

# INDUSTRIAL CEILING FAN MANUAL

IND-A36-4L	IND-B56-4L	IND-B56-240V-4L
IND-A48-4L	IND-B60-4L	IND-B56-277V-4L
IND-A56-4L	IND-B56-MR-4L	IND-A48-3S-3L
	IND-B60-MR-4L	IND-A56-3S-3L

**IMPORTANT: READ AND SAVE THESE INSTRUCTIONS.** Read carefully before assemble, install, operate or maintain the product described. Protect yourself and other by observing all safety information. Failure to comply with instruction could result in personal injury damage! Retain instructions for future reference.

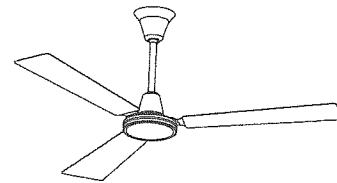
## DESCRIPTION

The ceiling fan is a high efficiency ceiling fan. It is designed to create air velocity and a ceiling effect on high speed.

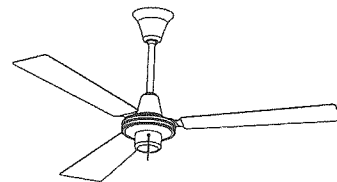
The lower speed can be used for reduce velocity or heat de-stratification. The lower speed gently de-stratifies the air giving a constant room temperature. Models are UL/CUL certified.

Model IND-A48-3S-4L, IND-A56-3S-3L are 3 speed downdraft ceiling fan.

IND-B56-MR-4L / IND-B60-MR-4L are designed to go into the harshest agricultural or high moisture application.



Industrial ceiling fan



Industrial ceiling fan with 3 speed downdraft

## UNPACKING

1. After opening carton, look for concealed damaged.
2. If concealed damage is found, immediately file claim with carrier.

## SPECIFICATION –

MODEL	SIZE	VOLTAGE / HZ	AMPS	WATTAGE	RPM
IND-A36-4L	36"	120V / 60HZ	0.35	40	400
IND-A48-4L	48"	120V / 60HZ	0.50	50	320
IND-A48-3S-3L	48"	120V / 60HZ	0.50	50	320
IND-A56-4L	56"	120V / 60HZ	0.55	65	280
IND-A56-3S-3L	56"	120V / 60HZ	0.55	65	280
IND-B56-4L	56"	120V / 60HZ	0.70	85	320
IND-B60-4L	60"	120V / 60HZ	0.70	90	320
IND-B56-240V-4L	56"	240V / 60HZ	0.40	85	320
IND-B56-277V-4L	56"	277V / 60HZ	0.36	85	320
IND-B56-MR-4L	56"	120V / 60HZ	0.70	85	320
IND-B60-MR-4L	60"	120V / 60HZ	0.70	90	320

## GENERAL SAFETY INFORMATION

**WARNING:** Disconnect power supply before wiring connections are made to prevent possible electric shock or damage to equipment.

**WARNING:** Read and follow instructions carefully. Failure to comply with instructions could result in fire,

electric shock, injury to persons and / or damage to equipment.

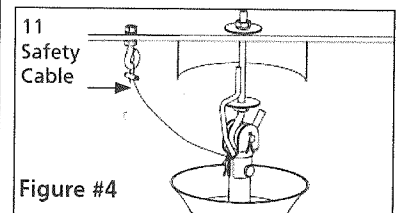
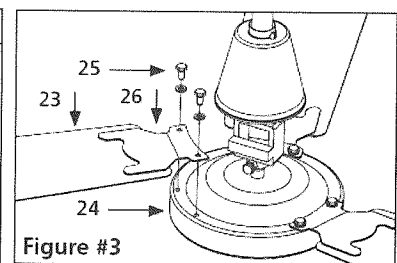
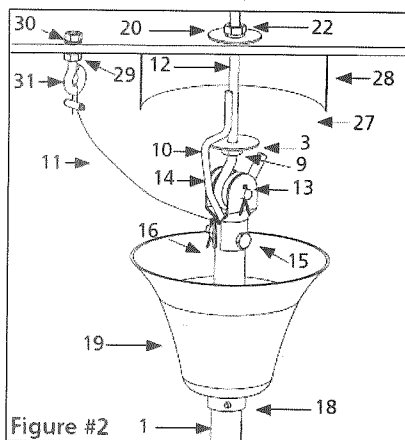
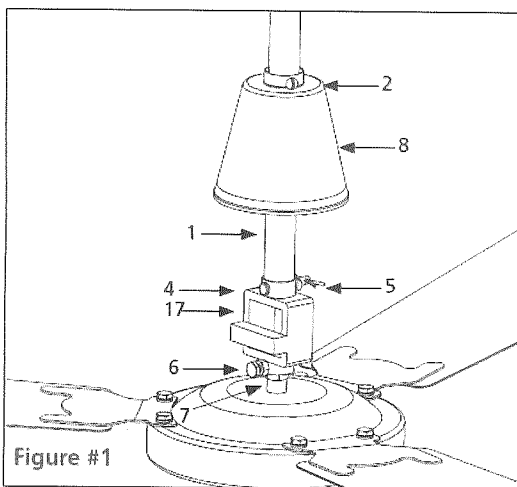
**CAUTION:** Follow all maintenance procedures enclosed.

**DANGER:** Failure to properly ground unit could result in severe electrical shock or death.

1. All wiring should conform to the National Electrical Code ANSI / NFPA 70-1999 (NEC) in the United States, CEC and local regulations.
2. Do not mount in an area which will allow the ceiling fan to come in contact with moisture. Except IND-B56-MR-4L / IND-B60-MR-4L, they are designed to go into the harshest agricultural or high moisture application.
3. Make certain the entire installation is grounded as a precaution against possible electrical shock.
4. Do not exceed maximum amperage rating of the ceiling fan as overloading can be result in damage to ceiling fan and control.
5. When wiring and electrical appliance or device follow all electrical and safety codes, as well as the most recent NEC, CEC and local regulations and the Occupational Safety and Health Act (OSHA).
6. Suitable for use with solid state speed control.

### ASSEMBLY

1. Remove all ceiling fan parts from the box.
2. Tools and supplies needed – Flat and Philips screwdriver – 9/16" and 3/8" open wrench or adjustable wrench, 2-4 wires nuts.
3. Install a junction box to accept the wiring of the fan. In many cases, a qualified electrician will be required to install the outlet box keeping with local electrical codes or to meet the NEC, CEC and local regulations.
4. For installation to open web steel joist – use the threaded J hook as supplied. For wood joist construction – use J hook with lag threads. For attachment in concrete, drill concrete anchors into the concretes as specification applicable to NEC, CEC and local regulation.



### INSTALLATION

Safety Product Inspection of Fan Prior to installation (Figure #1 and #2)

**WARNING:** To reduce the risk of personal injury, do not bend the blade brackets when installing the brackets, balancing the blades or cleaning the fan. Do not insert foreign objects in between rotating fan

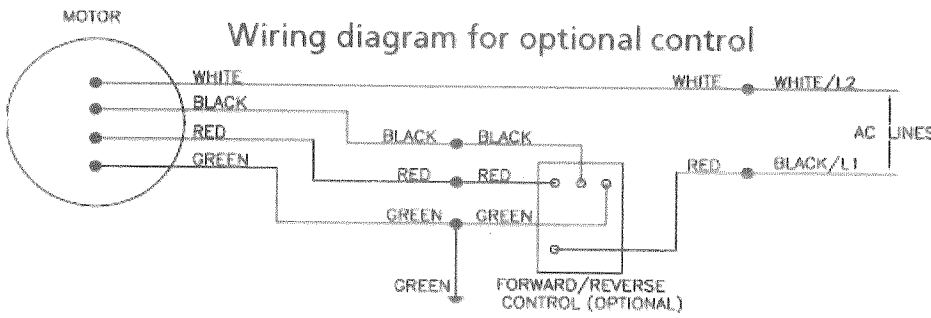
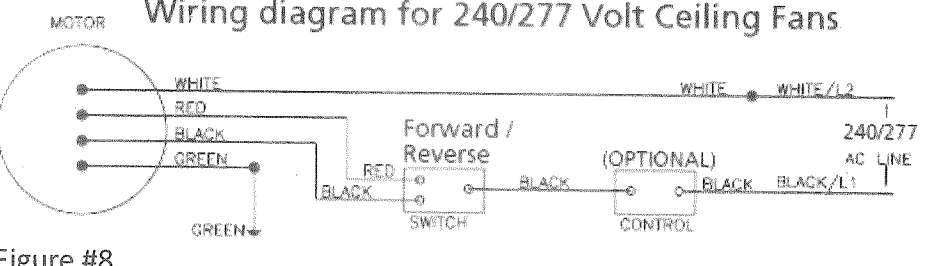
blades.

1. Make certain set screw (4) is tight to ascertain wobble free operation.
2. Make certain cotter pin (5) is in place and secure.
3. Make certain lock-nut (7) is tight and set screw (6) is in place and secure.
4. Slide lower canopy (8) down over rubber gasket (21) to create a tight seal.
5. Make certain lower canopy set screw (2) are tight on downrod (1).
6. Make certain cotter pin (13) is in place and secure.
7. Make certain bolt, cotter pin and nut (16) are tight.

### HANGING OF FAN (FIGURE #1 AND # 2)

1. Wind one nut (9) down to bottom of J hook (12) towards the curve. Add a lock washer and then flat washer (3) on top of the nut (9).  
 WARNING: Make certain crimps on safety loop is secure (See Figure #4). Make certain safety cable is attached properly to hook or structural member. Failure to comply with instructions could result in personal injury and / or property damage.
2. Drill a 5/32" pilot hole for safety hook (31) within a 12" radius of J hook (12) support for fan. Wind one nut down (29) to bottom of safety hook towards the loop. Add a lock washer (29) and slide safety hook through pilot hole. Slide lock washer (30) on top side of the safety hook and add nut (30). Tighten so lock washer on top and bottom of the structure are secure.
3. Drill a 1/2" pilot hole for J hook. Put J hook (12) through pilot hole in joist. Add flat washer and then lock washer (20) and nut (22). Do not tighten completely until fan is put in place on J hook. A lubricant should not be used on the single mounting screw, and then pilot hole should be drilled no larger than the minor diameter of the mounting screw threaded, and at least 38mm (1-1/2") of the threaded part of the mounting screw should be secured into a structural joist to provide secure mounting.
4. Loosen set screw (18) on top canopy (19) on fan downrod (1) and lower the canopy to make room to place rubber grommet (14) onto mounting hook.
5. Tighten top nut (22) on J hook to raise fan into proper installation position.
6. Ensure power to outlet box is off before hooking up wiring (10). Wire the fan according to NEC, CEC and local electrical codes –

<p>Wiring diagram with no wall control.</p> <p>Figure #5</p>	<p>For Model –</p> <ol style="list-style-type: none"> <li>1) IND-A48-3S-3L</li> <li>2) IND-A56-3S-3L</li> </ol>
<p>Wiring diagram</p> <p>Figure #6</p>	<p>For Model –</p> <ol style="list-style-type: none"> <li>1) IND-A56-4L with 3 speed wall control included</li> </ol>

 <p>Figure #7</p>	<p>For Model –</p> <ol style="list-style-type: none"> <li>1) IND-A36-4L</li> <li>2) IND-A48-4L</li> <li>3) IND-A56-4L</li> <li>4) IND-B56-4L</li> <li>5) IND-B60-4L</li> <li>6) IND-B56-MR-4L</li> <li>7) IND-B60-MR-4L</li> </ol> <p>Forward / reverse control (optional), Reversible operation is achieved only on special wired fans with EXTRA RED LEAD</p>
 <p>Figure #8</p>	<p>For Model –</p> <ol style="list-style-type: none"> <li>1) IND-B56-240V-4L</li> <li>2) IND-B56-277V-4L</li> </ol> <p>Forward / reverse control (optional). Reversible operation is achieved only on special wired fans with EXTRA RED LEAD</p>

After making the wire connections as outlined in Figure #5-8, the wire should be spread apart with the grounded conductor and the equipment-grounding conductor on one side of the outlet box and the ungrounded conductor on the other side of the outlet box. Splices should be turned upward and pushed carefully up into the outlet box.

7. Raise top canopy (19) up the downrod to cover hook. Leave 1/8" gap between top canopy (19) and hanging surface (so downrod does not move off center which could make fan wobble or vibrate and transmit motor noise to ceiling surface). Tighten set screw (18).
8. Attached blades (23) to motor (24) with blade bolts (25) (Figure #3). The blade (24) should be positioned below the blade arm bracket (26) when attaching to the motor to get proper air flow and direction.

**WARNING:** When installed properly the blades will hanging 10' above the floor level. It is critical that the J hook and nut adjustment is done so that the blades will be a minimum 12" from the ceiling. If your ceiling is less than 12' than the hook and downrod must be recessed into the ceiling so that the blades are mounted 10' above the floor level to meet OSHA standards.

**IMPORTANT:** In the event a shorter downrod is required, read the following additional instructions:  
**CHANGING TO SHORTER DOWNROD:**

1. Loosen and remove bolt cotter pin and nut (16).
2. Slide top canopy (19) and lower canopy off of the downrod (1) and over the wires and safety cable.
3. Loosen set screw (4) and remove cotter pin (5) and slide the downrod (1) over the wires and safety cable.
4. Take the shorter downrod and start to reverse steps 3 to 1.
5. Slide the shorter downrod over the wire and safety cable and insert into yoke (17).
6. Insert cotter pin (5) through the yoke and downrod making certain you do not damage the wires. Once

the cotter pin is in place, re-insert the split pin and bend the longer side backwards so the cotter pin will not slide out.

7. Tighten the set screws (4) to 10 foot/lbs of torque.
8. Slide the lower canopy (8) over the wires, safety cable (11) and downrod (1) until it sits on top of the yoke (17) and tighten the set screw (2).
9. Slide the top canopy (19) over the wires, safety cable and downrod and do not tighten the set screw (18).
10. Attach rubber grommet (14) and support bracket (15) to the top of the downrod using bolt cotter and nut (16). Make certain you do not damage the wires inside the downrod. Tighten the nut to 10 foot/lbs of torque and then re-insert the split pin and bend the longer side backwards so the pin will not slide out.
11. Return to the assembly and installation instructions.

*The shorter downrod when installed properly on a minimum 10' above the floor level. It is critical that the J hook and nut adjustment is done so that the blades will be a minimum 12" from the ceiling. If your ceiling is less than 12' than the hook and downrod must be recessed into the ceiling so that the blades are mounted 10' above the floor level to meet OSHA standards.*

## **OPERATION**

1. **Model IND-A48-3S-P / IND-A48-3S-4L / IND-A56-3S-P and IND-A56-3S-4L:** After installation the fan can be operated by pulling the chain. By pulling gently on the chain it will change the speeds from hi to medium to low to off. Select the speed that creates the most comfortable air movement.
2. **Model IND-A36-4L / IND-A48-4L / IND-A56-4L / IND-B56-4L / IND-B60-4L / IND-B56-MR-4L and IND-B60-MR-4L:** For optimum performance, use the UL Approved Speed control to adjust speed and direction of your fan (see figure #7 for wiring). Follow the instruction from the control for minimum speed setting and operation. The forward/reverse control will allow you to adjust the speed and direction of the fan. On the forward or downdraft direction you can blow air down on high speed for cooling or low speed for heat de-stratification. The reverse mode is idle for heat de-stratification or creating air movement without direct air flow.
3. **Model IND-B56-240V-4L and IND-B56-277V-4L:** Fan model IND-B56-240V-4L and IND-B277V-4L (see figure #8) have the forward/reverse switch separate to the variable speed control. For the model IND-B56-240V control use a of the approved 240 volt adjustable fan controls with the SPDT switch to change the direction of the fan. On the IND-B56-277V-4L control use the approved 277 volt adjustable fan control with the SPDT switch to change the direction of the fan.

## **MAINTENANCE**

**DANGER!** Always disconnect the power supply before servicing the ceiling fan or working with the unit for any reason.

**WARNING:** Parts replacement and troubleshooting to be performed only by qualified personnel.

**WARNING:** Do not place fingers or objects in the ceiling fan while motor is connected to the power source.

**WARNING:** Do not attach foreign objects to the blades of the ceiling fan.

**WARNING:** Do not use gasoline, benzene, thinner, harsh cleaners, etc., which are dangerous and will

damage the ceiling fan.

**CAUTION!** If you see noticeable vibration, wobbling or wear the fan should be removed from service and repaired or replaced by a qualified maintenance technician or electrician.

**TROUBLESHOOTING CHART**

Dayton Commercial Ceiling Fan is tested before it leaves the factory, resulting in an extremely low rate of returns. However, due to shipping and installation procedures, occasionally a fan will need a minor adjustment to run satisfactorily. If this should happen, we recommend that you identify the problem and try the simple suggestions listed below.

***Turn off power at main circuit breaker before checking!***

SYMPTOM	CORRECTIVE ACTION
Fan will not start	<ul style="list-style-type: none"> <li>a) Check fuses and circuit breakers.</li> <li>b) Check wire connections to fan.</li> <li>c) Check wiring connection in lower canopy.</li> <li>d) Check voltage at fan connection.</li> </ul>
Fan too fast / slow	<ul style="list-style-type: none"> <li>a) Adjust the trim set screw in fan wall control if using optional wall control. If minimum setting is too low the fan may shut off with voltage fluctuations. Increase minimum.</li> <li>b) Check voltage at fan connection.</li> <li>c) Blades must be attached to motor to reduce the speed.</li> </ul>
Fan makes noise	<ul style="list-style-type: none"> <li>a) Check motor case to make certain all visible screws are snug.</li> <li>b) Check to make certain that all blade bracket screws are tight.</li> <li>c) Check for labels or wire nuts that could be rubbing.</li> <li>d) All ceiling fans may have a slight motor noise known as the "60 cycle hum" when used with solid state infinite speed controls. Especially on lower speeds. This hum will not affect the fan performance.</li> <li>e) Make certain upper canopy is at least 1/8" from ceiling.</li> <li>f) Allow a 30 days break-in period which normally eliminates any Residual noise other than a), b), c), d) or e).</li> </ul>
Fan wobble	<ul style="list-style-type: none"> <li>a) Check that all blade brackets are screwed firmly to motor case.</li> <li>b) Check distance from tip of blades to ceiling. If blades get bent during installation, you must re-adjust them so that all blades travel on same plane. Gently bend up or down until all distance are the same.</li> <li>c) Make certain upper canopy is 1/8" from ceiling.</li> <li>d) Make certain that hanging hooks are secured tightly to ceiling.</li> <li>e) Run fan without blade, if motor does not wobble, then motor is not defective but the blades maybe bent.</li> </ul>

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