Temtop LKC-1000S+

Temtop LKC-1000S+ Air Quality Monitor User Manual

Comprehensive Guide for Your Air Quality Detector

Introduction

The Temtop LKC-1000S+ is a professional 9-in-1 air quality detector designed to measure various indoor and outdoor air pollutants. This device provides real-time monitoring of PM2.5, PM10, particles, Formaldehyde (HCHO), Total Volatile Organic Compounds (TVOC), Air Quality Index (AQI), temperature, and humidity. It also features a histogram function to track PM2.5 changes over 12 hours. This manual will guide you through the proper use and maintenance of your device to ensure accurate and reliable air quality readings.

Figure 1: Temtop LKC-1000S+ Air Quality Monitor. This image shows the front view of the device, highlighting its display and control buttons.

Product Features

- **9-in-1 Detection:** Measures PM2.5, PM10, particles, HCHO (formaldehyde), TVOC, AQI, temperature, and humidity.
- **Histogram Function:** Displays PM2.5 changes over the latest 12 hours for trend analysis.
- **Advanced Laser Sensor:** Features a third-generation laser particle sensor with a lifetime up to 20,000 hours, combined with a particle swarm optimization algorithm for accurate and stable particle measurement.
- **Pre-calibrated Electrochemical Sensors:** Accurately captures formaldehyde molecules and detects a wide range of organic pollutants.
- **Large TFT Screen:** Provides a clear and easy-to-read display of data, including a battery indicator.

Figure 2: Comparison of LKC-1000 series models. This chart illustrates the different functions available across the LKC-1000E, LKC-1000S, and LKC-1000S+ models, highlighting the comprehensive features of the LKC-1000S+.

What's in the Box

Upon opening the package, please ensure all the following items are present:

- Temtop LKC-1000S+ Air Quality Monitor
- Charging Cable
- Reset Pin
- User Manual (this document)

Figure 3: Packaging and contents of the Temtop LKC-1000S+. The image displays the device, charging cable, and user manual within its box.

Setup

1. Initial Charging

Before first use, fully charge the device. Connect the provided charging cable to the micro-USB port located at the bottom of the device and plug the other end into a USB power adapter (not included) or a computer USB port. The battery indicator on the screen will show charging status. A full charge typically takes several hours.

Figure 4: Bottom view of the Temtop LKC-1000S+ showing the micro-USB charging port. Note that the device cannot stand upright on its kickstand while charging due to the port's location.

2. Powering On/Off

- To power on, press and hold the **Power button** (center button) until the screen illuminates.
- To power off, press and hold the **Power button** until the screen turns off.

3. Initial Calibration

For optimal accuracy, especially for Formaldehyde (HCHO) and TVOC readings, it is recommended to perform an initial outdoor calibration. Place the device outdoors in a well-ventilated area, away from direct sunlight and rain, for at least 6 hours. During this period, the device will self-calibrate its sensors to baseline outdoor air quality levels. Ensure the device remains powered on during this process. If the device automatically powers off due to inactivity, periodically press a button to keep it active.

Operating Instructions

1. Understanding the Display

The large TFT screen displays various air quality parameters simultaneously. Key indicators include:

- **PM2.5** / **PM10:** Particulate Matter readings in µg/m³.
- **HCHO:** Formaldehyde concentration in mg/m³.
- **TVOC:** Total Volatile Organic Compounds concentration in mg/m³.
- **AQI:** Air Quality Index, a single value representing overall air quality.
- **Particles:** Total particle count.
- **Temperature & Humidity:** Ambient temperature and relative humidity.
- **Battery Indicator:** Shows remaining battery life.

Figure 5: The device display showing AQI (48, Good), temperature (79°F), and humidity (31%).

2. Button Functions

The device features several buttons for navigation and mode selection:

- **Power Button (Center):** Press and hold to power on/off. Short press to confirm selections or switch display modes.
- **AQI Button:** Cycles through display modes related to AQI.
- **PM2.5 Button:** Cycles through display modes related to PM2.5.
- **HCHO Button:** Cycles through display modes related to Formaldehyde.
- **Play/Pause Button (Bottom):** Used for controlling data recording or histogram display.

Figure 6: The device displaying a histogram of HCHO levels over time, with its integrated kickstand extended for viewing.

3. Interpreting Air Quality Readings (Health Parameter Guide)

Refer to the following guide to understand the health implications of the measured parameters:

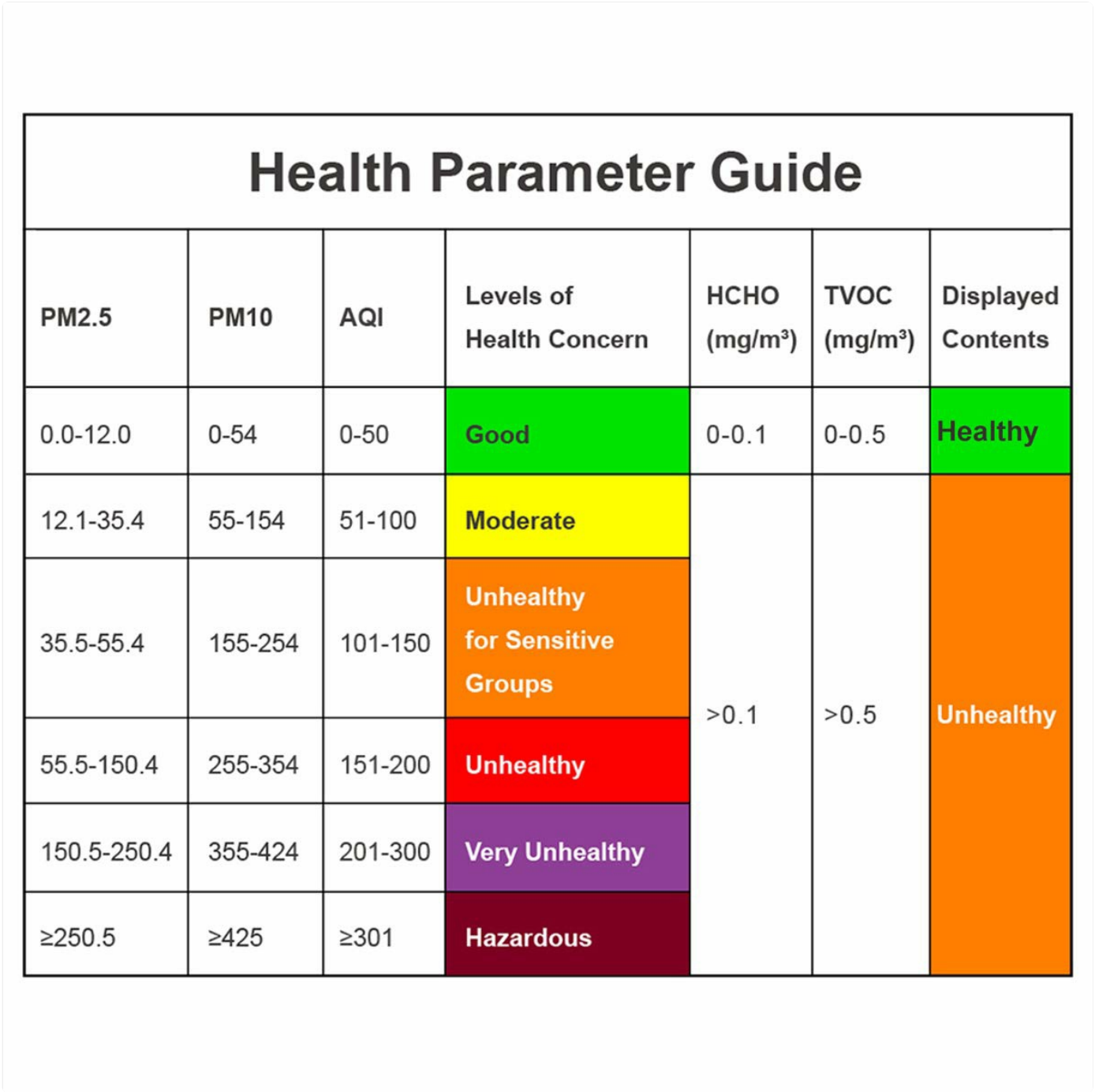

Figure 7: Health Parameter Guide. This table provides ranges for PM2.5, PM10, AQI, HCHO, and TVOC, correlating them with levels of health concern and displayed content (e.g., Good, Moderate, Unhealthy).

Health Parameter Guide

Parameter	Good	Moderate	Unhealthy for Sensitive Groups	Unhealthy	Very Unhealthy	Hazardous
PM2.5 (μg/m³)	0.0-12.0	12.1-35.4	35.5-55.4	55.5-150.4	150.5-250.4	≥250.5
PM10 (μg/m³)	0-54	55-154	155-254	255-354	355-424	≥425
AQI	0-50	51-100	101-150	151-200	201-300	≥301
HCHO (mg/m³)	0-0.1		>0.1			
TVOC (mg/m³)	0-0.5		>0.5			

4. Histogram Function

The histogram function allows you to visualize the trend of PM2.5 levels over the past 12 hours. To access this feature, navigate through the display modes using the PM2.5 button until the histogram view appears. This graphical representation helps in understanding air quality fluctuations over time.

Figure 8: The device in use, showing a PM2.5 histogram on its screen, indicating air quality trends.

Maintenance

1. Cleaning the Device

To maintain accurate readings, keep the device clean. Use a soft, dry cloth to wipe the exterior. Do not use abrasive cleaners or allow liquids to enter the sensor vents. Ensure the sensor vents on the side of the device remain clear of dust and debris.

Figure 9: Side view of the Temtop LKC-1000S+, highlighting the ventilation grilles for the air quality sensors. Keep these clear for accurate readings.

2. Battery Care

The device is powered by a built-in Lithium Ion battery. To prolong battery life:

- Avoid fully discharging the battery frequently.
- Charge the device regularly, even if not in constant use.
- Store the device in a cool, dry place when not in use for extended periods.

Troubleshooting

- **Inaccurate Readings:** Ensure the device has been properly calibrated outdoors for at least 6 hours. Avoid placing the device near strong air currents, heat sources, or areas with high humidity, as these can affect sensor performance. Clean the sensor vents regularly.
- **Short Battery Life:** Ensure the battery is charged. Battery life can vary based on usage patterns and environmental

conditions. If battery life significantly degrades, contact customer support.

- **Device Not Powering On:** Ensure the battery is charged. If the device still does not power on, try performing a reset using the provided reset pin. Insert the pin into the small reset hole (usually located near the charging port or on the back) and gently press.
- **Charging Port Accessibility:** The USB charging port is located at the bottom. If using the kickstand, the device cannot be charged simultaneously while standing upright. Consider charging the device flat or holding it during charging.

Specifications

Feature	Detail
Model Number	LKC-1000S+
Product Dimensions	6.97 x 2.56 x 1.26 inches
Item Weight	0.5 Pounds (approx. 8 ounces)
Power Source	Battery Powered (1 Lithium Ion battery included)
Sensor Type	Electrochemical (for HCHO, TVOC)
Operating Humidity	Up to 90%
Upper Temperature Rating	122 Degrees Fahrenheit
Alarm	Visual
Material	Plastic

Official Product Video

Watch this official video for a visual overview of the Temtop Air Quality Monitor and its capabilities.

Your browser does not support the video tag.

Video 1: Temtop Air Quality Monitor Overview. This video demonstrates the importance of air quality monitoring and showcases the device's ability to detect various pollutants like PM2.5, VOCs, and Formaldehyde, providing an easy way to control the air around you.

Warranty and Support

Temtop provides 24/7 US Technician Support via Email and Phone for any inquiries or assistance you may need regarding your LKC-1000S+ Air Quality Monitor. Please refer to the product packaging or the official Temtop website for contact details.