# INKBIRD IVC-001W Inline Duct Fan with Smart Controller User Manual



Contents



**INKBIRD IVC-001W Inline Duct Fan with Smart Controller**


## Product Information

## Specifications

- **Model**: IVC-001W
- **Product Type**: Inline Duct Fan with Smart Controller

### Product Contents

- Smart Controller Unit (1)
- Sensor Probe (1)
- Machine Screws (2)
- Wood Screws (2) – for wall mount
- Inline Duct Fan Unit (1)
- Duct Clamp (2)
- Wire Tie (6)
- Cable Tie Mount (6)
- Wood Screws (6)
- Duct Fan Screw Set (6)

### Features & Specifications

- Automatic Control Mode
- Manual Control Mode
- Timer Control Mode
- Shutdown Mode
- Lock Mode
- ECO Mode

- High temperature and humidity trigger values
- Low temperature and humidity trigger values
- Temperature and humidity calibration

## Product Usage Instructions

**Automatic Control Mode Instructions**
The fan will run at the set fan speed according to the relationship between the current temperature and humidity and the trigger target temperature and humidity.

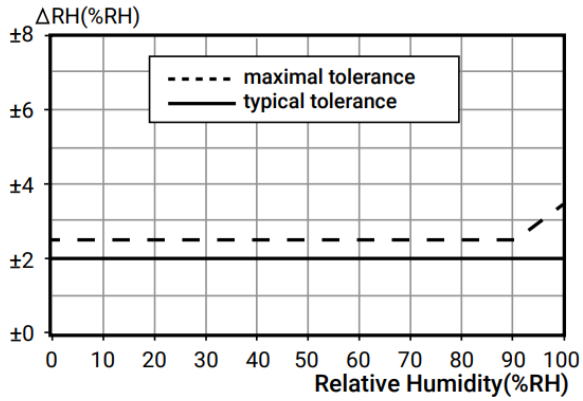
1. Press the button to select automatic control mode, in which the symbol is displayed.
2. Press and hold the button for 2 seconds to enter the setting mode, or press or button to enter the quick setting mode, in which “SETTING” is displayed. Press the button until the fan speed parameter flashes, then press the or button to adjust the fan speed to 10.
3. Press the button to select the high-temperature trigger value. “HIGH TEMP.” is displayed and the corresponding parameter flashes. Press the or button to adjust the high-temperature trigger value to 82.0.
4. Press the button to select the low-temperature trigger value. “LOW TEMP.” is displayed and the corresponding parameter flashes. Press the or button to adjust the low-temperature trigger value to 81.0.
5. Press the button to select the high-humidity trigger value. “HIGH HUMD.” is displayed and the corresponding parameter flashes. Press the or button to adjust the high-humidity trigger value to 80.0%RH.
6. Press the button to select the low-humidity trigger value. “LOW HUMD.” is displayed and the corresponding parameter flashes. Press the or button to adjust the low-humidity trigger value to 70.0%RH.
7. Press and hold the button for 2 seconds or no operation for 60 seconds (or 10 seconds in the quick setting mode) to quit the setting state and save the set parameters.

## Overview

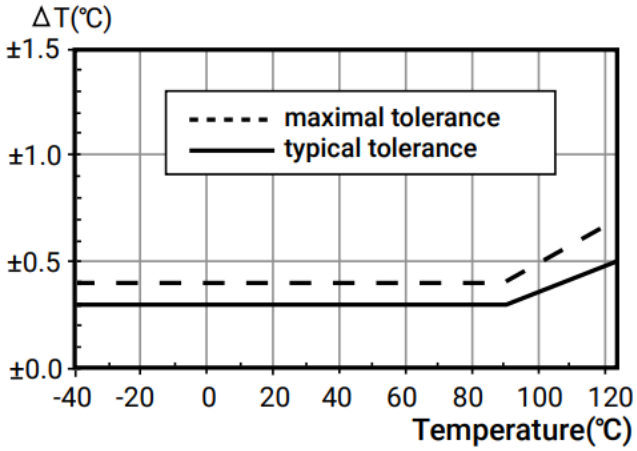
The ducted fan has a large air volume, low noise, and fast speed and has the functions of ventilation, deodorization, dehumidification, and temperature regulation. With a Wi-Fi-enabled smart controller with automatic, manual, and timer modes, we can remotely control the fan anytime, anywhere, creating a comfortable living environment for our family, plants, and pets.

## Features & Specifications

- **Product Name**: Duct Fan with Smart Controller
- **Model**: IVC-001W
- **Duct Fan Power**: 110~240Vac 50/60Hz
- **Smart Controller Power**: DC24V, 0.2A
- **Four Control Modes**: Manual/Automatic/Timer/Shutdown Mode
- **Temperature Display Accuracy**: 0.1°C/’F(<100°C/°F),1°C/°F(>=100°C/°F)
- **Humidity Display Accuracy**: 0.1%RH
- **Relative Humidity Detection Range**: 0~100%RH
- **Relative Humidity Detection Accuracy (at 25°C):** typical value ‡2%RH, as shown in the figure:




- **Temperature Detection Range:** -40°C~100°C/-40°F~212°F
- **Temperature Detection Accuracy:** typical value +0.3°C/‡0.5°F, as shown in the figure:




- **Working Temperature**: Room Temperature
- **Storage Condition:**
  - **Temperature**: 0°C~60°C/32°F~140°F
  - **Humidity**: 20~80%RH (Unfroze or condensation state)
- **Product Warranty**: 2 Years

**Product Contents**

**Smart Controller Unit**


SMART CONTROLLER (X1) | SENSOR PROBE (X1) | MACHINE SCREWS (WALL MOUNT) (X2) | WOOD SCREWS (WALL MOUNT) (X2) | WOOD SCREWS (WALL HANG) (X2)

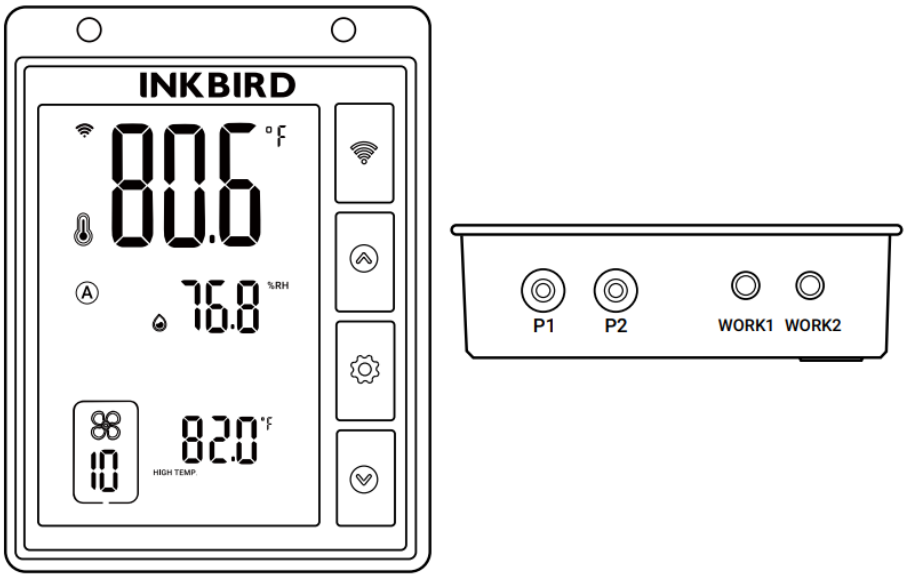
**Inline Duct Fan Unit**

INLINE DUCT FAN SYSTEM (X1) | DUCT CLAMP (X2) | WIRE TIE (X6) | CABLE TIE MOUNT (X6) | WOOD SCREWS (X6) | DUCT FAN SCREW SET (X6)

**INKBIRD App**

- Search the keyword “INKBIRD” in the App Store or Google Play, or scan the left QR code to download and install the app.
- Open the app and follow the operation instructions to register on the app and set up a connection with the device.

**Smart Controller Instructions**




- : Press and hold it for 2 seconds to reset the Wi-Fi connection; press it to toggle between SmartConfig connection mode and AP connection mode.
- : In the working state, press it to select automatic mode/manual mode/timer mode/shutdown mode. Press and hold it for 2 seconds to enter or quit the setting of each mode. In the setting state, press it to select the setting menu.
- : In the setting state, press it to increase the parameter value and hold it down for quick adjustment. In the working state, press it to enter the quick setting state of every mode.
- : In the setting state, press it to decrease the parameter value and hold it down for quick adjustment. In the working state, press it to enter the quick setting state of every mode.
- + : Press both buttons simultaneously and hold for 2 seconds to enable/disable the child lock.
- **P1 & P2:** Temperature and humidity probe ports
- **WORK1 & WORK2**: Duct fan probe ports

**Automatic Control Mode Instructions**
The fan will run at the set fan speed according to the relationship between the current temperature and humidity and the trigger target temperature and humidity.

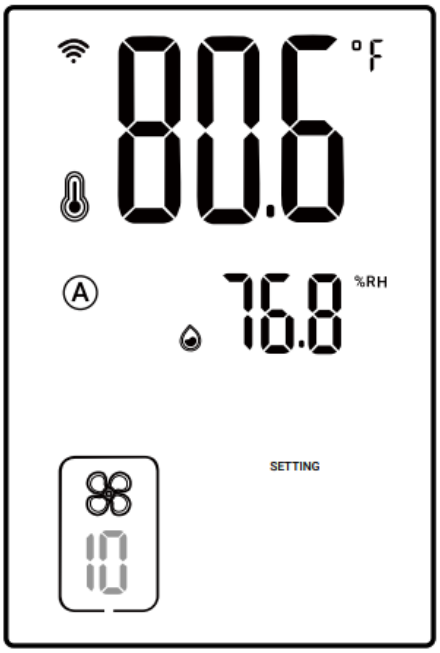
How to set the fan to run at a fan speed of 10 to keep the temperature at 81.0℉ to 82.0℉ and the humidity at 70.0%RH to 80.0% RH?

- **Step 1:**

Press the button to select automatic control mode, in which the symbol **A** is displayed.


- **Step 2:**

  Press and hold the button for 2 seconds to enter the setting mode, or press or the button to enter the quick setting mode, in which “SETTING” is displayed. Press the button until the fan speed parameter flashes, then press the or button to adjust the fan speed to 10.




- **Step 3:**

  Press the button to select the high-temperature trigger value. “HIGH TEMP.” is displayed and the corresponding parameter flashes. Press the or button to adjust the high-temperature trigger value to 82.0℉.


- **Step 4:**

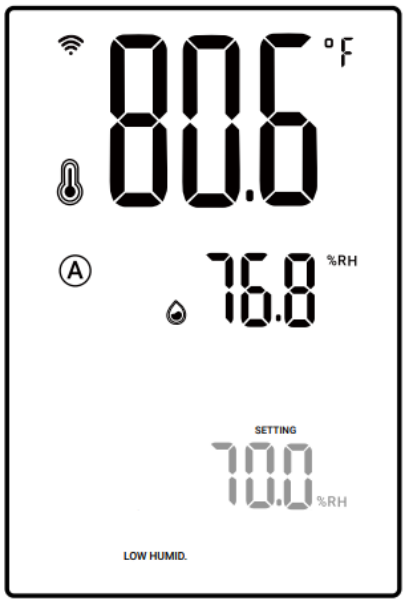
  Press the button to select the low-temperature trigger value. “LOW TEMP.” is displayed and the corresponding parameter flashes. Press the or button to adjust the low-temperature trigger value to 81.0℉.


- **Step 5:**

  Press the button to select the high-humidity trigger value. “HIGH HUMD.” is displayed and the corresponding parameter flashes. Press the or button to adjust the high-humidity trigger value to 80.0%RH.


- **Step 6:**

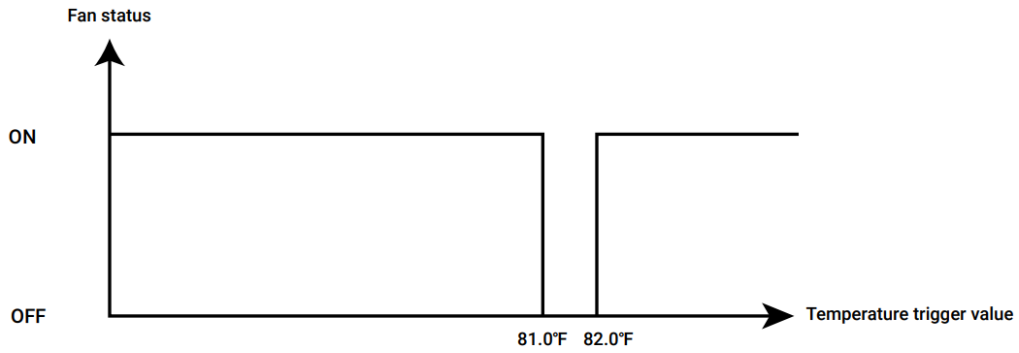
  Press the button to select the low-humidity trigger value. “LOW HUMD.” is displayed and the corresponding parameter flashes. Press the or button to adjust the low-humidity trigger value to 70.0%RH.

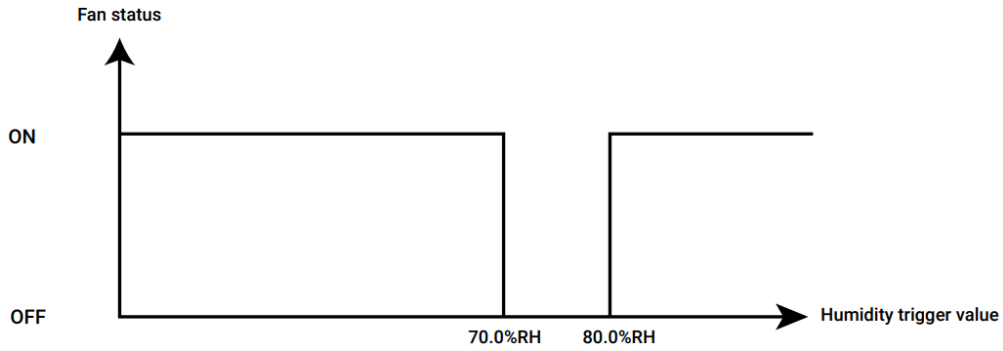



- **Step 7:**

  Press and hold the button for 2 seconds or no operation for 60 seconds (or 10 seconds in the quick setting mode) to quit the setting state and save the set parameters.

Following the above steps, the fan will run at the fan speed of 10, the temperature will be controlled at 81.0℉~82.0℉, and the humidity will be controlled at 70.0%RH~80.0%RH, as shown below:





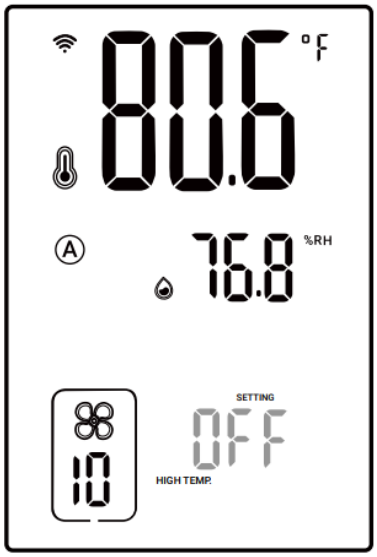

**How to disable the high-temperature trigger function?**

- **Step 1:**

  Press the button to select automatic control mode, in which the symbol **A** is displayed.


- **Step 2:**

  Press and hold the button for 2 seconds to enter the setting mode. Press the button to select the high-temperature trigger value. “HIGH TEMP.” is displayed and the corresponding parameter flashes. Press both buttons simultaneously and hold for 2 seconds to display OFF and turn off the high-temperature trigger function.




- **Step 3:**

  Press and hold the button for 2 seconds or no operation for 60 seconds to quit the setting state and save the

set parameters.

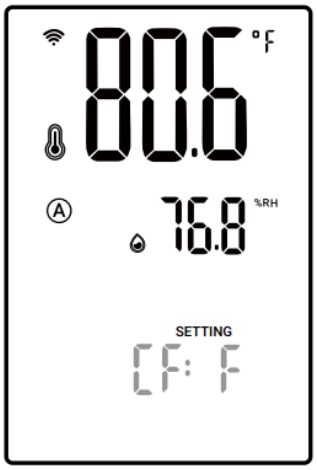
Low-temperature trigger, high-humidity trigger, and low-humidity trigger functions can be turned off by referring to the above steps. Note that at least one trigger function should remain on.

**How to set temperature unit/temperature alarm value/humidity alarm value/calibration value?**

1. **Step 1:**

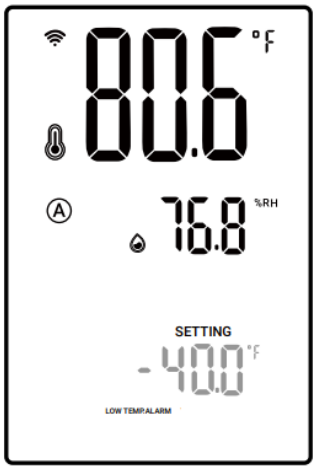
   Press and hold the seconds for 2 seconds to enter the setting mode, in which “SETTING” is displayed.
2. **Step 2:**

   Press the button to select the parameter to set and the corresponding characters flash. Press the or button to adjust the parameter.




Temperature Unit

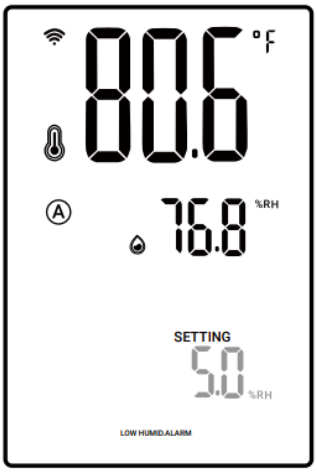

High Temperature Alarm Value




Low Temperature Alarm Value


Temperature Calibration Value

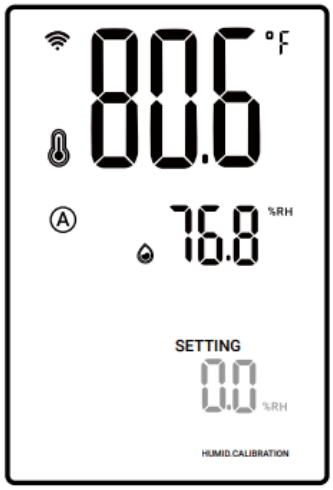

High Humidity Alarm Value




Low Humidity Alarm Value

3. **Step 3:**

   Press and hold the button for 2 seconds or no operation for 60 seconds to quit the setting state and save the set parameters.




**Humidity Calibration Value**

**Note:** When setting the high-temperature alarm value/low-temperature alarm value/high-humidity alarm value/low-humidity alarm value, press and hold the buttons simultaneously for 2 seconds to display OFF and disable the corresponding alarm function.

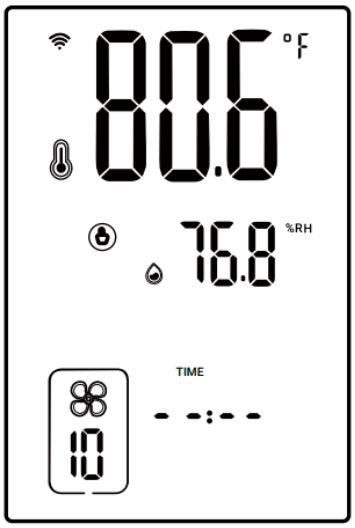
**Manual Control Mode Instructions**

The fan will continuously run at the set fan speed (from 0~10) and the running time, regardless of the current temperature and humidity. When is displayed, it means that the fan is not limited by time.

**How to set the fan to run at the set fan speed without a time limit?**
For example, the fan runs continuously at a fan speed of 8 until manually turned off.

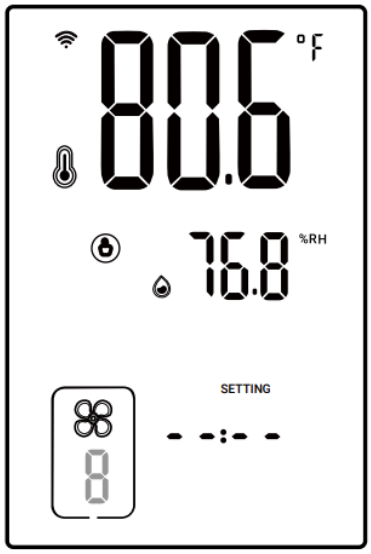
1. **Step 1:**

   Press the button to select the manual mode, in which the symbol is displayed.



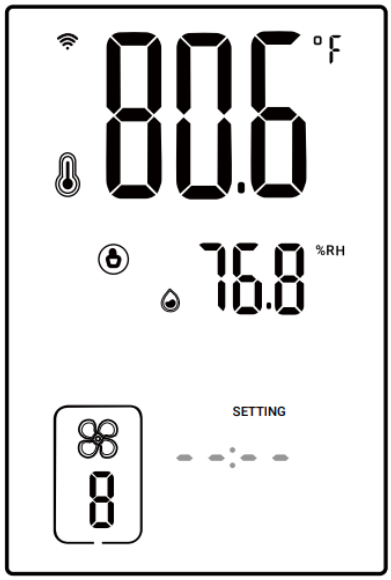

2. **Step 2:**

   Press and hold the buttons for 2 seconds to enter the setting mode, or press the or button to enter the quick setting mode, in which “SETTING” is displayed and the fan speed parameter flashes. Press the or button to adjust the fan speed to 8.




3. **Step3:**

   Press the button to select the fan run time. Press the or button to adjust the time display --:--.




4. **Step4:**

   Press and hold the button for 2 seconds or no operation for 60 seconds (or 5 seconds in the quick setting mode) to quit the setting state and save the set parameters.

Following the above steps, the fun will run continuously at a fan speed of 8 until manually turned off.

**Timer Control Mode Instructions**

The fan will run at the set fan speed according to the start time and running time of the day you choose.

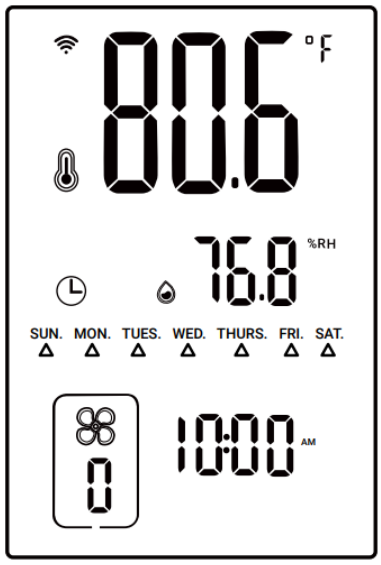
**How to set the fan to run at different speeds within different run times and at multiple start times on different days?**

For example, how can we set the fan to run on the following schedule?

| | Mon. | Tues. | Wed. | Thurs. | Fri. | Sat. |
|---|---|---|---|---|---|---|
| Seg.1 | Start at: 7:00<br>Speed: 8 Duration: 2hrs | | Start at: 6:00<br>Speed: 8 Duration: 2hrs | | Start at: 8:00 Speed:7 Duration: 1hrs | Start at: 5:00<br>Speed: 7 Duration: 2hrs |
| Seg.2 | Start at: 11:00<br>Speed: 10 Duration: 3hrs | | Start at: 10:00<br>Speed: 10 Duration: 3hrs | | Start at: 12:00<br>Speed: 10 Duration: 3hrs | Start at: 8:00<br>Speed: 10 Duration: 3hrs |
| Seg.3 | Start at: 18:00<br>Speed: 9 Duration: 2hrs | | Start at: 16:00<br>Speed: 9 Duration: 3hrs | | Start at: 17:00<br>Speed: 9 Duration: 3hrs | Start at: 12:00<br>Speed: 10 Duration: 3hrs |
| Seg.4 | | | Start at: 20:00<br>Speed: 7 Duration: 3hrs | | | Start at: 16:00<br>Speed: 10 Duration: 2hrs |
| Seg.5 | | | | | | Start at: 20:00<br>Speed: 6 Duration: 1hrs |

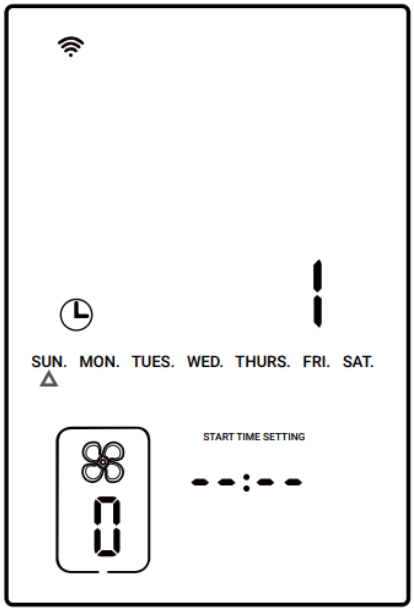
- **Step 1:**

  Press the button to select the timer mode, in which the symbol is displayed.



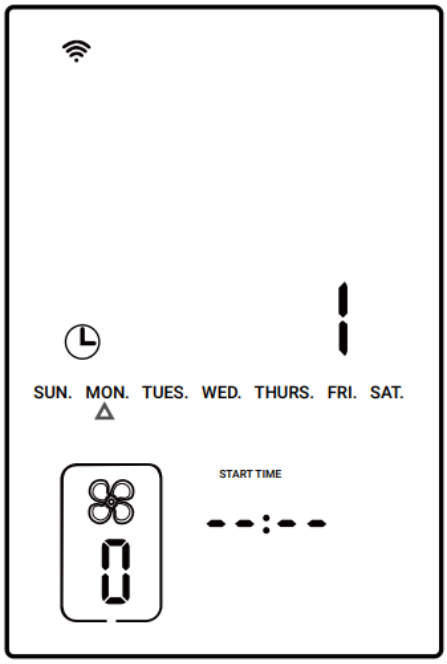

- **Step 2:**

  Press and hold the button for 2 seconds, or press the or button to enter the setting mode.



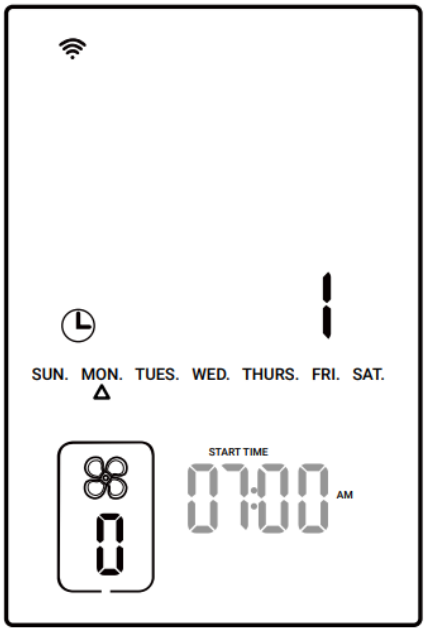

- **Step 3:**

  Press the or button to select the day to be set. Here we choose Monday as an example.



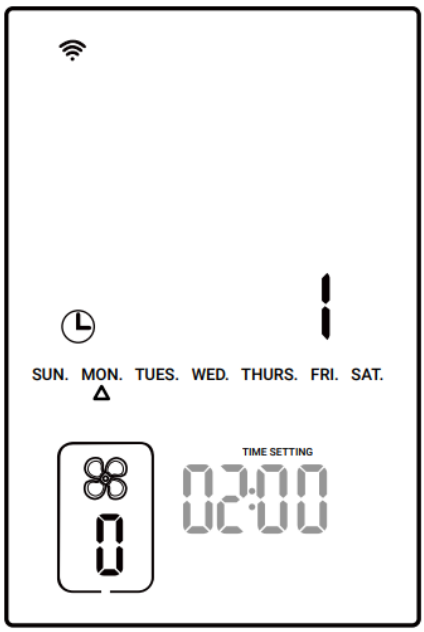

- **Step 4:**

  Press the button to enter the setting of active time segments, in which “START TIME ” is displayed. Press the or button to adjust the start time of segment 1 to 07:00.



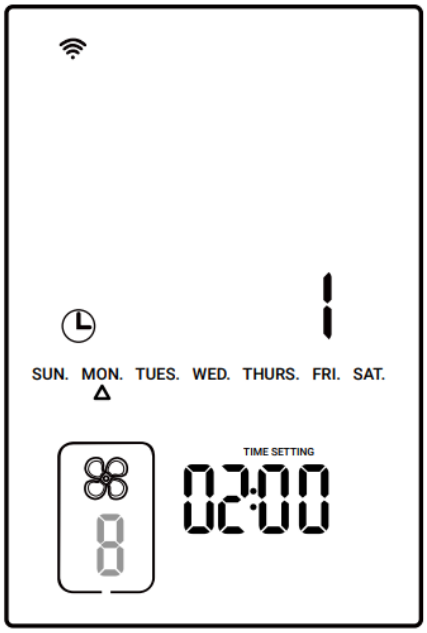

- **Step 5:**

  Press the button to set the run time of segment 1, and “TIME SETTING” is displayed. Press the or button to adjust the run time to 02:00.




- **Step 6:**

  Press the button to set the fan speed of segment 1, and the fan symbol is displayed. Press the or button to adjust the fan speed to 8.




- **Step 7:**

  Repeat steps 4 to 6, and set the start time of segment 2 to 12:00, the run time to 03:00, and the fan speed to 10; set the start time of segment 3 to 18:00, the run time to 02:00, and the fan speed to 9.
- **Step 8:**

  When the start time is displayed as--:--, press the button to return to Step 3 and set the running state for other days.
- **Step 9:**

  Repeat steps 3 to 8 to set the running state parameters for Wednesday, Friday, and Saturday.
- **Step 10:**

  Press and hold the button for 2 seconds or no operation for 60 seconds to quit the setting state and save the set parameters. The above steps can realize the daily running state of the fan in timer mode.

**Shutdown Mode**
All control functions are disabled.

Press the button to select the shutdown mode, in which all functional controls are turned off.

**Lock Mode**

In the non-setting state, press and hold the and button for 2 seconds simultaneously to turn on/off the lock function. When the lock function is on, the symbol is displayed.

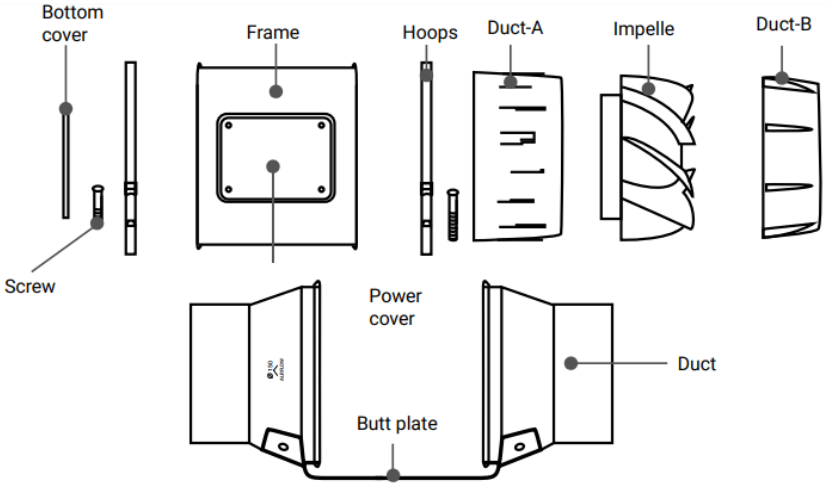
**ECO Mode**

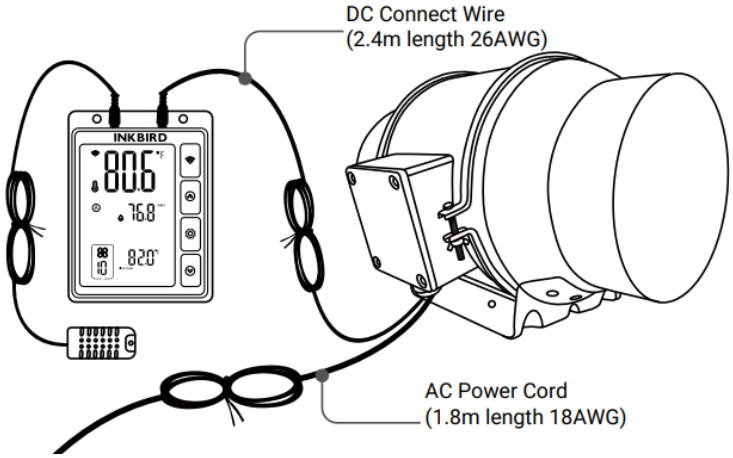
In the power-off state, press and hold the button for 2 seconds to enter the setting of backlight brightness. Press the or button to adjust the brightness percentage. After 30 seconds of no operation, the device enters ECO mode.

**Parameter Factory Setting**

After powering off, press the button, then power on the device again. All parameters in all modes will be restored to default data. Note that the buzzer will beep once to remind us that all parameters have been restored to default data.

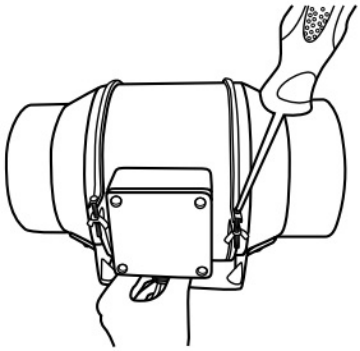
**Duct Fan Instructions**



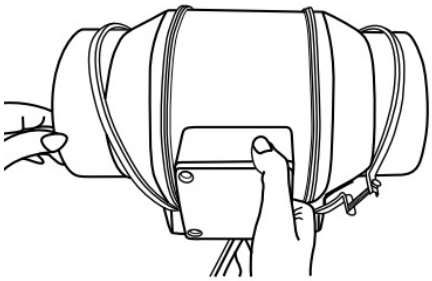




### Installation Instructions

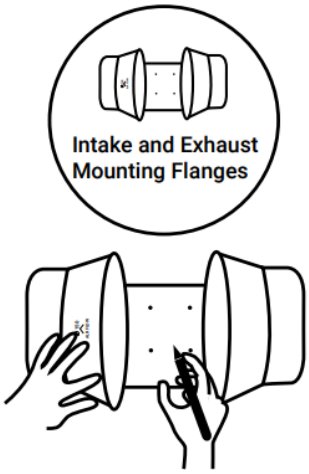
- **Step 1:**
  Unscrew the annular threaded nail of the duct fan.



- **Step 2:**
  Remove the power supply chassis from the rack.

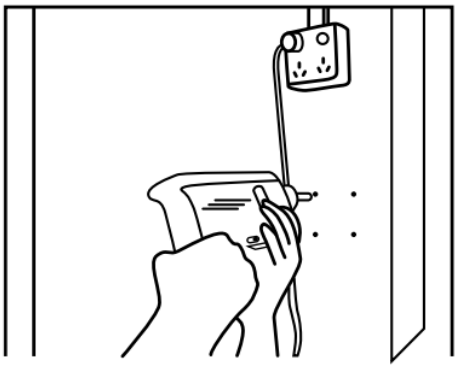


- **Step 3:**
  Use the mounting holes of the flange bracket to mark the position to be mounted. (Pay attention to the direction of intake/exhaust during installation, referring to the instructions for intake/ exhaust.)



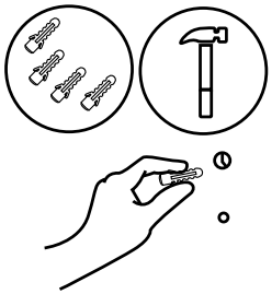

- **Step 4:**

  Drill four holes at the marked locations. Make sure the installation area is well-constructed and free of obstructions.



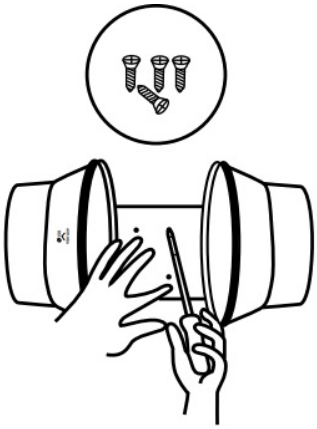
- **Step 5:**

  If you need plastic expansion tubes, insert the included 4 expansion tubes into the drilled holes and fix them in the holes with a hammer.

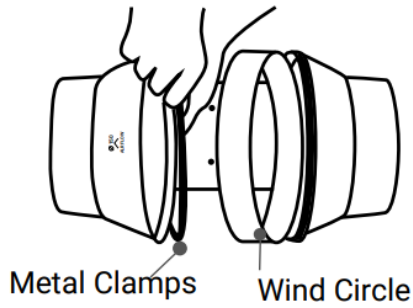


- **Step 6:**

  Align the hole of the flange bracket with the wall anchor, and use a screwdriver or drill to insert the four screws to fix the flange bracket. Make sure the airflow arrow points in the desired direction.

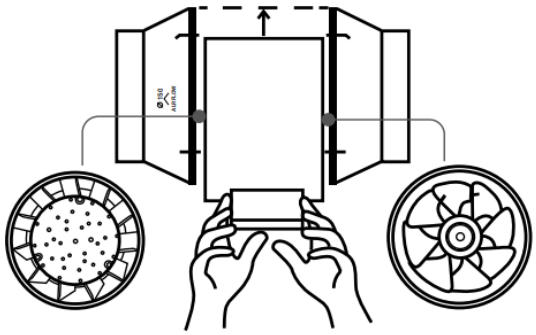


- **Step 7:**
- Put the wind circle back on the intake flange and reposition the flange on the appropriate metal clips.



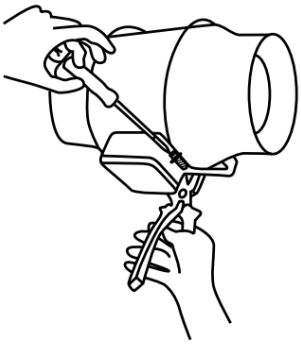

- **Step 8:**

  Move the power supply chassis back onto the flange bracket, making sure that the bulging part of the power supply chassis is installed in the direction of the flange bracket arrow. Use a Phillips screwdriver and pliers to tighten the metal clips and secure the power supply chassis.



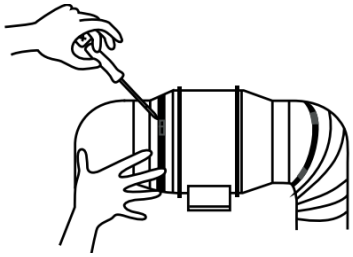
- **Step 9:**

  Put the metal ring back onto the flange and tighten the screws to fix the fan.



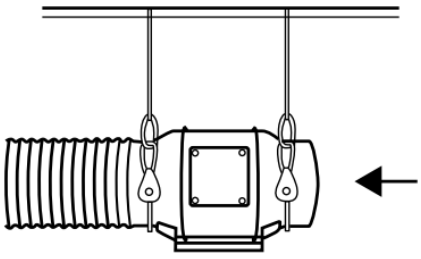
- **Step 10:**

  When installing the duct, use the included duct clamps to secure it to either end of the duct fan, making sure it is tightly sealed. Use a flat-head screwdriver to tighten the duct clamps.



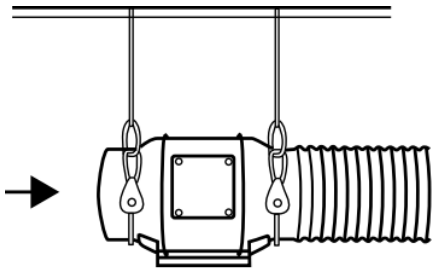
- **Step 11 A:**

  Hang Up—— If using a rope bridge (not included) for installation, wrap the rope around the flange and tighten the rope to secure the fan.



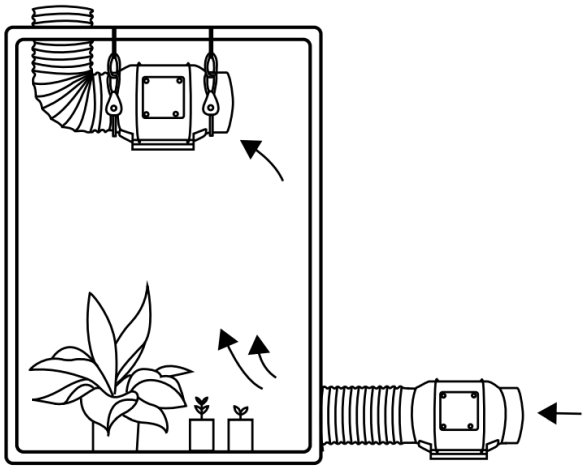
- **Step 11 B:**

  Hang Down You can also wrap the rope around the fan mounting plate to hang the fan. Tighten the rope to secure the fan and make sure the fan airflow arrow points in the desired direction.



**Intake & Exhaust**

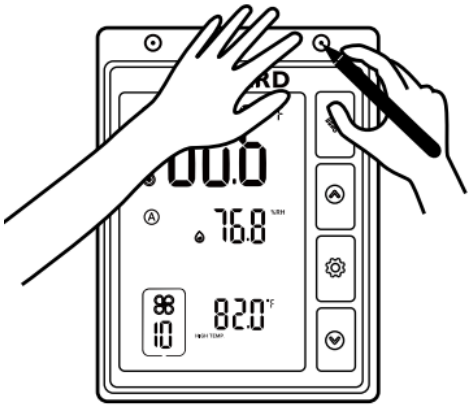
This duct fan can be used as an intake machine or exhaust machine in greenhouses and large grow tents. For optimal ventilation of the space, intake fans or openings (without fans) must be placed in the bottom corners of the growing space, and exhaust fans must be hung (as shown below) or mounted in the corresponding highest corners. Make sure the airflow arrow of the intake fan points toward the growing space and the arrow of the exhaust fan points away from the growing space.



**Controller Power Up and Setting**

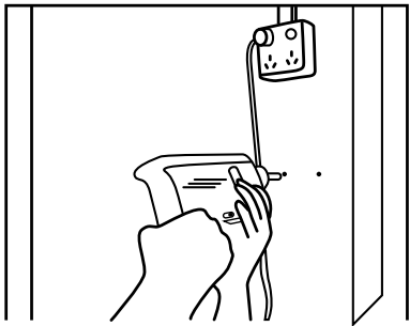
- **Step 1:**

  Mark the locations to be mounted with the mounting holes on the controller. Pay attention to the fan power cable length and the probe length.



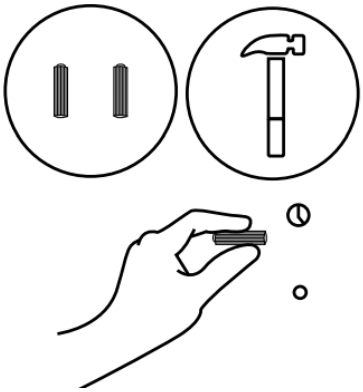

- **Step 2:**

  Drill 2 holes at the marked locations.



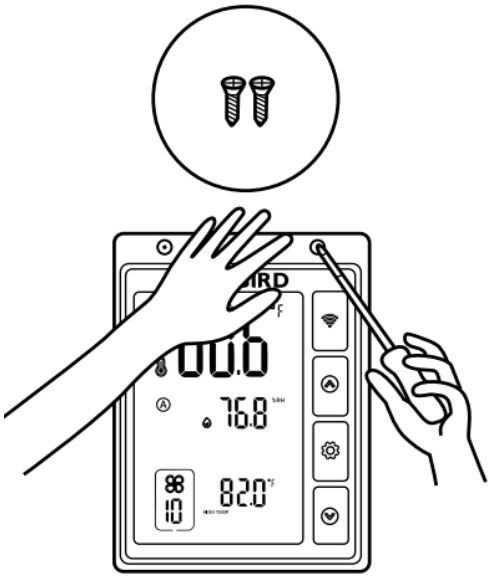
- **Step 3:**

  If you need plastic expansion tubes, insert the included 2 expansion tubes into the drilled holes and fix them in the holes with a hammer.



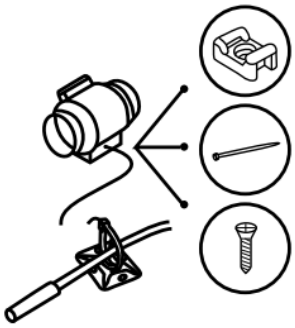
- **Step 4:**

  Align the mounting holes on the controller with the wall anchor, and insert the two screws with a screwdriver or drill.



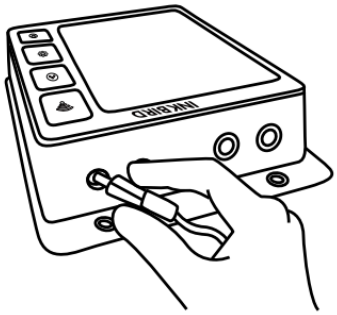
- **Step 5:**

  You can organize your cables using the included tie bracket, screws, and cable ties. Use screws to secure the cable tie to the surface. Wrap the cable tie around the rope and put it into the tie bracket.



- **Step 6:**

  Insert the probe of the duct fan into the WORK1/WORK2 port of the controller.

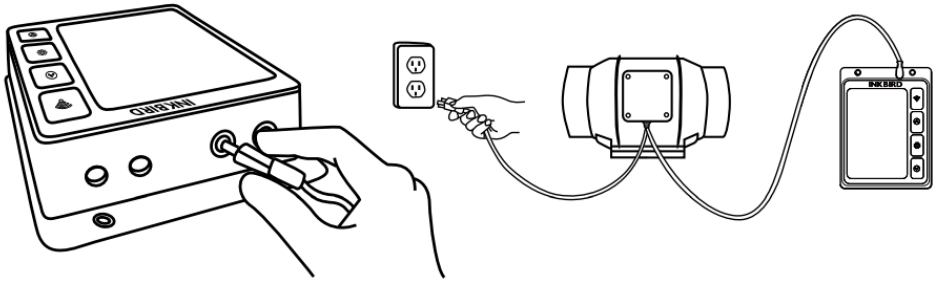


- **Step 7:**

  Insert the temperature and humidity sensor probe into the P1/P2 port of the controller. Then, place the probe near the plant in the grow tent for the most accurate reading.

- **Step 8:**

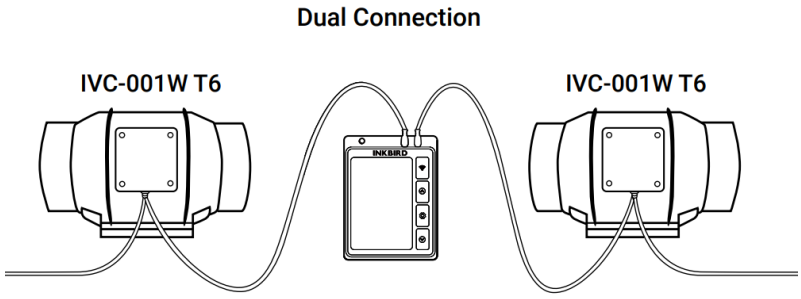
  Finally, plug the fan power cable into the power socket.



**Add More Fans**

This smart controller can control two fans simultaneously. Insert the two fans into the WORK1 and WORK 2 ports separately, as shown below:

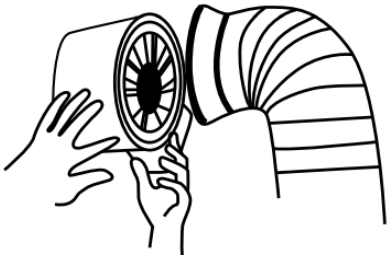
**Dual Connection**




## Cleaning & Maintenance

- **Step 1:**

  Remove the power supply chassis from the flange. (See steps 1 and 2 in the installation instructions on how to remove the power supply chassis.)



- **Step 2:**

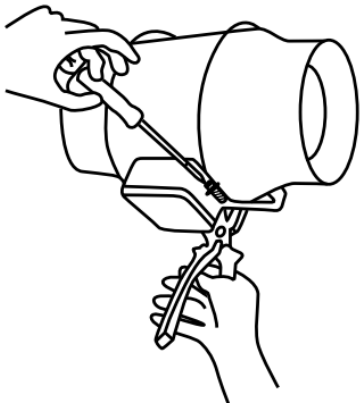
  Use a wet cloth to remove dust and debris from the wind circle and fan blades.

- **Step 3:**

  Remove dust and debris from the other side of the stator blade and clean the inner areas of the intake and exhaust flanges.

- **Step 4:**

  See steps 7 to 9 in the installation instructions to secure the power supply chassis on the flange.



**FCC Requirement**

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

**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 the receiver.
- Connect the equipment to 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.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator & your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

**Attached Table 1**: Parameter Description In Manual Mode

| Icon | Function | Setting Range | Default Setting |
|---|---|---|---|
| | Fan Speed | 0~10 | 10 |
| TIME | Fan running time | or 00:01~09:00 | means no time limit. |

**Attached Table 2:** Parameter Description In Automatic Mode

| Icon | Function | Setting Range | Default Setting |
|---|---|---|---|
| CF F | Temperature Unit | ℃ or ℉ | ℉ |
| | Fan Speed | 0~10 | 10 |
| High Temp. | High-temperature trigger value | -40℃~100℃/-40℉~212℉ or OFF (disable high-temperature trigger) | 25.0℃/77.0℉ |
| Low Temp. | Low-temperature trigger value | 40℃~100℃/-40℉~212℉ or OFF ( disable low-temperature trigger) | 20.0℃/68.0℉ |
| High Temp. Alarm | High-temperature alarm value | -40℃~100℃/-40℉~212℉ or OFF (disable high-temperature alarm) | 100℃/212℉ |

| | | | |
|---|---|---|---|
| Low Temp. Alarm | Low-temperature alarm value | -40℃~100℃/-40℉~212℉ or OFF (disable low-temperature alarm) | 40.0℃/-40.0℉ |
| Temp. Calibration | Temperature calibration value | -4.9℃~4.9℃/-9.9℉~9.9℉ | 0.0℃/0.0℉ |
| High Humid. | High-humidity trigger value | 0.0%RH~100%RH or OFF (disable high-humidity trigger) | 50.0%RH |
| Low Humid. | Low-humidity trigger value | 0.0%RH~100%RH or OFF (disable low-humidity trigger) | 45.0%RH |
| High Humid. Alarm | High-humidity alarm value | 0.0%RH~100%RH or OFF (disable high-humidity alarm) | 99.0%RH |
| Low Humid. Alarm | Low-humidity alarm value | 0.0%RH~100%RH or OFF (disable low-humidity alarm) | 5.0%RH |
| Humid. Calibration | Humidity calibration value | -20.0%RH~20.0%RH | 0.0%RH |

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**MADE IN CHINA**
DESIGNED BY INKBIRD

## FAQ’s

How many fan speed levels are available in automatic control mode?

The fan speed can be adjusted from 1 to 10 in automatic control mode.

Can I calibrate the temperature and humidity readings?

Yes, you can calibrate the temperature and humidity values using the calibration feature in the settings.

## Documents / Resources

| | |
|---|---|
|  | **INKBIRD IVC-001W Inline Duct Fan with Smart Controller** [pdf] User Manual<br>IVC-001W Inline Duct Fan with Smart Controller, IVC-001W, Inline Duct Fan with Smart Controller, Duct Fan with Smart Controller, Fan with Smart Controller, Smart Controller, Controller |

## References

- **User Manual**