

**READ AND SAVE THESE INSTRUCTIONS**

**CAUTION**

For General Ventilating Use Only. Do Not Use to Exhaust Hazardous or Explosive Materials and Vapors.

**CAUTION**

TO REDUCE THE RISK OF FIRE AND ELECTRIC SHOCK, INSTALL THIS REGISTER ONLY WITH REMOTE EXHAUST FAN MODELS RATED MAXIMUM 10A, 1/2 HP.

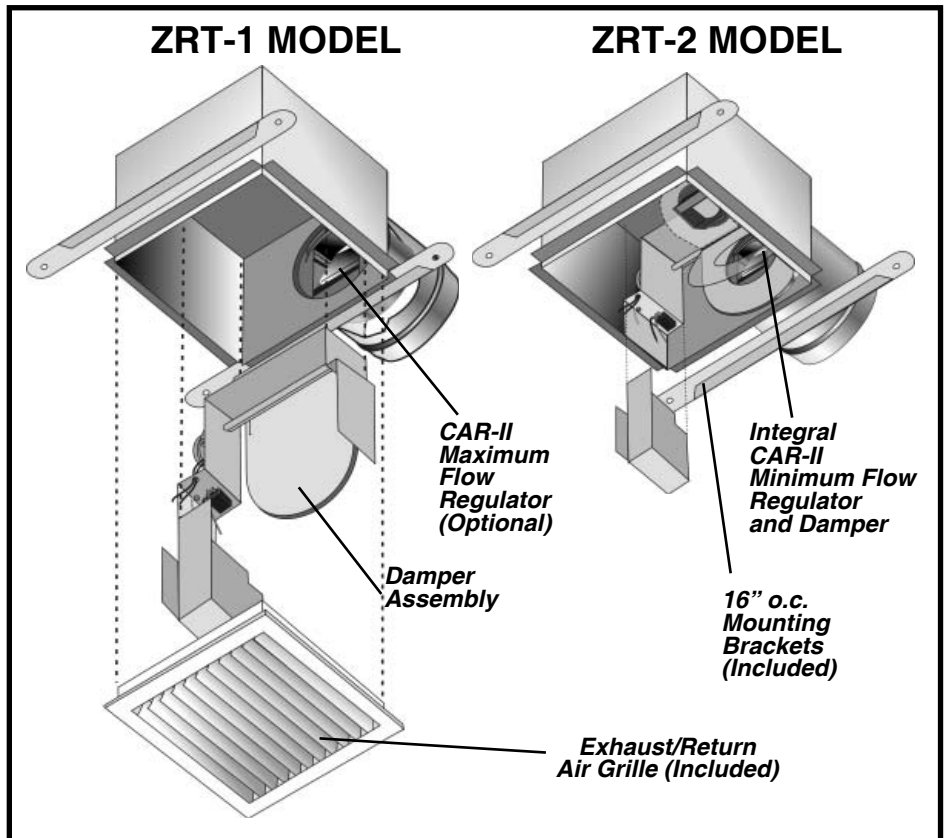
**WARNING**

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

- A. Use this unit only in the manner intended by the manufacturer. If you have any questions, contact the manufacturer.
- B. 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.

In addition to the following manufacturer's instructions, it is necessary to comply with federal, state, and local government codes. Your purchase of this American ALDES ventilation system represents an investment in the health and comfort of the occupants, as well as an investment in the protection of the building from the damaging effects of excessive indoor humidity.

**System design:** Satisfactory performance of a central exhaust ventilation system requires the proper integration of all the components, compatible exhaust grilles, and wall/roof caps, proper duct design for friction losses, consideration of acoustic and vibration properties of the fan and its mounting, acoustic properties of the exhaust grilles, consideration of the mode of operation, whether continuous, or automatically controlled by timer, dehumidistat, occupancy sensor, etc., installation in a heated or unheated space, with consideration for the



*potential of condensation in the ducting or fan housing.*

**Inspect the carton** upon receipt to insure the terminal has not been damaged in transit. If damaged, it is the responsibility of the recipient to file a damage claim with the carrier. American ALDES Ventilation Corporation is not responsible for damage incurred during shipment.

**Handle the unit with care** to prevent damage to the housing and other components. Store the unit indoors if possible. If outdoor storage is required, protection against moisture and dirt is necessary.

**DESCRIPTION**

**General:** The ZRT series zone control exhaust terminals by American ALDES are designed to introduce flexibility and dynamic control of central ventilation systems. Used

in both large and small systems, the ZRT controls the ventilation where it is required without the need for individual fans. Each ZRT is a combination grille, register box, control damper and optional flow regulator(s). This unique combination provides up to four different control schemes without the need for expensive pneumatic, electronic, or DDC control systems.

By replacing static grilles in large central exhaust systems, the ZRT-1 model provides on-off control for on-demand ventilation. This allows central fan downsizing and promotes energy savings by minimizing necessary fan horsepower and ventilation induced heat and cooling loads on the building. The optional model CAR-II constant airflow regulator can be installed in the ZRT-1's extended duct collar to place a maximum flow limit on each terminal. The automatic operation of the CAR-II will prevent noise and excessive

energy consumption caused by over-ventilation, as well as fluctuations in airflow rates as total system pressure varies.

The **ZRT-2** model can also be used for combination low-flow indoor air quality ventilation and on-demand high-flow spot ventilation using the same central fan system. This is achieved by integrating a CAR-II minimum airflow controller directly into the damper subassembly. With the damper completely closed, the factory calibrated CAR-II will still allow steady low continuous ventilation during fan operation (consult the CAR-II submittal sheet for sizing and specifying information). Even as other **ZRT** terminals are opened for on-demand control of spot ventilation, the closed **ZRT-2s** will maintain the specified low continuous rate through the CAR-II minimum flow control. By opening the **ZRT-2's** control damper, the low-flow regulator is removed from the air stream, which allows either controlled (optional using 2nd CAR-II) or full maximum boost ventilation.

The **ZRT** series terminals can themselves activate fans used in smaller central exhaust ventilation systems. Through the use of an integral damper end-switch, the **ZRT** can trigger the remote fan to start. This provides the distinct advantage of allowing the fan to only ventilate specific spaces when called upon, again without the need for separate fans in each space. This is especially important in residential bath exhaust applications using popular in-line and multi-port fans, where extremely low noise and single exterior vent penetrations are desired.

**MOUNTING**

The **ZRT** zone register terminals are available with mounting brackets to accommodate new or existing construction. Spanner brackets that allow mounting to joists up to 16" on-center are provided, and should be secured using the screws provided (See figure 1). Install additional blocking, or use single joist bracket if spacing is greater than 16" on-center. For installation in ceilings where drywall is already installed, use single joist

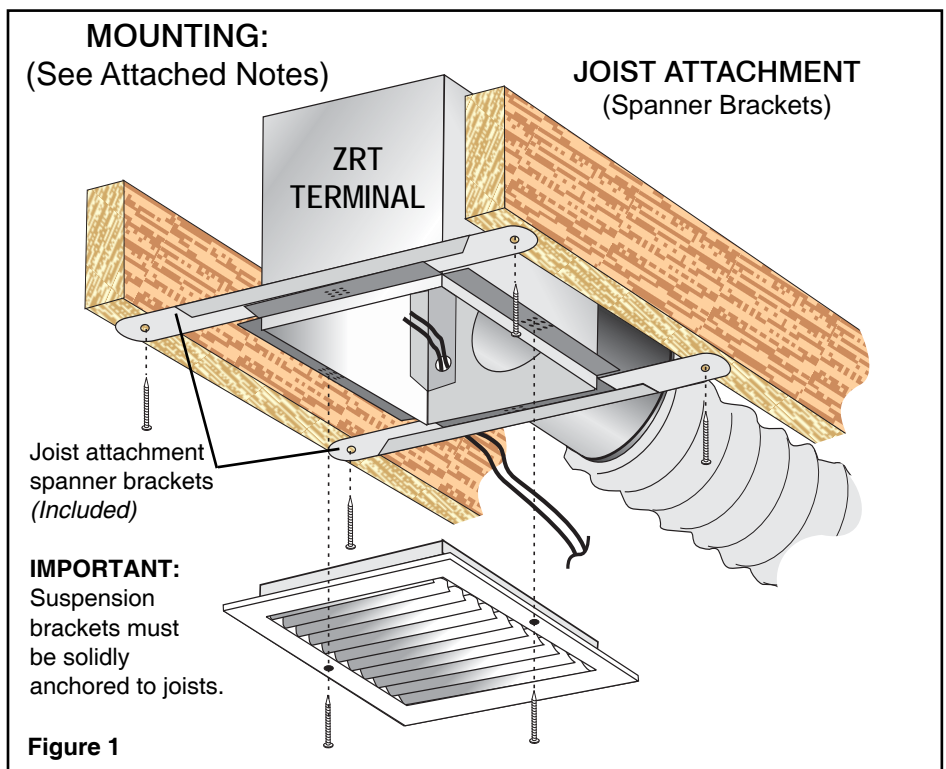


Figure 1

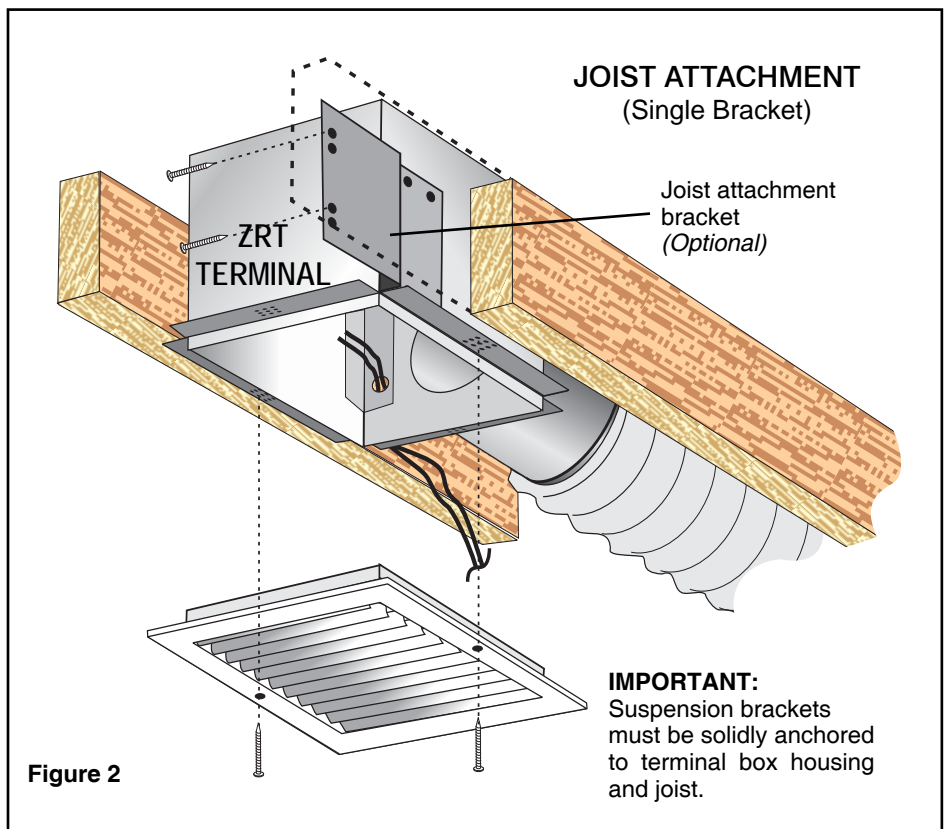


Figure 2

bracket and securely attach to **ZRT** housing and joist using screws provided (see figure 2). The joist bracket should be positioned on the terminal at the correct depth.

**MAINTENANCE**

**Monthly:** Clean the exhaust grilles and filters, if so equipped.

***C A U T I O N :***  
***Automatically operated device—to reduce risk of injury disconnect from the power supply before servicing.***

## DISCLAIMER

IT IS THE RESPONSIBILITY OF THE CONTRACTOR/INSTALLER TO DETERMINE THE SUITABILITY OF THIS EQUIPMENT WITH RESPECT TO THE POTENTIAL FOR BACK DRAFTING NATURALLY VENTED FLUE DEVICES AND/OR AFFECTING RADON ENTRY.

## WARRANTY

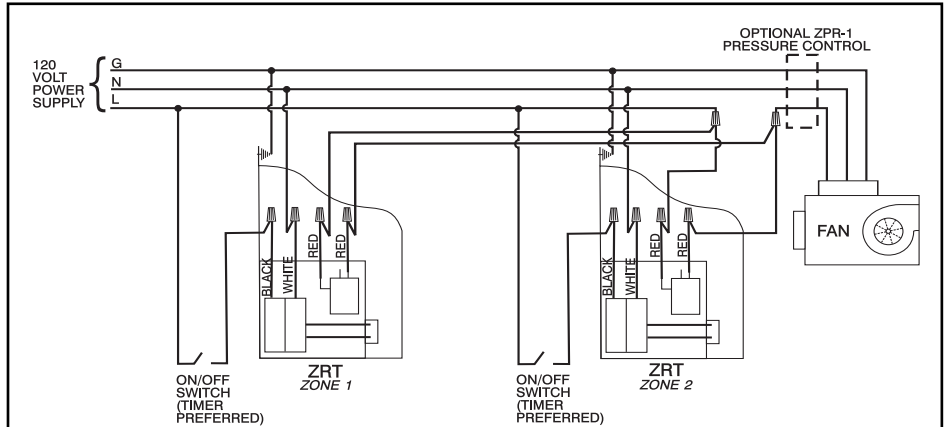
American ALDES Ventilation Corp. warrants the ZRT zone register terminal under normal use against defects in material and workmanship for three years from date of purchase. American ALDES Ventilation Corp. will, at its option, repair or replace any defective component without charge providing the product is promptly returned, prepaid to American ALDES Ventilation. This warranty is void if any unauthorized alterations or repair are made to any component part. American ALDES Ventilation Corp. disclaims and excludes any liability for implied warranties or for accidental or consequential damages wherever permitted by law. This warranty gives you specific legal rights and you may also have other rights, which vary from state to state. For warranty service or information, please contact customer service at American ALDES Ventilation Corp.

## WIRING

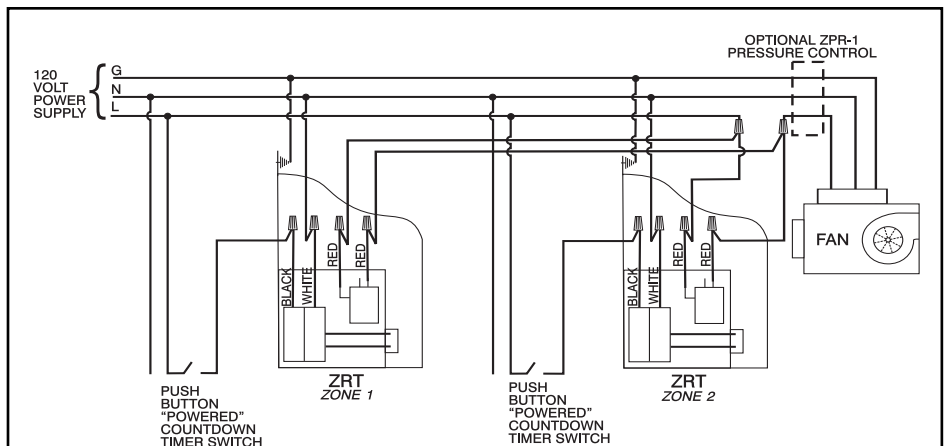
The ZRT zone register terminals are available with 120V or 24V actuator motors. 120V wiring options are shown in figures 3-5, and 24V wiring options using the ZTC zone terminal low voltage control center are shown in figures 6 and 7.

**Note:** ZRT's are approved for use over a tub or shower, the most efficient method of removing humidity from the bathroom.

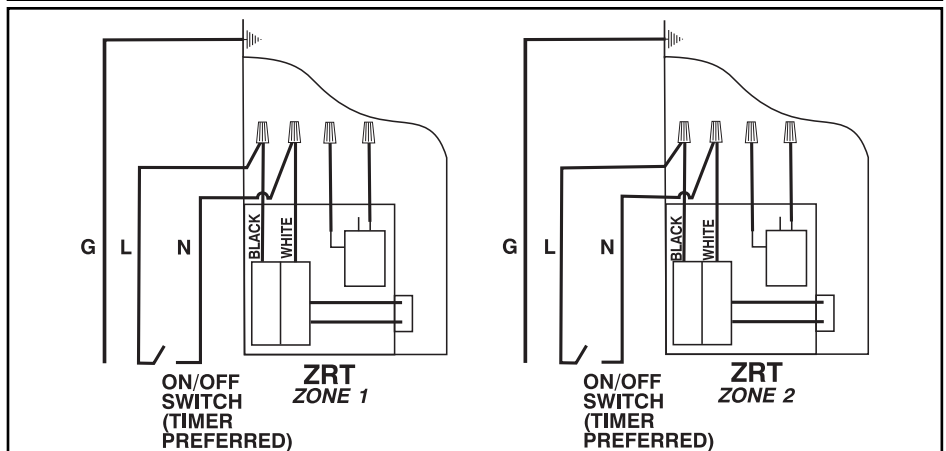
**CAUTION:** Acceptable for use over tub or shower when installed in a GFCI protected circuit. If wired directly to the fan or ZRT's, a single Ground Fault Protector on the 120V common power supply must be used to protect all devices on the same circuit.



**Figure 3 — Intermittent fan operation using 120VAC power supply to ZRT-1 terminals.** SPST convenience switches such as manually operated, mechanical timers, or dehumidistats may be used to control each ZRT and fan in this configuration.

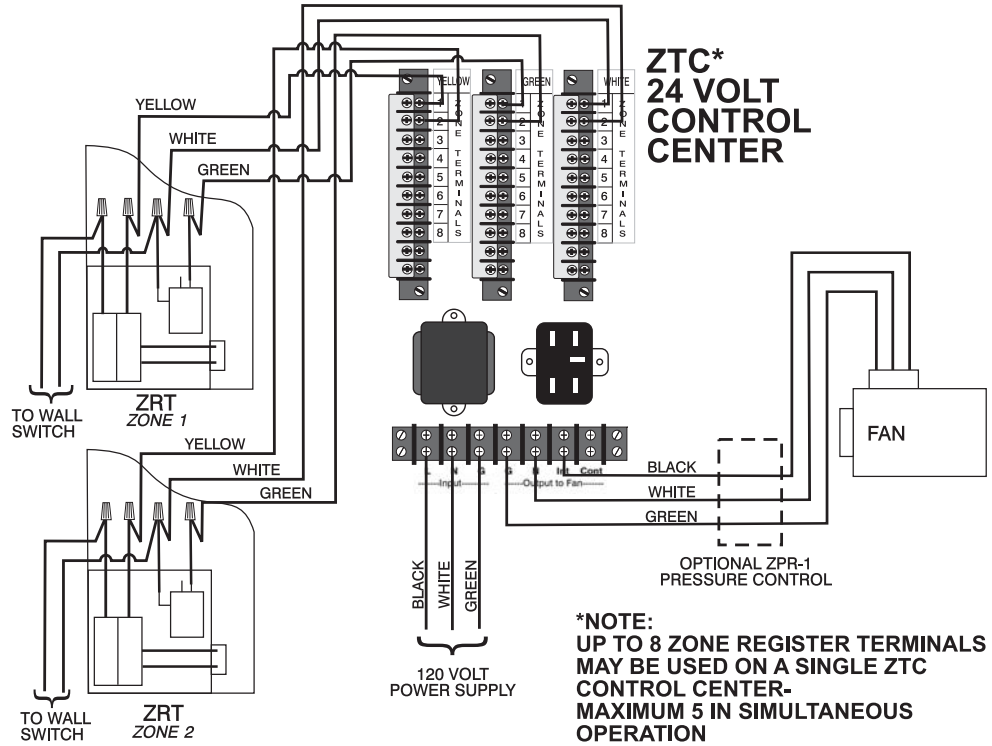


**Figure 4 — Intermittent fan operation using 120VAC power supply to ZRT-1 terminals.** SPST convenience switches such as push button timers or motion sensors may be used to control each ZRT and fan in this configuration.



**Figure 5 — Continuous fan operation using 120VAC power supply to ZRT-2 terminals.** The fan and ZRT terminals may be wired independently.

**Figure 6 — Intermittent fan operation using 24v ZTC zone terminal control center and ZRT-1 terminals.** SPST convenience switches such as manually operated, mechanical timers, or dehumidistats may be used to control each ZRT and fan in this configuration. The fan is controlled by the ZTC.



**Figure 7 — Continuous fan operation using 24v ZTC zone terminal control center and ZRT-2 terminals.** SPST convenience switches such as manually operated, mechanical timers, or dehumidistats may be used to control each ZRT in this configuration. The fan may be wired to the ZTC or independently.

