VENTILATION FAN / LED LIGHT

Installation and Operating Instructions

MODELS 150F/150LEDNL/150LED-ADJ/150DS

READ AND SAVE THESE INSTRUCTIONS

GENERAL SAFETY INFORMATION

1. Make sure that the electric service supply voltage is AC 120V, 60Hz.
2. Follow all local electrical and safety codes, as well as the National Electrical Code (NEC) and the Occupational Safety and Health Act (OSH Act).
3. Always disconnect the power source before working on or near the ventilating fan, motor or junction box.
4. Protect the power cord from sharp edges, oil, grease, hot surfaces, chemicals or other objects.
5. Do not kink the power cord.
6. Do not install the unit where ducts are configured as shown in Fig.A.
7. Provide suction parts with proper ventilation.
8. This unit is UL Listed for use over a bathtub or shower when installed in a GFCI protected branch circuit.

WARNING

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

1. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.
2. Before servicing or cleaning the unit, switch the power off at the service panel and lock the service disconnecting means to prevent the power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.
3. Installation work and electrical wiring must be done by a qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
4. Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent backdrafting. Follow the heating equipment manufacturer's guideline and safety standards such as those published by the National Fire Protection Association (NFPA), and the American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE) and local code authorities.
5. When cutting or drilling into the wall or ceiling, do not damage electrical wiring and other hidden utilities.
6. Ducted ventilating fans must always be vented to the outdoors.
7. If this unit is to be installed over a tub or shower, it must be marked as appropriate for the application and be connected to a GFCI (Ground Fault Circuit Interrupter) – protected branch circuit.
8. Do not use this unit with any other solid-state control device. Solid-state control device may cause harmonic distortion, which can cause a motor humming noise.
   (Avertissement: ne convient pas à des régulateurs de vitesse à semi-conducteurs).
9. NEVER place a switch where it can be reached from a tub or shower.
10. Not to be installed in a ceiling thermally insulated to a value greater than R50. (This is required for installation in Canada only).
11. Do not open/disassemble LED light engine.

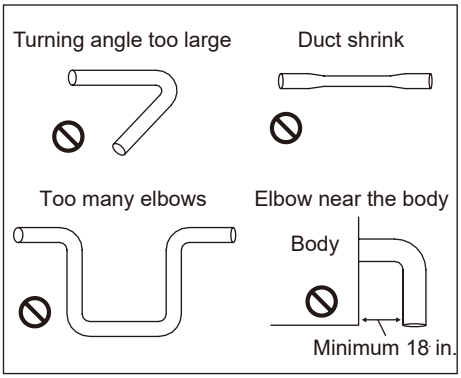


Fig. A

CAUTION

1. For general ventilating use only. Do Not Use To Exhaust Hazardous Or Explosive Materials And Vapors.
2. Not for use in cooking areas. (Fig.B)
3. This product must properly connect to the grounding conductor of the supply circuit.
4. To reduce the risk of injury to persons, install the fan at least 8.2 feet (2.5m) above the floor.

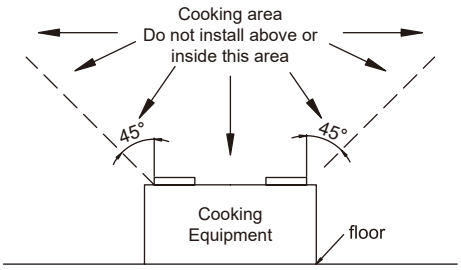


Fig. B

PREPARATION

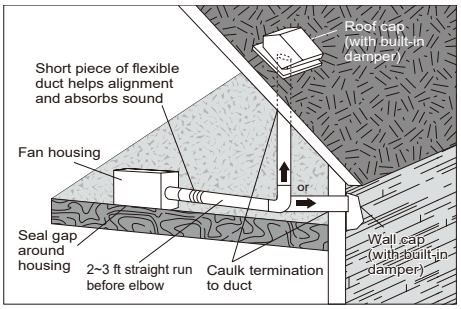
Tools Required for Assembly (not included): Hammer, Flathead Screwdriver, Wire Nuts, Nails, Duct Tape, Phillips Head Screwdriver, Utility Knife
Helpful Tools (not included): Electric Drill, Drill Bits

WARNING: Turn off electricity at breaker box before beginning installation.

- Carefully remove unit from carton.
- Check area above installation location to be sure that wiring can run to the planned location and that duct work can be run. Make sure the area is sufficient for proper ventilation.
- Inspect duct work and wiring before proceeding with installation.
- Before installation, provide inspection and future maintenance access at a location that will not interfere with installation work.
- You may need the help of a second person to install this fan: one person on the attic side and one on the room side.

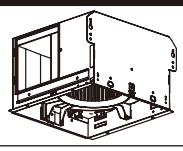
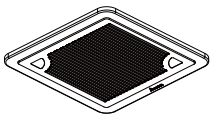
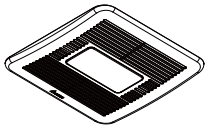
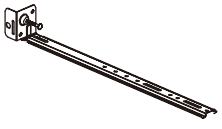
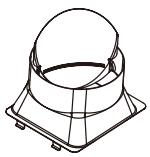
Note: Installations may vary depending on how the previous bath fan was installed. Supplies necessary for the installation of your bath fan are not all included. However, most are available at your local home improvement or hardware store.

Proper insulation around the fan to minimize building heat loss and gain. 6 in. circular duct is recommended for installation. The ducting from this fan to the outside of building has a strong effect on air flow, noise and energy use of the fan. Use the shortest, straightest duct routing possible for best performance, and avoid installing the fan with smaller ducts than recommended. Insulation around the ducts can reduce energy loss and inhibit mold growth. Fans installed with existing ducts may not achieve their rated air flow.



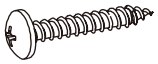
- The fan will operate most efficiently when located where the shortest possible duct run and minimum number of elbows will be needed.
- Use a roof cap or wall cap that has a built-in damper to reduce backdrafts.
- External timer can be used in conjunction with single speed mode only, please contact Delta Breez customer service and consult with a licensed electrician for compatibility.
- External dimmer can be used in conjunction with LED light model, please contact Delta Breez customer service and consult with a licensed electrician for compatibility.

PACKAGE CONTENTS

PART NAME	APPEARANCE	QTY
Fan Body		1
Grille	150F / 150DS 	1
Grille	150LEDNL / 150LED-ADJ 	1
Hanger Bar Ⅰ 13"(318.5mm)		2
Hanger Bar Ⅱ 13"(318.5mm)		2
Duct Connector (6")		1

MFG MODELS: VFB150E6A1 / VFB150E6LED1 / VFB150E6LED1-A / VFB150E6D1

HARDWARE CONTENTS
(Images are to scale)

Ⓐ  × 5

Tapping Screw (ø 4 x 25mm)

Ⓑ  × 5

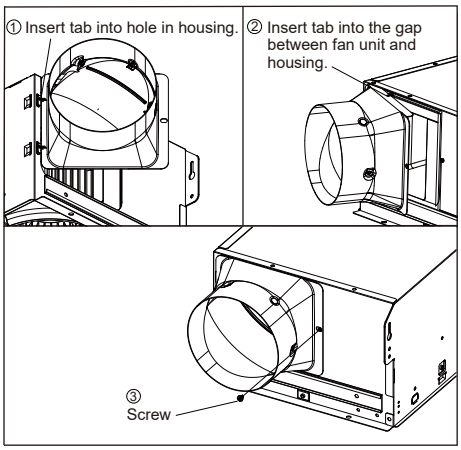
Screw (#8-32 x 5/16 in.)

ASSEMBLY INSTRUCTIONS

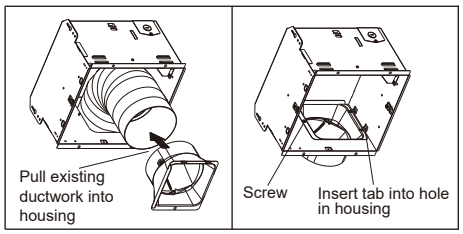
Attach duct connector

Note: Remove the tape from the damper before installation.

1. Attach the duct connector from outside, and secure by using screw (#8-32 x 5/16 in.).

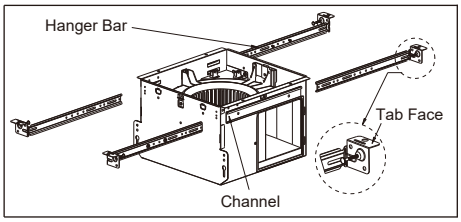


2. Remove the motor assembly, attach the duct connector from the housing can inside, and secure by using screw (#8-32 x 5/16 in.).
   Insert and secure motor assembly.

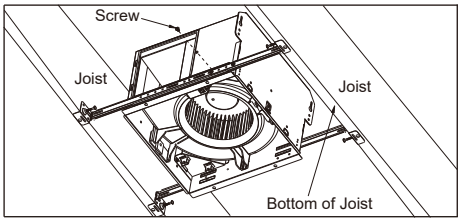


Install the housing (I)-using hanger bars

1. Sliding hanger bars are available to allow for positioning of the housing anywhere between joists up to a span of 24 in..
2. Insert the hanger bars into the channels on the housing. Make sure the tabs face up as shown.



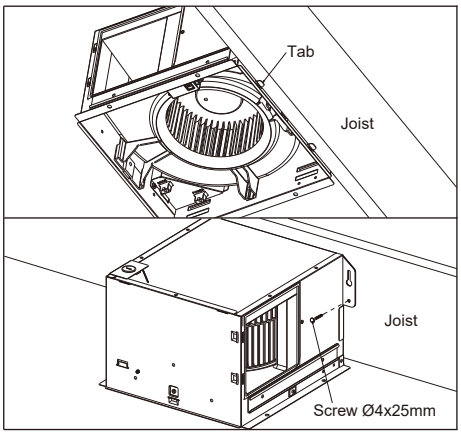
3. Extend the hanger bars to fit the width of the joists. Hold the fan in place by wrapping the hanger bar tabs around the bottom of the joist.
   Make sure the fan body is level and perpendicular to the joist.



4. Ensure that the distance between the ceiling and fan body is appropriate for mounting the grille.
5. Secure the suspension brackets to the joists with nails or by using the tapping screws (Ø4x25mm) through holes near nails.
6. Secure the suspension bracket to the fan body using screws (#8-32 x 5/16 in.).
7. Follow steps 2 to 6 of the installation instructions to complete the installation work.

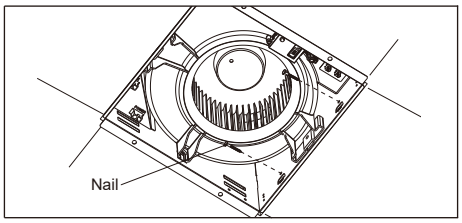
Install the housing (II)-using mounting tabs

1. Slotted tabs are provides to locate housing flush with 1/2 in. ceiling material. Bend tabs outwards 90° (Use a screw driver if desired) and position housing so that tabs rest against bottom edge of the joists (or front of the stud). Nail the housing to the joist or stud using four screws to ensure a solid, quiet installation.



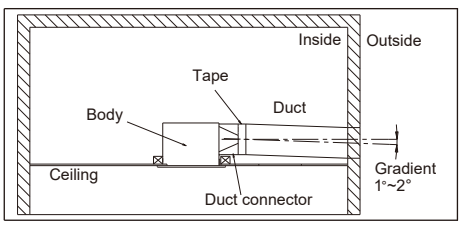
Install the housing (III)-existing ceiling installation

1. Position the housing so that it is centered in the existing ceiling opening; make sure the housing is flush with finished ceiling. After making electrical connection, driving the nails (not provided) through the housing where indicated by arrows.



Duct connection

1. Insert the 6 in. duct (not provided) into the duct connector and tape all ductwork connections to make them secure and airtight.
2. Install the duct with a gradient 1°~2° to the outside.



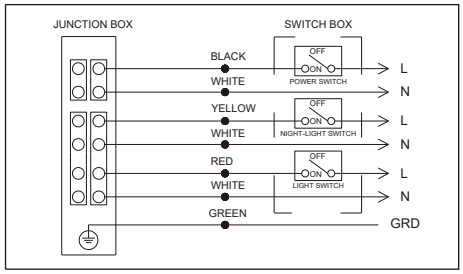
CONNECT WIRING

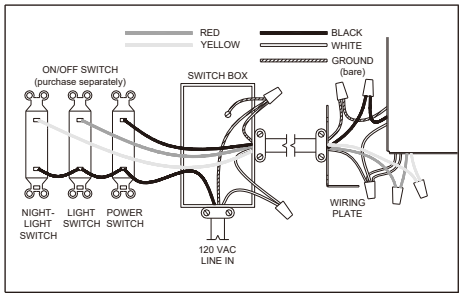
TURN OFF POWER SOURCE. REVIEW ALL SAFETY PRECAUTION.

1. Follow all local electrical and ANSI/NFPA70.
2. NEVER place a switch where it can be reached from a tub or shower.
3. Using wire nuts (not provided), connect the house power cable and Light cables to the ventilating fan wires.
4. 14 AWG (2.1 mm^2) is the smallest conductor that shall be used for branch-circuit wiring.
5. Connect wires as shown in wiring diagrams.

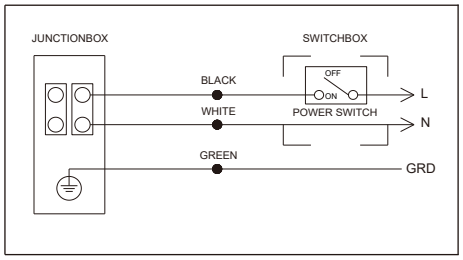
CONVENTIONAL WIRING DIAGRAM

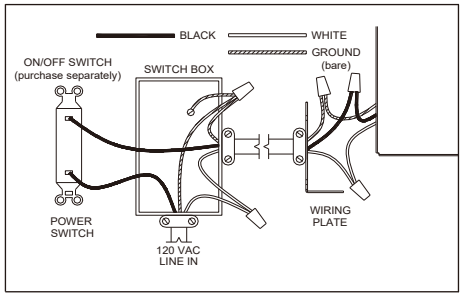
LED Light Model: 150LEDNL



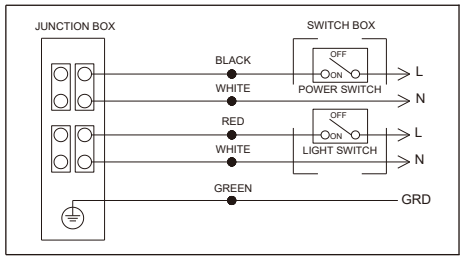


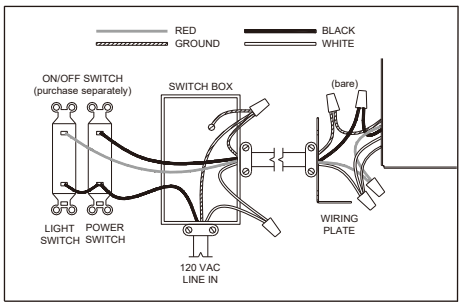
Single Speed Model: 150F



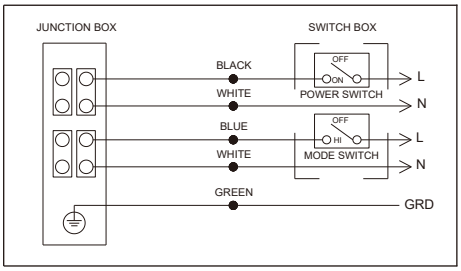


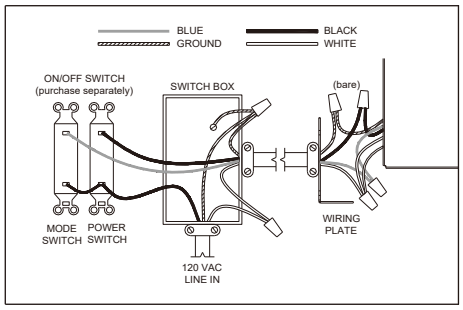
LED Adjustable Model: 150LED-ADJ





Dual Speed Model: 150DS

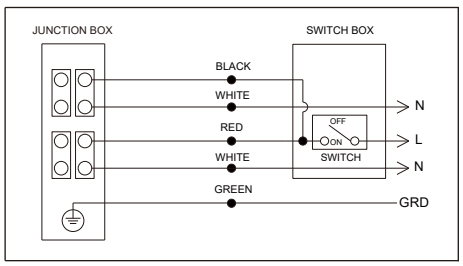


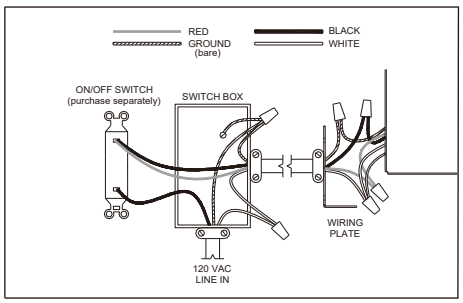


OTHER WIRING OPTION

LED Adjustable Model: 150LED-ADJ

Combine power & light to one switch.
Turn the switch on, fan runs and the light on at the same time.

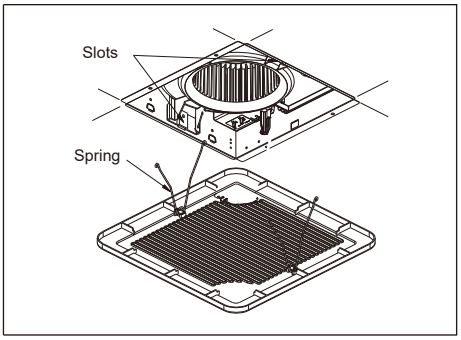




GRILLE INSTALLATION

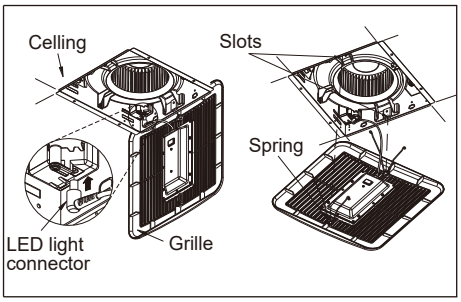
For 150F/150DS

1. With the power on, check for abnormal vibrations or sounds.
2. Insert mounting springs into the slots and mount the grille to the fan body.



For 150LEDNL

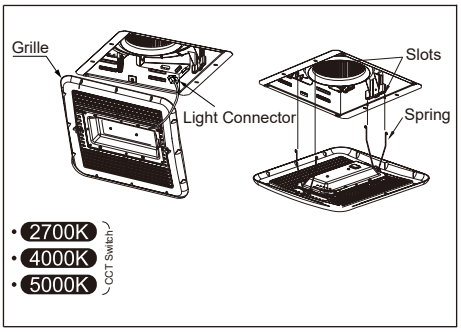
1. Insert the LED light connector into the LED socket.
2. With the power on, check for abnormal vibrations or sounds.
3. Insert mounting springs into the slots and mount the grille to the fan body.



For 150LED-ADJ

1. Insert the LED light connector into the LED socket.
2. Using the switch on the back of grille, choose the color temperature you want for your LED.
   You can choose from 2700K warm white, 4000K cool white, and 5000K daylight white.
3. With the power on, check for abnormal vibrations or sounds.
4. Insert mounting springs into the slots and mount the grille to the fan body.

Using the switch on the back of grille, choose the color temperature you want for your LED.
You can choose from 2700K warm white, 4000K cool white, and 5000K daylight white.



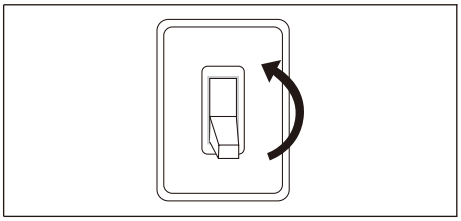
OPERATION

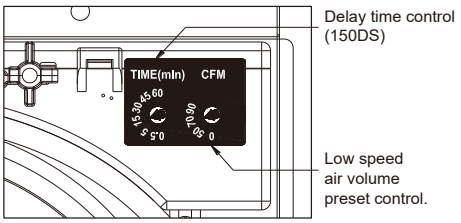
Turn the switchs on/off to operate the fan / light / night light.

Dual Speed Model: 150DS

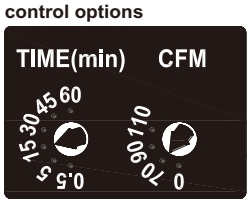
1. Low speed control mode: Turn the POWER switch on (MODE switch is off) to operate at the user-adjustable low speed air flow - the LED indicator will be green.
2. Full speed control mode: Turn the POWER switch & MODE switch on to operate at full speed mode - the LED indicator will be amber. When the user turns the MODE switch off, the fan will continue to run at the full speed until the user-adjustable time delay has elapsed, and then will automatically change to the user-adjustable low speed air flow - the LED indicator will be green.

Factory setting: Low speed airflow 70CFM, time delay 15 minutes.





150DS
control options



CARE AND MAINTENANCE

TURN OFF POWER SOURCE. REVIEW ALL SAFETY PRECAUTION.

See safety information before proceeding.
Routine maintenance must be done every year.

CAUTION

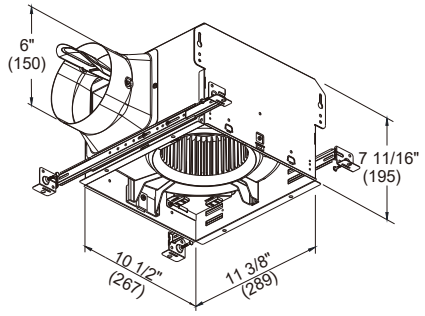
- Never use gasoline, benzene, thinner or any other such chemicals to clean the ventilating fan.
- Do not allow water to enter the motor.
- Do not soak resin parts in water over 140°F (60°C).

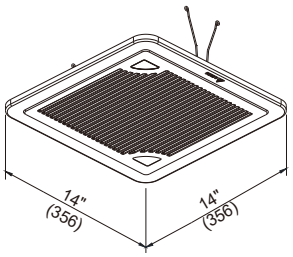
CLEANING

1. To remove grille, unplug the LED light connector (For 150LEDNL and 150LED-ADJ), squeeze springs and pull down.
   Wash and clean grille with non-abrasive kitchen detergent. Then wipe dry with a new cloth.

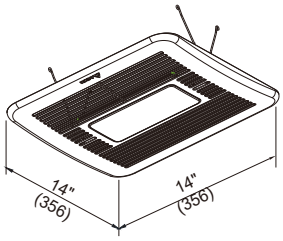
   Caution: Do not let water into the LED light engine.
2. Remove dust and dirt from the fan body with a vacuum cleaner.
3. Using a cloth dampened with non-abrasive kitchen detergent, remove dust and dirt from the fan body. Then wipe dry with new cloth.
4. Replace the grille back onto the fan body. Plug the light and fan power into the junction box of housing. Turn the switchs on/off to operate the fan/ light/night light again.

DIMENSIONS Unit: Inches (mm)





150F/150DS



150LEDNL /
150LED-ADJ

PRODUCT SPECIFICATIONS

Model No.	Voltage (V)	Frequency (Hz)	Air Flow @ 0.1"SP (CFM)	Power @ 0.1"SP (W)	Max. Power (Watt)	Weight (lb.)	Note	Light Spec
150F/ VFB150E6A1	120	60	150	16.9	30	10.4	Single Speed	
150LEDNL/ VFB150E6LED1	120	60	150	17.6	50	10.7	Single Speed	13 Watt LED, 850 Lumens, 3000K
150LED-ADJ/ VFB150E6LED1-A	120	60	150	17.6	50	10.7	Single Speed	13 Watt LED, 850 Lumens 2700K 4000K 5000K
150DS/ VFB150E6D1	120	60	150	16.9	30	10.4	Dual Speed	

Note: Design and specifications subject to change without notice.

WARRANTY

DELTA ELECTRONICS THREE YEAR LIMITED WARRANTY

Delta Electronics Inc. (“Delta Electronics”) warrants to the original consumer purchaser in the USA that the Breez ventilation fan products will be free from defects in material or workmanship. This warranty is limited to three (3) years from the original date of purchase.

Limitations and Exclusions

1. During the warranty period, a replacement for any defective product will be supplied free of charge for installation by the consumer. The warranty provided herein does not cover charges for labor or other costs incurred in the troubleshooting, repair, removal, and installation service.
2. All returns of defective parts or products must include the product model number, and must be made through an authorized Delta Electronics distributor. Authorized returns must be shipped prepaid. Repaired or replacement products will be shipped by Delta Electronics F.O.B. shipping point.
3. Delta Electronics shall not be liable for any indirect, incidental, consequential, punitive, or special damages arising out of or in connection with products use or performance, regardless of the form of action whether in contract, tort (including negligence), strict product liability or otherwise.
4. The warranty does not cover if user does not comply with manufacturer’s installation manual.
5. To qualify for warranty service, you must notify Delta Electronics at the address or telephone number below.
6. Delta Electronics shall have no liability to the original owner-user with respect to any defect caused by abuse, misuse, neglect, improper transportation or storage, improper testing, improper installation,improper operation, improper use, improper maintenance, improper repair, improper alteration, improper modification, tampering or accident of products or parts thereof, or unusual deterioration or degradation of products or parts thereof due to a physical environment beyond the requirement of products' specifications.

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
The fan is not turning on	1. Power off 2. Faulty switch 3. Faulty wire connection	1. Make sure power supply is on. 2. Test or replace switch. 3. Check wire in switch box.
The fan seems louder than it should	1. CFM too great 2. Damper not working properly or damaged 3. Bend in duct too close to fan discharge 4. Fan discharge duct 5. Fan body not securely attached	1. Be sure the CFM rating on the fan matches the size of your room. 2. Check damper to ensure it is opening and closing properly. If the damper has become damaged, please call Customer Service. 3. Be sure you do not have any sharp bends in duct closer than 18 in. to the fan discharge. 4. Use recommended size ducting to reduce fan noise. 5. Be sure the fan is securely attached to your ceiling joists.
The fan is not clearing the room	1. Insufficient intake airfow within room 2. Insufficient CFM	1. Be sure a door or window is slightly ajar or opened to allow airflow. The fan is not able to draw air out of the room without enough airflow to draw in from. 2. Be sure the CFM rating on the fan matches the requirements for your room size.
The light is not turning ON	1. Power off 2. Faulty switch 3. Faulty wire connection	1. Make sure power supply is on. 2. Test or replace switch. 3. Check wire in switch box.

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