

SmartSense™ Combination

MODELS: QT-100LM

IMPORTANT SAFETY INSTRUCTIONS

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

- Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.
- Before servicing or cleaning unit, switch power off at service panel and lock service panel 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.

CAUTION:

For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors.

INSTALLATION INSTRUCTIONS

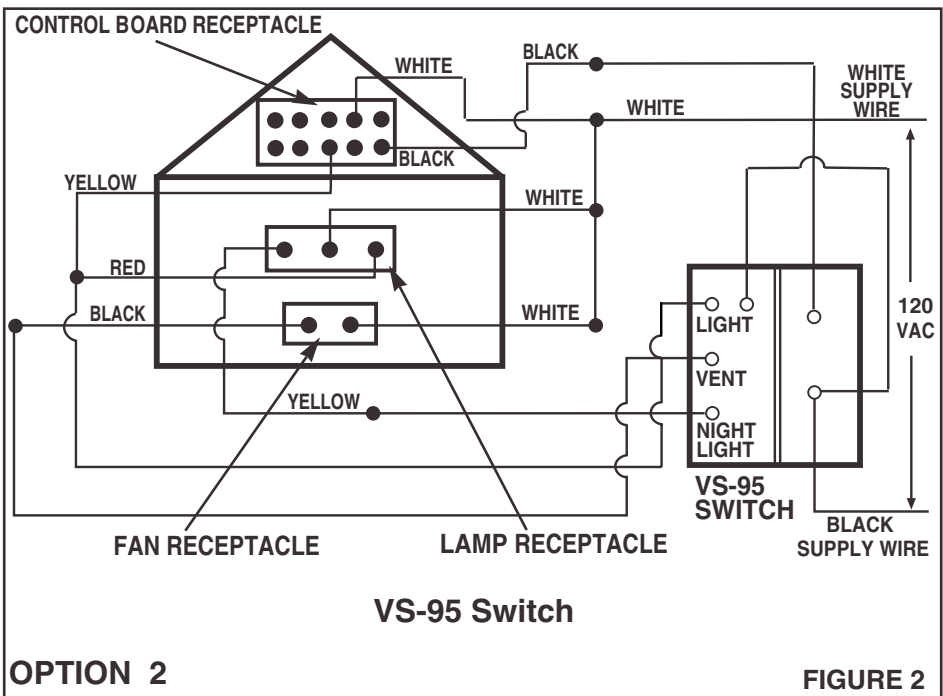
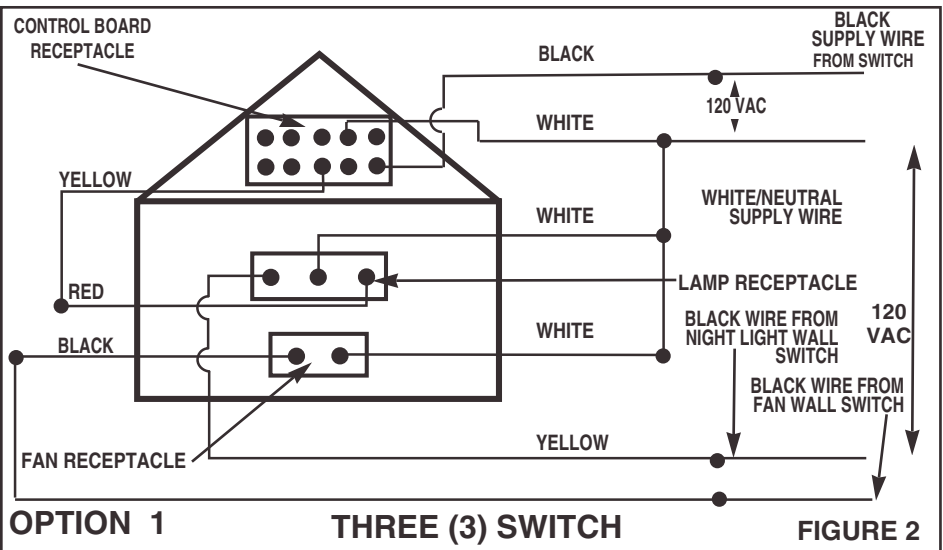
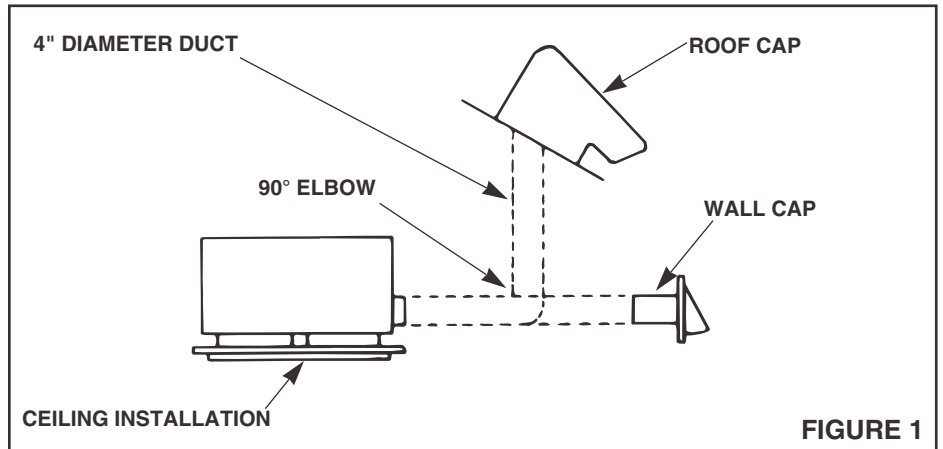
WARNING: TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

- Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
 - 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.
 - When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
 - Ducted fans must always be vented to the outdoors.
 - If this unit is to be installed over a tub or shower, it must be marked as appropriate for the application.
 - NEVER** place a switch where it can be reached from a tub or shower.
 - Handle the sensor unit with care. Avoid direct contact with electronic components while installing.
- Do not install in a ceiling insulated to a value greater than R40.
 - Not for use in kitchens.
 - Suitable for use over a tub or shower when installed in a GFCI protected branch circuit.

FOR BEST RESULTS

When installing the Ventilator in a **new construction site**, install housing during the rough-in construction of the building. The blower unit, sensor unit and grille should be installed after the finished ceiling is in place.

To install a ventilator in an **existing building** requires an accessible area (attic or crawl space) above the planned location. Locate the ventilator in an area that provides a clear viewing path for the motion sensor ("see motion sensor range" below).



INSTALLATION IN A NEW CONSTRUCTION SITE

PREPARATION

1. Remove blower/power unit assembly from housing:
 - A. Loosen three (3) mounting screws.
 - B. Slide unit back to free it from mounting screws.
 - C. Remove unit and set aside until needed.
2. Remove one of the wiring knockouts from housing.

MOUNTING THE HOUSING

1. Refer to Figure 3. Insert mounting brackets at each end of housing.
2. Place long side of housing parallel to ceiling joist. Position housing in desired location. Make sure housing flange is even with the planned finished ceiling.
3. Use screws or nails (not provided) to secure mounting brackets to ceiling joists.
4. Refer to Figure 1. Use 4" round duct to discharge the ventilator to the outside.

IMPORTANT: Be sure nothing obstructs the discharge of the ventilator. Make sure that insulation does not get into the duct work or into the fan.

WIRING

Refer to Figure 2.

1. Run 120v AC house power wiring (with ground) through switch box to junction box in ventilator housing.
2. Remove ventilator outlet box cover.
3. Referencing Figure 2, determine which switch option will be used for the installation. Connect the house power wire (black) to the connector black wire. Connect the house neutral wire (white) to the connector, light plug and motor plug white wires. Connect the remaining power lines to the corresponding connector and plug wires as noted in Figure 2. Connect the ground wire to the green ground screw.
4. Replace outlet box cover.
5. Mount sensor unit by sliding it into place on top of the junction box cover and installing the retaining screw into the ventilator housing.(ref. fig. 4)
6. Connect house power wire to the wall switches.

NOTE 1: BE SURE VENTILATOR AND SWITCH ARE PROPERLY GROUNDED. ALL WIRING MUST COMPLY WITH LOCAL ELECTRICAL CODES.

NOTE 2: Figure 2 represents two of the most common wiring situations. Other combinations are possible using the following guidelines;

1. Continuous power must be supplied to the controller via the Black wire on the Control Board connector for the unit to operate in the automatic mode.
2. The yellow wire from the Control Board Connector is "hot" when motion is detected.
4. Override switches can be used for fan, light or night light functions as shown in option 2.

POWER/BLOWER UNIT INSTALLATION

1. Plug motor and lamp plugs into receptacles on outlet box cover.
2. Position power unit mounting plate over mounting screws in housing.
3. Slide unit forward until the gasket fits firmly against discharge opening in housing and mounting screws are seated in narrow end of keyhole slots.
4. Refer to Figure 3. Securely tighten screws.
5. Install 100 watt max. type A lamp and 7 watt max. type C lamp.

GRILLE INSTALLATION

1. Refer to Figure 3. Snap grille mounting springs' center loop into notched bosses on the back of grille.
2. Plug motion sensor lead from grille into connector in control cover (Refer Figure 4). Plug locator must align with notch in connector.
3. Place grille mounting springs into slots in power unit mounting plate.
4. Press grille firmly into place against the ceiling.

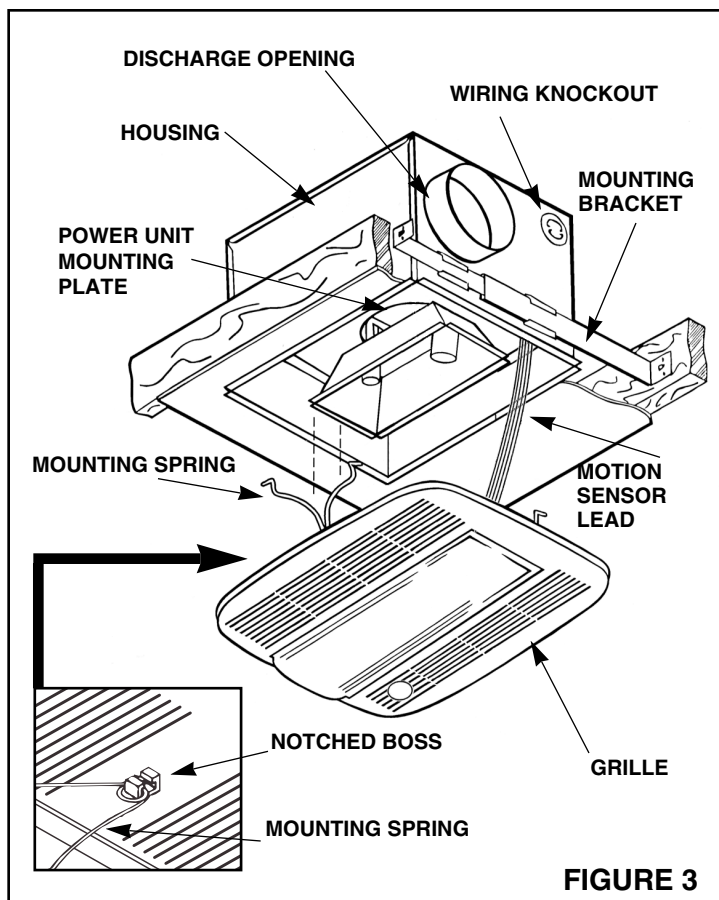


FIGURE 3

INSTALLATION IN EXISTING CONSTRUCTION

Installing the vent, light and night light in an existing house requires an accessible area (attic or crawl space) above the planned installation location.

Review "INSTALLATION IN A NEW CONSTRUCTION" and follow all instructions which apply to your installation.

Location – locate ventilator parallel to a ceiling joist.

Wiring and Ducting – plan ducting and wiring before proceeding with installation.

Refer to Figure 2 for wiring and Figure 1 for ducting.

CAUTION: Check area above planned installation to be sure that:

1. Ducting can be installed.
2. Wiring can be run to the planned location.
3. No wiring or other obstructions might interfere with installation.

INSTALLATION FROM ACCESSIBLE AREA ABOVE

1. From below, drill a small hole in ceiling at the planned location. Stick clothes hanger through hole to help locate it.
2. Locate hole in attic or crawl space.
3. In attic or crawl space, mark ceiling for cutout by using the housing as a template. The long side of cutout must be parallel to ceiling joist.
4. Make cutout along marked line.

NOTE: If ceiling is plaster, cutout should be made from below to avoid chipping plaster.

5. Install housing, connect wiring and ducting, install power unit/blower assembly and install lamps (100 watt type A max. 7 watt TYPE C night light), install grille.

SENSOR OPERATION AND CARE

The SmartSense™ motion sensing fan/light is designed to sense the movement of occupants in the room and to automatically activate the light or night light. The sensor continually monitors the area and operates the light until no further motion is detected. The length of time that the light operates after the last detectable motion is user adjustable.

Note: When power is applied to the unit, the light will operate for approximately 1 minute (or longer depending upon timer control setting). After the initial operation the unit will operate automatically when motion triggers the sensor. Power should be removed during servicing.

TIMER ADJUSTMENT

The motion sensor control timer can be adjusted to operate the light from approximately 1 to 20 minutes after the last detectable motion. To adjust the delay time:

- 1: Disconnect power to the ventilator
- 2: Remove the ventilator grille.
- 3: Using a small flat-blade screwdriver, slowly rotate the timer control **(Refer to Figure 4)**
- 4: Replace the grille and turn on power.

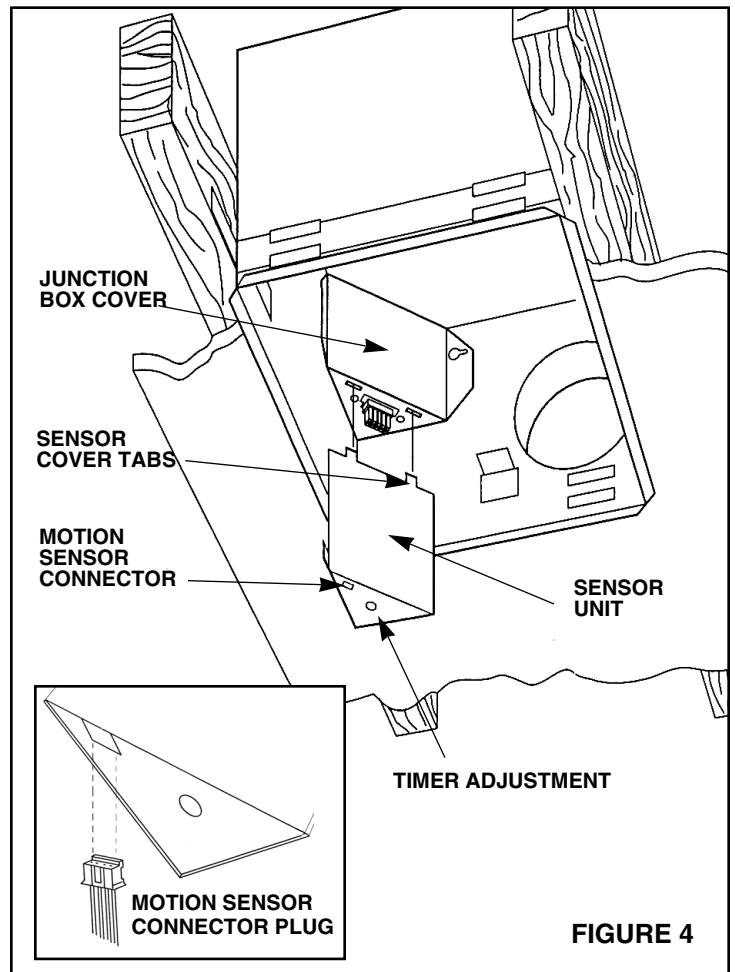
SENSOR CLEANING

The motion sensor is permanently mounted in the ventilator grille and cannot be removed for cleaning. Periodically, lightly wipe or brush any accumulated dust from the lens cover.

Abrasive cleaners or clothes and solvent cleaners should not be used for cleaning either sensor.

MOTION SENSOR RANGE

The motion sensor is designed to view an elliptical pattern of approximately 10' x 15' when mounted on an 8' ceiling. Adjustments to the viewing area can be made by blocking portions of the motion sensor lens to limit the viewing area. To limit a viewing area, simply remove one of the cut sections of adhesive film provided with the unit from the backing material and affix it to the lens in the area to be blocked. Pieces can be cut as needed to refine the viewing area.



NuTone®

One Year Limited Warranty

WARRANTY OWNER: NuTone warrants to the original consumer purchaser of its products that such products will be free from defects in materials or workmanship for a period of one (1) year from the date of original purchase. **THERE ARE NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

During this one year period, NuTone will, at its option, repair or replace, without charge, any product or part which is found to be defective under normal use and service. **THIS WARRANTY DOES NOT EXTEND TO FLUORESCENT LAMP STARTERS OR TUBES, FILTERS, DUCT, ROOF CAPS, WALL CAPS AND OTHER ACCESSORIES FOR DUCTING.** This warranty does not cover (a) normal maintenance and service or (b) any products or parts which have been subject to misuse, negligence, accident, improper maintenance or repair (other than by NuTone), faulty installation or installation contrary to recommended installation instructions.

The duration of any implied warranty is limited to the one year period as specified for the express warranty. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

NUTONE'S OBLIGATION TO REPAIR OR REPLACE, AT NUTONE'S OPTION, SHALL BE THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY. NUTONE SHALL NOT BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH PRODUCT USE OR PERFORMANCE. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state. This warranty supersedes all prior warranties.

WARRANTY SERVICE: To qualify for warranty service, you must (a) notify NuTone at the address stated below or telephone 1/800-543-8687, (b) give the model number and part identification and (c) describe the nature of any defect in the product or part. At the time of requesting warranty service, you must present evidence of the original purchase date.

Date of Installation

Builder or Installer

Model No. and Product Description

IF YOU NEED ASSISTANCE OR SERVICE:

For the location of your nearest NuTone Independent Authorized Service Center:

Residents of the contiguous United States Dial Free 1-800-543-8687

Please be prepared to provide:

Product model number • Date and Proof of purchase • The nature of the difficulty

Residents of Alaska or Hawaii should write to: NuTone Inc. Attn: Department of National Field Service, 4820 Red Bank Road, Cincinnati Ohio 45227-1599.

Residents of Canada should write to: Broan-NuTone Canada, 1140 Tristar Drive, Mississauga, Ontario, Canada L5T 1H9.

Rev. 03/2001



Product specifications subject to change without notice.

4820 Red Bank Road, Cincinnati, Ohio 45227
Printed in U.S.A., Rev. 3/2001, Part No. 89744