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› AIRAIN TECH 10-in-1 Wireless Weather Station User Manual (Model: 6.5-inch dual monitors)

AIRAIN TECH 6.5-inch dual monitors

AIRAIN TECH 10-in-1 Wireless Weather Station User Manual

Model: 6.5-inch Dual Monitors

1. INTRODUCTION

This manual provides detailed instructions for the setup, operation, and maintenance of your AIRAIN TECH 10-in-1 Wireless Weather Station. This device offers comprehensive real-time weather data, including indoor/outdoor temperature and humidity, wind speed and direction, rainfall, barometric pressure, and moon phase, displayed on two 6.5-inch color LCD consoles.

2. PACKAGE CONTENTS

Carefully unpack all components and ensure all items are present. If any items are missing or damaged, please contact customer support.

- Display Console ×2
- Integrated Outdoor Sensor ×1
- User Manual ×1
- Power Adapter ×2
- Feet ×1
- Mounting Bracket Backplate ×1
- Mounting Pole ×1
- Nuts (M3/M5) / Bolts (M3/M5)
- Screws



Figure 2.1: Overview of included components and their approximate dimensions.

3. PRODUCT OVERVIEW

3.1 Display Console



The after sales service center is located in **Florida, USA**



Figure 3.1: Front view of the display console.

The ultimate in efficiency



Figure 3.2: Rear view of the display console with labeled buttons and ports.

3.2 Integrated Outdoor Sensor

Maximum transmission distance of 328 feet/100 meters



Mount on top



Mount on side



Mount on pole(top)



Mount on pole(side)

Figure 3.3: Detailed view of the integrated outdoor sensor components.

- **Rainwater Collector:** Measures rainfall.
- **Solar Panel:** Provides power to the sensor and charges internal batteries.
- **Wind Vane:** Measures wind direction.
- **Wind Cup:** Measures wind speed.
- **Thermo-Hygrometer Radiation Shield:** Protects temperature and humidity sensors from direct sunlight and radiant heat.

- **Thermo Hygro Sensor:** Measures outdoor temperature and humidity.
- **Battery Compartment:** Holds 3 AA batteries for backup power.
- **LED Indicator and Reset Button:** For status indication and resetting the sensor.

4. SETUP AND INSTALLATION

4.1 Outdoor Sensor Installation

The outdoor sensor is designed for easy installation and wireless transmission up to 328 feet (100 meters) in open areas. For optimal performance, choose a location that is open, free from obstructions, and allows the solar panel to receive direct sunlight.

1. **Battery Installation:** Open the battery compartment on the outdoor sensor and insert 3 AA batteries (included). Ensure correct polarity.
2. **Mounting Location:** Select a location that provides accurate readings for wind, rain, temperature, and humidity. Avoid placing it near heat sources, large metal objects, or areas with heavy foliage.
3. **Mounting Options:** The sensor comes with an adjustable bracket and hardware for various mounting configurations. Ensure the solar panel faces south for maximum sun exposure.

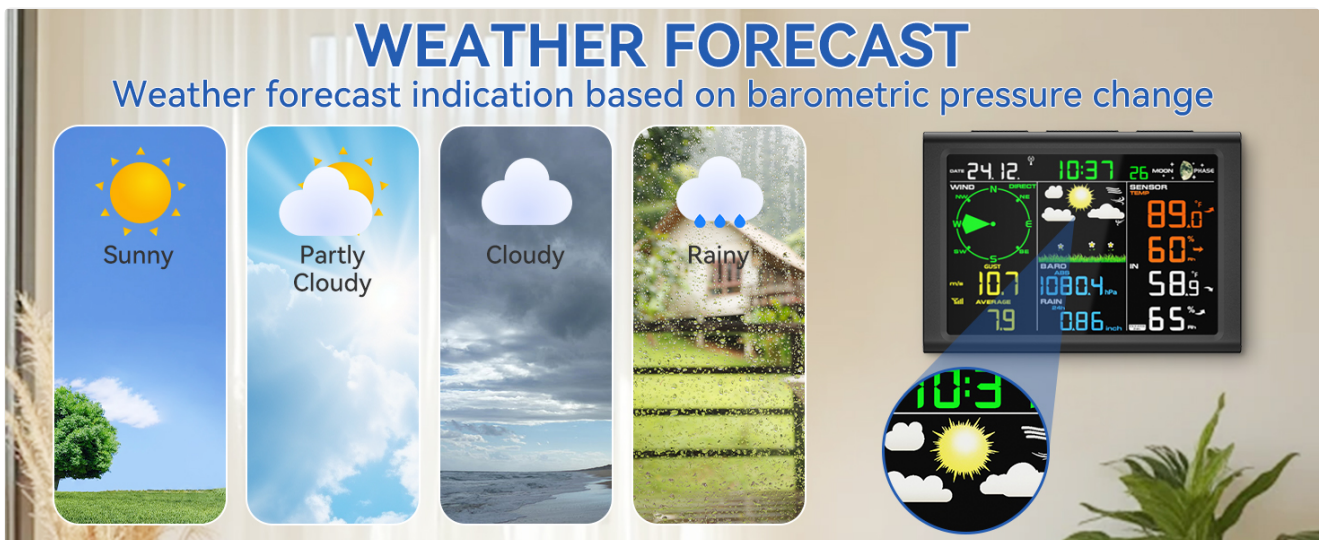


Figure 4.1: Various mounting options for the outdoor sensor.

4.2 Display Console Setup

The weather station includes two display consoles, allowing you to monitor data in different rooms.

1. **Power Connection:** Connect each display console to a power outlet using the provided power adapters.
2. **Initial Synchronization:** Once powered on, the display consoles will automatically attempt to connect with the outdoor sensor. This process may take a few minutes. Ensure the outdoor sensor is powered on and within range.
3. **Placement:** Position the display consoles in desired indoor locations. They can be placed on a desktop using the integrated stand or mounted on a wall using the hanging hole.



10-IN-1 WEATHER STATION

Weather Station with Outdoor Sensor

- Indoor temperature and humidity
- Outdoor temperature and humidity
- Air pressure
- Wind speed (gust/average wind speed)
- Wind direction
- Rainfall and rainfall rate
- Heat index
- Alarm clock
- Moon phase
- Calendar and date



Figure 4.2: Example of dual display console setup in different rooms.



Figure 4.3: Display console can be wall-mounted or placed on a desktop.

4.3 WWVB Radio Clock Synchronization

The console automatically performs an RCC signal search at 2:00, 8:00, 14:00, and 20:00 every day to correct any deviation from the exact time. Ensure the console is placed in an area where it can receive the WWVB signal.

Predict prematurely developing storms

by leveraging historical trend analysis and real-time atmospheric pressure shifts

Time (h)	Pressure (hPa)	Weather
New	1005	Cloud
6h	890	Rain
12h	1017	Sun
24h	1036	Sun
48h	1008	Cloud

Figure 4.4: WWVB icon indicating radio clock synchronization.

5. OPERATION

5.1 Understanding the Display

The 6.5-inch color LCD display provides a wealth of information at a glance. Key data points include:

- **Date and Time:** Synchronized via WWVB radio signal.
- **Moon Phase:** Current lunar phase.
- **Outdoor Temperature & Humidity:** Real-time readings from the outdoor sensor.
- **Indoor Temperature & Humidity:** Readings from the display console's internal sensor.
- **Wind Direction:** Indicated by a compass rose.
- **Wind Speed:** Displays both gust and average wind speeds.
- **Barometric Pressure:** Current atmospheric pressure and trend.
- **Rainfall:** Measures daily, weekly, or monthly rainfall.
- **Weather Forecast:** Icons indicating predicted weather conditions based on barometric pressure changes.

5.2 Adjusting Backlight Brightness

The display console features a 3-level backlight brightness adjustment. Press the **[SNOOZE/LIGHT]** key to cycle through three brightness levels or turn the backlight off.

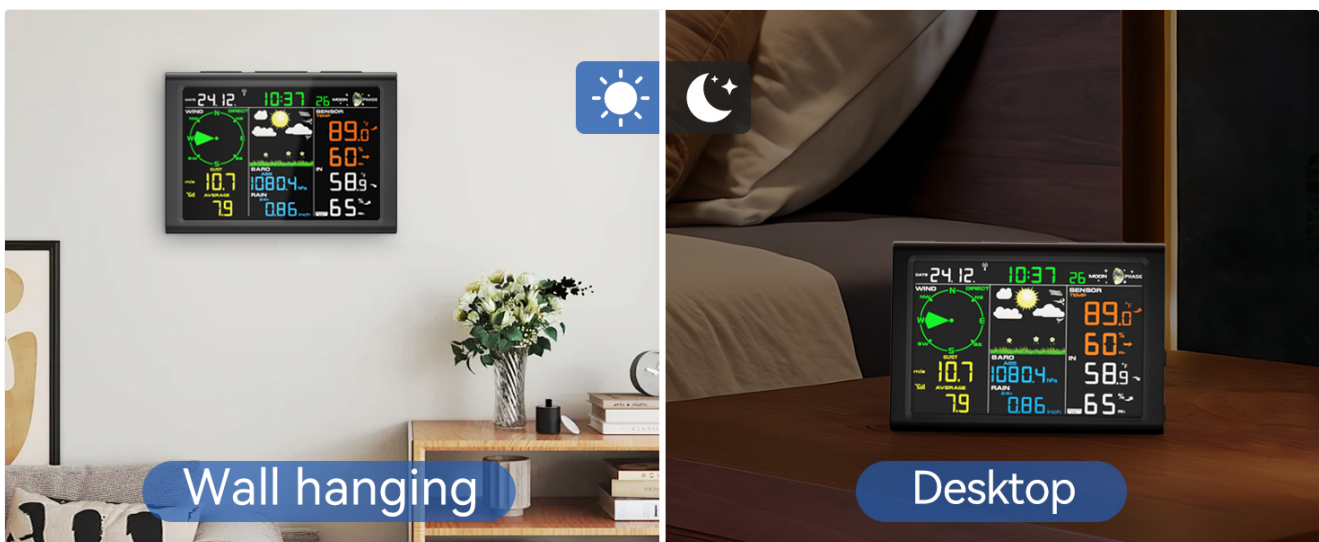


Figure 5.1: Backlight brightness levels and control button.

5.3 Weather Data Interpretation

The weather station provides highly localized data for your household. The system analyzes wind chill index and outdoor dew point data, which can be useful for planning outdoor activities.

- **Temperature & Humidity:** Real-time temperature range: -40°F to 140°F ($\pm 2^\circ\text{F}/1^\circ\text{C}$ accuracy). Real-time humidity range: 10% to 99% ($\pm 5\%$ accuracy).
- **Weather Forecast:** Icons (Sunny, Partly Cloudy, Cloudy, Rainy) are generated based on barometric pressure trends. These are predictions and may not always match official forecasts.

6. MAINTENANCE

6.1 Battery Replacement

The outdoor sensor uses 3 AA batteries for backup power. Replace these batteries annually or when the low battery indicator appears on the display console. Ensure to use high-quality alkaline batteries.

6.2 Cleaning the Sensor

Periodically inspect and clean the outdoor sensor, especially the rainwater collector and wind cups, to ensure accurate readings. Remove any debris, leaves, or insects that may obstruct the sensors. Use a soft, damp cloth for cleaning; avoid abrasive cleaners.

7. TROUBLESHOOTING

If you encounter issues with your weather station, please refer to the following common solutions:

- **No Outdoor Data Displayed:** Ensure the outdoor sensor has fresh batteries and is powered on. Check that the sensor is within the 328 ft (100m) wireless transmission range of the display console and free from major obstructions. Try resetting both the sensor (using the reset button) and the display console.
- **Inaccurate Readings:** Verify the outdoor sensor's placement. It should be in an open area, away from direct heat sources or reflective surfaces. Ensure the rain gauge is clear of debris and the wind cups/vane spin freely.
- **Time Synchronization Issues:** Ensure the display console is in an area with good reception for the WWVB signal. Avoid placing it near electronic devices that may cause interference.
- **Display Not Working:** Check the power adapter connection for the display console. If using batteries (if applicable for backup), ensure they are fresh and correctly inserted.

For persistent issues, please contact AIRAIN TECH customer support.

8. SPECIFICATIONS

Feature	Detail
Brand	AIRAIN TECH
Model Number	6.5-inch dual monitors
Power Source (Outdoor Sensor)	Solar Powered with 3 AA batteries (included)
Power Source (Display Console)	Power Adapter
Connectivity Technology	Radio Frequency
Wireless Transmission Range	Up to 328 ft (100 meters) in open areas
Display Type	Color LCD
Outdoor Temperature Range	-40°F to 140°F (-40°C to 60°C)
Temperature Accuracy	±2°F / ±1°C
Humidity Range	10% to 99%
Humidity Accuracy	±5%
Material	Plastic
Item Weight	4.69 pounds
Package Dimensions	15 x 11.46 x 7.4 inches

9. SUPPORT AND WARRANTY

AIRAIN TECH is committed to providing high-quality customer support. Our after-sales service center is located in Florida, USA.

9.1 Contact Information

- **Phone:** 904-652-2795 (Monday to Friday, 9:00 a.m. to 6:00 p.m. Eastern Time)
- **Email:** Refer to the front of the product packaging for email contact. Replies typically within 24 hours on weekdays.



Figure 9.1: AIRAIN TECH customer support team.

9.2 Warranty Information

Your product is covered by a warranty. Please refer to the product packaging or contact customer support for specific warranty terms and duration. We aim to provide up to two years of high-quality customer support.