

IMPORTANT INSTRUCTIONS - OPERATING MANUAL

Models: AK50LS, AK80LS-1, AK80,
AK90, AK110PN, AK110, AK130



Exhaust Fan

READ AND SAVE THESE INSTRUCTIONS

READ CAREFULLY BEFORE ATTEMPTING TO ASSEMBLE, INSTALL, OPERATE OR MAINTAIN THE PRODUCT DESCRIBED. PROTECT YOURSELF AND OTHERS BY OBSERVING ALL SAFETY INFORMATION. FAILURE TO COMPLY WITH INSTRUCTIONS COULD RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE!

RETAIN INSTRUCTIONS FOR FUTURE REFERENCE.

GENERAL SAFETY INFORMATION

When using electrical appliances, basic precautions should always be followed to reduce the risk of fire, electric shock and injury to person, including the following:

1. Read all instructions before installing or using exhaust fan.
2. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.
3. Before servicing or cleaning the unit, switch power off at service panel and lock the service disconnecting means to prevent 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.
4. Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-related construction.
5. Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent back drafting. 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 for Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE), and the local code authorities.
6. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
7. Ducted fans must always be vented to the outdoors.
8. This unit must be grounded.
9. To avoid motor bearing damage and noisy and/or unbalanced impellers, keep drywall spray, construction dust, etc. off power unit.
10. Acceptable for use over a bathtub or shower when installed in a GFCI protected branch circuit.
11. NEVER place a switch where it can be reached from a tub or shower.

WARNING: TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, DO NOT USE THIS FAN WITH ANY SOLID-STATE SPEED CONTROL DEVICE.

WARNING: DO NOT USE IN KITCHENS

CAUTION: FOR GENERAL VENTILATING USE ONLY. DO NOT USE TO EXHAUST HAZARDOUS OR EXPLOSIVE MATERIALS AND VAPORS.

SAVE THESE INSTRUCTIONS

INSTALLATION INSTRUCTIONS

CAUTION: MAKE SURE POWER IS SWITCHED OFF AT SERVICE PANEL BEFORE STARTING INSTALLATION.

SECTION 1

Preparing the Exhaust Fan

1. Unpack fan from the carton and confirm that all pieces are present. In addition to the exhaust fan you should have:
 - 1 - Grill
 - 1 - Damper Assembly (attached)
 - 4 - Mounting Rails
 - 1 - Instruction/Safety Sheet
2. Choose the location for your fan. To ensure the best air and sound performance, it is recommended that the length of ducting and the number of elbows be kept to a minimum, and that insulated hard ducting be used. Larger duct sizes will reduce noise and airflow restrictions. This fan will require at least 8" of clearance in the ceiling or wall, and will mount through drywall up to 3/4" thick. The fan mounts between 16" or 24" on center joists using the 4 provided mounting rails.
3. Select the most convenient electrical knockout and remove using a straight-blade screw driver (**Figure 1**).

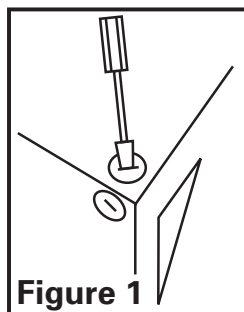


Figure 1

SECTION 2

New Construction

1. Install the side rails on the housing and position the housing next to the joist. Line up housing so that it will be flush with the finished ceiling. Secure the ends of the rails with screws or nails (not included) to the joists and slide the housing into the final position (**Figure 2**).

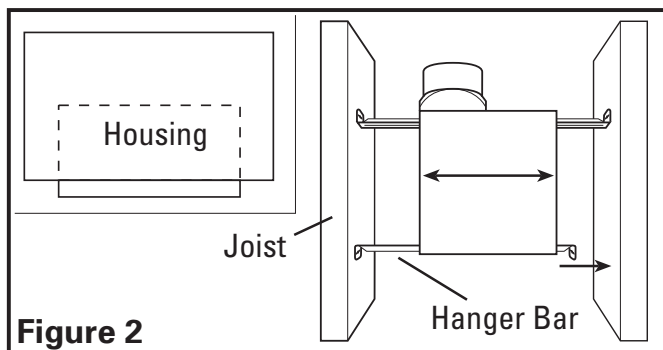


Figure 2

SECTION 3

Existing Construction

1. Set housing in position between the joist and trace an outline onto the ceiling material (**Figure 3**). Set housing aside and cut opening, being careful not to cut or damage any electrical or other hidden utilities. Install the side rails on the housing and position the housing in the previously cut hole so that it is flush with the finished ceiling. Secure the ends of the rails to the joists (**Figure 2**).

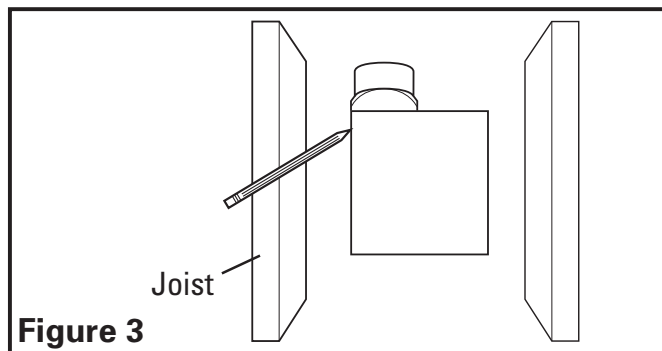


Figure 3

SECTION 4

Ducting

CAUTION: ALL DUCTING MUST COMPLY WITH LOCAL AND NATIONAL BUILDING CODES.

1. Connect the ducting to the fan's duct collar (**Figure 4**). Secure in place using tape or screw clamp. Always duct the fan to the outside through a wall or roof cap.

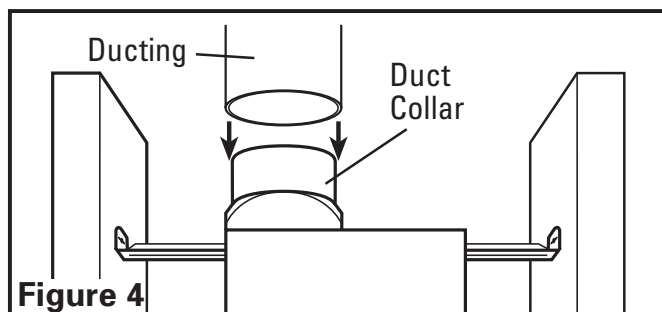


Figure 4

SECTION 5

Wiring

CAUTION: MAKE SURE POWER IS SWITCHED OFF AT SERVICE PANEL BEFORE STARTING INSTALLATION.

CAUTION: ALL ELECTRICAL CONNECTIONS MUST BE MADE IN ACCORDANCE WITH LOCAL CODES, ORDINANCES, OR NATIONAL ELECTRICAL CODE. IF YOU ARE UNFAMILIAR WITH METHODS OF INSTALLING ELECTRICAL WIRING, SECURE THE SERVICES OF A QUALIFIED ELECTRICIAN.

NOTE: This unit includes a side access panel for wiring that does not require the removal of the fan's blower assembly. If you choose to wire the unit from the inside, you will need to remove the blower assembly and internal wiring compartment. Both methods are equally effective.

- 1a. **External Wire Compartment:** Remove the wire compartment cover screw and place cover in a secure place (**Figure 5**).

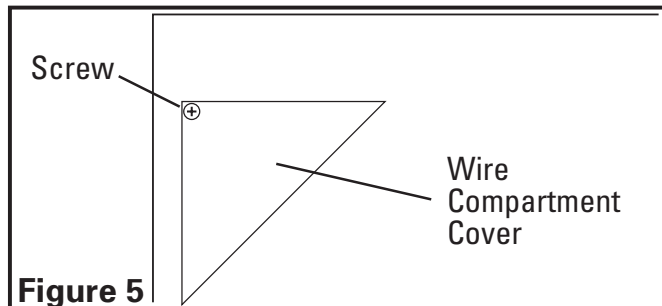
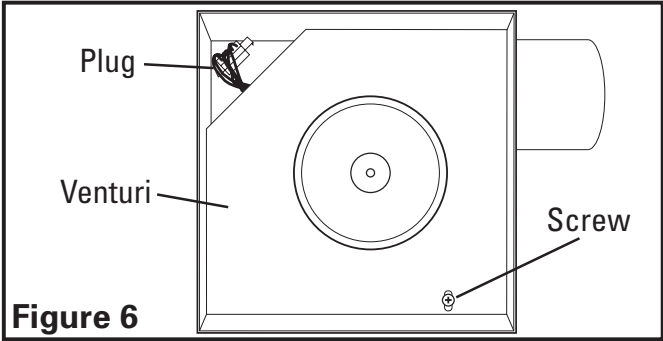
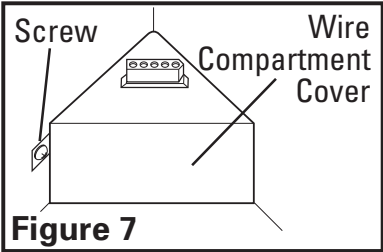


Figure 5

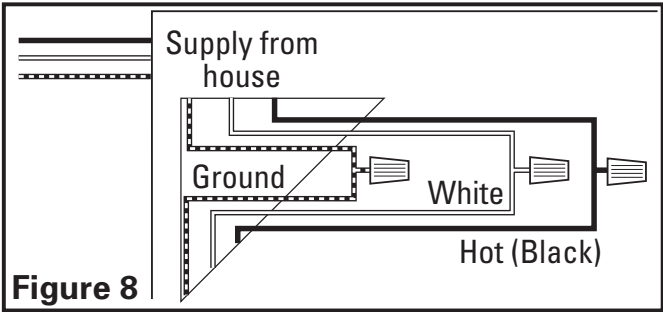
1b. **Internal Wire Compartment:** Remove the screw holding the venturi in place. Lift the venturi up and at an angle to slide it out of the housing (**Figure 6**). Remove the wire compartment cover screw and place the cover in a secure place (**Figure 7**).



NOTE: If the fan motor plug is connected to the fan housing receptacle, unplug so the venturi can be completely removed.



- Run wiring from an approved wall switch carrying the appropriate rating. One neutral (white), one ground (green or bare copper), and one hot (black lead connected to the switch). Secure the electrical wires to the housing with an approved electrical connector. Make sure you leave enough wiring in the box to make the connection to the fan's receptacle.
- From where you have chosen to access the fan's junction box, connect the White wire from the house to the White wire from the fan's receptacle. Connect the Black wire from the wall switch to the Black wire from the fan's receptacle. Connect the ground wire from the house to the Green wire from the fan's receptacle (**Figure 8**). Use approved methods for all connections.



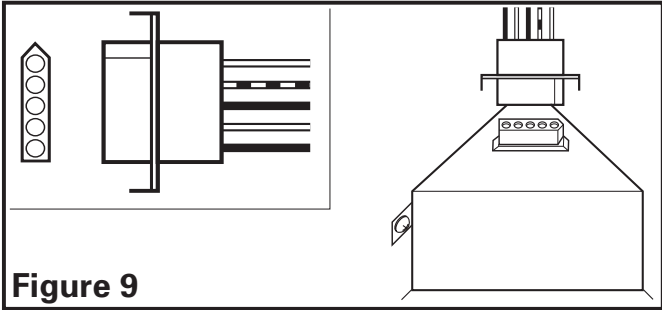
NOTE: The fan's receptacle wires might need to be pulled outside compartment for connection. Only pull the three loose wires outside of compartment. Additional wires will be present.

- Carefully tuck wire back inside wire compartment and replace wire compartment cover securing with the screw that was removed earlier.

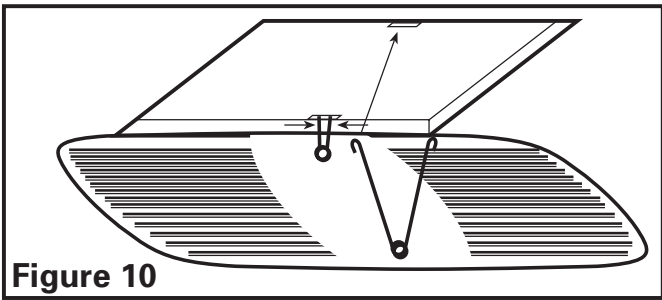
SECTION 6

Completing the Installation

- If the fan's blower assembly was removed during the wiring process, reinstall the blower by reversing the directions in *Step 1b* in **Section 5 Wiring**.
- Plug the fan's quick connect motor cord into the receptacle. This cord will only fit one way into the receptacle (**Figure 9**).



- Install the grill by squeezing the two ends of the springs together and installing them up into the slots on the fan's housing. Push the grill up into position (**Figure 10**).



- Restore power and test your installation.

SECTION 7

Use and Care

CAUTION: MAKE SURE POWER IS SWITCHED OFF AT SERVICE PANEL BEFORE SERVICING THE UNIT.

- Cleaning the Grill:** Remove grill and use a mild detergent, such as dishwashing liquid, and dry with a soft cloth. NEVER USE ANY ABRASIVE PADS OR SCOURING POWDERS. Completely dry grill before reinstalling. Refer to instructions in **Section 6 Finishing the Installation**, to reinstall grill.
- Cleaning the Fan Assembly:** Wipe all parts with a dry cloth or gently vacuum the fan. NEVER IMMERSE ELECTRICAL PARTS IN WATER.

Troubleshooting Guide

Trouble	Probable Cause	Suggested Remedy
1. Fan does not operate when the switch is on.	1a. A fuse may be blown or a circuit tripped. 1b. Connector plug from motor is not plugged in. 1c. Wiring is not connected properly. 1d. Motor has stopped operating.	1a. Replace fuse or reset circuit breaker. 1b. Turn off power to unit. Remove Grill and plug motor into receptacle in housing. Restore power to unit. 1c. Turn off power to unit. Check that all wires are connected. 1d. Replace motor.
2. Fan is operating, but air moves slower than normal.	2. Obstruction in the exhaust ducting.	2. Check for any obstructions in the ducting. The most common are bird nests in the roof cap or wall cap where the fan exhausts to the outside.
3. Fan is operating louder than normal.	3a. Motor is loose. 3b. Fan blade is hitting housing of unit.	3a. Turn off power to unit. Remove grill and check that all screws are fully tightened. Restore power to unit. 3b. Call your dealer for service.

LIMITED WARRANTY

All products manufactured by Air King Limited are warranted for one year from the date of purchase against defects in workmanship and/or material. In addition, all ventilating/exhaust fans, heaters, combination fan lights and/or heaters, and range hoods are guaranteed for five years from the date of purchase against defects in workmanship and/or material.

This warranty does not cover any labor or shipping costs or the cost of replacement components as part of routine maintenance such as: range hood grease filters, charcoal filters or combination charcoal/grease filters; replacement light bulbs in range hoods or bathroom fan/light/bulb heater combinations. As well, any damage or failure caused by abuse, misuse, abnormal usage, faulty installation, or improper maintenance will not be covered by this warranty.

In order to make a claim on this warranty, you must be the original consumer of the product. You will be required to present to Air King the original bill of sale showing: date of purchase, place of purchase and model purchased. Failure to meet these requirements will void your warranty.

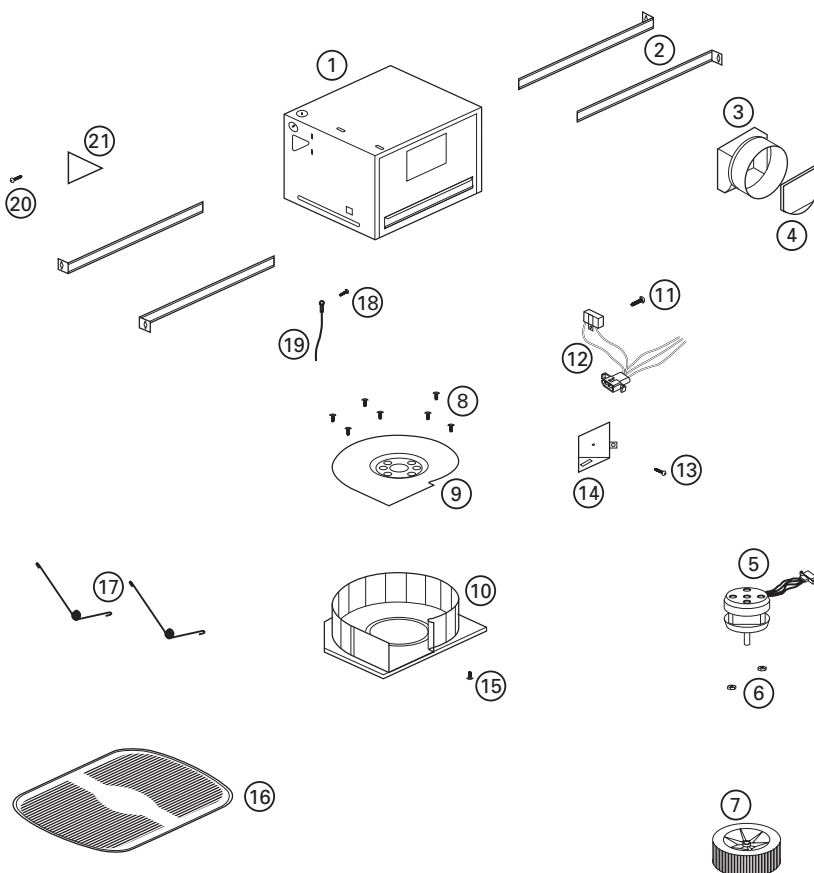
Air King will not be held responsible for any bodily injury or damages to personal property or real estate whether caused directly or indirectly by the product. Some states and provinces do not allow the exclusion or limitation of incidental or consequential damages and some states do not allow limitations on how long an implied warranty lasts, so these exclusions or limitations may not apply to you. This warranty gives you specific legal rights and you may have other rights which vary from state to state and province to province.

FOR PARTS OR TECHNICAL ASSISTANCE

Please call: 1-800-465-7300, **MONDAY THROUGH FRIDAY, BETWEEN THE HOURS OF 8 AM AND 4:00 PM EST.**
PLEASE DO NOT RETURN PRODUCT TO PLACE OF PURCHASE.

Reference the type and style of product (located on label inside of the product) when you call.
 For more information please visit our website: www.airkinglimited.com

#	Qty.	Description	Replacement Part #
1	1	Fan Housing	5S1202001
2	4	Mounting Rails	5S1299002
3	1	Collar	5S1299003
4	1	Damper	5S1299004
5	1	Motor	5S2202001
6	2	Screw	5S2202002
7	1	Blower Wheel	5S2202003
8	7	Blower Screws	5S2202004
9	1	Motor Plate	5S2202005
10	1	Venturi	5S2202006
11	1	Screw	5S1999009
12	1	Motor Cap Harness	
		AK50LS	5S2202031
		AK80LS-1	5S2202007
		AK80	5S2202008
		AK90	5S2202009
		AK110PN	5S2202012
		AK110	5S2202010
		AK130	5S2202011
13	1	Screw	5S1999010
14	1	Internal Wire Cover	5S1202004
15	1	Screw	5S1999011
16	1	Grill	5S1202005
17	2	Grill Springs	5S1202006
18	1	#10 Ground Screw	5S1999002
19	1	14 ga Ground Wire	5S1999003
20	1	Screw	5S1999010
21	1	External Wire Cover	5S1202007



Installer: _____ Installation Date: _____

Place of Purchase: _____ Model Number: _____