

U S E R M A N U A L

R.A.D.

Remote Activated Diffuser

WIRELESS DIFFUSER CONTROL

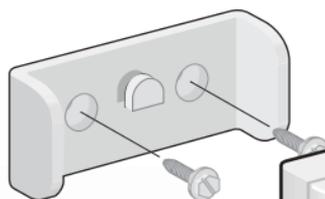


CARNES®

448 South Main Street / Verona, WI 53593-1499 / (608) 845-6411

2 Introduction

The R.A.D. consists of the Actuator on the bottom of the diffuser that controls the butterfly damper and the Wireless Remote control used to directly adjust the airflow from the diffuser or adjust the airflow based on space temperature. A wall mounting bracket is also included.



Wall Bracket



Damper Actuator

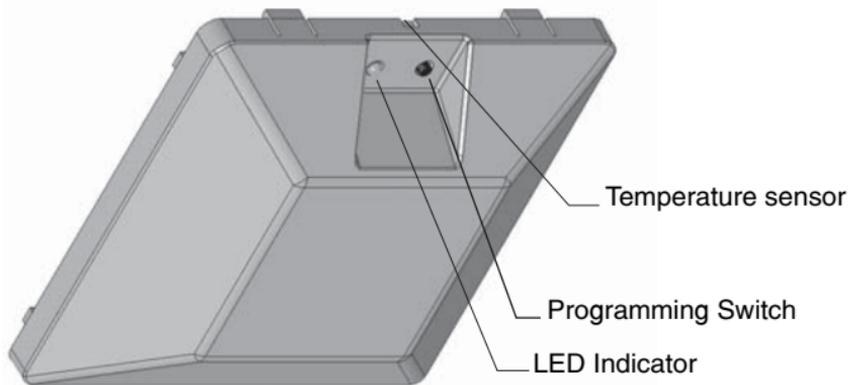


Remote Control

Actuator

The Actuator has been installed on the bottom of the diffuser. The small pushbutton switch allows you to program the address of the Actuator using the Remote. Each Actuator can be set to any one of 16 groups and any one of 32 zones within each group. Multiple Actuators can be set to the same group and zone so they respond together.

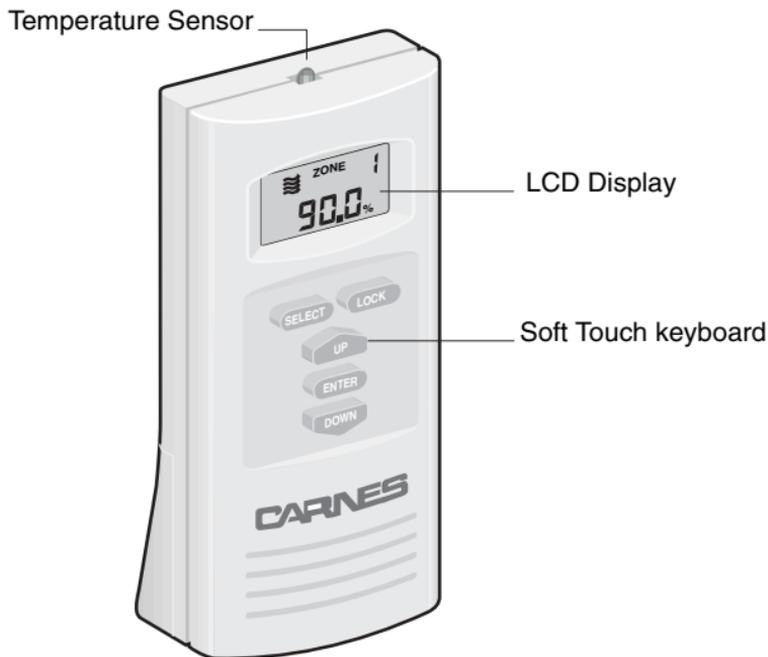
The LED will indicate the status of the damper (red for fully closed and green for fully open) or will blink red or green when the Actuator has received a valid command and is opening or closing.

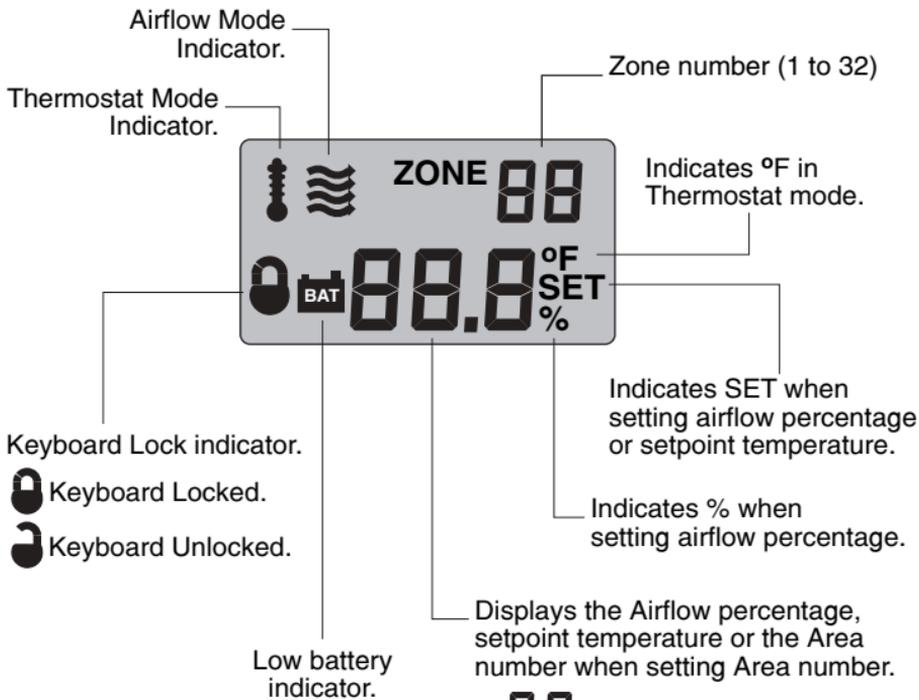


4 Remote

The Remote is battery powered and is used to control the Actuator by direct control of the butterfly damper (from fully closed to 100% open) or by controlling the damper based on setpoint temperature, space temperature and supply air temperature.

The LCD displays the status of any diffuser and the keys allow you to set the addresses of the Actuators and operate the R.A.D. in Airflow or Thermostat mode.





80% Damper is 80% open.

79^{SET}% While airflow is being set.

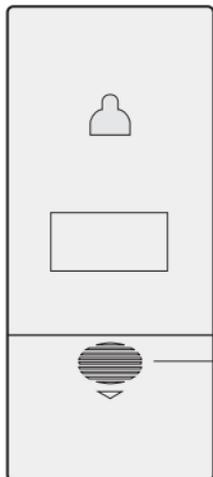
72.0^{°F} Space temperature is 72.0oF.

70.0^{°F}_{SET} Setpoint temperature.

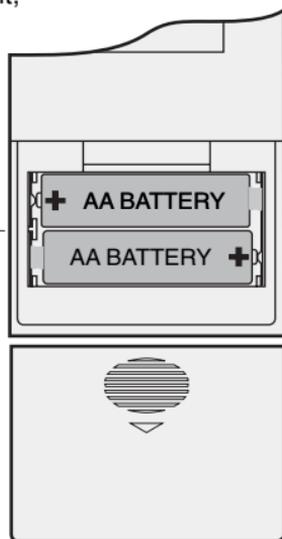
A02 Selecting Area number (1 to 16)

6 Installing Batteries

Back of Remote



To open battery compartment,
press here and slide open.



Install two AA alkaline
batteries as shown and
replace battery cover.

WARNING:
Reversing batteries can damage control.

The Area number or group allows you to separate your diffusers into up to 16 Areas or groups. The Area number can respond to different floors or departments. Within each Area you can have up to 32 Zones. Each diffuser can have a different Zone number. Multiple diffusers can have the same Zone number so they respond together.

First select the Zone number (see page 10) and then the Area number (see page 10). Press the small program switch on the diffuser Actuator (see page 3) and the Green LED will turn On. For 30 seconds the Actuator will accept a new Zone and Area number. Press and hold the SELECT key for about 8 seconds until the PRO appears in the LCD. Press ENTER to clear the LCD.

SELECT

Press and hold the SELECT key until PRO appears in the LCD. Then press ENTER.



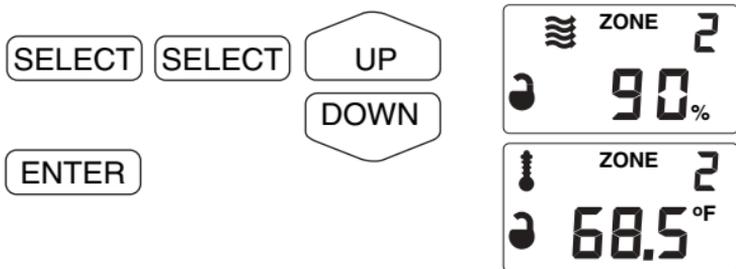
8 Selecting Airflow or Thermostat Mode

In Airflow mode you have direct control over the damper opening. You can set the damper from completely closed (0%) to fully open (100%). A single Remote can control any number of diffusers.

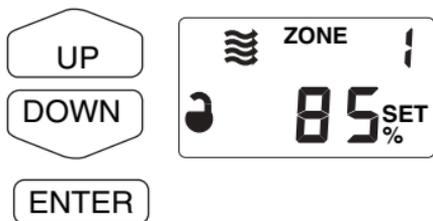
In Thermostat mode the diffuser is controlled by the temperature set on the remote, the space temperature and the supply air temperature.

In Thermostat mode the Remote must remain in the space being supplied by the diffuser. The Remote can sit on a desk or be mounted on a wall using the bracket provided. The Remote will monitor and display the space temperature and periodically and automatically adjust the diffuser for best comfort.

To select a mode, first select the Zone number (see page 10). Momentarily press the SELECT key twice and use the UP or DOWN keys to toggle between Airflow and Thermostat mode. Press ENTER to save the mode.

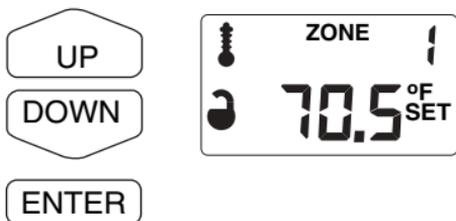


In Airflow mode you can set the Airflow or damper position from from 0 to 100% open. First select the Zone (see page 10) and Area numbers (see page 10).



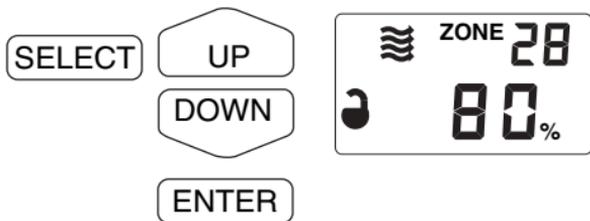
Setting the Comfort Temperature

In Thermostat mode you can set the comfort or setpoint temperature from 50 to 80.5 °F. First select the Zone and Area numbers (see page 10).



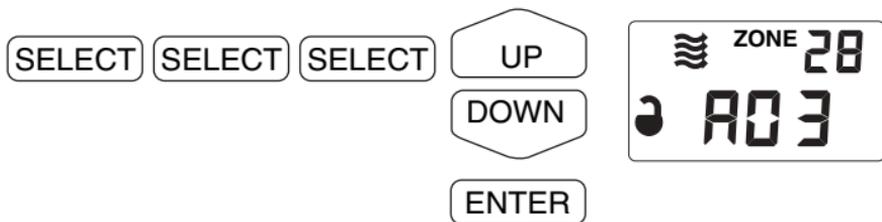
10 Selecting the Zone Number

Momentarily press the SELECT key once and use the UP and Down keys to select the Zone number. Press the ENTER key when finished.



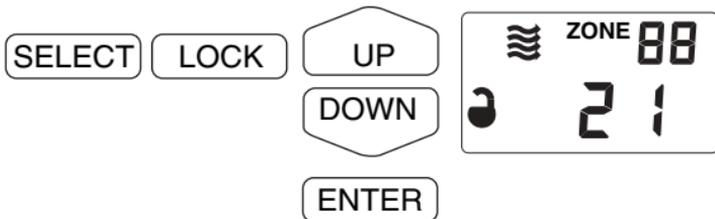
Selecting the Area Number

Momentarily press the SELECT key three times and use the UP and Down keys to select the Area number. Press the ENTER key when finished.



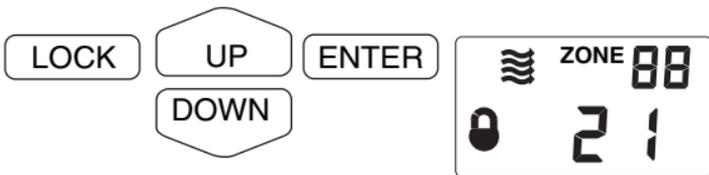
In Thermostat mode it may be desirable to lock the keys so that the Remote can only be changed by an authorized person.

First, you must select a lock code (number from 1 to 21). momentarily press SELECT and then LOCK and use the UP and Down keys to select the lock number.



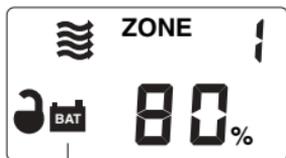
Locking and Unlocking the Keys

Momentarily press LOCK and use the UP and Down keys to select the lock number. Press ENTER to lock or unlock the keys. The lock symbol will indicate whether the keys are locked or unlocked.



12 Low Battery Indicator

The battery symbol will turn On to indicate the batteries should be changed. The symbol will blink to indicate the batteries should be changed immediately.



Battery symbol