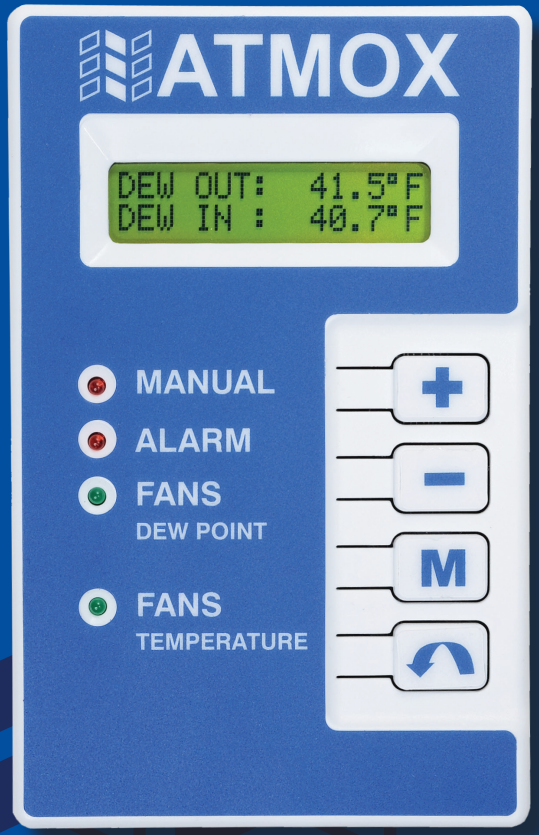
ATMOX

ATMOX PEAK System

Moisture Control and Heat Reduction System for Attics

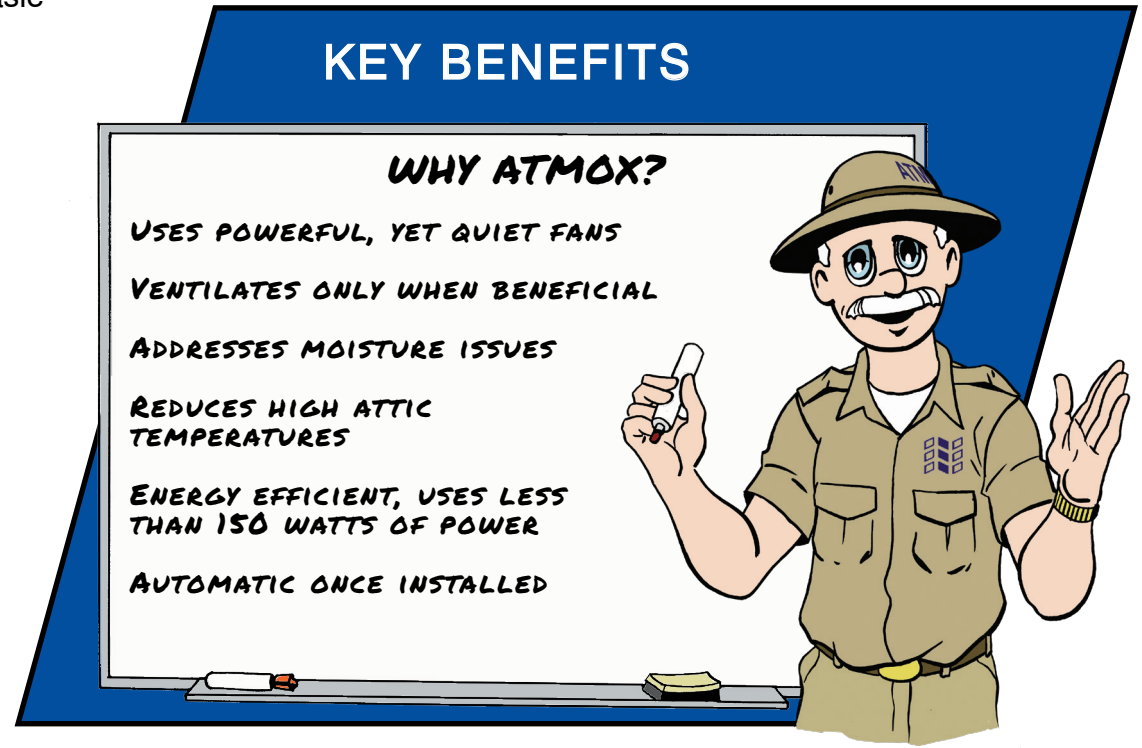
User's Guide



Welcome to ATMOX

This User's Guide will cover the basic operation of the ATMOX System.

For instructions on installation and setup, please refer to an ATMOX Installation Manual.



Operating Principle

Attics need proper ventilation. The goal of ATMOX is simple – reduce the heat and moisture level in your attic.

The basic principle of how it works is also simple. Ventilate with “good” air from the outside only when it will improve the conditions in the attic. Using sensors, ATMOX calculates dew point inside and outside your attic to determine when the fans should run to reduce moisture. The fans also reduce heat in the attic.

Once installed, the ATMOX System will operate on its own and automatically. There is no need to manually make any changes to the system unless desired.

ATMOX Settings

The ATMOX System is an automatic and software-controlled heat reduction and moisture management system. The system continually measures conditions inside and outside to determine the best course of action for your attic.

The system is preset to the proper settings. It is very rare for adjustments to be necessary. For select geographic areas, settings may be adjusted. For more information, review pages 14-17.

If you have inadvertently made changes by pressing buttons, talk to your installer about setting system back to its default settings.

Do not adjust the settings on your system without talking to your installer. Improper settings can negatively affect the operation of the ATMOX system.

Standard System Components

PEAK Controller A-Box

PEAK Controller B-Box

Outside Temperature and Humidity Sensor

Inside Temperature and Humidity Sensor

Optional Sensors

Wood Moisture Sensor

High Water Alert Sensor

Product Specifications

Usage: Variable from 1.5-150 W

Input Voltage: 85-132V AC

Output Voltage: 12-13V DC

Output Current Range: 0-12.5A

Data Input: 2 Temperature/RH, 1 Wood Moisture, 1 Water

Power Output: 1 Switched, 1 Constant

Use only approved ATMOX Fans and Accessories with the ATMOX PEAK System

Basic System Configuration

Sensors measure and provide data to the Controller.

RED OUTPUT

Fans will run when the outside air is beneficial.

PURPLE OUTPUT

A constant power source for accessories.

Informational Display Screens

The ATMOX Controller will automatically rotate through its standard informational screens about every fifteen seconds.

System Screen

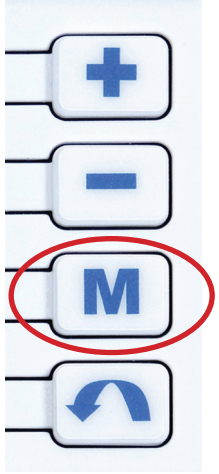
This screen displays the name of the ATMOX model and the installed software version.

To view all screens, you can wait and watch as it scrolls automatically.

For faster rotation of screens, you can manually change the display. Press the M Button on the panel to scroll through each of the screens.

The M Button will also light up the screen for easier viewing.

Note: The system will continue to auto rotate even while the M Button is being pressed.



Informational Display Screens

Temperature Screen

The Temperature Screen displays the temperature outside and inside the attic.

The ATMOX system evaluates the outside and inside temperature to determine whether or not to ventilate the attic for general moisture control parameters. For heat reduction, the ATMOX System will ventilate based on a high inside temperature.

Note: If the outside sensor is located in direct sunlight, it will often heat the metal housing causing the sensor to read a temperature that is higher than the ambient outdoor temperature. The overall outside moisture calculations (dew point) will not be incorrect, so this generally does not affect basic operation of the ATMOX system in determining when fans should be running.

Dew Point Screen

The Dew Point Screen displays the dew point outside and inside the attic.

Dew point is the key to the ATMOX system. Dew point is calculated from the temperature and humidity measurements and gives you the best indicator of moisture in the air. A higher dew point means there is more moisture in the air, and a lower dew point means there is less moisture in the air. The ATMOX system does not activate ventilation on an absolute number but instead uses a comparison of air in the two locations. Under most circumstances, the fans will ventilate when the outside dew point is one degree lower than inside dew point. There are some exceptions to this built into the software, for example temperature parameters need to be met. There is also a time delay of 15 to 30 minutes to conserve energy and avoid constant on and off. This means that you will not always see instantaneous change in operations.

Relative Humidity Screen

The Relative Humidity Screen displays the relative humidity outside and inside the attic.

Relative humidity is measured by the sensor along with temperature in each location and is used to calculate dew point. An important component of relative humidity is the word “relative.” Humidity is relative to temperature and can fluctuate significantly with changes in temperature. ATMOX ventilates based on a dew point comparison for this reason. It is possible for the humidity outside to be higher than inside but to still trigger fans to run. It all depends on the corresponding temperature. In general, the ATMOX system is not looking to target an exact humidity level but instead is looking to have variations mirroring the outdoors. The goal is not to have extremely high humidity in the attic for extended periods of time.

Wood Moisture Screen

The Wood Moisture Screen displays the wood moisture content from the optional sensor in the attic.

If the wood moisture sensor is not installed, then the display will read N/A. If the sensor is installed, then the wood moisture from the sensor will be displayed.

Wood moisture is a great tool in evaluating the actual moisture in an attic. The wood moisture will vary throughout the year. The ATMOX system has an alert to notify you if the wood moisture reading is too high. Under the default setting, the alert is triggered at 20% and once activated will not turn off until wood moisture content decreases below 18%. If desired, this setting can be adjusted. Contact your installer if you have questions about custom settings.

System Operation, Alarms and Alerts

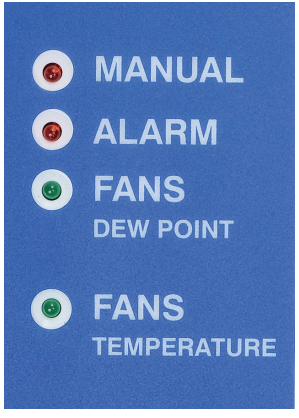
ATMOX PEAK System

MANUAL

Under normal operation, this light is not illuminated. If the Manual light was accidentally illuminated, it can be turned off by pressing the bottom Arrow button one time to turn off.

ALARM

This light indicates that there is an alert on the system. Check screen to identify the reason for alarm.



FANS - DEW POINT

When this light is on, the outside conditions are better based on moisture control parameters and the fans will be operating.

FANS – TEMPERATURE

When this light is on, the fans have been triggered by a temperature parameter. This will occur in high heat for heat reduction or in cold temperatures when Snow Mode is active.

BOTH LIGHTS OFF

When both lights are off, the outside air is not beneficial and no fans are running. ATMOX system is “waiting” for any change in conditions.

FLASHING LIGHTS

Either or both lights may be flashing at times. This means the system is in a time delay for switching between operations.

B-Box Components Overview

Sensors are attached to B-Box via RJ11 cable and jacks.

The Display A-Box is connected to the B-Box via RJ11 cable and jacks.

The ATMOX System sends signal and power to the fans, relays and other accessories via low voltage 12v DC power.

Each color represents an output for a different function of the system. Color-coded plugs connect the low voltage wire to the B-Box.

Data Transmission Light

There is a small light on the B-Box.
If the light is flashing quickly, then data is not being received from A-Box.
If the light is pulsing slowly, then data is being transmitted or received from A-Box.

System Notifications

System notifications are designed to alert you of a potential problem. The following are all possible alerts:

Wood Moisture Too High

If the system has an optional ATMOX wood moisture sensor, this alert is triggered by moisture levels that are higher than they should be in the attic. The attic should be checked to determine cause.

High Water Alert

If the system has an optional ATMOX water sensor, this alert is triggered by standing water in the location of the water sensor. The water sensor is generally used in a condensate line. The location of the water sensor should be checked if this alert is triggered.

Box B : Check B

There is a data connection problem with the wire between the A-Box and B-Box. Contact your installer or ATMOX for more information.

Humidity Too High

Under the system default settings, this humidity alarm setting is turned to the off position, so it may not be active on your system. If this alert is on for a brief period of time, there is no reason for concern as humidity can fluctuate. If this alert is on for an extended period of time, the attic should be checked.

Missing, None, Defect (Def), with Inside or Outside Sensor

Any of these alerts indicate that there is a data connection problem with the corresponding sensor. First, try to restart the system to clear the error. Second, check the RJ11 cable and couplers between the B-Box and the sensor to see if anything is unplugged or damaged. If sensor is still not reading, contact your installer or ATMOX for more information.

Maintenance

As a homeowner, ATMOX suggests a periodic maintenance inspection of your ATMOX system and attic by your installer. Conditions in and around your home are always changing. Please be aware of the following during other times of year:

Power Connection

If the ATMOX display screen is not showing any readings, it most likely has no electrical power and is not operating. In this case, see if something is unplugged or make sure that the outlet being used for the B-Box has power. If the A-Box has no display or if the B-Box has no power, then contact your installer for more information.

System Alarms

If the ATMOX system has an alarm such as missing hardware, then the system will not operate. Please check periodically to make sure that the display has no alerts needing attention.

Fan Operation

The ATMOX fans should periodically be brushed off lightly to keep debris blocking ventilation. The ATMOX display does not give a notification if any single or group of fans are not operating. Fans should periodically be checked for operation.

System Settings

Most ATMOX Systems do not need any software adjustments for operation. There are instances where you may want to adjust a setting to better suit your needs. These adjustments are described here.

Heat Reduction

Heat Reduction Mode is designed to mitigate heat buildup in the attic. This mode allows for the attic fans to ventilate regardless of dew point calculations once the temperature exceeds the set inside temperature. The default setting is an inside temperature of 99.2° F. The trigger for Heat Reduction can be set lower or higher within the range of 80° F and 120.8° F. The fans will run continuously until the inside temperature goes five degrees below the set temperature.

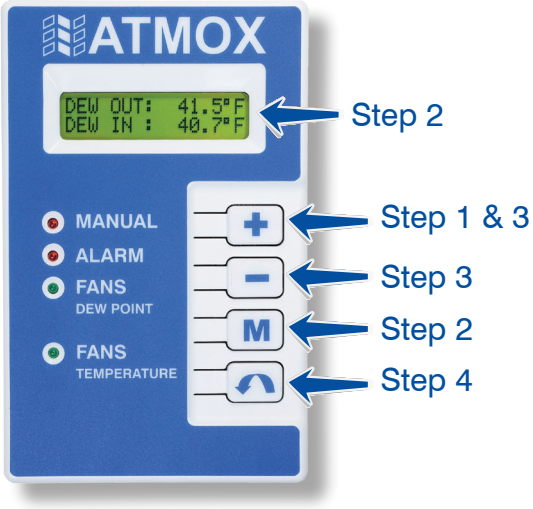
No Ventilation Temperature Setting

The No Ventilation setting is designed to avoid bringing in cooler outside air in the winter time in most geographic climates. In colder climates, it may be desired to expand this temperature range for increased ventilation during the winter. This setting determines the minimum temperature inside the attic that will allow ventilation to occur. The default setting to stop ventilation is an inside temperature below 46° F. The setting can be set lower or higher within the range of 0° F and 86° F.

CAUTION

To better understand ATMOX options, contact your installer or ATMOX before making changes to software settings.

Making Setting Adjustments



To adjust settings follow these steps:

Step 1: Press + button one time.

Step 2: Press M button until screen reads:

HEAT REDUCTION
if above: 99.2°F

or

NO VENTILATION
if below: 46.0°F

Step 3: Use + and − buttons to adjust to desired setting.

Step 4: Press Arrow button to return to main screen.

Snow Mode

Snow Mode is a special setting in the ATMOX Attic systems designed to mitigate the potential for ice damming in climates where snow and ice buildup create challenges for the attic. Snow Mode is a tool in fighting ice damming but needs to be viewed as part of an overall strategy and may not eliminate all issues in all attics.

Often when attics are warmer than outside temperatures, it can create issues when snow and ice begin to melt and possibly cause water penetration into the home or attic. The Snow Mode creates a way to cool the attic to balance the temperature differential. When the Snow Mode is turned on, the fans will run when the inside temperature is above 32° F and the outside temperature is below 32° F in system default setting. The fans run to dissipate the heat in the attic to resist excessive melting of snow or ice.

Snow Mode is defaulted to OFF and will need to be turned on manually by a homeowner or installer.

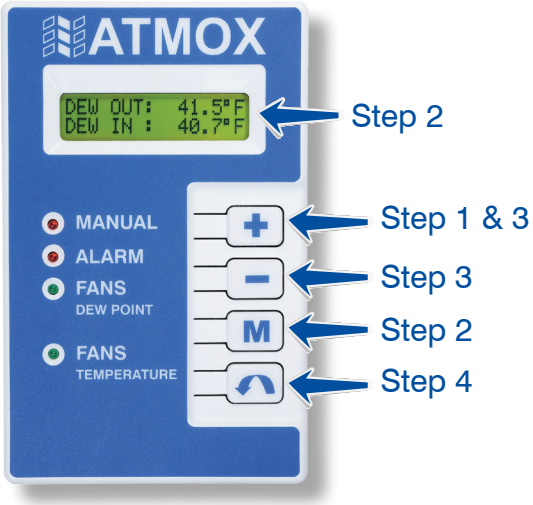
CAUTION

In order for ventilation to reduce temperatures effectively under Snow Mode, the fan setup may need to be adjusted. It is important that exhaust fans have clean outflow points and are not restricted by snow. Additionally, there need to be open intake points by soffit vents to get airflow to the low corners. There may need to be additional internal fans to get cold air to these corners. Please discuss the fan setup with your installer or with ATMOX.

TIP

Snow Mode is only important when there is snow or ice on the roof. You may want to make it inactive during other parts of the winter to keep attic warmer from an energy efficiency standpoint.

Snow Mode Settings



To turn Snow Mode ON or OFF:

Step 1: Press +

Step 2: Press M button until screen reads:

or

Step 3: Use + and − buttons to turn on or off.

Step 4: Press Arrow button to return to main screen.

When Snow Mode is active, the main rotating screen will include the Snow Mode display.

Frequently Asked Questions

What happens if we have a blackout or power outage?

The ATMOX System obviously runs on electricity, so there will be no operation when the system does not have electrical power. When the power comes back on, the ATMOX system will automatically restart and continue normal operation. All settings are retained so there is no need to do anything.

Will the fans running cause too much cold air to be brought in during the winter?

In its default settings, the fans will not bring outside air into the attic below a set temperature setting. In certain geographic climates, the attic system settings can be adjusted to intentionally bring cold outside air into the attic.

It is raining outside and the fans are running. What is wrong?

The answer is probably nothing. You have to trust the system even when it doesn't seem intuitive. The fans will be activated by dew point and not humidity levels. If a cold front comes through (even with rain), it is possible that the colder air will have a lower dew point than what is in the attic. The air with the lower dew point will be beneficial to the attic.

I have an alarm or a question, who should I contact?

Contact your local installer first as they will have more information about the specifics of your home and system. For any additional information or questions, contact ATMOX by phone at 704-248-2858 or email info@atmox.com.

ATMOX Limited Three-Year Warranty

When installed, operated, used and maintained as intended in residential applications and according to the instructions supplied with ATMOX products, ATMOX warrants its products for a period of 3-years from the date of purchase against any defects in material and workmanship. The products covered by this warranty include the control boxes, fans, sensors and wiring manufactured by ATMOX. ATMOX will repair or replace, at ATMOX's option, any ATMOX product or component found to be defective within the 3-year warranty period.

ATMOX products are designed to improve conditions in the crawlspace, basement or attic, yet are limited by atmospheric and natural conditions over which ATMOX has no control and which are not covered by this warranty. ATMOX products are not warranted against damage caused by electrical surges, fire or other casualty, vandalism, or acts of God (including lightning strikes and floods). This warranty does not make representations regarding mold, insects, termites, water, rot, electrical, HVAC, roof, framing, foundation, floors, drywall, gutters, ice dams or other problems that may occur in a house structure. The warranty does not include any costs of removal or reinstallation.

Third-party products by other manufacturers sold by ATMOX (such as dehumidifiers) are not covered by this warranty but may be covered under separate warranties by the product's manufacturer. Purchaser should contact third party manufacturers for warranty claims and coverage of third-party products not manufactured by ATMOX.

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Some states do not allow certain limitations and exclusions of warranty, so these exclusions 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.

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