# MIA-9G (AC three-speed version) fresh air controller manual

1. Overview：

The MIA-9G fresh air system intelligent controller can monitor indoor temperature and humidity, PM2.5, CO2 (optional), VOC (optional), simulated formaldehyde (optional) and other data in real time; it can be connected to WIFI (optional); with ModBus RTU (RS485) interface, users can connect to smart home and other back-end devices to monitor the status of the equipment; the output signal of the AC 3-speed controller directly controls the start and speed of the fresh air ventilator, which can be widely used in residential, commercial and industrial applications, and can effectively improve air quality and create a healthy, comfortable, efficient, environmentally friendly and energy-saving living and working environment.

2. Function description of the touch buttons
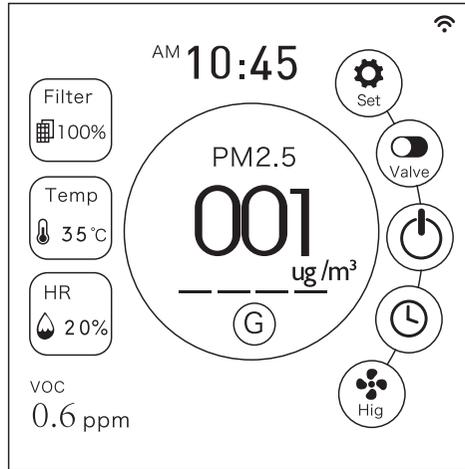
2.1   : Power On / Off

2.2   : Fan speed(low, medium, high)

2.3   : Working Mode(manual, automatic, timing)

2.4   : Valve(Damper) on/off

2.5   : Setting

Note: In the automatic mode, the wind speed is switched according to the sensor data; in the timing mode, the fan turns on/off according to the timing time, and the fan stops at the timing shutdown time. The fan runs at the manual wind speed at the timing startup time.

3. Display description

3.1 Main interface: The main interface is as shown below
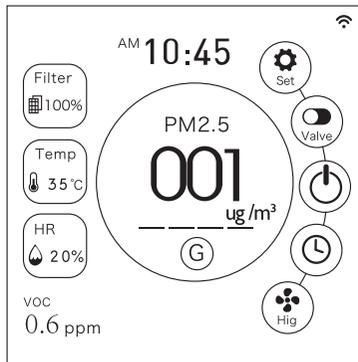
Turn on and enter the main display interface, the middle circle shows indoor PM2.5 dust parameter, and it shows the PM2.5 pollution level at bottom, green represents great, yellow represents good, orange represents common, and red represents poor; Versions can be optional, the CO2 version has CO2 display; the VOC version has VOC Display; WIFI version has WIFI display when connecting network; pls notice that this PM2.5 version does not display CO2.

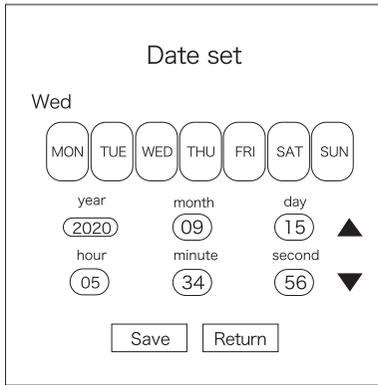3.2 Setting selection interface: as shown below
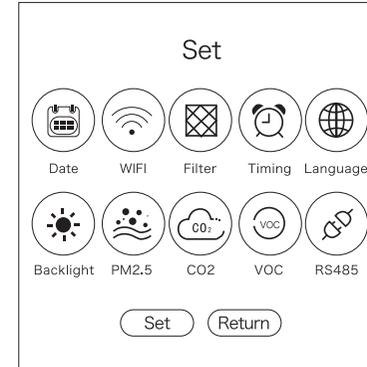
In the main interface state, press the setting button to enter the setting selection interface. The setting interface includes date setting, backlight setting, timing parameter configuration, filter reset, ModBus device address configuration, sensor data configuration under automatic mode control, etc.

3.3 WIFI setting interface: as shown below
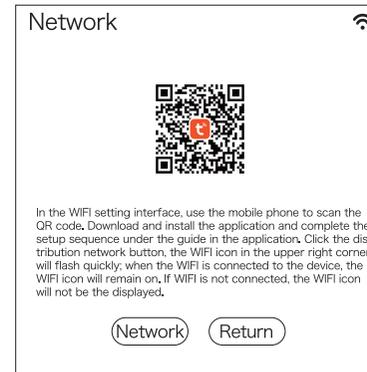
In the WIFI setting interface, use the mobile phone to scan the QR code. Download and install the application and complete the setup sequence under the guide in the application. Click the distribution network button, the WIFI icon in the upper right corner will flash quickly; when the WIFI is connected to the device, the WIFI icon will remain on. If WIFI is not connected, the WIFI icon will not be the displayed.
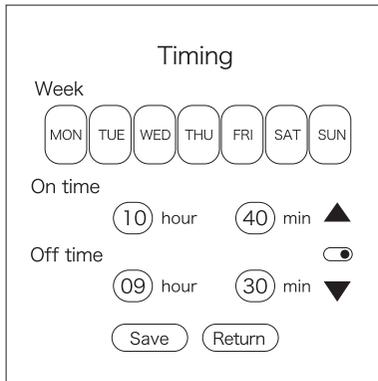
In the WIFI setting interface, use the mobile phone to scan the QR code. Download and install the application and complete the setup sequence under the guide. Click the network button, the WIFI icon in the upper right corner will flash quickly; click the "+" in the upper right corner of the App to manually add a new fan, and follow the prompts to enter the connection state. When the WIFI is connected to the device, the WIFI icon will remains lit. If WIFI is not connected(failed), the WIFI icon will not be displayed.

3.4 Date parameter interface: as shown below

Date set

Wed

MON TUE WED THU FRI SAT SUN

year: 2020   month: 09   day: 15 ▲

hour: 05   minute: 34   second: 56 ▼

Save   Return

On the date interface, select the time you want to set, and then press the plus and minus keys to modify the time. After the modification is completed, press the save key to save, and press the return key to return to the previous interface.

3.5 Timing parameter setting interface: as shown below

Timing

Week

MON TUE WED THU FRI SAT SUN

On time

10 hour   40 min ▲

Off time

09 hour   30 min ▼

Save   Return

In the timing parameter setting interface, press Monday to Sunday respectively to select whether the timing time of the corresponding day is turned on or off. If the timing button is turned off, the fan will run at manual fan speed; if the button corresponding to the day is turned on, the fan will operate according to the "on time" and "off time" (on time and off time are not the switch of the whole machine, but the on and off of the fan).
After setting the timing parameters, press the "Save" button to save and return to the previous interface.

**3.6 Brightness parameter setting interface: see below**

Birghtness

Birghtness

dark ☾   —   +   ☀ bright

Save   Return
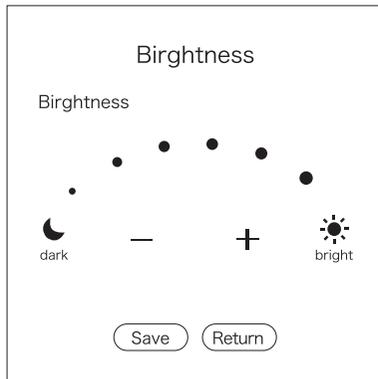
The brightness can be adjusted in the brightness parameter setting interface. When the adjustment is completed, press "Save" to save.

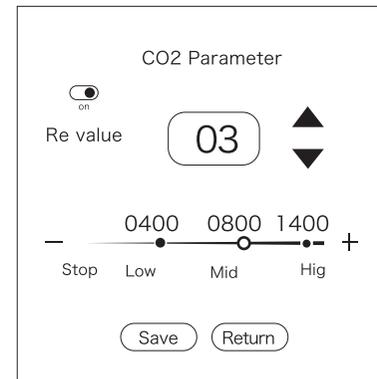**3.7 RS485 Setting Interface: see below**

RS485

Modbus Slave
SlaveAddress (Input 1-254)

001 ▲▼

Save   Return
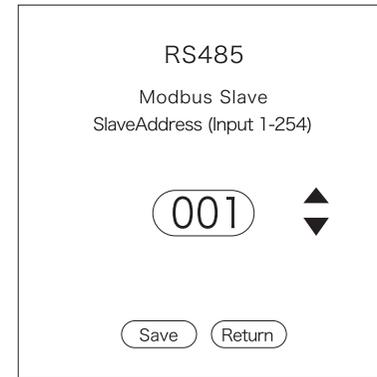
Modbus slave address setting, the setting range is 0-254, after setting, press "Save" to save.

3.8 Filter time setting interface: see below

Filter

Filter setting time

0 5 8 0 ▲▼

Run time   60 hour

Filter reset

Save   Return
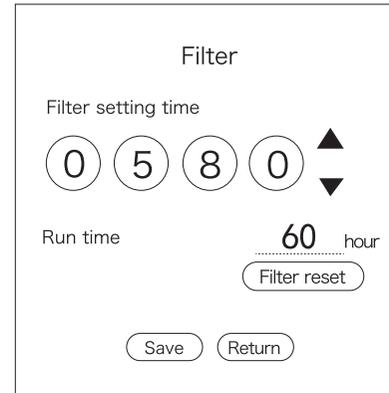
*In the filter time setting interface, the initial filter time setting range is 1—9000 hours. The remaining percentage filter time is based on the ratio of the working time and the initial time, that's the remaining percentage filter time=100-(working time/initial time)*100*

3.9 CO2 parameter setting interface: see below

CO2 Parameter

on

Re value   03 ▲▼

Stop 0400 Low 0800 Mid 1400 Hig +

Save   Return

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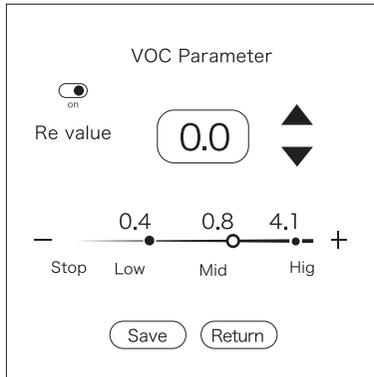
In the CO2 parameter setting interface, set the Re value, low, medium and high. When it is turned on, in the automatic mode, the fan switches the speed according to the CO2 value. When it is off, it is not affected by the CO2 value in the automatic mode. When the CO2 button is turned on, in the automatic mode, when the CO2 value is greater than the set value, the fan runs in the corresponding speed. When the speed is switched from high to low, the CO2 value should be lower than the set value minus the Re value. This version does not contain CO2.

3.10 PM2.5 parameter setting interface: see below

PM2.5 Parameter

on

Re value   03   ▲ ▼

040   080   140
Stop   Low   Mid   Hig

Save   Return
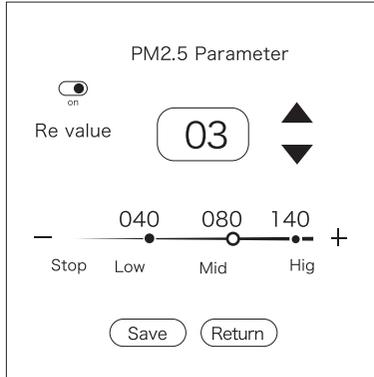
In the PM2.5 parameter setting interface, set the Re value, low, medium and high. When it is turned on, in the automatic mode, the fan switches the speed according to the PM2.5 value. When it is off, it is not affected by the PM2.5 value in the automatic mode. When the PM2.5 button is turned on, in the automatic mode, when the PM2.5 value is greater than the set value, the fan runs in the corresponding speed. When the speed is switched from high to low, the PM2.5 value should be lower than the set value minus the Re value.

3.11 VOC parameter setting interface: see below

VOC Parameter

on

Re value   0.0   ▲ ▼

0.4   0.8   4.1
Stop   Low   Mid   Hig

Save   Return

In the VOC parameter setting interface, set the Re value, low, medium and high. When it is turned on, in the automatic mode, the fan switches the speed according to the VOC value. When it is off, it is not affected by the VOC value in the automatic mode. When the VOC button is turned on, in the automatic mode, when the VOC value is greater than the set value, the fan runs in the corresponding speed. When the speed is switched from high to low, the VOC value should be lower than the set value minus the Re value.

3.12 Language switch setting interface: see below

Language

Chinese   English

Save   Return

3.13 Except for the functional interfaces introduced above, the other functional interfaces are supplementary interfaces.

3.14 In the menu interface, press the "Return" key to return to the previous interface. In the non-WIFI setting interface, it will automatically return to the main interface after 1 minute of inactivity.

3.15 This machine is connected to an AC fan, an AC air valve, and RS485 communication.

3.16 You can modify the device 485 address, the device address range is 1~254, and the default is 1.

3.17 If there is no key operation for 10 minutes, PM2.5 will enter intermittent work. When working intermittently, PM2.5 is on for 60 seconds and off for 4 minutes.

4. Technical Parameters

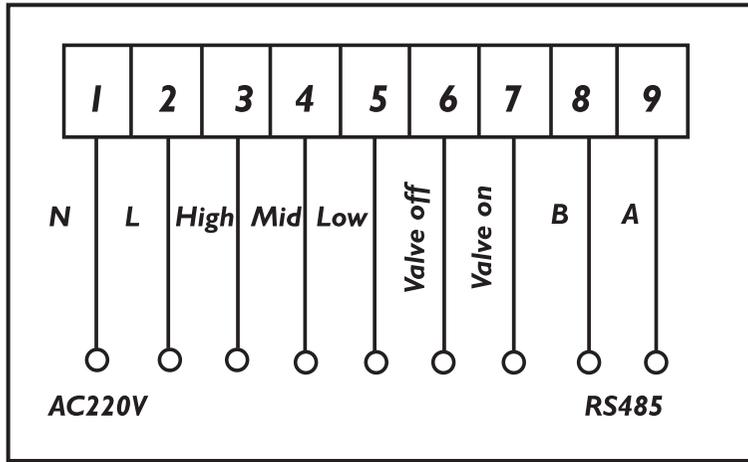|	
External Dimension: 86×86×40mm	Warm up time: 2 minutes
Hole distance of installation: 60mm(Standard)	Response time: ≤10 seconds
Terminal Blocks: Maximum 2.5 mm² wire	recovery time: ≤30 seconds
Rated voltage: AC220V 50Hz	Operating temperature: -10℃ --- +50℃
Consumption of standby power: ≤2.0W	Operating humidity: 5％RH——90％RH(not dew formation)
Controller Power: ≤200W	Storage temperature: -10℃ --- +60℃
Output Interface: Three-speed Fan	Storage humidity: ≤60％RH
Temperature Display Range: 0℃——99℃	Service life: ≥3 years
CO2 Display Range: 350ppm——2000ppm(optional)	PM2.5 Display Range: 1ug/m³——999ug/m³

5. Wiring

1	2	3	4	5	6	7	8	9
N	L	High	Mid	Low	Valve off	Valve on	B	A

AC220V   RS485

6. QR code and download

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