

# REGISTER BOOSTER FAN USER MANUAL








<Picture Only For Reference>




**READ & SAVE THESE INSTRUCTIONS**









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## Safety Precautions

 <b>WARNING</b>	Improper operation may cause personal injury. Improper operation may cause damage to the machine. Improper operation may cause others to object damage.
	The symbol indicates that the user should pay high attention to and pay attention to the drawing shows the situation to be noted, and the left figure shows "Be careful of electric shock"
	Disconnect the fan when moving from one location to another.
	Do not use a power supply that does not meet the rated voltage The use of non-compliant power supplies can cause fire or electric shock.
	This appliance can be used by children aged 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance.Children shall only make cleaning and user maintenance with supervision.

	Children should be supervised to ensure they do not play with the appliance
	If the machine emits smoke, odor, motor noise, and other abnormal conditions. Please do not use it. It may cause fire or electric shock.
	Do not disassemble, repair or rectify the machine during use. Doing so may result in fire or electric shock and personal injury.

	<b>BE CAREFUL</b>
	DO NOT use the fan in a window. Rain may create an electrical hazard.
	Do not damage or arbitrarily change the original power cord, and do not bend, forcibly pull, bind or press the power cord under heavy objects. This will damage the power cord, causing an electric leakage fire or shock.
	If the machine is not used for a long time, please unplug the power cord from the socket
	If the power cord is damaged, contact your local service center or a qualified electrician to install an appropriate replacement cord to prevent any injury or damage
	Never insert fingers, pencils, or any other object through the guard when the fans is running.
	The plug should be unplugged when the power cord is unplugged from the socket. Do not pull the power cord to forcibly pull the wire, which may cause damage to the wire and lead to leakage or electric shock
	Please disconnect the power supply when cleaning.



### **FCC Warning Statement:**

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.

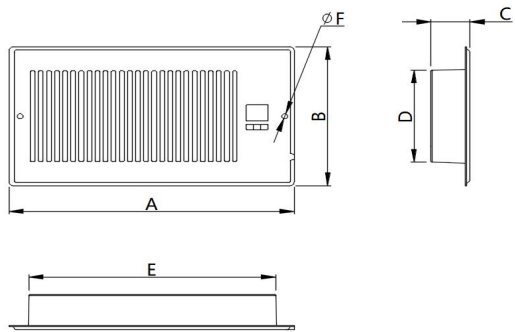
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

## Technical Parameter

Model	BT-DF0410RCA(B)	BT-DF0412RCA(B)	BT-DF0610RCA(B)	BT-DF0612RCA(B)
Voltage	120 V	120 V	120 V	120 V
Frequency	60 Hz	60 Hz	60 Hz	60 Hz
Power	6 W	6 W	6 W	12 W
Power Cord Length	12 ft	12 ft	12 ft	12 ft
Working Ambient Temperature	-10~ 45 °C	-10~ 45 °C	-10~ 45 °C	-10~ 45 °C
Fits Register Sizes	4 X 10 in	4 X 12 in	6 X 10 in	6 X 12 in
Mounting Positions	Horizontal or Vertical			

## Mechanical Dimensions



MODEL	A (cm)	B (cm)	C (cm)	D (cm)	E (cm)	ØF (cm)
BT-DF0410RCA(B)	29.3	14.1	5.0	10	24.7	0.4
BT-DF0412RCA(B)	35	14.1	5.0	10	24.7	0.4
BT-DF0610RCA(B)	29.3	19	5.0	10	24.7	0.4
BT-DF0612RCA(B)	35	19	5.0	12.8	30.7	0.4

## Product Description

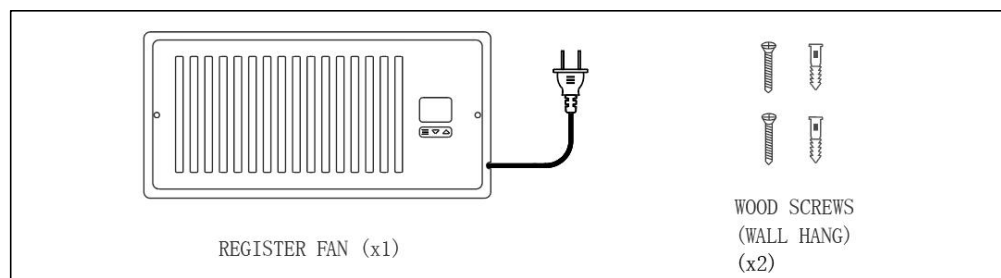
A quiet fan system is designed to be mounted onto wall or floor registers to boost airflow. Increasing warm and cool air from weak registers can increase room comfort and reduce energy costs. Features a LED display with smart thermostat control and customizable fan speeds. Features PWM control fans that are designed for high static pressure applications such as ducting. Includes hardware and power supply needed to secure the unit onto an existing register opening and power it through an outlet.

The product is designed with outstanding performance in quality and reliability. High precision ball bearing system and rotor blade provides superb reliability and achieve lower acoustic noise under high airflow and air pressure condition.

Programmable LED controller with heating and cooling thermostat, and automated fan speeds. Ultra quiet: Dual-ball bearing fans use a PWM control system that is engineered to minimize noise while delivering high airflow.

The product designed for improving wall and floor register airflow from HVAC systems.

## PRODUCT CONTENTS



## PWM Control Fans

The system utilizes high-performance DC-motors that are controlled using PWM( Pulse Width Modulation) . This technology enables the dual fans to be able to run smoothly at extremely low RPM speeds without generating motor or electromagnetic noises. In addition, the fans feature a blade design with a high static pressure rating, specialized for delivering airflow even in applications where air movement is being restricted such as through duct work. The motor houses allow the fan system to be mounted horizontally or vertically.

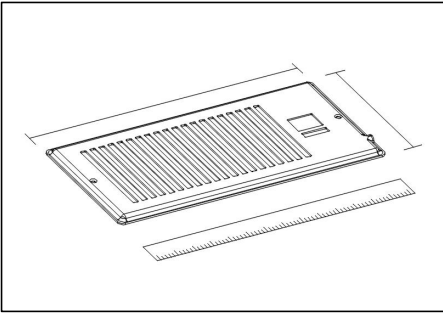
## Installation

### STEP1 :

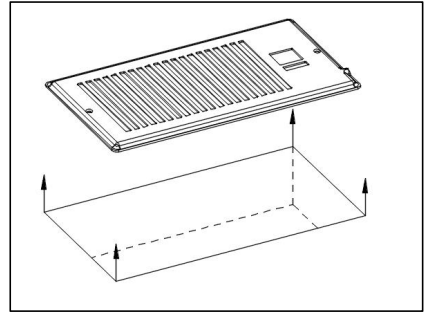
Measure your fan vent to make sure this model will fit. Standard reference mechanical dimensions. See the ( Fig.1.)

### STEP 2:

Remove your fan grille. You may need to use a Philips screwdriver to remove the mounting screws. See the (Fig.2.)



**Fig.1**



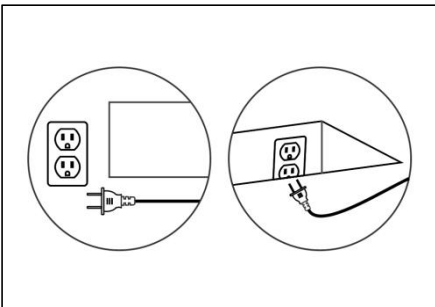
**Fig.2**

### STEP 3:

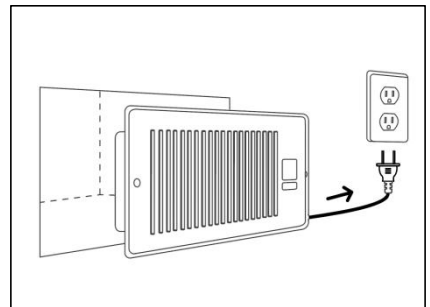
Insert two-pin plug into an outlet. This can be next to your register or inside your register. See the (Fig.3.)

### STEP 4:

If you are power the register fan with an external outlet, Keep the power cord in the same direction as the external power outlet. See the (Fig.4.)



**Fig.3**



**Fig.4**

**STEP 5:**

Check the display panel to see if it is lit and shows a number reading. See the (Fig.5.)



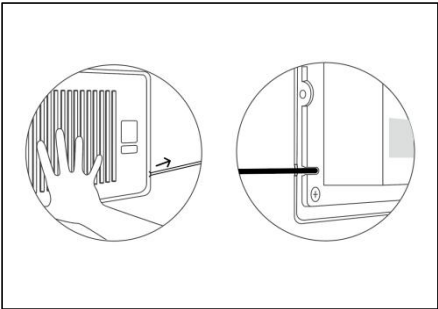
**Fig.5.**

**STEP 6:**

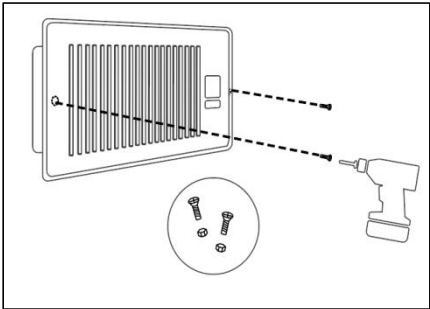
Position the register fan to be mounted. If the outlet is external. Ensure the cord runs through the gap between the wall and mounting plate. See the (Fig6.)

**STEP 7:**

Drill your existing screws into the mounting holes to secure the register fan. If needed, use the screws included with your register fan. If the screw holes do not align, you may need to drill new holes into your wall. See the (Fig.7.)



**Fig.6**

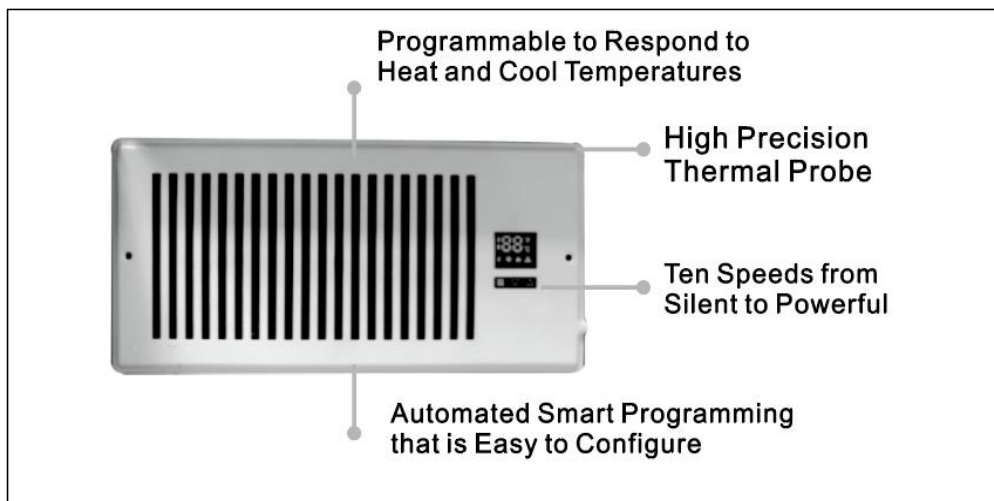


**Fig.7**



## Intelligent Programming

The controller on each unit features active thermal monitoring that can trigger fans to run for both cooling and heating temperatures you have set, as well as automatically adjust fan speeds to respond to varying temperatures. The controller can also be set to run continuously at speeds manually.



## Programming Guide

This in-depth guide will show you how to program the register booster fan, featuring cooling and heating triggers that enhance airflow to improve your home comfort. When programming your fan, it's important to note that the temperature setting is the activation temperature. That is, it is NOT the temperature you want your room to be; it triggers based on the airflow temperature coming through your vents. The register vent booster fan does not adjust according to your comfort level, nor does it adjust your central AC or heater setting. Here is a rundown of how the product works:

1. Your AC/ heater is on your preferred temperature setting.
2. Air blows through your duct, by the fan's probe, and out your registration.
3. The probe reads the airflow temperature, activating the fan when a trigger is tripped.
4. The register booster fan exhausts air from your duct to enhance AC/ heater output.
5. will turn off when the probe detects a higher temperature than the cooling trigger( lower temp. than the heating trigger).

We recommend establishing the two triggers one at a time to avoid confusion. When both triggers

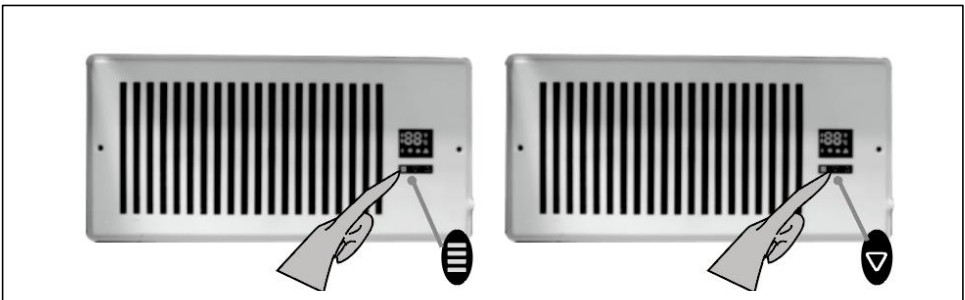
are active, the vent booster fan can be activated by airflow in temperatures not meant for your intended trigger. For example, 67F may turn on the fan via cooling trigger when you are just turning on your heater.

If you are using your air conditioner, turn off the heating trigger; if using your heater, turn off the a cooling trigger.

## How To Program

Follow these steps to calibrate your AC vent booster cooling trigger (skip to heater):

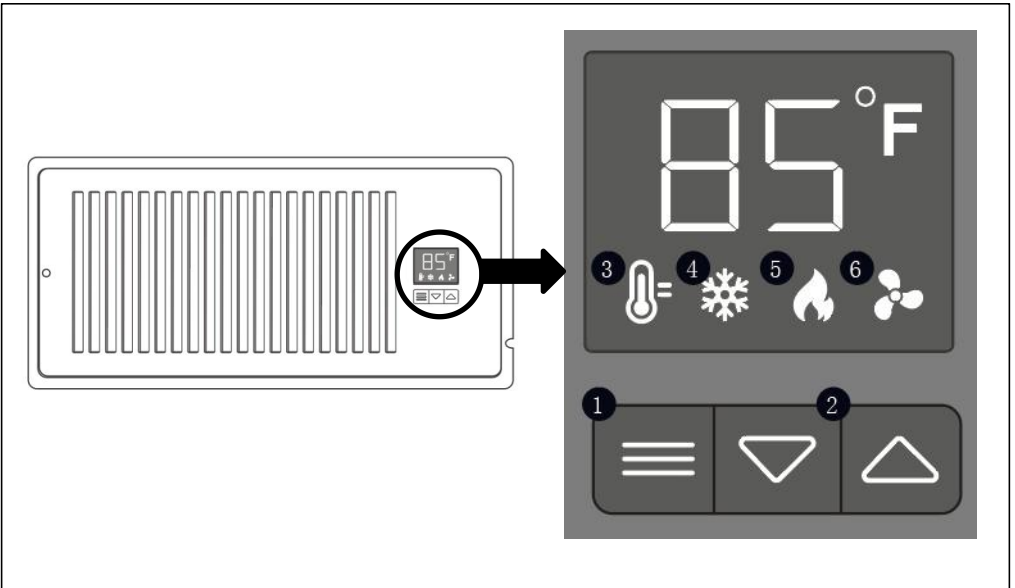
1. Turn on your air conditioner.
2. Set it to a temperature you regularly use.
3. Let it run for a few minutes to let the fan system read a consistent temperature.
4. Press the mode button, then press the "UP Button" Button and "DOWN Button" meantime, could switch the temperature unit between degrees Celsius( C) and degrees Fahrenheit(F)
5. Press the mode button to navigate to the cooling trigger(snow- flake symbol).
6. Set the cooling trigger at or above the stabilized temperature indicated by the temperature display mode.



To calibrate the air vent booster fan's heating trigger:

1. Turn on your heater.
2. Set it to a temperature you regularly use.
3. Let it run for a few minutes to let the fan read a consistent temperature
4. Press the mode button to navigate to the heating trigger( fire symbol).
5. Set the heating trigger at or below the stabilized temperature indicated by the temperature display mode.
6. Press the mode button to speed control mode( blade symbol) then press the UP " DOWN fans speed could be adjusted manually from 0 to 10.

## How To Use



**Fig.8.**

### Using The Control Panel (See the Fig.8.)

#### 1. Mode Button

Cycles through the unit's modes: temperature display, cooling trigger, heat trigger, and fan speed. Press the key "≡" cyclely, could change operating mode from to Heating Trigger mode, Cooling Trigger mode, Fan Speed mode. **After connecting to the power supply, press the "≡" key will activate the fan.** In any mode, pressing and holding the "≡" key for 5 seconds will shut down the fan.

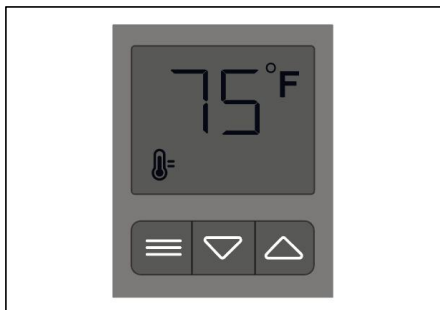
#### 2. Up/Down Button

Changes the temperature setting in the cooling trigger, the heating trigger, and the fan speed. under "Heating Trigger" or "Cooling Trigger" mode, set the operating temperature range. under "Fan Speed" Mode, set fan speed from "0" to "10".

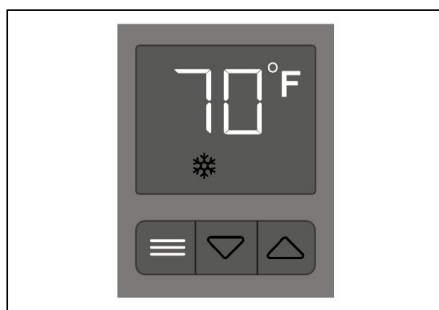
### 3. Temperature Display

Displays the current temperature that is measured by the probe. Used as the default display.

This mode displays the airflow temperature measured by the probe. While on this display mode, the cooling and heating triggers, as well as the max fan speed setting, are still active unless you disable them. See the (Fig.9.)



**Fig.9**



**Fig.10.**

### 4. Cooling Trigger

Allows you to set a temperature trigger for the fans to run when your air conditioner system on.

Use this mode to set the temperature trigger for your air conditioner. Please note you are NOT setting your desired temperature.

In this mode, the fans will run if the probe temperature meets or falls below the trigger's cold temperature setting. It will not run if the probe temperature is above the trigger's cold temperature setting. Press the up or down buttons to set the cooling trigger temperature. To calibrate your register booster fans, turn on your AC and wait for a few minutes until the probe temperature stabilizes. Set your cooling trigger to this number or higher. See the (Fig.10.)

We recommend disabling the cooling trigger when not using your AC to avoid confusion. We recommend returning to the temperature display mode after adjusting your cooling trigger.

### 5. Heating Trigger

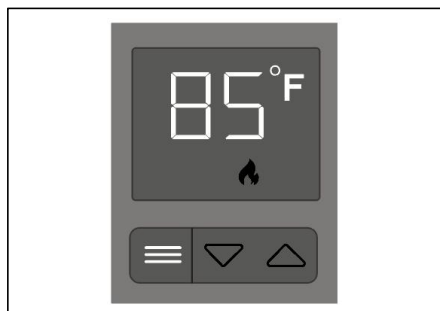
It allows you to set a temperature trigger for the fans to run when your central heating system is on.

Use this mode to set the temperature trigger for your heater. Please note you are NOT setting your desired temperature.

In this mode, the fans will run if the probe temperature meets or rises above the trigger's hot temperature

setting. It will not run if the probe temperature is below the trigger's hot temperature setting. Press the up or down buttons to set the heating trigger temperature. To calibrate your register booster fans, turn on your heater and wait for a few minutes until the probe temperature stabilizes. Set your heating trigger to this number or lower. See the (Fig.11.)

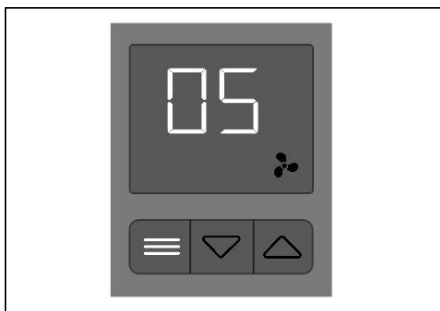
To avoid confusion, we recommend disabling the heating trigger when not using your heater. We recommend returning to the temperature display mode once you adjust your heating trigger.



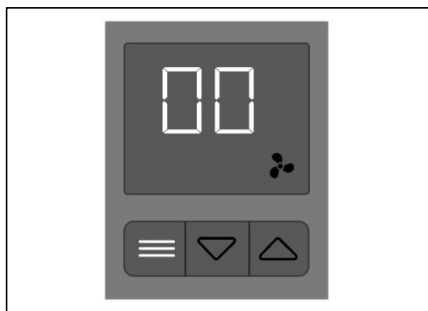
**Fig.11**

## 6. Fan Speed

Sets the fans maximum running speed when the cooling or heating triggers are tripped to run. This mode allows you to set a maximum fan speed in which they will actively run until you leave it. Pressing up or down will change the fan speed and determine the level of airflow boosting. See the (Fig.12.) Pressing up or down until the fan speed is 0, and the fan will stop running. See the (Fig.13.) Remember, the faster the fans spin, the louder they will be.



**Fig.12**

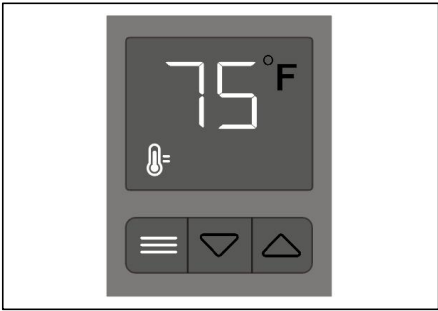


**Fig.13**

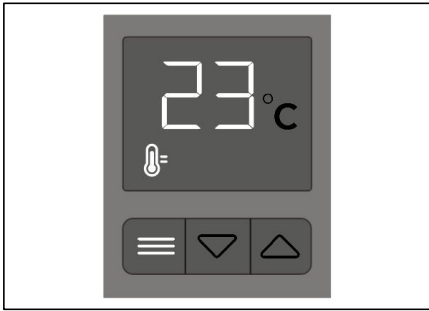
## 7. Fahrenheit Or Celsius

To change the temperature scale between Fahrenheit and Celsius, hold the up and down buttons

simultaneously until the letters change. All digits displayed will be automatically converted to the designated scale.(Fig.14. & Fig.15.)



**Fig.14.**

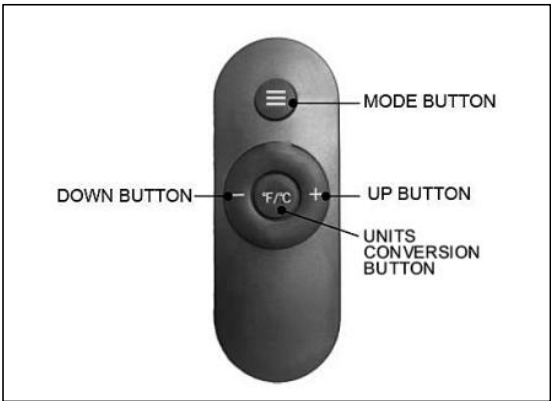


**Fig.15.**

### 8. Using The Remote Control

See the button functions as they appear on the remote control in: (Fig.16.)

**MATCH CODE:** After connecting to the power supply, press the "≡" key on the panel for 5 seconds to turn off the fan, then, press and hold the "△" key on the panel until the screen start flashing. then press and hold the mode button ("≡") at the top of the remote control to match the code. After the code is matched, the screen displays normally and the remote control can operate normally.



**Fig.16**

Note: Radio frequency: 433.97MHz

1. **Mode Button:** Switch mode key of panel key "≡" corresponding to switch mode key. In any time, press and hold the mode button ( "≡" ) for 5 seconds. The fan will turn off.
2. **Down Button:** The remote control "-" corresponds to the panel key's second key "-".
3. **Up Button:** The "+" on the remote control corresponds to the third key "+" on the panel key.
4. **Units Conversion Button:** The middle key of the remote control corresponds to the "° C" and "° F" switching keys, which correspond to the function of pressing "-" and "+" simultaneously on the panel key. (Note that switching between "° C" and "° F" is to press this key to switch when there is a temperature display. Refer to How To Use 7. )

## FAQ

Q : Will I be able to mount this fan on my ceiling?

A : We do not recommend mounting the fan on your ceiling for safety reasons.

Q : Can I mount this fan on a baseboard-style register?

A : No. Because of the tilted design, the fan will not have the clearance to be properly mounted.

Q : My register is bigger than my fan's rear insert. How can I fit this fan onto my register?

A : We can only recommend using the appropriately sized fan fan for your register.

Q : Does this register booster fan have fittings to use a filter with?

A : This product is not specifically designed to be used with filters.

Q : Can I reverse this fan's airflow?

A : The fan's boosted airflow cannot be reversed, nor can the fans be flipped.

Q : What temperature is the register booster fan detecting?

A : The fan's backside probe reads the airflow temperature of your register vent. Please note this temperature may vary from your home thermostat's reading.

Q : My register booster fan is too loud. How do I decrease the fan noise?

A : To minimize the noise from the fan, decrease the maximum fan speed. Refer to FAN SPEED.

Q : My fan constantly runs when I don't need it to. How do I turn it off?

A : Disable the trigger you are not using by pressing up or down until the fan speed is 0, and the fan will stop running.