

# **Operating Instructions**

This manual describes how to install, configure, and operate the MountainAir® manually operated or automated control system. Throughout this manual, text shown in black is applicable to both the manually and automatically controlled systems. Text shown in purple is applicable to the automatic system only and should be ignored if you are using the manually controlled version. We highly recommend that you read and understand this manual before entering the altitude tent.

NOTE: If you purchased a manually controlled system and wish to upgrade it to an automatically controlled system (including automated sensors, altitude control/monitoring, continuous ventilation fan, and companion app), you can do so at this link.

The MountainAir® automated control system requires the user to have an iPhone or Android phone or tablet, access to the Apple App Store or Google Play Store, and a password-protected **2.4 GHz** home Wi-Fi connection (these items are *not* included with MountainAir® automated control system).

The statements made on our website and in these Operating Instructions are not intended to be a substitute for individualized, professional medical advice.

Please see the Health and Safety section of this manual for contraindications.

Users should seek their own professional counsel for any medical condition or before starting any weight loss or cardio improvement plan.

Mountain Air Health products are not FDA Certified and should be considered a wellness product.

ESTIMATED TIME TO SET UP the MountainAir® altitude tent system: It is recommended that two people install the tent. It should take approximately 45 minutes to install the complete system plus another 30 minutes for the system to achieve the desired altitude.

If at any time during the setup procedure you have any questions, please call our support number at:



+1.720.432.6305 during mountain time office hours or

email us at <a href="mailto:support@mountainairhealth.com">support@mountainairhealth.com</a>

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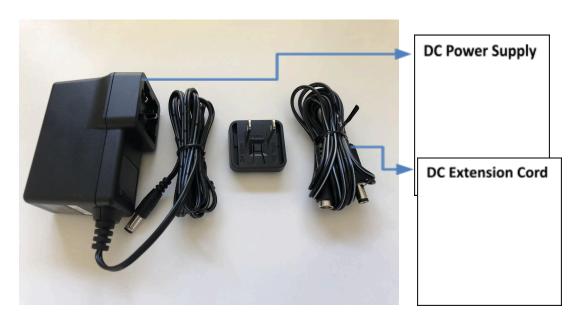
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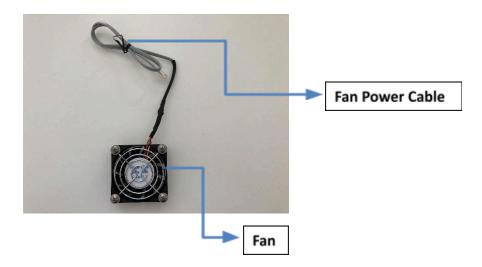
a. MountainAir® controller. This is the "brain" of the system and includes the processor, Wi-Fi module, oxygen sensor, air pressure sensor, and temperature/humidity sensors.



b. DC power supply, AC outlet adaptor, and DC power extension cord.

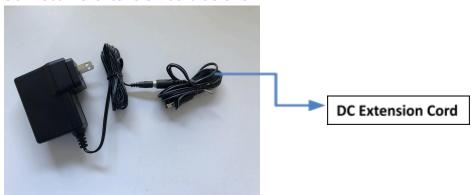


c. Fan and fan power cable (more details on this in step 4 below).



### **INSTALLATION PROCEDURE**

1. Connect DC extension cord as shown.



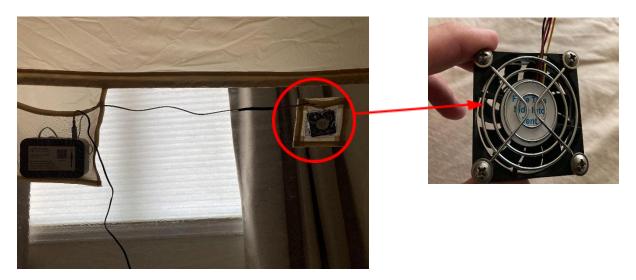
- 2. Plug DC power supply extension cord and fan power cord into MountainAir® control box. Plug the other end directly into an AC outlet near the altitude tent. Plug the fan power cable into the MountainAir® control box as well. *Important do not plug this DC power supply into the smart plug. Only the air unit should be plugged into the smart plug.*
- 3. Insert the MountainAir® control box into the mesh pocket on the side wall of tent with the "up arrow" pointing up. It is important that the control box be allowed to "breathe" so that it can accurately measure the oxygen levels, temperature, and humidity inside the altitude tent. Do not allow the control box to be covered with blankets or other potential air blockages.
- 4. Install the fan as shown on the next page with the power cable running on the inside of the tent to the control box.



#### **IMPORTANT NOTE:**

The fan needs to be oriented in the correct direction to draw fresh air from the room into the tent. The label in the center of the fan should be facing *inside the tent*.

### Fan installed in fan pocket:



### **IMPORTANT NOTE:**

The controller box should be left plugged in 24 hours/day. The reason is that it automatically recalibrates the oxygen sensor once per day while you are not using the tent. If you were to unplug the controller when it's not in use, the accuracy would drift over time. The power consumption from the controller box is incredibly small and will not make a noticeable difference in your power bill.

5. Proceed to the App Store or Play Store on your iPhone or Android phone and download the Mountain Air Health companion app, Smart Life app and Amazon Alexa app (you will need all 3, regardless of operating system). The control and operation of your MountainAir® control box will be via these apps (see setup and operation below).

















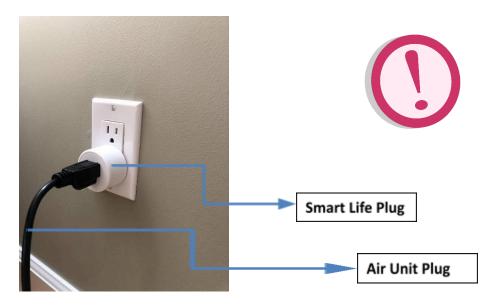


You can follow the setup instructions on the following pages or watch this 9-minute video:
<a href="https://www.usertube.com/embed/MKNqkwYcKW8">https://www.usertube.com/embed/MKNqkwYcKW8</a>

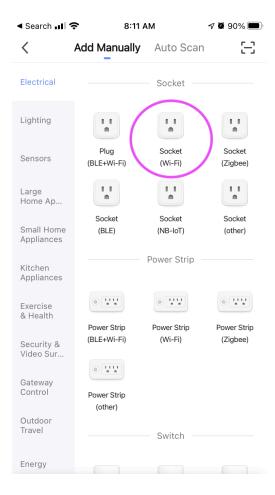
# **SETUP AND OPERATION - Smart Life Plug and App**

Please skip this step if you are operating your system outside of North America.

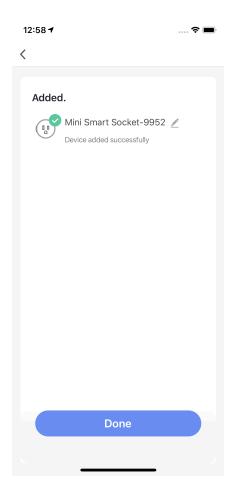
1. Plug the Smart Life plug into an AC power supply and then plug the **air unit** into the Smart Life plug. *Make sure the smart plug is connected to the air unit and not the controller box. There should be nothing else connected to the smart plug other than the air unit.* 



- 2. Make sure the phone is connected to home 2.4 GHz Wi-Fi network. If the device is connected to a 5 GHz network, the smart plug and MountainAir® controller will not be able to connect.
- 3. Open the Smart Life app on phone and create an account (remember this login, as it will be needed later).
- 4. From the home page, click the "+" button and then at the top of the screen, tap "Socket (Wi-Fi)".



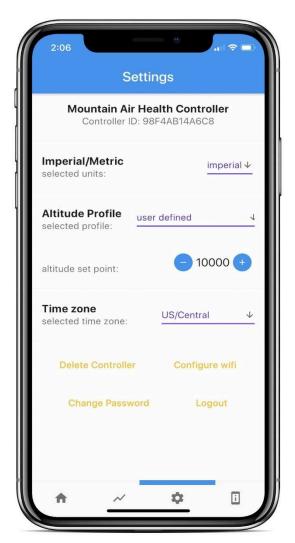
- 5. Enter home Wi-Fi password and press "next".
- 6. Press "next" two more times.
- 7. Check the box that says, "Confirm the indicator is blinking rapidly", press "next".
- 8. The app then scans and adds the device to home network (this will take around 1 min).



- 9. You will now see smart plug appear on the home screen and will be able to turn it on and off from the app.
- 10. From the home screen, tap on the plug and change the name of the plug to "Mountain Air Plug" by tapping the edit button (edit button shows as a pencil).
- 11. This next step is optional but convenient if you go to bed and wake up at the same time each day. If you tap "Mountain Air Plug" from the Smart Life home screen, then tap "Schedule" you can program the air unit to turn on/off at a scheduled time each day. You can also set a different schedule for weekends/weekdays.
- 12. All done here! You will not need the Smart Life app going forward and can delete it unless you want to use or change the on/off schedule.

### **SETUP AND OPERATION - Mountain Air Health App**

- Open the MountainAir® app on a cell phone or tablet and create an account. Remember these login credentials as they will be needed later. When entering your birthdate, tap the year at the top of the calendar and then select the month and day using the left/right arrows. Once the user account is created, you will need to go to your email inbox for an email verification. Click on the email verification link before proceeding further.
- 2. Proceed to the Settings page and press the "+" sign to onboard the controller.
  Allow the app to have access to camera, and then point cell phone to the QR code on the top of the MountainAir® controller box.
- 3. Once the app has recognized your controller, press the "configure Wi-Fi" button from the Settings page. The app should recognize home network (the same 2.4 GHz network that the phone is connected to). Stand close to the MountainAir® control box (initial setup uses Bluetooth so you should be within 5 feet of the controller box) and type in home Wi-Fi password.



### **IMPORTANT NOTE:**



GHz network.

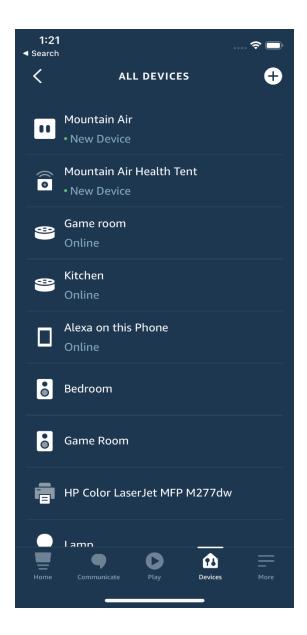
Be sure to use a 2.4 GHz Wi-Fi network and not a 5 GHz network. Even if you have a 5 GHz home network, all routers will allow you to enable a 2.4 GHz network as well. You may need to download router's app or login directly to router to verify that phone (and controller) is connected to the 2.4 GHz network. Some routers broadcast both networks under the same network name. This is fine as the MountainAir® controller will automatically select the 2.4

### **SETUP AND OPERATION - Alexa App**

# \*\*Note - this step is only for users inside the USA. Please skip this step if you live outside the US.

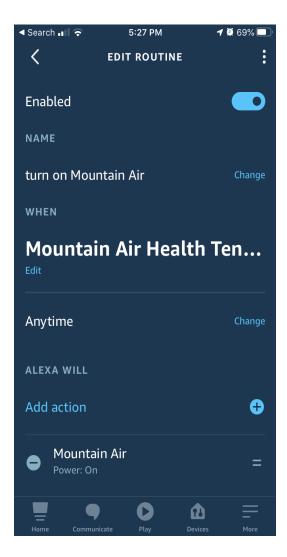
- 1. Open the Alexa app on a cell phone or tablet and create an Amazon account. If you already have an Amazon account, you can use the same credentials.

  Note: You do not need an Alexa device to operate MountainAir®, just the Alexa app. If you have an Alexa device, it does allow you to turn MountainAir® on and off simply by using Alexa voice commands.
- 2. After the introductory prompts, tap "Devices" from the Alexa app homepage.
- 3. In the top right corner, press the "+" button, then "add device". Scroll down to "plug" and tap on that.
- 4. When it asks for the brand of your plug, tap "Aoycocr", then follow the on-screen instructions to enable the Aoycocr skill, then press "Discover Devices".
  Note: You've already downloaded the Aoycocr app. It's otherwise known as the Smart Life app.
- 5. It will take around 30-45 seconds to find your plug. When it does, click "setup device". Skip the plug grouping, then "done".
- 6. From the Alexa app home page, tap "more" and then "Skills & Games".
- 7. Search for the skill called "Mountain Air Health".
- 8. Click "Enable to Use".
- 9. Login to the Skill account with the same *User ID* and *Password* you created in the *Mountain Air Health app*.
- 10. The Mountain Air Health skill should now be enabled. Click "close" and then "Discover Devices". This will take around 45 seconds to complete. Once it finds your device, click "setup device", then skip the grouping and click "done".
- 11. You should now be able to see the *Mountain Air Plug* and the *Mountain Air Health* Tent in all devices tab (see screenshot below).



- 12. From the More tab "Routines", then tap the "+" button on the top right of the screen to create a routine.
- 13. Tap "Enter routine name" and type "turn on Mountain Air".
- 14. Tap "when this happens" and tap "Smart Home". Tap "Mountain Air Health Tent".
- 15. Tap the "Open" button, then "next".
- 16. Tap "Add Action".

- 17. Tap "Smart Home", then all devices.
- 18. Tap "Mountain Air Plug", then power on, then "Next", then "Save".



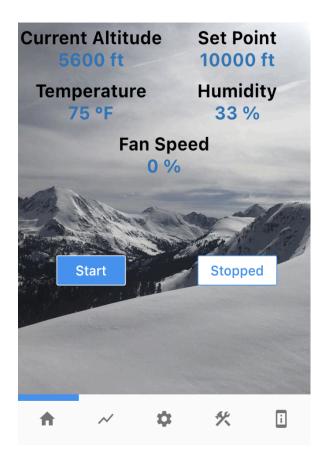
- 19. Now we'll create a second routine to turn off Mountain Air. Press "+".
- 20. Name this new routine "turn off Mountain Air".
- 21. Tap "when this happens" and tap "smart home". Tap "Mountain Air Health Tent".
- 22. Tap the "close" button, then "next".
- 23. Tap "add action".
- 24. Tap "Smart Home", then all devices.
- 25. Tap "Mountain Air Plug", then power off, then "next", then "Save".

That's all for the Alexa app, now back to the Mountain Air app...

## SETUP AND OPERATION - Mountain Air Health App (Part 2)

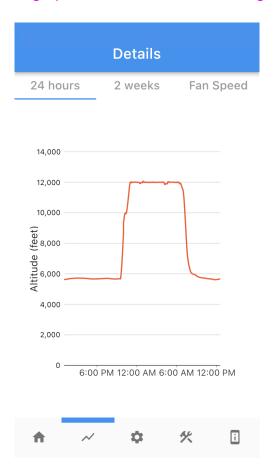
- If you go to the homepage of the app, you should now be able to see the altitude set point, fan speed, temperature, and humidity reading inside the tent. This should take about 1-2 minutes for these numbers to appear.
- For your home elevation, tt can take *up to 90 minutes* for this to appear for the first time while the controller calibrates itself to your local elevation, temperature and humidity levels. Please wait until a non-zero number appears here before turning on your air unit for the first time. The controller should be plugged in during the calibration process.
- Note that your home altitude is calculated based on the barometric pressure and will vary depending on local weather conditions so don't be alarmed if it's off by several hundred feet (it will show a higher elevation on a stormy day and a lower elevation on a clear day).
- There is no need to adjust your altitude setpoint based on these daily changes in elevation reading as the controller will automatically compensate for that. As soon as the controller senses that the oxygen inside the tent is dropping, it switches the altitude calculation method from using barometric pressure (just a rough estimate) to counting the number of oxygen molecules in the air (very precise).
- You will know that the numbers are "live" if they're shown in blue (out-of-date data would show in gray).
- You will also see start/stop buttons as shown in the below screenshot. If you
  don't see the buttons, go back and repeat the steps for Alexa above.





- You can use these buttons to turn the air unit on and off. For this to work, you should leave the air unit's power switch in the on position and allow the smart plug to turn the air unit on/off.
- If you have an Alexa device, you can also tell Alexa to, "turn on Mountain Air Plug", or "turn off Mountain Air Plug".
- On the settings page (the gear icon at the bottom of the screen), select the units that you prefer (imperial or metric), select your time zone, and then select one of four altitude setting options:
  - a. **Standard Profile** will increase your altitude setpoint by 1,000' per night until you achieve 10,000' of simulated altitude. This setting is suitable for most users.

- b. **Accelerated Profile** will increase your altitude setpoint by 1,500' per night until you achieve 10,000' of simulated altitude. This setting is for those who adjust to higher altitude quickly.
- c. **Relaxed Profile** will increase your altitude setpoint by 500' per night until you achieve 10,000' of simulated altitude. This setting is for those who take longer to adjust to altitude.
- d. User Input allows the you to manually select an altitude in 500' increments up to 14,000' (depending on your ambient altitude, you may or may not be able to go that high). Most users prefer this selection as it allows them to manually select the altitude each night based on their sleep quality. If your sleep quality starts to suffer, that means you've gone too high/too fast and you should slow your rate of ascent until your physiology has time to catch up.
- The graphing page will show altitude progress over time. After system has been running overnight, the graph should look like something like this:



Now that controller is connected to the app, you can turn the air unit on. Be sure the air hose is properly inserted into the altitude tent.

### **IMPORTANT NOTE:**



Now that smart plug is configured, you should leave the power (rocker) switch on the air unit in the ON position. To turn the air unit on/off, you should use the buttons from the home page in Mountain Air Health app. Alternatively, you can tap the button on the side of the smart plug to turn it on/off.

### **TUNING**

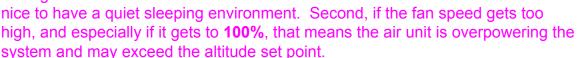
You can utilize the fan percentage on the home screen or on the graphing page to help "tune" the flow rate of air unit to give you the best experience inside the altitude tent.

Here's what the numbers mean and how you can utilize them:

- a. Let tent stabilize at the set altitude, then if the fan speed is less than 20%, you should increase the flow rate of air unit. Why? The higher the fan speed and the higher the air unit flow rate, the fresher air you will get in the tent. Notice, that the temperature, humidity and CO<sub>2</sub> buildup will all be lower and more comfortable. The exception to this rule of thumb is if you are operating at very high altitudes (> 8,000 ft) you may already be at or near the maximum flow rate of the air unit. At these higher altitudes, you are approaching the limits of what the air unit can deliver so the air in the tent does not require very much dilution.
- b. If fan speed is 20-70%, that's in a good range! It doesn't have to be exact and the percentage will vary slightly throughout the night, but this should be in target range.
- c. If fan speed is more than 70%, you should reduce the flow rate of air unit.
   Why? First, the higher the fan speed, the higher the noise level of the fan. It's

**Details** 24 hours 2 weeks Fan Speed Adjust your air unit to keep fan speed in the optimal range 100 90 80 Reduce Volume on Air Unit 70 Speed % 60 Fan 40 30 20 10 6:00 PM 12:00 AM 6:00 AM 12:00 PM

×





Air unit flow rate adjustment knob

You can use the table below as a rough guide as to where to initially set the air unit flow rate:

Feet above home altitude	Flow Rate (I/min)
1,000	4
2,000	5
3,000	7
>=4,000	10

You can think about the air unit flow rate knob as the "coarse adjustment" for altitude and the altitude setting on app as the "fine adjustment".

### Note:

The internal recycle valve should always be in position 2 as shown in the photo below.

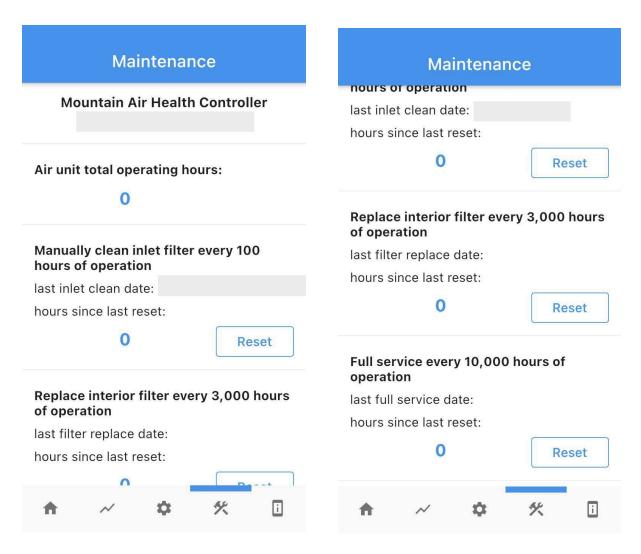


# PRO TIP:



It takes between 30-60 minutes to achieve full 'altitude' inside the tent. If you exit the tent at any time during the night, the altitude will temporarily decrease, but will return to the set point within a short time depending on how wide and how long you leave the access door open. The maximum flow rate of the air unit is 10 l/min. Do not increase the flow rate beyond that as it could damage the air unit.

### **MAINTENANCE SCREEN**



The maintenance screen helps monitor the number of operating hours between service intervals:

Maintenance Item	Operating Hours	Approximate Frequency
Clean inlet filters	100	once every two weeks
Replace interior filters	3,000	once per year
Full service	10,000	once every 3-4 years

Once a scheduled maintenance has been completed, press the RESET button to zero the operating hours for the respective service. Please see the <u>installation and maintenance instructions</u> for more information on how to maintain air unit.

### INSTRUCTIONS ON USING THE AIR UNIT IN MANUAL MODE

If you have the manually controlled version, or if you lose internet or are unable to connect the Mountain Air app to controller, the system can still be operated in manual mode. To do this, follow these steps:

- Unplug the ventilation fan from the MountainAir control box.
- Zip the doors of the tent shut, make sure the air hose is connected between the air unit and tent, and then turn on the air unit.
- Adjust the air flow with the black knob on the front of the air unit. The floating silver ball is calibrated in I/min of oxygen flow. The corresponding flow of hypoxic air is approximately 10x that. As a rough guide, each I/min of oxygen flow corresponds to ~1,000 feet of altitude above your home elevation. So, for example, if you live at sea level and want to sleep at 3,000 feet, adjust the floating silver ball to just under 3 I/min. If you live at 5,000 feet and want to sleep at 10,000 feet, set it the floating silver ball to just under 5 I/min. The "gear" (black lever on the top of the air unit) should be set to 2.

You can check the below table as a *rough guide* as to where to set the air unit flow rate:

Feet above home altitude	Flow Rate (I/min)
1,000	1
2,000	2
3,500	3
4,500	4
6,000	5
7,500	6
9,000	7
10,000	8
11,000	9
12,000	10

### Note:

The internal recycle valve should always be in position 2 as shown in the photo below.



# PRO TIP:

It takes between 30-60 minutes to achieve full 'altitude' inside the tent. If you exit the tent at any time during the night, the altitude will temporarily decrease, but will return to the set point within a short time depending on how wide and how long you leave the access door open. The maximum flow rate of the air unit is 10 l/min. Do not increase the flow rate beyond that as it could damage the air unit.

For a more accurate assessment of your altitude when operating in manual mode, you can use the altitude chart on the next page together with a "Handi+®" handheld oxygen meter. NOTE: If you have the MountainAir® fully automated system, you will not need this because the MountainAir® controller includes an oxygen sensor and automatically calculates your simulated altitude in real time.

The Handi+® meter is not included with the MountainAir® system but is available separately <a href="here">here</a>. The procedure to calculate your simulated altitude is as follows:

- 1. Select the flowrate of the air unit based on the table above (see page 26).
- 2. Allow the altitude inside the tent to stabilize. This will take 30-60 minutes depending on how high you're going.
- 3. Calibrate the Handi+® oxygen meter by first turning it on, and then by pressing and holding the calibration button for 5 seconds. Calibration is successful when the display reads 20.9%. This is the oxygen percentage of normal air, regardless of your home elevation.



- 4. Place the oxygen meter inside the tent, allow the reading to stabilize (5-10 seconds), and then take note of the oxygen percentage.
- 5. Cross reference the oxygen percentage with the simulated altitude based on the table on the next page. NOTE: The indicated elevation is in addition to your home altitude. For example, if you live at 1,000 feet and the oxygen meter reads 18.6%, then the simulated altitude would be 1,000 feet + 3,000 feet = 4,000 feet.



# Mountain Air Health - Altitude Chart Mountain Air Health Increase over ambient altitude

$\triangle$ Altitude (ft)	$\triangle$ Altitude (m)	O <sub>2</sub> %
0	0	20.9
1,000	300	20.1
2,000	600	19.4
3,000	900	18.6
4,000	1,200	17.9
5,000	1,500	17.3
6,000	1,800	16.6
7,000	2,100	16.0
8,000	2,400	15.4
9,000	2,700	14.8
10,000	3,000	14.3
11,000	3,400	13.7
12,000	3,700	13.2
13,000	4,000	12.7
14,000	4,300	12.3
15,000	4,600	11.8

mountainairhealth.com Support:

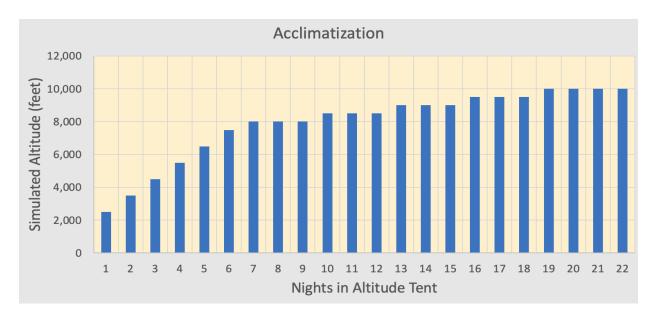
+1.720.432.6305

### **ACCLIMATIZATION**

One of the most frequently asked questions that we get is, "how fast should I go up"? The answer to that is different for each person and it depends on how well your body adjusts to altitude. Physical fitness level is not necessarily a predictor of how well you acclimatize! In fact, if you are training hard for an event, your body is in a stressed state and you may find that you can only increment the altitude by 500' per night whereas during normal activity, you may find that you can increase by 1,000 or 2,000 feet per night. The important thing is to listen to your body and dial in your altitude accordingly. If you notice that your sleep quality is suffering, that means you've gone too high, too fast. Slow down your rate of ascent and/or descend to a lower altitude until your body has had time to catch up with your altitude.

The physiological responses to altitude start to really kick in around 7,500' but most of our users find that setting the altitude between 8,000-9,000 feet is the "sweet spot". That is, it's high enough to get the impact of being at altitude, but low enough that sleep quality is good. A typical altitude profile will usually start with an initial jump of 2,000-3,000 feet above your local altitude on the first night, and then a slow ascent after that. Most users will comfortably reach their target altitude after 1-2 weeks.

"Relaxed" acclimatization profile for those who are training hard:



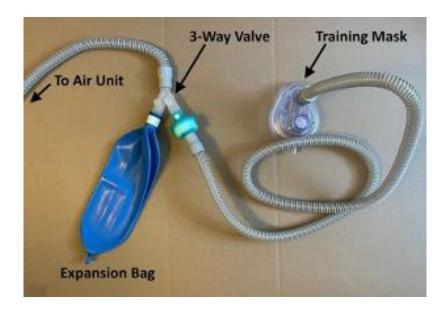
# INTERMITTENT HYPOXIC TRAINING (IHT) ~ optional

One additional use for your air unit is for intermittent hypoxic training (IHT). This is best used together with a treadmill or stationary bike. It can also be used to get additional time at altitude without having to be inside the tent (such as watching TV or working at a desk). For IHT, please follow the altitude chart guidelines below:

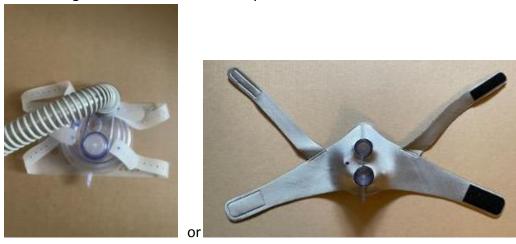
Simulated Altitude Adjustment						
Altitude	Gear	Flow	Г	Altitude	Gear	Flow
1000M=3280FT	1.5	2 L		3100M=10168FT	2.5	8 L
1100M=3608FT	1.0	2 L		3300M=10824FT	1.5	6 L
1450M=4756FT	3.0	4 L		3800M=12464FT	2.5	10 L
1600M=5428FT	3.0	6 L		3900M=12792FT	2.0	8 L
2000M=6560FT	2.0	4 L		4000M=13120FT	1.0	6 L
2300M=7544FT	1.5	4 L		4700M=15416FT	2.0	10 L
2400M=7872FT	3.0	8 L		4800M=15744FT	1.5	8 L
2600M=8528FT	2.0	6 L		5600M=18368FT	1.0	8 L
2800M=9184FT	1.0	4 L		5700M=18696FT	1.5	10 L
3000M=9840FT	3.0	10 L		6500M=21320FT	1.0	10 L

Once you've decided on an altitude, adjust the "gear" and "flow" according to the chart. The gear is the black lever on the top of the air unit and it controls the amount of internal recycle. The flow is the hyperoxic flow rate of the air unit and is located on the front of the air unit. Turn the black knob so that the silver ball is floating at a level equal to the corresponding flow rate.

Then, disconnect the air hose from the air unit (the air hose goes to the tent), and connect the training mask system as shown in the photos below. Adjust the straps on the training mask for a snug but comfortable fit. Note that some users find it more comfortable to remove the exhaust check valve (the bottom "circle" of the mask). This allows your exhalation to exhaust without leaking out the sides of the mask and does not affect the simulated altitude. When you are done with the IHT, just be sure to return the flow rate of the air unit to your nighttime flow rate.



The training mask will be one of two styles as shown below:



Training masks can be purchased at the link below: <a href="https://mountainaircardio.com/product/hypoxic-training-mask/">https://mountainaircardio.com/product/hypoxic-training-mask/</a>

### **RECOMMENDED IHT PROTOCOLS**

Interval Training on a treadmill or stationary bike - 1 hour

~warmup at ambient altitude, then...

~10 minutes at high effort level at altitude followed by 5 minutes rest while breathing normal air

~repeat the above 4 times

~repeat this 3 times per week

~start at 7,000 feet and then increase up to 12,000 feet as you are able

Injury Recovery (maintaining cardio w/o overloading the body)

~40-60 minutes at medium effort level at altitude

~repeat this 5 times per week

~start at 7,000 feet and then increase up to 12,000 feet as you are able

Regardless of the protocol, your oxygen saturation levels (SpO<sub>2</sub>) should never go below 80%. Periodic checking with a <u>fingertip pulse oximeter</u> is suggested.

### **AIR CIRCULATION and TENT COOLING**

The temperature inside the tent can rise 2-6°F depending on if there are 1 or 2 people inside. Many users find the use of a small ventilation fan hooked to the interior loop helps to keep comfortable. It is important that if you use a ventilation fan, that it only circulate air around the interior of the tent and that it is not drawing fresh air in from outside the tent.



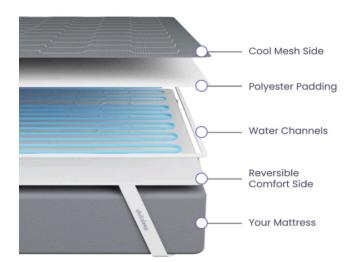
Here's <u>a link</u> to Amazon for the fan pictured above.

If your electrical outlet is far away, you may also need a USB extension cord: USB extension cord link

Just about any USB wall outlet will do the trick: USB AC outlet link

If you want to further cool your sleeping experience, a chiliPAD™ is a good option. chiliPADs™ have chilled (and/or heated) water that circulates through a pad that lies between mattress and fitted sheet. It's a closed loop system so it doesn't alter the altitude and is fully compatible with the MountainAir® altitude system.

Click on this link to learn more about sleep.me and chiliPAD™.











### **HEALTH AND SAFETY**

### Safety

This level of hypoxia has been studied extensively and is safe for healthy people. The short overnight doses and acclimatization periods employed in the MountainAir® system successfully prevent symptoms of mountain sickness. Millions of people healthily reside at altitudes over 11,000 feet (3,350 m), and millions more safely ski and hike in Colorado and other mountain areas at altitudes between 9,000 - 12,000 feet (2,740 - 3,650 m). Thousands of altitude tent users have slept at simulated altitudes between 8,000 - 12,000 feet (2,440 - 3,650 m). Studies simulating altitudes of 13,700 feet (4,175 m) have found no harmful effects in obese populations.

<u>Users should seek their own professional counsel for any medical condition or before</u> starting any weight loss or cardio improvement plan.

### **Recommended Dose**

- Regular nightly use
- Minimum of 7 hours per night
- 7,500-10,000 feet of altitude

### **Contraindications**

- Hard-to-control hypertension
- · Heart failure
- Obesity hyperventilation syndrome
- Symptomatic coronary disease
- Severe obstructive sleep apnea (OSA)
- Chronic obstructive pulmonary disease ("COPD")
- Cardiac arrhythmia
- Lung disease
- Sickle cell disease
- Anemia
- Polycythemia
- Patients who require oxygen therapy
- Women who are or who may be pregnant

### **Common Comorbidities of Obesity that are not Contraindicated**

- Diabetes
- Non-symptomatic heart disease

### Side Effects

 Periodic breathing is common over 8,000 – 9,000 feet (2,440 – 2,740 m) but is not harmful

- Altitude acclimatization (headaches, nausea or vomiting, dizziness or lightheadedness, weakness or fatigue, difficulty sleeping)
- Decrease in appetite
- Increased red blood cells
- Increase in mitochondrial density
- Increased in frequency in urination
- Increased basal metabolic rate The increase in basal metabolic rate can cause an increase in caloric burn of approximately 500 calories per day. If you don't want to lose weight, be sure to increase consumption by a similar amount and monitor weight closely. If you do want to lose weight, this increased rate of burn results in approximately 1 lb./week of fat loss.

### TROUBLESHOOTING GUIDE

If you are unable to achieve the set altitude, please follow the steps below:

### Air Unit

- Is the flow rate knob set to maximum? Maximum flow is 10 liters/min.
- Is the air unit in a well-ventilated area? It should be placed in a room or hallway with an ambient temperature no greater than 90 °F. Make sure it's at least 6 inches away from any wall. Air unit will not operate correctly if it is placed in a closet as it will overheat.
- Is the internal recycle valve in position 2 as per the photo on page 25?
- Are the filters clean? Filters should be cleaned every 100 hours of operation (if using the system for 8 hours/day, that works out to about every 2 weeks).

### Air Hose

- Is the air hose free of kinks and blockages?
- Is the air hose firmly connected to the hypoxic air discharge of the air unit?
- Is the air hose (with silencer) clear of bedding or blockages inside the tent?

### **Tent**

- Are all access panel zipper pairs shut tight? Are zippers snug around where the air hose enters the tent?
- If you're operating in automatic mode, has the Velcro cover patch been removed from the fan pocket on the outside of the tent? Velcro cover patch remains in place for manual operation.



### <u>Fan</u>

• Is the fan installed in the fan pocket in the tent? Fan should be oriented so that the air flows into the tent. There is a sticker on one side of the fan that says, "place this side into tent".

### Controller

Is the controller in the mesh pocket towards the top of the tent? Controller
must be able to "breath" and nothing else should be placed in the mesh pocket
other than the controller. Make sure the controller is oriented correctly with the
arrow pointed up.

# Mountain Air Health App

If the Mountain Air Health app does not display the current altitude, temperature, and humidity, please follow the steps below. You will know that the data is current when the color of the numbers on the home screen change from gray to blue.

1. Verify that the network is connected to is 2.4 GHz and not 5 Ghz (*very important!*). The only way to confirm this is by accessing router settings. Router settings can be seen through a web browser that points to router IP address, or via the router manufacturer's app. Using the app is usually easier.

- 2. Verify that network SSID and password that you entered to configure Wi-Fi (from the settings page of the Mountain Air Health app) is correct. When you enter your Wi-Fi password into the app, you'll receive a message that says, "Mountain Air Health controller configuration successful". This means that the controller has received your inputted password. It does not necessarily mean that you entered the correct password!
- 3. Verify that the plug where your controller is plugged into is live.

If the above steps have been verified and the data is still not showing, please proceed to the following steps.

- 4. Unplug the controller, wait for 5 seconds and plug it back in
- 5. The fan should spin up for about 2 seconds and then stop when you plug it back in. Verify that this occurred.
- 6. "Kill" the Mountain Air Health app.
- 7. Open the Mountain Air Health app and see if the data fields on the home page have turned blue (blue data fields mean the data is current/live). If they haven't, proceed to the next steps.
- 8. Go to the settings page.
- 9. Log out
- 10. Log back in
- 11. Press the "configure Wi-Fi" button from the settings page of the Mountain Air Health app and re-enter 2.4 Ghz Wi-Fi credentials. Note that "SSID" should be same as "Network Name".
- 12. Let the controller soak for 90 minutes while it calibrates the various sensors.
- 13. The current altitude, temp, humidity, etc. should now appear on home screen

If you get a message on the home screen of the Mountain Air Health app that says, "An error occurred with the fan", this could be for one of the three reasons below:

- The altitude sensor has not yet calibrated. If the sensor has not yet calibrated, it will
  indicate a current altitude of zero on the home screen of the app. To fix this, let the
  controller sit for 90 minutes (with the air unit off) to allow calibration to complete.
  or...
- 2. The fan is unplugged from the control box. or...

3.	The initial altitude setting was not recognized by the cloud-based calculation system. To fix this, go to the settings page of the Mountain Air Health app and tap "user input" under altitude profile, then use the $\pm$ buttons to toggle the altitude up/down and then leave it on the desired altitude for the night. This altitude will now be reflected on the home screen. This step will only be necessary on initial setup.