

AprilAire®

Humidifier

OPERATING INSTRUCTIONS

Model 60, 62 & 4655

Automatic Digital and Manual
Humidifier Control



Model 60 shown.

**INSTALLER: LEAVE THIS
OPERATION MANUAL WITH
THE HOMEOWNER**

Product Info &
Digital Manual

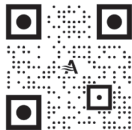


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YOUR HUMIDIFIER

Your humidifier is controlled by either an Automatic Digital Humidifier Control or a Manual Humidifier Control.

The Automatic Digital Humidifier Control offers 2 modes of operation, Automatic (**AUTO**) and Manual (**MAN**). When in the Automatic Mode, this system offers the following benefits:

- The control automatically adjusts your home's relative humidity (RH) based on the outdoor temperature. **You will receive the optimum amount of humidity so that your home and its furnishings are protected from the damaging effects of excess condensation or low humidity during the heating season.**
- **Simple operation with few adjustments.** The control eliminates the need to manually adjust when outdoor temperature changes. It also eliminates the need to turn the dial setting to **OFF** during the summer season.

DIGITAL HUMIDIFIER CONTROL INDICATOR LIGHTS

Call Dealer for Service: The red light indicates that the humidifier is not operating normally and that service is required.

Change Water Panel: The yellow light indicates that it is time to change the water panel in the humidifier. **NOTE:** This concerns the Model 60 only. The Model 62 is used for steam applications that do not require this feature.

Humidifier On: The green light indicates that the humidifier is operating normally.

OPERATING INSTRUCTIONS

BLOWER ACTIVATION

The Blower Activation switch is set to the **ON** position to allow the humidifier control to activate the HVAC fan for maximum humidification. For this setting, the Models 500, 600 and 700 must be connected to hot water.

If the HVAC system has been idle for 1 hour, the humidifier control will activate the HVAC system fan to sample the air for 3 minutes. If the RH is lower than the set point, the humidifier control will activate the humidifier and keep the fan running. The humidifier will continue to operate for 2 hours or until the humidification set point is reached.

If the RH set point has not been reached by the end of a call for heat, the control will continue to operate the humidifier and the HVAC fan until the humidification set point is reached or 2 hours have elapsed.

When the Blower Activation switch is in the **OFF** position, the humidifier control will only operate the humidifier if humidity is required and the HVAC system fan is operating or the HVAC system is producing heat.

AUTOMATIC DIGITAL HUMIDIFIER CONTROL

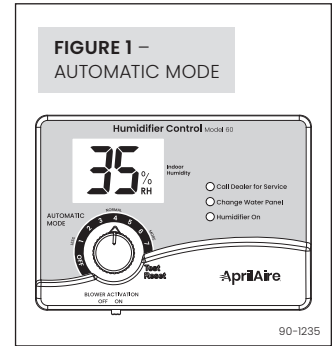
Your Automatic Digital Humidifier Control works in conjunction with your heating, ventilation, and air conditioning (HVAC) equipment to control the operation of the humidifier. In order to operate in automatic mode, the included outdoor temperature sensor (ODT) must be installed. The control senses indoor humidity, and the ODT senses outdoor temperature. The control then automatically adjusts the operation of the humidifier to provide the optimal humidity level for the home.

The digital display on the automatic control accurately shows the humidity level inside the cold air return duct. It will provide the best reflection of the humidity in the living space when the HVAC blower is operating.

AUTOMATIC MODE (MANUAL MODE – SEE PAGE 6)

Your AprilAire humidifier control is installed in the cold air return duct.

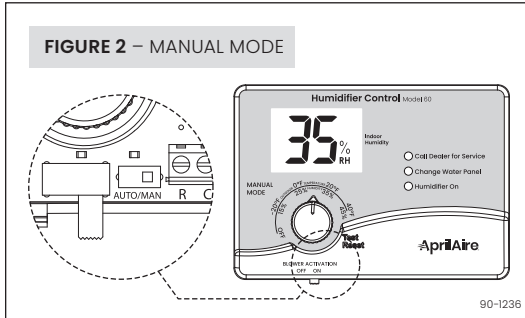
During the first heating season, your humidifier control needs to be set initially to match your home's condition. Please follow these steps when adjusting your control (refer to **FIGURE 1**).



1. Turn the dial setting knob to **5**, which is within the normal range. During the next 24 to 48 hours it may be necessary to adjust the dial for more or less humidity, depending on your personal comfort and home's requirements. Refer to **TABLE 3 – Operation Guide**.
2. During the coldest portion of the first heating season, minor adjustments may be necessary. This is dependent upon your home's construction. Refer to **TABLE 3 – Operation Guide**.

The humidity in your home will now be accurately controlled to meet your needs and should not need further adjustment during future heating seasons. Make note of the dial setting in the event you temporarily move the knob to **OFF** when performing annual maintenance of your AprilAire humidifier.

MANUAL MODE (AUTOMATIC MODE – SEE PAGE 5)



When the humidistat is in Manual Mode (see **FIGURE 2** – internal switch in the **MAN** position and **M** in the display), it is important to anticipate a drop in outdoor temperature and reduce the setting accordingly to avoid excess condensation. For example, with an outdoor temperature of 20°F, the correct setting will be 35%. If the temperature is expected to fall to 0°F, reduce the setting to 25% several hours prior to the temperature change.

See **TABLE 1** for the recommended settings. These settings represent a compromise between humidity levels within the range of comfort and protection from window condensation. For example, a range of 40–60% indoor humidity in wintertime may be ideal for comfort, but would result in damaging condensation. Thus, observing recommended humidity levels on the humidifier control is important. Condensation on the inside surface of windows in the form of fogging or frost is indicative of over-humidification. This same condensation can occur in other areas of the home, resulting in damage.

TABLE 1 – OUTDOOR TEMPERATURE / INDOOR RELATIVE HUMIDITY

Outside Temperature	Recommended RH
+40°F	45%
+30°F	40%
+20°F	35%
+10°F	30%
0°F	25%
-10°F	20%
-20°F	15%

WATER PANEL CHANGE INDICATOR (MODEL 60 ONLY)

The control keeps track of humidifier operation time. The yellow **Change Water Panel** light flashes after a preset amount of running time has elapsed. This running time is preset by the installer based on the humidifier model and water hardness.

Refer to the **ANNUAL MAINTENANCE** section for instructions on changing the water panel or call your heating and air conditioning dealer for service. After the water panel is replaced, turn the control knob past **7** to the **Test/Reset** position. It will click into position. Leave it there until the green **Humidifier On** light flashes, to reset the water panel change timer.

TEST/RESET

The **Test/Reset** setting allows the humidifier operation to be checked even if there is no call for humidity. See **CHECK THE HUMIDIFIER OPERATION** on page 8.

CHECK THE HUMIDIFIER OPERATION

Set the knob to **Test/Reset**, make sure that the water saddle valve is open and that there is electricity to the humidifier. The HVAC fan must be running for the humidifier to function. **NOTE:** Turning the knob to **Test/Reset** resets the **Change Water Panel** timer. The humidifier will only operate for 1 minute in test mode. (Model 400 and 400M: Floats must be down for the solenoid valve to allow water flow.) Reduce the humidifier control setting to the recommended indoor humidity, depending on the outside temperature. **DO NOT LEAVE IN TEST MODE AS HUMIDIFIER WILL NOT OPERATE.**

NOTE: If the control knob is left in the **Test/Reset** position, after 1 minute the display will show the software revision level (**r1, r2, r3**, etc.) and the blue backlight will flash.

ADDITIONAL INFORMATION

Your humidifier is a precision system that will accurately maintain the humidity in your home. For every 2°F change in outdoor temperature, the Digital Humidifier Control will automatically adjust the indoor RH by 1%.

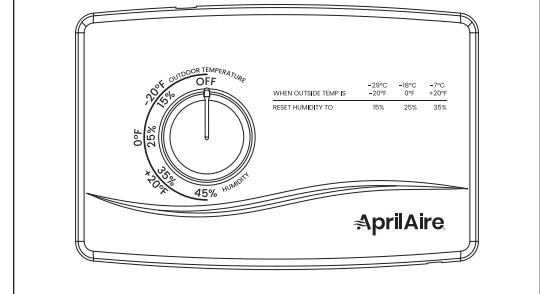
The Digital Humidifier Control will accurately control the humidity in your home to a maximum of 45%.

The humidity values in **TABLE 2** are targets based on outdoor temperature and the Digital Humidifier Control setting. The actual humidity may vary due to conditions in the home (cooking, showering, etc.).

		Outdoor Temperature (°F)						
		-10°F	0°F	10°F	20°F	30°F	40°F	
Dial Setting	1	10%	10%	10%	15%	20%	25%	Relative Humidity (%)
	2	10%	10%	15%	20%	25%	30%	
	3	10%	15%	20%	25%	30%	35%	
	4	15%	20%	25%	30%	35%	40%	
	5	20%	25%	30%	35%	40%	45%	
	6	25%	30%	35%	40%	45%	45%	
	7	30%	35%	40%	45%	45%	45%	

TABLE 3 – OPERATION GUIDE

Condition	Solution
Condensation on windows.	Reduce the setting on the control dial by 1 increment.
Lack of humidity.	Increase the setting on the control dial by 1 increment. If the humidifier control is already at the maximum setting of 7 , set the Blower Activation switch to ON . The humidifier should be plumbed to hot water when using the Blower Activation feature.
Humidifier does not operate.	Turn dial to Test/Reset . Make certain HVAC blower is operating. If unit still does not operate, consult a heating contractor.
Humidifier will not shut off.	Turn dial to OFF . If unit continues to operate, consult a heating contractor.
Test mode.	System operation is checked by setting the knob to Test/Reset . Make certain HVAC blower is operating. Humidifier will operate for 1 minute. NOTE: Placing the knob in Test/Reset resets the water panel change timer.
Red Call Dealer for Service light flashes (FIGURE 1).	Note the error code on the display (E1, E2 or E3) and call your heating and air conditioning dealer.
Model 60 only: Yellow Change Water Panel light flashes (FIGURE 1).	Refer to the Humidifier Owner's manual for instructions on changing the water panel or call your heating and air conditioning dealer for service. After the water panel is replaced, turn the control knob to the Test/Reset position until the green Humidifier On light flashes. This will reset the water panel change timer.

MANUAL HUMIDIFIER CONTROL**FIGURE 3 – MANUAL HUMIDIFIER CONTROL**

Your AprilAire humidifier is controlled by a Manual Humidifier Control (see **FIGURE 3**). The Manual Humidifier Control is installed either in the cold air return duct or on an interior wall of the home. With the Manual Humidifier Control, it is important to anticipate a drop in outdoor temperature and reduce the setting accordingly to avoid excess condensation, just as with the Digital Humidifier Control installed in Manual Mode (see page 6).

To determine the indoor RH, slowly turn the knob clockwise and counterclockwise and listen for 2 clicks. The indoor RH is within the range of the 2 clicks. See **TABLE 2** on page 9.

CHECK THE HUMIDIFIER OPERATION

Set the knob to the highest setting, make sure that the water saddle valve is open and that there is electricity to the humidifier. The HVAC system must be operating for the humidifier to function. Confirm that the solenoid valve is energized and water is flowing into the humidifier. Return control knob to desired setting.

ANNUAL SUMMER SHUTDOWN

Digital Humidifier Control in Automatic Mode

(see **FIGURE 1**) and Blower Activation switch is in the **OFF** position: No adjustment is necessary.

Digital Humidifier Control in Automatic Mode

(see **FIGURE 1**) and Blower Activation switch is in the **ON** position: Set the knob to the **OFF** position.

Digital Humidifier Control in Manual Mode

(see **FIGURE 2**): Set the knob to the **OFF** position.

Manual Humidifier Control

(see **FIGURE 3**): Set the knob to the **OFF** position.

LIMITED WARRANTY

Your AprilAire® Humidifier Control is expressly warranted for five (5) years from date of installation to be free from defects in materials or workmanship.

The exclusive obligation of AprilAire under this warranty shall be to supply, without charge, a replacement for any control which is found to be defective within such five (5) year period and which is returned not later than thirty (30) days after said five (5) year period by you to either your original supplier or to AprilAire, Madison, Wisconsin 53701, together with the installation date of the control.

THIS WARRANTY SHALL NOT OBLIGATE APRILAIRE FOR ANY LABOR COSTS AND SHALL NOT APPLY TO DEFECTS IN WORKMANSHIP OR MATERIALS FURNISHED BY YOUR INSTALLER AS CONTRASTED TO DEFECTS IN THE CONTROL ITSELF.

IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL BE LIMITED IN DURATION TO THE AFORESAID FIVE YEAR PERIOD. THE APRILAIRE LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, OTHER THAN DAMAGES FOR PERSONAL INJURIES, RESULTING FROM ANY BREACH OF THE AFORESAID IMPLIED WARRANTIES OR THE ABOVE LIMITED WARRANTY IS EXPRESSLY EXCLUDED. THIS LIMITED WARRANTY IS VOID IF DEFECTS(S) RESULT FROM FAILURE TO HAVE THIS UNIT INSTALLED BY A QUALIFIED HEATING AND AIR CONDITIONING CONTRACTOR. IF THE LIMITED WARRANTY IS VOID DUE TO FAILURE TO USE A QUALIFIED CONTRACTOR, ALL DISCLAIMERS OF IMPLIED WARRANTIES SHALL BE EFFECTIVE UPON INSTALLATION.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages so the above exclusion or limitations 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.

WARRANTY REGISTRATION

Visit us online at aprilair.com to register your AprilAire product. If you do not have online access, please mail a postcard with your name, address, phone number, email address, product purchased, model number, date of purchase, and dealer name and address to: AprilAire, P.O. Box 1467, Madison, WI 53701.

Your warranty registration information will not be sold or shared outside of this company.



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