LYCEBELL LC-856A

LYCEBELL LC-856A Pro Anemometer User Manual

Model: LC-856A

1. Introduction

The LYCEBELL LC-856A Pro Anemometer is a professional instrument designed for accurate measurement of wind speed, wind velocity, airflow (CFM), and temperature. It is suitable for various applications including HVAC system balancing, environmental monitoring, sailing, drone operation, and fishing. This manual provides detailed instructions for the proper use, setup, and maintenance of your device.

Figure 1: LYCEBELL LC-856A Pro Anemometer and accessories.

2. Package Contents

Please verify that all items listed below are included in your package:

- 1 x LYCEBELL LC-856A Anemometer
- 1 x Wind Velocity Sensor (extensible and replaceable)
- 1 x USB Computer Connecting Cable
- 1 x Portable Carrying Box
- 1 x Screwdriver
- 1 x User Manual (this document)

Figure 2: Protective carrying case for the anemometer.

3. Product Features

The LC-856A Pro Anemometer offers the following key features:

- **USB Sync to PC:** Connects to a computer for data logging, analysis, and real-time monitoring via PC software.
- **Accurate Measurement:** Measures wind velocity (0.03~100 mph, +/- 3.0% + 0.2), wind flow (CFM 0-999900 ft^3/min), and wind temperature (14°F~140°F).
- **Multiple Units:** Supports wind speed measurement in m/s, km/h, ft/min, knots, and mph.
- **Backlit LCD Display:** Large display with backlight for clear readability in various lighting conditions.
- **Data Storage:** Built-in data recorder can store up to 600 sets of measured values.
- **Data Hold Function:** Freezes the current reading on the display.
- **Auto Power OFF:** Automatically powers off after a period of inactivity (cancelable).
- **Extensible & Replaceable Wind Sensor:** Allows for flexible positioning and easy replacement.
- **Hard Shell Protective Suitcase:** Provides protection against drops and impacts.

4. Component Identification

Familiarize yourself with the main components and controls of your anemometer:

Figure 3: Anemometer button functions.

1. Backlight LCD
2. MAX/MIN Mode Button
3. Wind Speed / Air Volume Button
4. HOLD Button (Hold current reading)
5. Units Switchable Button
6. °C/°F Switchable Button
7. REC Button (Record measurement)
8. Input Sampling Cross-Sectional Area Button
9. POWER ON/OFF Button
10. Default Record Button
11. Backlight ON/OFF Button

12. Confirm Input Area Button
13. Average Airflow Measurement Button
14. Read Record Data Button

Figure 4: Anemometer dimensions and backlit LCD.

5. Setup

5.1 Battery Installation

The LC-856A Anemometer requires one 9V (6F22) battery. To install or replace the battery:

1. Locate the battery compartment cover on the back of the device.
2. Use the provided screwdriver to loosen the screw on the battery cover.
3. Remove the cover and insert a new 9V battery, ensuring correct polarity.
4. Replace the battery cover and tighten the screw.

Figure 5: Battery compartment and extensible wind sensor.

5.2 Connecting the Wind Sensor

The wind sensor connects to the main unit via a coiled cable. Align the connector and push it firmly into the port on the top side of the anemometer. The sensor is extensible, allowing for flexible positioning during measurements.

6. Operating Instructions

6.1 Power ON/OFF

Press the **POWER ON/OFF** button (9) to turn the device on or off.

6.2 Basic Wind Speed Measurement

Once powered on, the device will automatically begin measuring wind speed and temperature. Position the wind sensor in the airflow you wish to measure. The readings will be displayed on the LCD.

Figure 6: Anemometer in use for HVAC and general airflow.

6.3 Unit Selection

Press the **Units Switchable** button (5) to cycle through different wind speed units: m/s, km/h, ft/min, knots, and mph. Press the **°C/°F Switchable** button (6) to switch between Celsius and Fahrenheit for temperature readings.

6.4 Data Hold

During measurement, press the **HOLD** button (4) to freeze the current data on the display. Press it again to return to normal measurement mode.

6.5 Backlight

Press the **Backlight ON/OFF** button (11) to toggle the LCD backlight on or off, improving visibility in low-light conditions.

6.6 Air Volume (CFM) Measurement

To measure air volume, you need to input the cross-sectional area of the duct or opening. Press the **Input Sampling Cross-Sectional Area** button (8) and follow the on-screen prompts to enter the area. Then, press the **Confirm Input Area** button (12). The device will then calculate and display the air volume (CFM or CMM).

Figure 7: Air volume measurement range and specifications.

6.7 Data Logging and PC Connection

The LC-856A can store up to 600 sets of data. To record a measurement, press the **REC** button (7). To read stored data, press the **Read Record Data** button (14).

For advanced data logging and real-time monitoring, connect the anemometer to your PC using the provided USB cable. Install the accompanying PC software (refer to the software's specific instructions for installation and use). This allows for detailed analysis and graphical display of wind data.

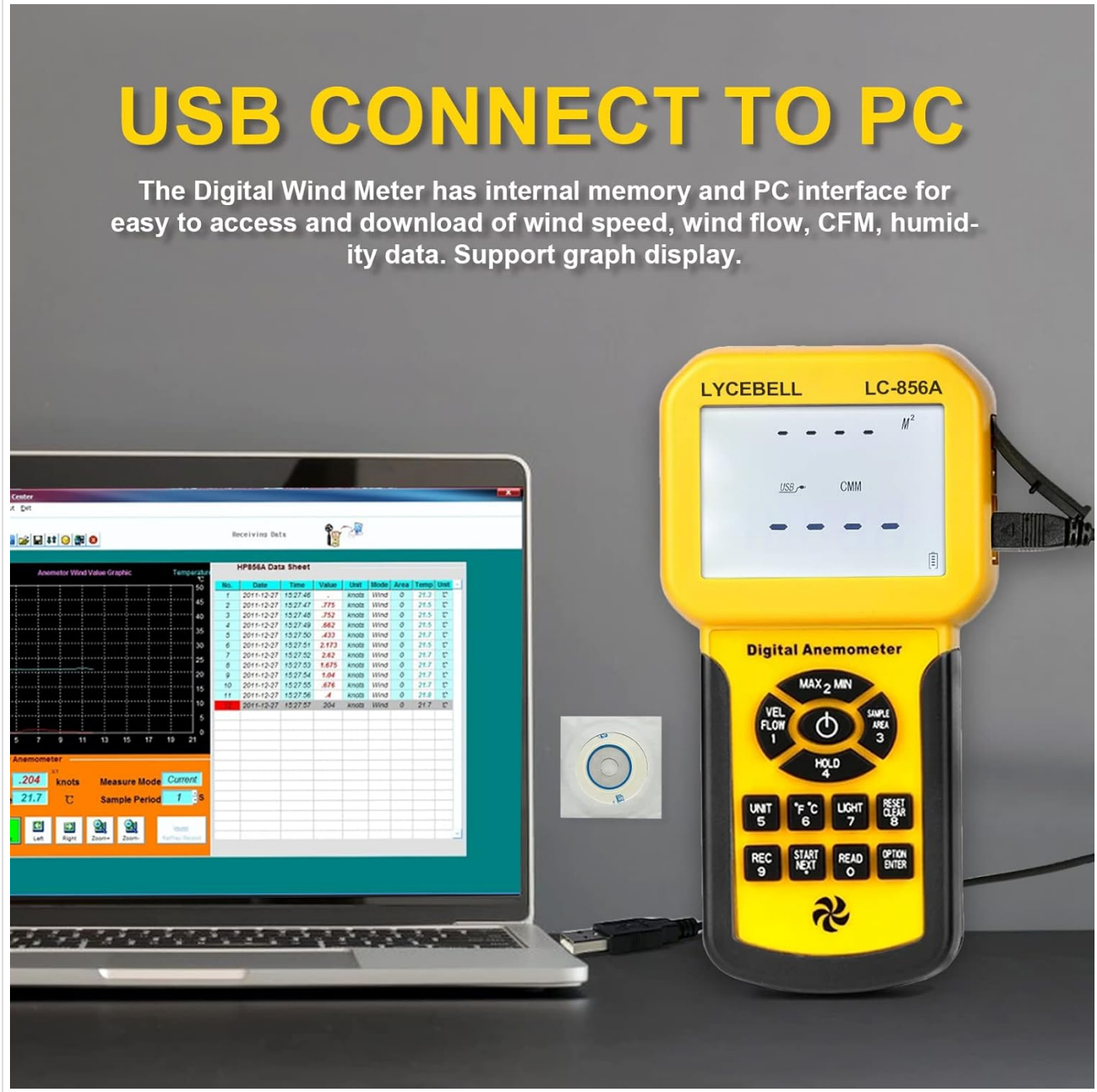

Figure 8: Anemometer connected to a PC for data transfer.

7. Specifications

Parameter	Value
Wind Velocity Range	0.03 ~ 100 mph
Wind Velocity Accuracy	± 3.0% + 0.2 reading
Wind Speed Units	m/s, km/h, ft/min, knots, mph
Wind Temperature Range	14°F ~ 140°F (-10°C ~ 60°C)
Temperature Units	°C / °F
Wind Volume Range	0 ~ 999,900 m³/min; 0 ~ 999,900 ft³/min
Data Storage	Up to 600 records

Parameter	Value
Connectivity	USB to PC
Power Supply	1 x 9V (6F22) Battery
Product Dimensions	16.3 x 8.5 x 3.45 cm
Item Weight	320 g
Material	Polycarbonate (PC)

8. Maintenance

8.1 Cleaning

Wipe the device with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure the wind sensor is free from dust and debris for accurate readings.

8.2 Battery Replacement

Replace the 9V battery when the low battery indicator appears on the LCD. Refer to Section 5.1 for battery installation instructions. Remove the battery if the device will not be used for an extended period to prevent leakage.

8.3 Storage

Store the anemometer in its protective carrying case in a cool, dry place, away from direct sunlight and extreme temperatures.

9. Troubleshooting

- **Device does not power on:** Check battery installation and ensure the battery has sufficient charge. Replace if necessary.
- **Inaccurate readings:** Ensure the wind sensor is clean and unobstructed. Verify that the correct units are selected.
- **No display:** Check battery. If the backlight is off, press the backlight button (11).
- **PC connection issues:** Ensure the USB cable is securely connected to both the anemometer and the computer. Verify that the PC software is correctly installed and running.

10. Warranty and Support

The LYCEBELL LC-856A Pro Anemometer is supported by the LYCEBELL after-sales service team. If you have any questions or require assistance with your product, please contact us. Our team is available to provide support within 24 hours.