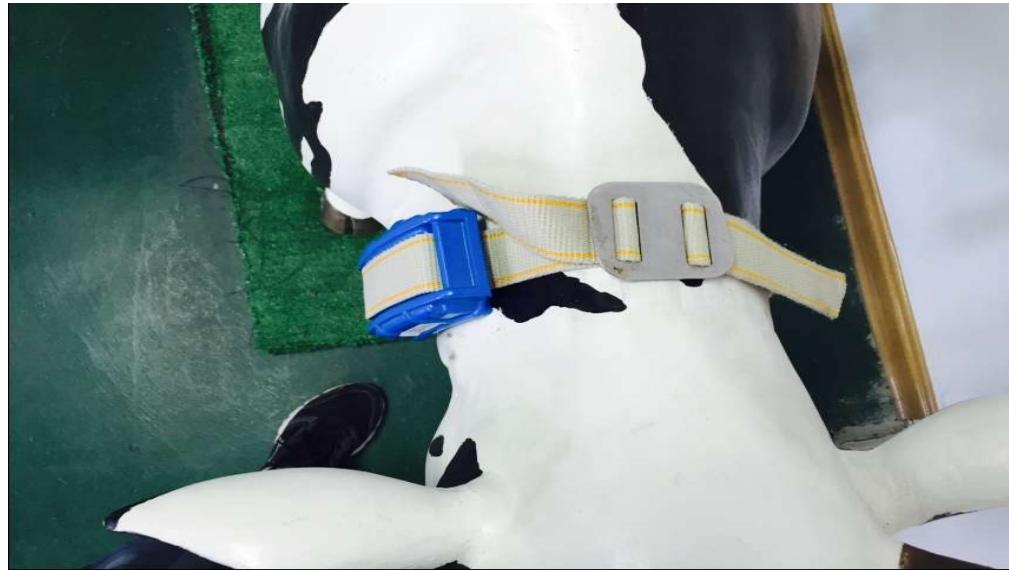


One-end of the “目-shaped” buckle is connected with one end of the pendant through a nylon strap, and then hung on a cow's neck. The appropriate tightness is adjusted according to the cow neck size and the cow shape.

Side-elevation drawing as below:



Side-view figure:



Top-view figure: Only if the UCOWS sensor is installed properly, can the normal operation of the system and the duration of usage of the UCOWS sensor can be ensured.

## ◆ Standards for Acceptance Inspection

### 1. Acceptance Inspection on Installation

To examine whether the installation is in compliance with the standards, and whether the connection between devices is normal:

- whether the collector is worn at a correct position on the left of the cow neck, not too high or too low;
- whether the chain belt and the buckle is fixed securely.

### 2. Acceptance Inspection on Performance

Whether the collector is working properly is mainly examined on the UCOWS cow oestrus monitoring platform ([www.aotoso.org](http://www.aotoso.org)).

- whether the communication process of the collector is smooth is examined by the “view collector data” list of the software platform;
- the data in the “view collector data” list are observed at the back office, and the data of the label ID, the current activity level and the 24-hour activity

level of the collector are examined while the normal communication is ensured; if such data are normal, the collector is working normally.

## ◆ Maintenance and Repair

### 1. Routine Maintenance

- To correct the position of a cow's wearing the collector;
- To use the UCOWS software to view the collector operation status;
- To timely replace the collector with abnormal data.

### 2. Repair

- To send the collector back to the supplier.

## FCC Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

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.

**◆ Safety Considerations**

The protection level should reach IP66.

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