BIBIRE AK27

BIBIRE AK27 14-in-1 Air Quality Monitor User Manual

Model: AK27

1. Introduction

This manual provides comprehensive instructions for the operation and maintenance of your BIBIRE AK27 14-in-1 Air Quality Monitor. Please read this manual thoroughly before using the device to ensure proper function and accurate readings. This device is designed to help you monitor various indoor air quality parameters for a healthier environment.

2. Product Overview

The BIBIRE AK27 is a versatile air quality monitor capable of detecting multiple parameters, including PM1.0, PM2.5, PM10, HCHO (Formaldehyde), TVOC (Total Volatile Organic Compounds), AQI (Air Quality Index), Temperature, Humidity, and Time. It is marketed as a 14-in-1 device, combining these functions to provide a comprehensive overview of your indoor air quality.

2.1 Key Features

- **14-in-1 Monitoring:** Measures PM1.0, PM2.5, PM10, HCHO, TVOC, AQI, Temperature, Humidity, and Time.
- **Real-time Data:** Resamples data every 1.5 seconds for continuous monitoring.
- **Buzzer Alarm:** Alerts users when air quality levels exceed predefined thresholds.
- **Portable Design:** Compact size with a built-in rechargeable lithium battery (up to 12 hours continuous use).
- **Clear Display:** Large screen for easy reading of all parameters.

2.2 Package Contents

- 1 x BIBIRE AK27 Air Quality Monitor
- 1 x USB Charging Cable
- 1 x User Manual (this document)

2.3 Device Components

Figure 1: Front View of the BIBIRE AK27 Air Quality Monitor. This image displays the device's main screen, showing readings for HCHO, TVOC, PM2.5, AQI, Temperature, Humidity, and Time, along with the control buttons at the bottom.

Figure 2: Device Display and Components. This image illustrates the main display of the BIBIRE AK27 Air Quality Monitor, highlighting key indicators such as HCHO, TVOC, PM values (PM1.0, PM2.5, PM10), AQI, battery level, current time, temperature, and humidity. It also points to the buzzer location.

Figure 3: Side View with Sensors and Charging Port. This image shows the side of the monitor, indicating the location of the active adsorption sensors for faster and more accurate data collection, and the Type-C charging port.

3. Setup

3.1 Initial Charging

Before first use, fully charge the device. Connect the provided USB charging cable to the Type-C port on the side of the monitor and plug the other end into a standard USB power adapter (not included) or a computer USB port. The battery indicator on the display will show charging status. A full charge typically takes a few hours and provides up to 12 hours of continuous use.

Figure 4: Type-C Charging Port. This image highlights the Type-C fast charging port on the device, emphasizing its convenience and the built-in 2500mAh lithium battery.

3.2 Powering On/Off

Press and hold the power button (usually the rightmost button with a power icon) for a few seconds to turn the device on or off. The display will illuminate upon startup.

4. Operating Instructions

4.1 Understanding the Display

The monitor's display provides real-time readings for various air quality parameters. Refer to Figure 2 for a visual guide to the display layout.

- **HCHO (Formaldehyde):** Measured in mg/m³.
- **TVOC (Total Volatile Organic Compounds):** Measured in mg/m³.
- **PM1.0, PM2.5, PM10:** Particulate matter measurements in µg/m³. The device cycles through these readings every few seconds.
- **AQI (Air Quality Index):** A numerical scale indicating overall air quality.
- **Temperature:** Displays current ambient temperature in °C or °F.
- **Humidity:** Displays current relative humidity in %.
- **Time:** Shows the current time.
- **Battery Level:** Indicates remaining battery charge.

Figure 5: Cycling PM Readings. The monitor automatically cycles through PM10, PM1.0, and PM2.5 readings, displaying each for approximately 5-10 seconds.

4.2 Button Functions

The device features several buttons for control and settings adjustment:

Figure 6: Button Functions. This image details the functions of the four control buttons located at the bottom of the monitor's display.

- **Leftmost Button (Gear Icon):**
  - Short press: Switch between 12-hour and 24-hour time format.
  - Long press: Enter time setting mode.
- **Second Button (Speaker Icon):**
  - Short press: Toggle buzzer alarm sound ON/OFF.
  - In time setting mode: Increase time value.
- **Third Button (Light Bulb Icon):**
  - Short press: Adjust display brightness.
  - In time setting mode: Decrease time value.
- **Rightmost Button (Power Icon):**
  - Long press: Power ON/OFF the device.

- Short press: Switch temperature unit (°C/°F) or view calibration data (if applicable).

4.3 Alarm Functionality

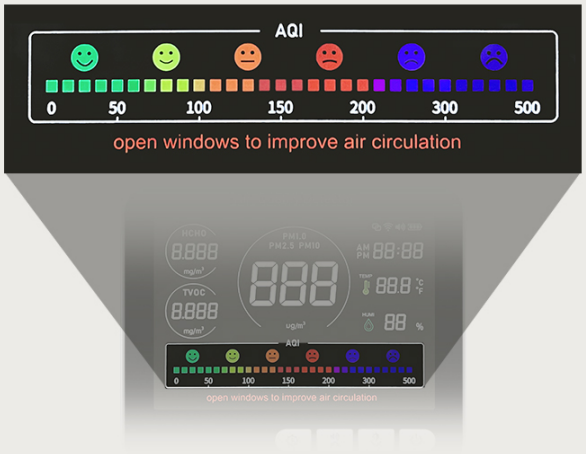
The built-in buzzer alarm activates when any monitored air quality parameter exceeds a dangerous threshold. This provides an immediate audible alert to potential air quality issues.

- To silence the alarm: Short press the Speaker Icon button.
- The alarm thresholds are preset and cannot be adjusted by the user.

Figure 7: Beep Alarm Indication. This image shows the monitor displaying an alert, signifying that air quality levels have exceeded safety standards and the buzzer alarm is active.

4.4 Air Quality Index (AQI) and Numeric Reading Details

The device provides an Air Quality Index (AQI) and detailed numeric readings for various pollutants. Understanding these values is crucial for interpreting the air quality in your environment.



Air Quality Index Reference Table

AQI:Level	AQI Quality index	Pollution Level	Corlor
AQI:1	0 - 50	Excellent	
AQI:2	51 - 100	Good	
AQI:3	101 - 150	Mild pollution	
AQI:4	151 - 200	Moderately pollution	
AQI:5	201 - 300	Severe pollution	
AQI:6	above 300	Serious pollution	

Figure 8: AQI Reference Table. This table provides a guide to understanding the Air Quality Index levels, their corresponding numerical ranges, pollution descriptions, and visual indicators.

Numeric Reading Details

	Good	Acceptable	Unhealthy	Very Unhealthy
CO2	0 - 1000	1000 - 2000	2000 - 3000	3000+
HCHO	0.0 - 0.1	0.1 - 0.2	0.2 - 0.5	0.5+
TVOC	0 - 0.5	0.5 - 1.0	1.0 - 3.0	3.0+
PM2.5	0 - 50	50 - 100	100 - 150	150+
PM10	0 - 60	60 - 80	80 - 100	100+
PM1.0	0 - 20	20 - 45	45 - 65	65+
Temperature	18°C - 26°C , 65°F - 79°F	< 18°C or >26°C , < 65°F or >79°F		
Humidity	30 - 60%	< 30 or >60%		

Figure 9: Numeric Reading Details. This table outlines the specific numerical ranges for various air quality parameters (CO2, HCHO, TVOC, PM2.5, PM10, PM1.0, Temperature, Humidity) and categorizes them into Good, Acceptable, Unhealthy, and Very Unhealthy levels.

5. Maintenance

5.1 Cleaning the Device

To ensure accurate readings and prolong the life of your monitor, keep it clean. Use a soft, dry cloth to wipe the exterior. Do not use abrasive cleaners, solvents, or immerse the device in water. Avoid blocking the sensor vents.

5.2 Sensor Care

The sensors are delicate components. Avoid exposing the device to extreme temperatures, high humidity, or direct sunlight for extended periods. Do not attempt to open the device or clean the internal sensors, as this may damage them and void your warranty.

6. Troubleshooting

Problem	Possible Cause	Solution

Problem	Possible Cause	Solution
Device does not power on.	Low battery or device is off.	Charge the device using the provided USB cable. Press and hold the power button to turn it on.
Readings appear inaccurate or fluctuate wildly.	New device, sensor stabilization needed, or environmental interference.	Allow the device to operate for 5-10 minutes in a stable environment for initial stabilization. Ensure no strong air currents or chemical fumes are directly affecting the sensors. If issues persist, contact customer support.
Buzzer alarm sounds frequently.	High levels of pollutants detected.	Check the display for specific pollutant levels. Improve ventilation by opening windows or using air purifiers. If the alarm is unwanted, short press the Speaker Icon button to silence it.
Display is dim or unreadable.	Brightness setting is too low.	Short press the Light Bulb Icon button to adjust display brightness.

7. Specifications

Parameter	Value
Model Number	AK27
Product Dimensions	142 x 120 x 60 mm (5.59 x 4.72 x 2.36 inches)
Item Weight	14.9 ounces
Battery Type	1 Lithium Ion battery (included)
Battery Capacity	2500mAh (approximate)
Battery Life	Up to 12 hours continuous use
Charging Interface	USB Type-C
Screen Size	4.13 Inches
Manufacturer	BIBIRE

8. Safety Information

- Do not expose the device to water or excessive moisture.
- Keep out of reach of children.
- Do not attempt to disassemble or modify the device.
- Avoid placing the device in areas with strong electromagnetic interference.
- Use only the provided USB cable for charging.
- Dispose of the device and battery according to local regulations.

9. Warranty and Support

For warranty information and technical support, please refer to the contact details provided with your purchase or visit the official BIBIRE website. Please retain your proof of purchase for warranty claims.

Manufacturer: BIBIRE