ACOUSTIC REMEDY HUMIDITY CONTROL SYSTEM

OWNER'S MANUAL

CONTENTS

Welcome

Thank you for choosing Acoustic Remedy. We are committed to product quality and simple, reliable, and consistent humidity control. Please read this entire manual before operating your Acoustic Remedy Humidity Control System.

Congratulations on owning the finest humidification systems ever created for the preservation of stringed instruments. All of our systems have been designed to provide an optimal storage environment for your instruments.

If you have any questions regarding the programming or operation of your Acoustic Remedy humidifier, please contact us using any of the options below. We pride ourselves on friendly and prompt customer service.

Contact Information

608-844-8460 | Monday - Saturday: 8 AM - 8 PM CST

arc@acousticremedycases.com | 24/7/365

INTRODUCTION

Acoustic Remedy Humidity Control System

Once the ClimaCab is in the final location where it will be used and prior to inserting any instruments, the process of setting up the humidity control system will begin. We also provide a ClimaCab Owner's Manual, which can be accessed by clicking HERE. This Acoustic Remedy Humidity Control System Owner's Manual focuses specifically on getting the humidity control system operating quickly and correctly.

Depending on the time of year the ClimaCab was shipped from the Amish shop (which is not a humidity controlled environment), the internal humidity levels of the ClimaCab may be higher than desired in the summer months and lower than desired in the winter months. This is because Wisconsin experiences very hot and humid summers and extremely dry winters. In addition, the Amish shop utilizes a series of wood stoves for heat, which drive down internal humidity levels to the single digit or low teens over the winter months.

We do our best to "pre-condition" the ClimaCab prior to shipping by either adding or removing moisture. In some circumstances, due to shipping or production schedules, we may not be able to perform this activity. Therefore, it is critical to note the beginning level of the ClimaCab humidity level prior to determining what pre-conditioning may be required at your location prior to adding your instruments and how to operate the system in general.

In the initial stages of use, it is important to keep an eye on the system and make some decisions on whether to add water to the reservoir to add moisture OR add desiccant to the reservoir to absorb moisture in the ClimaCab upper section. In addition, we have a redundant/back up system with the Boveda 2-Way Humidification Packets, which is capable of releasing and absorbing moisture as well. In certain situations, the Boveda may be sufficient to maintain desired humidity levels in the ClimaCab. These three primary methods can be used in combination or independently depending on what the circumstances warrant.

In addition, depending on the starting humidity level of the instruments, they can also add or quickly absorb moisture from the upper section of the ClimaCab. At some point during the initial stage of using the ClimaCab, everything will come to an equilibrium. How long this takes is based on many factors and paying close attention is necessary for the first couple of weeks. Once equilibrium occurs, there are a few factors to determine how the humidity control system will respond. The room air where the ClimaCab resides, which is introduced each time the doors are opened, and the length of time the doors are opened will effect interior humidity levels. As the instruments are removed from the ClimaCab to be played, the humidity level of the instrument is effected slightly, which is a product of the environment the instrument resided in and for how long.

Lastly, understanding the temperature and humidity relationship is important. We've provided some basic information on this topic and much more can be found online.

QUICK START GUIDE

Standard Lower Section ClimaCabs (Without Ducted Humidifier)

If your ClimaCab has a standard lower section, the humidifier will not require ducting. The standard lower section contains a reservoir hardwood box in the center of the lower section and a storage compartment for the remainder.

The reservoir and lid will be shipped inside a box in the lower section. Remove the reservoir and lid from the box. Place the reservoir into the hardwood box attached to the floor of the upper section. Locate the 4 pin Molex cord that comes down the center of the ClimaCab wire chaise and is tucked into the wire storage box in the lower section. Attach to the 4 pin Molex cord connected to the fan, which is mounted to the lid. Place the lid onto the reservoir.

Locate the cord leaving the back of the cabinet. This 10' cord is from the power strip. Plug the cord into a standard outlet and the lighting/humidity control system will automatically power on.

Note of the internal humidity level located in the upper right corner of the controller display, as well as the temperature in the center. If you need to add moisture (i.e. the internal level is below ~45%), remove the fill port cover and fill with distilled water to the Max Fill Water Level line. We recommend utilizing the Passive Humidity Control mat, which will float on the water surface and combat excess passive humidity from over-humidifying the ClimaCab. If you need to remove moisture, please follow the instructions on pages 25-26. Once the reservoir is ready for humidification or dehumidification, place the slotted vent plate into the opening in the floor of the ClimaCab.

Customized Lower Section ClimaCabs (With Ducted Humidifier)

If your ClimaCab has a customized lower section that incorporates roll out trays, shelves, or other features which require ducting of the humidifier, the reservoir and lid will be shipped inside a box in the lower section. Remove the reservoir and lid from the box. Prior to placing the reservoir in the back of the lower section on the floor, follow the instructions to determine if humidification or dehumidification is required discussed above.

Locate the cord(s) leaving the back of the cabinet. Plug the cord(s) into a standard outlet. If the lighting/humidity control system do not automatically power on, you will need to locate the two AC/DC adaptors (one for the lighting and the other for the humidity control system) and plug them into the power strip mounted to either the floor or back/side wall of the lower section. Depending on configuration and customization of your ClimaCab, this location can vary.

Connect the ducting to the flange on the top of the humidifier lid to the underside of the circular vent plate. We also utilize wood turnbuckles to keep the circular vent plate tight to the floor. Ensure the turnbuckles are running parallel to the front/back of the ClimaCab.

QUICK START GUIDE

Wiring

The wiring operating the humidity control system is concealed in the upper section and managed in the lower section with an excess wire storage compartment. The power is supplied to the controller via an included AC/DC adaptor, which is plugged into a provided power strip discussed in previous section..

In the upper section, all wiring plugs into the underside of the controller. These wires are concealed by the wire channel, which is a wood piece running from the controller to the floor and fastened to the back of the ClimaCab. All wires run through a U-shaped channel and are zip tied together prior to positioning in the channel. Where the back of the ClimaCab and the floor of the upper section meet, the wiring enters the lower section. If you ever need to access this wiring due to a faulty wiring component, the wood concealer channel is held in place with either four or six screws that are inserted through the back of the ClimaCab and into the back side of the wood concealer channel (pre- Feb 2023) or with magnets allowing for removing from the front. (post-Feb 2023).

Pre-Programming

We pre-program the settings and test the humidity control system prior to shipping ClimaCabs from our shop. If you'd like to review or change those settings, the instructions to do so are contained within this document. The pre-programmed settings are discussed on page 7.

Wick

The wick is pre-installed into the square slot under the lid of the reservoir. There is nothing needed to utilize the wick upon initial set up; however, please pay attention to the maintenance required. This information is provided in the component description section of this Owner's Manual.

Controller

The controller should power on upon plugging in the power strip into an outlet. If the sensor probe wire is loose, there will be two dash marks where the temperature and humidity are normally displayed. If the temperature and humidity are displaying inaccurate numbers, most likely the sensor probe wire will need to be replaced. If either of these scenarios are present with your unit, please contact us immediately and we will find solutions quickly.

Passive Humidity Control Mats

The Passive Humidity Control Mats are designed prevents passive evaporation from the water reservoir. These mats float on top of the water surface and we recommend using them upon the first fill of the reservoir.

FACTORY DEFAULT SETTINGS

Your Acoustic Remedy Humidity Control System has been set up in Low Humid. Auto Mode at 50%. All other Auto Modes have been set to OFF to prevent activation of the fan when not desired. The factory default settings are discussed more detail below. Please understand all aspects of Auto Modes before changing anything on the controller.

As previously mentioned, the Smart Controller will be programmed prior to the ClimaCab shipping. These settings are "locked in" so they remain pre-programmed upon receipt. The factory default settings are as follows:

Fan Setting (for Auto Mode Settings): **6**. The fan speed ranges between 0 and 10. This setting is changed in the "On" mode and indicates is maximum level fan speed in the auto mode settings. Once the auto mode setting level activates the fan, it will come on to this speed until the desired level is achieved (i.e. low humidity set point of 45%). Once that level is achieved, the fan will start to decline speed until it reaches zero.

Low Humidity Auto Mode: **50%**. This is the middle of the recommended range for stringed instruments, which is 45-55% relative humidity. In this mode, when the humidity level drops below this set point the fan will activate and add moisture into the ClimaCab until the set point is reached.

High Humidity Auto Mode: **OFF**. We leave this off until dehumidification is necessary. Around 95+% of instrument owners need to provide moisture and not remove it. The process of dehumidification is discussed in more detail on pages 25-26, including the process to alter this set point. When this setting is set to anything other than OFF, the fan will activate in an attempt to drive the humidity below the value in the set point. Unless there are desiccant beads in the reservoir, **this can result in over-humidification of your ClimaCab**, so please understand the implications of doing so and if you want to dehumidify, follow the appropriate steps. discussed on pages 25-26.

Low Temperature Auto Mode: **OFF**. We leave this off because we don't want the fan activating due to low temperature.

High Temperature Auto Mode: **OFF**. We leave this off because we don't want the fan activating due to high temperature.

All alarms other than OFF will activate the fan at speed 10 overriding the auto mode settings. Do not put alarms on before understanding the implications. For example, if High Humidity Alarm was set at 55% and the interior levels rose to 56%, it will automatically turn the fan on to the highest setting and send the unit into runaway humidification.

Low Humidity Alarm Setting: **40%**. This will cause the alarm to sound, with a series of repeating, low decibel beeps, if the interior cabinet humidity level drops below 40%. When this happens, most likely the reservoir is out of water.

High Humidity Alarm Setting: **OFF**. Leave this off, alarms for low humidit are desired in most circumstancesy. .

Low Temperature Alarm Setting: **OFF.** Leave this off, alarms for low humidity are desired in most circumstances. .

High Temperature Alarm Setting: **OFF.** Leave this off, alarms for low humidity are desired in most circumstances. .

HUMIDITY CONTROL SYSTEM COMPONENTS

- **Reservoir:** stainless steel, 1-gallon reservoir
- **Reservoir Lid:** stainless steel lid with fan mounted to the top, wick holder underneath the lid, and fill port on top
- **Fill Port Cover:** circular, black, slotted cover plate that slides into the fill port
- **Fan:** pre-mounted to the reservoir lid
- **Fan Control Wire:** connects via 4-pin Molex cord running from controller to fan down the center wire channel
- **Reservoir Wicking Filter:** pre-installed inside of humidifier reservoir on the underside of the lid in a fabricated stainless steel wick holder
- **Smart Controller:** mounted on the middle back wall of the ClimaCab
- **Steel Probe Sensor:** pre-installed below the controller, exiting the right side of the wire channel
- **12 Volt Power Adaptor:** provides power to the controller and fan
- **Vent Plate:** we offer two types of vent plates depending on whether the humidity control system is used in standard location or ducted to the upper section. A hardwood slotted vent plate is used for standard application and a solid plate with a circular cut out is used for ducted solutions. Both vent plates will be shipped uninstalled and need to be positioned into opening in the floor of ClimaCab after initial set up and removed to perform routine maintenance.
- **Wire Channel:** pre-Feb 2023, the wire channel is fastened through the back of the ClimaCab with screws. March 2023 to present, the wire channel is fastened with neodymium magnets. Both situations allow for swapping out of certain components of the humidity control system; however, the latter is much easier to accomplish this. Based on the fact that we will provide replacement components and every situation is different, we will provide specific instructions on how to accomplish this if needed.
- **Hardwood Box:** when the humidity control system is used in standard location, we provide a hardwood box to house the reservoir/lid and power supply. This hardwood box is attached to the underside of the floor of the upper section of the ClimaCab.
- **Ducting & Components:** when the humidity control system is ducted to the upper section, we provide all the components necessary to properly route the humidity controlled air. This includes HVAC flexible ducting, flanges, and all components to prevent the vent plate from lifting off the floor of the ClimaCab in this application.

HUMIDIFICATION SYSTEM COMPONENTS

RESERVOIR & RESERVOIR LID

Upon receipt of your ClimaCab, please have at least one gallon of distilled water available to fill the reservoir for the first time if you need to provide humidity and the desiccant beads and the dedicated reservoir (available for purchase) if you need to remove humidity. To add water, remove the fill port cover and locate the Max Water Level sticker adhered to the side of the reservoir. Carefully pour water until the water level is just below the line on the sticker.

Maintenance for Reservoir and Reservoir Lid:

- On average, the wick requires replacing every 4-6 months. Remove the reservoir and lid by disconnecting the 4-pin Molex cord. Take the lid to a sink and remove the old wick by pressing on one side and pushing through the wick holder, taking care to not scrap your hands or fingers on the sharp edges of the wick holder
- Wash the reservoir in a sink with warm water and soap. Use a wash cloth and carefully handwash the lid. **Do not immerse the fan in water.** The fan is designed to be water resistant, so small amounts on a cloth will be ok, but full immersion will cause issues with proper function
- Rinse and dry the reservoir with a dry cloth
- Wipe down the lid with a non-soapy, wet cloth. Dry the lid with a dry cloth once all soap residue is removed
- Insert a new wick into the wick holder and place the lid back onto the reservoir, ensuring a proper fit
- Place lid back onto the reservoir and return the entire reservoir/lid back into the proper location
- Refill with distilled water to just below the line on Max Water Level sticker and add 1-3 drops of bacteriostat
- Replace the fill port cover and re-plug the 4-pin Molex cable connecting the fan and controller

HUMIDIFICATION SYSTEM COMPONENTS

STEEL PROBE SENSOR

The Acoustic Remedy Humidity Control System utilizes several quality components that are reliable and accurate. Precise data is provided via a Swiss-made sensor, which provides pinpoint temperature and most importantly, humidity measurements to the controller. The controller uses this information to activate or deactivate the fan based on settings programmed into the controller.

Rapid feedback from the SAE grade-316 steel probe reacts quickly to millisecond fluctuations. It features Ingress Protection 44 rating that provides durability and protection from interference from unwanted dust and moisture.

The sensor connects to the underside of the controller and loops downward through the wire channel and back up to finally terminate about 2" below the controller out the side of the wire channel. The sensor is held in place by a piece of Velcro on the interior of the wire channel. If you happen to accidentally push in the sensor wire into the hole, you will need to remove the wire channel from the back of the ClimaCab (pre-Feb 2023) or the front (Mar 2023 - present) and re-position with the probe head to exit through the hole ensuring the slot in the probe cover is exposed.

HUMIDIFICATION SYSTEM COMPONENTS

FAN & CONTROL WIRE

A high-airflow fan provides up to 120 CFM with low noise of 30 Dba at the highest fan speed. The high quality fan has spiral fan guards and is housed in a heavy duty anodized aluminum frame. We attach the fan to the stainless steel lid with bolts and nuts. The control wire connects the fan to the controller via a 4-pin Molex cord. To disconnect and remove the reservoir/lid from the cabinet, simply pull apart the 4-pin Molex connectors.

The fan is designed to automatically adjust speed depending on temperature and humidity set points programmed by the smart controller. It utilizes DC motors that are controlled using PWM (Pulse Width Modulation), which maximizes airflow while reducing noise and power consumption to 3.6 watts when running at the highest fan speed (10). In addition, the fan is IP-44 rated to be highly resistant to liquids and dust particles. The motor houses dual-ball bearings rated at 67,000 hours.

When the reservoir is filled with water, this fan will provide critical moisture control to the interior of the ClimaCab. When the reservoir is empty or filled with desiccant beads, this fan will assist with reducing interior humidity.

HUMIDIFICATION SYSTEM COMPONENTS

WICK

We use high quality paper/aluminum wicks to accomplish the critical task of increasing the surface area of the water in the reservoir and acting as a filter to collect some dust and small particles passing through the fan and reservoir, especially in the portion exposed above the water line.

The wick should be changed out once every 4-6 months or more frequently based on visual inspection. The easiest way to prevent mold or bacteria growth on the wick is to use 1-3 drops of bacteriostat per refill of water. Replacement wicks and bacteriostat is available for purchase from Acoustic Remedy by navigating to page 29.

HUMIDITY CONTROL SYSTEM COMPONENTS

SMART CONTROLLER

The smart controller included with each unit features active temperature and humidity monitoring. Fan speeds can be programmed to automatically adjust to high/low temperatures and humidity. The program can also set the fans to run continuously or on a timer at custom speeds. The smart controller features alarm warnings, fan failure alerts, an eco-mode, and backup memory.

All smart controllers are pre-programmed prior to leaving the shop; however, if you'd like to change the settings, programming is very easy. The instructions for doing so can be found on page 17-24.

HUMIDIFICATION SYSTEM COMPONENTS

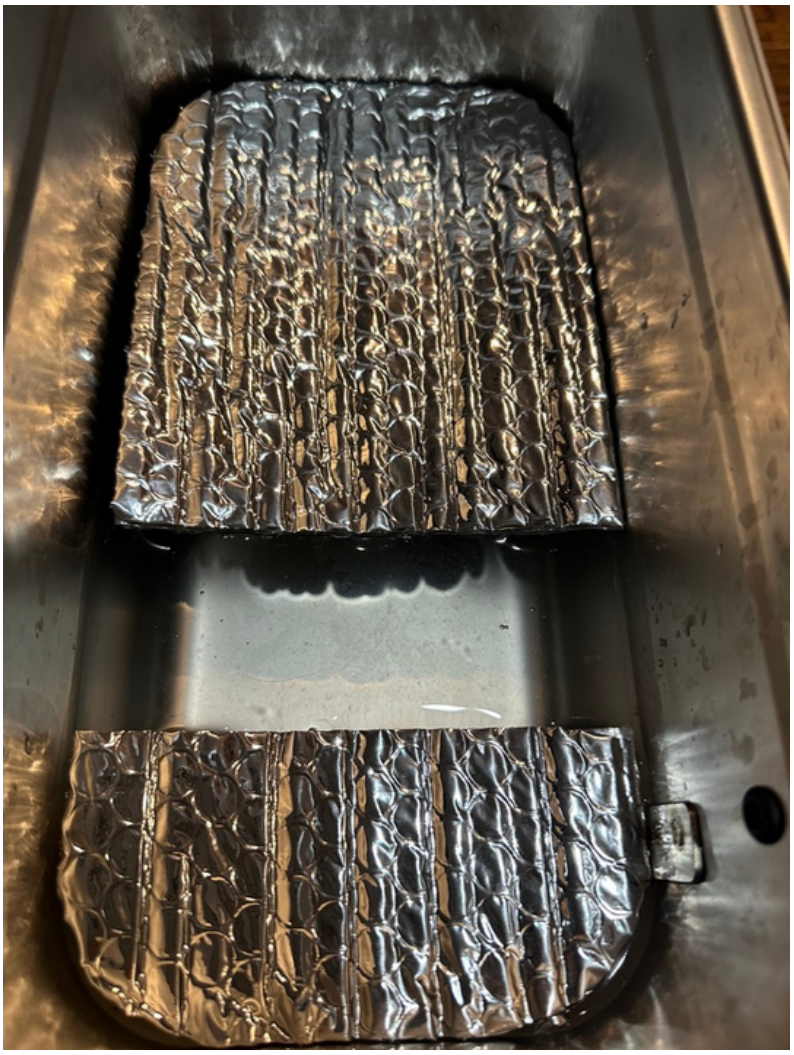
WIRE STORAGE BOX - LOWER SECTION

As the wires enter the lower section, there is extra length that should be stored in the included storage box. Zip ties and other cable management supplies can be utilized to further tidy up the wires.

HUMIDIFICATION SYSTEM COMPONENTS

PASSIVE HUMIDITY CONTROL MATS

The Passive Humidity Control Mats are cut from a cellular, water impermeable material. One piece is larger than the other and they go on opposite sides of the wick holder. They are designed prevents passive evaporation from the water reservoir. These mats float on top of the water surface and will typically drive down levels by approximately 4-7%. We recommend using them upon the first fill of the reservoir.



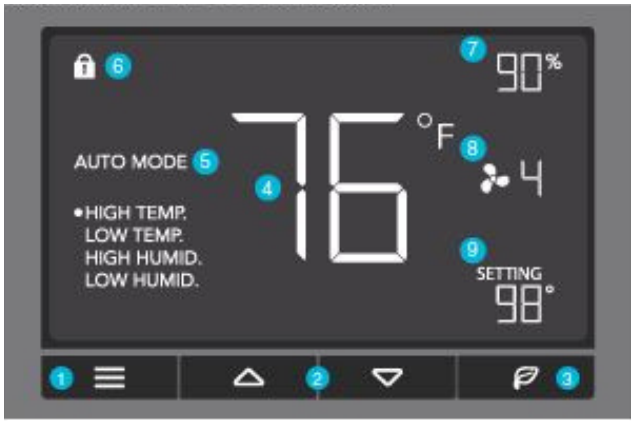
HUMIDIFICATION SYSTEM COMPONENTS

VENT PLATE, WIRE CHANNEL, HARDWOOD BOX, AND DUCTING SUPPLIES

Examples of these components are shown below and have been discussed in greater detail throughout this document.

PROGRAMMING

GET TO KNOW THE SCREEN



1. MODE BUTTON
This button cycles through each of the controller's modes: ON, OFF, TIMER, AUTO (4 triggers), and ALARM (4 settings).

2. UP / DOWN BUTTON
The up and down buttons adjusts the settings of the mode that you are in. Up button increases and down button decreases.

3. LEAF BUTTON
This turns the display off while programs run in the background. Hold for two seconds to lock or unlock the display.

4. PROBE TEMP
Displays the current temperature that the corded sensor probe is measuring. Shows "- -" if no probe is plugged in.

5. CONTROLLER MODE
This area displays the mode that the controller is currently in. Press the Mode Button to cycle through the modes.

6. ALERT ICONS
This area displays the alerts and status from the controller including alarms and screen lock.

7. PROBE HUMIDITY
Displays the current humidity that the corded sensor probe is measuring. Shows "- -" if no probe is plugged in

8. FAN SPEED
Displays the current speed the fan is running

9. SETTING
Displays the value you have set for the current mode. Press the up or down button to change.

PROGRAMMING

MODE SETTINGS

Press the Mode button to cycle through the controller's available programming modes and settings: ON Mode, OFF Mode, TIMER Mode, AUTO Mode (4 triggers), ALARM Settings (4 settings).

IMPORTANT NOTICE

All examples of the screen in each situation shown below is for **informational purposes only** and not indicative of the settings that should be used to properly humidify or dehumidify your ClimaCab. Please pay close attention to these instructions and understand how changes will effect the performance of this system.

ON MODE

In this mode, the fans will run continuously regardless of temperature or humidity. The speed set in this mode will be the max speed the fans can reach in AUTO Mode.

OFF MODE

In this mode, the fans will not run regardless of temperature or humidity. While in this mode, pressing the up or down button will change the display's brightness. There are four settings for brightness, (Setting:1/2/3/A3). On setting A3, if the device is left unattended for 30 seconds, the display will automatically dim its brightness back to setting 1. Holding up or down button will change the display's units F or C.

TIMER MODE

In this mode, press the up or down button to set a time for the timer. The fans will run at the speed set in ON Mode until the timer's clock runs out, in which the fans will stop running. The clock will begin counting down if no buttons are pressed for 3 seconds. Leaving the timer mode while the countdown is running will pause the clock until you return to this mode.

PROGRAMMING

AUTO MODE: HIGH TEMPERATURE

LEAVE THIS SETTING OFF AT ALL TIMES

In this mode, press the up or down button to set a high temperature trigger. The fans will activate if the probe's measured temperature exceeds the temperature you have set in this mode. The activated fans will slowly increase in speed until it reaches the speed set in ON Mode. Whenever the measured temperature falls below your set temperature, the fans will slowly decrease in speed until the fans stop. You may also hold the up and down button simultaneously to turn off this mode, in which the digits under setting will show OFF. Note that this trigger can activate to run as long as you are in AUTO Mode, even if other AUTO modes are set.

AUTO MODE: LOW TEMPERATURE

LEAVE THIS SETTING OFF AT ALL TIMES

In this mode, press the up or down button to set a low temperature trigger. The fans will activate if the probe's measured temperature falls below the temperature you have set in this mode. The activated fans will slowly increase in speed until it reaches the speed set in ON Mode. Whenever the measured temperature rises above your set temperature, the fans will slowly decrease in speed until the fans stop. You may also hold the up and down button simultaneously to turn off this mode, in which the digits under setting will show OFF. Note that this trigger can activate to run as long as you are in AUTO Mode, even if other AUTO modes are set.

PROGRAMMING

AUTO MODE: HIGH HUMIDITY

LEAVE THIS SETTING OFF AT ALL TIMES UNLESS DEHUMIDIFICATION MODULE IS BEING USED

In this mode, press the up or down button to set a high humidity trigger. The fans will activate if the probe's measured humidity exceeds the humidity you have set in this mode. The activated fans will slowly increase in speed until it reaches the speed set in ON Mode. Whenever the measured humidity falls below your set humidity, the fans will slowly decrease in speed until the fans stop. You may also hold the up and down button simultaneously to turn off this mode, in which the digits under setting will show OFF. Note that this trigger can activate to run as long as you are in AUTO Mode, even if other AUTO modes are set.

AUTO MODE: LOW HUMIDITY

FACTORY SET AT 50%. ADJUST THIS SETTING BASED ON THE HIGHEST HUMIDITY LEVEL YOU ARE COMFORTABLE WITH

In this mode, press the up or down button to set a low humidity trigger. The fans will activate if the probe's measured humidity falls below the humidity you have set in this mode. The activated fans will slowly increase in speed until it reaches the speed set in ON Mode. Whenever the measured humidity rises above your set temperature, the fans will slowly decrease in speed until the fans stop. You may also hold the up and down button simultaneously to turn off this mode, in which the digits under setting will show OFF. Note that this trigger can activate to run as long as you are in AUTO Mode, even if other AUTO modes are set.

PROGRAMMING

ALARM SETTING: HIGH HUMIDITY

LEAVE THIS SETTING OFF AT ALL TIMES UNLESS DEHUMIDIFICATION MODULE IS BEING USED

In this settings mode, press the up and down button to set a high humidity alarm. The alarm will activate if the probe's measured humidity exceeds the humidity you have set in this mode. When the alarm triggers, the fan will start spinning gradually to max speed regardless of your other settings. You may also hold the up and down button simultaneously to turn off this alarm, in which the digits under settings will show OFF. You will need to be in AUTO, ON, or TIMER mode for this alarm to be able to activate.

ALARM SETTING: LOW HUMIDITY

FACTORY SET AT 40%. ADJUST THIS SETTING BASED ON THE LOWEST HUMIDITY LEVEL YOU ARE COMFORTABLE WITH

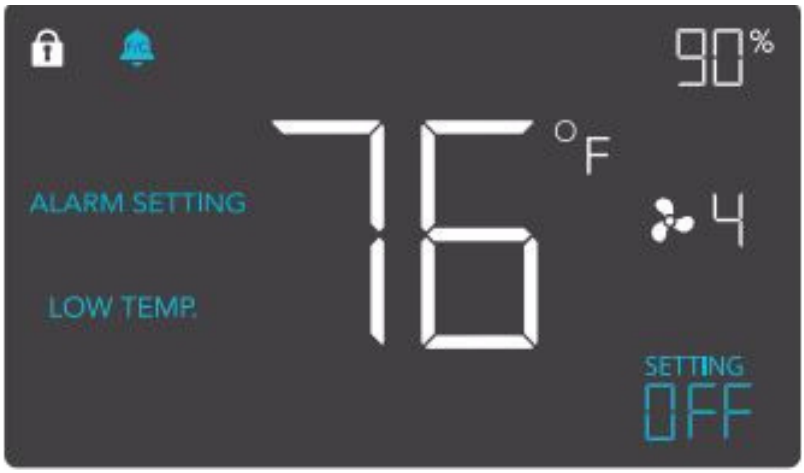
In this settings mode, press the up and down button to set a low humidity alarm. The alarm will activate if the probe's measured temperature falls below the temperature you have set in this mode. When the alarm triggers, the fan will start spinning gradually to max speed regardless of your other settings. You may also hold the up and down button simultaneously to turn off this alarm, in which the digits under settings will show OFF. You will need to be in AUTO, ON, or TIMER mode for this alarm to be able to activate.

PROGRAMMING

ALARM SETTING: HIGH TEMPERATURE

LEAVE THIS SETTING OFF AT ALL TIMES

In this settings mode, press the up and down button to set a high temperature alarm. The alarm will activate if the probe's measured temperature exceeds the temperature you have set in this mode. When the alarm triggers, the fan will start spinning gradually to max speed regardless of your other settings. You may also hold the up and down button simultaneously to turn off this alarm, in which the digits under setting will show OFF. You will need to be in AUTO, ON, or TIMER mode for this alarm to be able to activate.



ALARM SETTING: LOW TEMPERATURE

LEAVE THIS SETTING OFF AT ALL TIMES

In this settings mode, press the up and down button to set a low temperature alarm. The alarm will activate if the probe's measured temperature falls below the temperature you have set in this mode. When the alarm triggers, the fan will start spinning gradually to max speed regardless of your other settings. You may also hold the up and down button simultaneously to turn off this alarm, in which the digits under setting will show OFF. You will need to be in AUTO, ON, or TIMER mode for this alarm to be able to activate.

PROGRAMMING

FAHRENHEIT OR CELSIUS

To change to displayed units between Fahrenheit and Celsius, please set the controller to OFF Mode, then hold the up button for Fahrenheit (˚F) or hold the down button for Celsius (˚C).

DISPLAY BRIGHTNESS

To adjust the brightness of the display, please set the controller to OFF Mode, then press the up or down button to increase or decrease the brightness level. Four brightness settings are available.

TEMPERATURE CALIBRATION

To adjust the temperature that the probe sensor is measuring, please press the MODE and UP button simultaneously. This can be done while the controller is any mode or setting. The calibration cycle ranges from -8˚F to 8˚F (or -4˚C to 4˚C) and will be applied to the probe sensor's measurements.

HUMIDITY CALIBRATION

To adjust the humidity that the probe sensor is measuring, please press the MODE and DOWN button simultaneously. This can be done while the controller is any mode or setting. The calibration cycle ranges from -8% to 8% and will be applied to the probe sensor's measurements.

CONTROLLER LOCK

To lock the controller to prevent settings to be changed accidently, hold the LEAF button for two or more seconds. While the display is locked, you will not be able to switch modes or changes any settings. You will only be able to put the controller in ECO display by pressing the LEAF button. Holding the LEAF button for two or more seconds will unlock the controller.

ECO-MODE

The controller can be put into ECO display in which the screen will be turned off but all programs, settings, and alarms will be running in the background. This can be done by pressing the LEAF button. You may also do this while the controller is locked. To exit ECO display, simply press any buttons.

PROGRAMMING

ALERT ICONS

On the top left of the display is the alert icon section. Icons may flash when the controller wishes to alert you that a particular function or alarm is being triggered.

DISPLAY LOCK ALERT

This icon is visible when the controller has been locked. The icon will flash to alert you that the controller is locked if you try to change the mode or settings.

HUMIDITY ALARM ALERT

This icon will flash when the high or low humidity alarm that you have set has been triggered.

TEMPERATURE ALARM ALERT

This icon will flash when the high or low temperature alarm that you have set has been triggered.

CHECK FAN ALERT

This icon will flash when the fan's sensor detects interference to its operation. Please check the fan for possible issues. If the fan is rotating, it may just be static pressure resistance and operating as intended. If the fan is not rotating, please see the warranty page for replacement information. (This feature is only available on certain model.)

DEHUMIDIFICATION

HIGH HUMIDITY OVERVIEW

In most situations, the need to add moisture is the biggest concern; however, many regions or seasons may require full time or brief periods of dehumidification**.** Acoustic Remedy has a separate **Dehumidification Module**, available when purchasing the ClimaCab or following purchase, should you find that dehumidification is necessary. Before employing the module, there are a few minor changes and checks to perform prior to switching completely over to dehumidification.

Checking Internal Room Humidity

Before you begin, determine the interior room humidity level by placing a digital hygrometer or Bluetooth monitoring device (available for purchase on page 30) on the top of the ClimaCab or somewhere within the room the ClimaCab resides in. Note: the independent hygrometer must be a high quality, **digital** hygrometer that is calibrated frequently. There are several good options out there, but our recommend product is a Caliber IV, which we use for our single instrument humidors. We also sell a Boveda Calibration Kit to assist with calibration. All are available for purchase by clicking the links below:

- **Caliber IV**
- **Boveda Calibration Kit**
- **Bluetooth Monitoring Temperature and Humidity Sensors**

First Steps

- Double check that you are not operating the system in the On mode and that no other alarm settings other than Low Humidity are causing the fan to run any time other than providing moisture to achieve the Low Humid. Auto Mode setting. The On Mode and the Alarm Settings (other than Low Humid.) turned on will cause **the fan will run constantly, regardless of the settings in Auto Mode**. If you see "On" in the upper left of the display, you will need to change the system back into Auto Mode. To return to Auto Mode, press the Mode Button until the dot is shown by Low Humid.
- Double check the Low Humid. set point is within 45-55% so you are not accidentally over-humidifying your ClimaCab. Sometimes a drop in the set point is all that is required if you're out of the target range.
- Double check that other Auto Modes are OFF. If these are anything other than OFF, the controller will signal the fan to come on due to high humidity and high/low temperature. Any of these auto modes can result in over-humidifying the ClimaCab (if water is in the reservoir).
- Check for passive evaporation: A small amount of passive evaporation may be all that is creating the slightly than higher humidity levels within the ClimaCab. Each ClimaCab ships with a Passive Evaporation Prevention Mats which can be placed into the reservoir on top of the water surface on either side of the wick holder. This has been proven to result in approximately 4-8% drop in humidity levels when used consistently.
- Determine if (de)humidifying with Boveda packets only is a solution. To determine if this is the case, remove the water from the reservoir and remove the wick. Leave the door(s) open to purge the interior air. Close the door and allow for the Boveda packets to (de)humidify the ClimaCab. These packets are designed to release or absorb moisture to the target humidity level of 49%. In addition, Boveda does make 49% HA packets, which stands for High Absorption. The packets will also attempt to achieve the same target humidity level of 49 %, but have slightly more absorption capabilities. Purchase Boveda 49% HA Packets

DEHUMIDIFICATION

Next Steps (If Required) Continued...

- Upon making the above changes and still having higher than desired internal humidity levels, it is time to switch to using the Acoustic Remedy Humidity Control System as a dehumidifier.
- Visit our website and purchase the Dehumidification Module, which includes the following:
  - Reservoir with no wick holder
  - Lid with fan
  - 1/2/3 pounds of color changing desiccant beads (depending on quantity required)
- Once the Dehumidification Module arrives, follow the instructions below

Using the Dehumidification Module & Changing Settings In Controller

- Upon receipt of the module and contents, unbox all components and double check all items arrived safely
- Disconnect the water reservoir from the controller by disconnecting the 4-pin Molex cable. Remove the entire water reservoir.
- Remove the lid from the dehumidification reservoir and set aside. Inside the reservoir you'll find the bag of desiccant beads.
- Open the bag containing the color changing desiccant beads and pour into the reservoir, spreading evenly across the bottom of the reservoir
- Replace the lid on the reservoir and place into the proper location in the ClimaCab (based on standard vs. ducted described previously)
- Reconnect the 4-pin Molex connector to the fan cable
- Using the Mode button (three horizontal lines), scroll through the Auto Modes until the dot is next to "High Humid."
- Change AUTO MODE: HIGH HUMIDITY to the highest humidity level you're comfortable with. We recommend setting this at 50%. With this example, the controller is telling the fan to activate anytime the humidity level is **50% or higher** and to deactivate once the humidity level goes below 50%. Keep in mind that it's important to be aware of how much the desiccant will absorb moisture without the fan running (i.e. passive absorption). Make adjustments to this setpoint as needed during the first few weeks of use, based on frequent monitoring. This is another reason why the high quality Bluetooth or WiFi humidity and temperature monitors we sell are great options for keeping an eye on the humidity levels easily from afar
- Change the AUTO MODE: LOW HUMIDITY to OFF by holding the up/down arrow simultaneously for 2 seconds
- Change the ALARM SETTING: LOW HUMID. to OFF by holding the up/down arrow simultaneously for 2 seconds
- Change the ALARM SETTING: HIGH HUMIDITY to 5% higher than the AUTO MODE: HIGH HUMIDITY setting. For example, if you set the AUTO MODE: HIGH HUMIDITY setting at 50%, then set the ALARM SETTING: HIGH HUMIDITY at 55%
- Once the settings have been changed, the system has been put into dehumidification mode. This will immediately begin running air over the desiccant beads and removing moisture.

RECHARGING DESICCANTS

The desiccant beads will change colors when they have absorbed moisture and need to be recharged. We use Premium Mixed Indicating Silica Gel Beads, which a mixture of 95% White Beads and 5% Blue Indicating Beads. The benefit of this mixture of high performing white beads with a few blue beads (to serve as an indicator) works well in this application. The blue silica gel beads will change to pink when 50-60% of the moisture content has been absorbed. At that time, we recommend recharging to keep the beads ready for maximum absorption. The beads can be reactivated by placing the reservoir in the oven for 0.5 to 2 hours at 200 to 250F or dumping them into a microwave safe bowl and running the microwave for 10 minutes in defrost mode. Depending on the beads' condition and moisture level, they may take shorter than the recommended time. Please check the beads' color periodically and have a spoon or spatula to stir once or twice during the drying process.

HUMIDITY/TEMPERATURE RELATIONSHIP

Temperature is something that tells us about the coldness or warmness of any object which is generally measured in Celsius and Fahrenheit. It determines the intensity of the heat whereas if we talk about humidity, it talks about the water content that is present in the air, or simply we can say it determines the moisture of the air. These two concepts are different but show a great impact on each other. We will see the relation between temperature and humidity further below. Before that, let's understand more about humidity and its types.

Absolute Humidity & Relative Humidity

There are generally two types of humidity - absolute and relative. The former tells the humidity present in a parcel of air without taking temperature into consideration whereas the latter tells the humidity present in the air concerning the temperature of the air. The former defines the amount of water content by dividing the weight of the parcel by its volume whereas the latter is calculated by dividing the amount of water content present divided by the total capacity of the parcel of the air to hold multiplied by 100. The former decreases with height whereas the latter when reaching 100%, the air gets saturated.

Relationship Between Relative Humidity and Temperature

The relation between humidity and temperature formula simply says they are inversely proportional. If temperature increases it will lead to a decrease in relative humidity, thus the air will become drier whereas when temperature decreases, the air will become wet and the relative humidity will increase.

For protection of stringed instruments, we are more concerned with Relative Humidity, often expressed as RH. As you probably already know, proper RH for instruments effects so many qualities of the instrument. It's paramount to preservation and to general day-to-day sound of the instrument. After all, that's what led you to an Acoustic Remedy ClimaCab.

FAQ

Q: HOW DOES ACOUSTIC REMEDY CHOOSE THE FACTORY PRESETS?
A: We select the presets based on the fact that most people need to humidify and than dehumidify. Therefore we have chosen the factory presets with this general concept in mind.

Q: WHERE DO I PURCHASE NEW WICKS?
A: Wicks are available for purchase here: Acoustic Remedy Humidity Control System Wicks. We recommend changing every 4 - 6 months, so the three packs that we sell are designed to provide a 1 - 1.5 year supply of wicks for most circumstances.

Q: WHAT HAPPENS IF I NEED NEW COMPONENTS FOR MY HUMIDITY CONTROL SYSTEM?
A: All of the components are replaceable with very little effort. Please contact us describing your issues and we will work with you to fix it, including sending new components if required. All components have a 5 year warranty under normal use conditions.

Q: DO I NEED BACTERIOSTAT AND WHERE DO I PURCHASE?
A: Yes, you will need to add bacteriostat each time you fill the reservoir. We have bottles for purchase here: Bacteriostat

Q: CAN I CHANGE THE LARGE FONT WHICH DISPLAYS TEMPERATURE FOR THE HUMIDITY?
A: Unfortunately the temperature and humidity displays are not interchangeable. We recommend purchasing a Bluetooth Monitoring Temperature and Humidity Sensor and going digital on your phone to monitor internal levels. In addition, you can purchase various large font LCD hygrometers which can be placed on the floor of the ClimaCab near the glass for easy viewing.

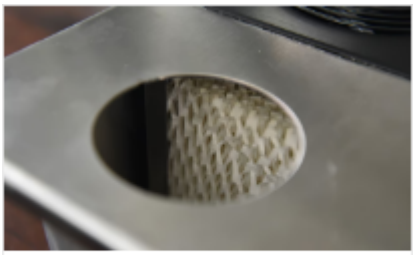
Q: WHY IS MONITORING THE ROOM HUMIDITY LEVEL WHERE THE CLIMACAB RESIDES IMPORTANT?
A: The previously mentioned Bluetooth Monitoring Temperature and Humidity Sensors are a great tool to understand what the room humidity levels are and this is important for understanding how humidity levels within the room are affecting ClimaCab internal humidity levels. Each time the door is opened, the air inside the room enters the ClimaCab and can influence interior levels.

Q: HOW DO I LOCK AND UNLOCK THE SCREEN?
A: Hold down the leaf button in the lower right corner for 2 seconds.

Q: WHAT HAPPENS IF I ACCIDENTALLY PUSH IN THE TIP OF THE SENSOR PROBE?
A: You will need to remove the wire channel from the back of the ClimaCab (pre-Feb 2023) or remove the magnetized wire channel (March 2023 to present) and push the tip back through the hole. The interior of the wire channel has a small piece of velcro to prevent this from happening, so as you push back through ensure that the sensor wire is within the velcro loop. Finally, re-install the wire channel.

PURCHASE SUPPLIES

WICKS



Acoustic Remedy Humidity Control System | ClimaCab Humidifier Wick | 2022 and...

Introduction Acoustic Remedy's Humidity Control System utilizes paper and aluminum wicks. These wicks require replacement every four months as par...

BACTERIOSTAT

Humidifier Reservoir Bacteriostat (4 oz.)

Introduction Bacteriostat for Acoustic Remedy's active humidification systems....

Acoustic Remedy / $22.50

DEHUMIDIFCATION MODULE

ClimaCab Dehumidification Module

IntroductionIn order to combat high humidity.Product Details Stainless steel reservoir with fill line for desiccant beads...

Acoustic Remedy / $400.00

PURCHASE SUPPLIES

BLUETOOTH MONITORING

Tempi.fi Bluetooth Humidity & Temperature Monitoring Sensor

Acoustic Remedy / $49.95

Sensor Push | HT.w Water-Resistant Temperature / Humidity Smart...

Sensor Push's Water-Resistant Temperature / Humidity Smart Sensor pairs effortlessly wi...

Acoustic Remedy / $69.99

WIFI MONITORING

Sensor Push | G1 WiFi Gateway

Sensor Push's G1 WiFi Gateway enables you to monitor your SensorPush sensors remotely from anywhere via the Internet!...

Acoustic Remedy / $99.95

BOVEDA PACKETS

Boveda 49% Packet (Single Packet)

Welcome to the Boveda Products collection. We offer all of the popular music accessory products from Boveda to complement your Acoustic Remedy...