

Here is a brief rundown of the five options for muting the audible alarm on an AFA 1000.

- 1. Temporary mute**
- 2. Permanent mute**
- 3. Night Setback**
- 4. Alarm Disable**
- 5. "Link" power**

1. Temporary mute

When the monitor is in alarm mode, press the enter button. The horn will remain off for the duration of the alarm condition. When the monitor returns to safe mode, the alarm will be re-enabled for the next time the monitor has an alarm condition. Users have the option of activating a timer for this temporary mute by following these steps:

1. Hold the enter button until you are given the choice between Run and Set Up. Choose Set Up.
2. Next, choose Configure (default password is 0-0-0-0).
3. Scroll down to Low Air Timer
4. Changed to Enabled
5. Set the timer (the default option is five minutes; the range is one to 30 minutes)
6. Select Done, this returns you to the main menu.
7. Select Run.

2. Permanent mute.

This is a "permanent" mute activated by going through the monitor's software via the following steps:

8. Hold the enter button until you are given the choice between Run and Set Up. Choose Set Up.
9. Next, choose Configure (default password is 0-0-0-0).
10. Next, choose CalConfig Menu
11. Then, scroll until you see Audible Alarm.
12. Change to Not Enabled, then press enter.
13. This returns you to the CalConfig Menu.
14. Select Done, this returns you to the main menu.
15. Select Run.
16. You should go back to the standard operation screen. There will be an icon of the horn with a slash through it and the green light will flash. When there is an alarm condition, the red light will flash and the display will alternate between the face velocity and AIR FAIL.

To undo the permanent silence, repeat the steps until you are in the Audible Alarm menu, and then change to Enabled.

3. Night Setback

This is a "temporary" mute activated by electric input. Your monitor has three dry contact relay inputs on the back. To enable Night Setback, you need to wire an external element (the hood power, the fan power, the room light, etc.) into one of the relay inputs. Then, when the external element changes states (turns on/turns off, etc.) it sends a signal to the relay to switch from open to closed. When the monitor enters Night Setback mode, the audible alarm is disabled. If there is an air fail, the red light will flash and the display will alternate between the velocity and "AIR FAIL." Then, when the external element changes states back to the original condition, the relay switches back and the alarm returns to normal operating mode (the horn is re-activated automatically).

These steps are what you do on the monitor assuming you have connected to input 1. You or the electrician will determine which state you want the relay to be in during normal operation mode, and then when the external element changes state, the relay will flip and the alarm will be disabled. In the case when relay contacts are set to normally open when the unit is in standard operation mode:

1. Hold the enter button until you are given the choice between Run and Set Up. Choose Set Up.
2. Next, choose Configure (password is 0-0-0-0).
3. Next, choose Input 1.
4. Select "contacts close on activation" and press enter. The monitor will display "Input 1 activation set" for two seconds and bring you to the next screen, which allows you to choose a function.
5. From here, you choose Night Setback. The monitor will display "Input 1 function set" for two seconds and then return you to the Config menu.
6. Once back in the Config menu, scroll to Night Setback Mute. Hit enter and set to "Enabled."
7. Select Done, this returns you to the main menu.
8. Select Run.
9. You should go back to the standard operation screen.

Then, to make sure everything is set properly, you must activate the blower switch on and off while looking at the monitor to make sure the mode is changing as you intend.

Once you've got this set up, no one has to physically do anything to the monitor for Night Setback mode to work. Simply flip the switch on whatever the external element is, and you're set.

It is possible to use an output relay to send a signal when the monitor enters Night Setback mode. By using the output from one monitor and the input to a second, and so on, it would be possible to put all the alarms in an entire lab into setback by activating one switch.

4. Alarm Disable

Like Night Setback, this also is a "temporary" mute activated by electric input. The prime difference is this option generally is controlled at the hood level whereas Night Setback is typically administered at the room level or externally via a building management system and a programmed schedule.

To enable Alarm Disable, wire an external element (in this case a switch, button or key switch) into one of the relay inputs. Then, when a user flips the switch or pushes the button, it sends a signal to the relay to switch from open to closed. That will disable the audible alarm and the LCD screen will read "ALARM DISABLE."

The activation process is identical to Night Setback (above), except that in Step 5 Alarm Disable is chosen as the function.

This method most often is deployed at times when the sash must be open for extended periods for loading materials in or out of the hood or during service work. Also like Night Setback, the feature may be daisy-chained to other monitors using the output relay of the lead monitor and the input of a follower.

5. "Link" power

The idea here is for someone to wire the monitor so that when the power to an external source (say, the room or hood lights) is shut off, the monitor powers off as well. You can either do that electrically, by connecting wires, or you can do it the "layman's way," by making sure the outlet that powers the monitor loses power whenever the hood itself loses power (kind of how a TV, DVD player, etc., all shut off as you turn off the surge protector/power strip).

A note on input relays

The AFA 1000 has 3 inputs — these are digital, meaning open or closed, two-wire relays. They are dry contacts; they need no external voltage on them because the monitor itself provides the voltage that is then switched back in.

The inputs have two terminals, + & SW. The + is internally connected to the + of the power supply on the AFA (there are some EMC components connected but we can consider them directly linked). As the power supply is 15VDC there is then 15VDC (approximately) on each + input terminal.

When the + terminal is connected to the SW terminal (input closed) we are simply connecting the 15VDC back into the SW terminal, this then is indirectly fed to the microprocessor to activate the assigned input function.

In other words, you can fit a simple link wire to the two terminals; this will activate the input.

Typically the link wire is a micro switch (mechanical switch) or signal from the building automation system (dry relay contact) in the field. If you put any external (other source) voltage into the inputs it will damage the AFA — it uses its own voltage.

In the UK it is fairly commonplace to have a blower switch with an auxiliary (spare) isolated contact, a switch with two sets of contacts.

Another solution is to fit a remote 120V relay that is switched from the blower switch, then use a dry contact from the relay to connect to the monitor.