Protmex PT3531B

Protmex PT3531B Projection Clock Digital Weather Station User Manual

INTRODUCTION

This manual provides detailed instructions for the setup, operation, and maintenance of your Protmex PT3531B Projection Clock Digital Weather Station. This device combines a projection clock with dual alarms, an indoor/outdoor thermometer, a weather forecast function, and a USB charging port. Please read this manual thoroughly before use to ensure proper functionality and to maximize your product experience.

PACKAGE CONTENTS

Upon unpacking, please verify that all the following items are included:

- 1 x Protmex PT3531B Projection Clock
- 1 x Wireless Outdoor Sensor
- 1 x Power Adapter
- 1 x User Manual (this document)

PRODUCT OVERVIEW

Familiarize yourself with the main unit and its components.

Figure 1: Protmex PT3531B Projection Clock and Wireless Sensor. This image displays the main clock unit with its digital display showing time, indoor/outdoor temperature, and weather forecast, alongside the compact wireless outdoor sensor.

Figure 2: Detailed diagram of the Protmex PT3531B Projection Clock's front display and side controls. Key features include the time display, weather forecasting icons, week, alarm indicators, month and date, indoor and outdoor temperature readings. The side panel shows Alarm 1 and Alarm 2 on/off switches, and a USB charger output socket. The bottom front includes MODE, MEM, +, and - buttons, along with a Snooze/Backlight button and the Projection Display lens.

Figure 3: Rear view of the Protmex PT3531B Projection Clock showing the 'Rainbow' and 'Loop' buttons for backlight control, the battery compartment for AAA batteries, and the DC 5.0V 1.2A power supply socket. The wireless sensor is also shown with its battery compartment and a suspension hole for wall mounting.

SETUP

1. Powering the Main Unit

- Connect the provided power adapter to the DC 5.0V 1.2A socket on the back of the clock and plug it into a wall outlet.
- For battery backup (to retain settings during power outages), insert 3 x AAA batteries (not included) into the battery compartment on the back of the clock.

2. Setting Up the Wireless Outdoor Sensor

- Insert 2 x AAA batteries (not included) into the wireless sensor's battery compartment.
- Place the sensor in a suitable outdoor location, protected from direct sunlight and rain, within 60 meters (open area) of the main unit. Ensure it is mounted securely using the suspension hole or placed on a flat surface.
- The main unit will automatically attempt to connect with the wireless sensor and display the outdoor temperature. If connection fails, press and hold the 'MEM' button on the main unit to initiate a manual search.

3. Initial Time Synchronization (WWVB Radio-controlled Time)

The clock is equipped with an atomic clock feature that automatically sets the time via a radio-controlled signal (WWVB). This process typically occurs overnight.

- Upon initial power-up, the clock will automatically search for the WWVB signal. A tower icon will flash on the display.
- Place the clock near a window for better reception.
- During WWVB reception mode, only the '-' button operates; other buttons are temporarily inactive.
- Once synchronized, the tower icon will appear solid on the display.

OPERATING INSTRUCTIONS

1. Manual Time and Date Setting

- Press and hold the 'MODE' button to enter time setting mode. The hour digit will flash.
- Use the '+' or '-' buttons to adjust the hour.
- Press 'MODE' again to move to the next setting (minute, year, month, day, 12/24 hour format, temperature unit °C/°F).
- Repeat the adjustment process for each setting.
- Press 'MODE' one last time or wait 15 seconds for the settings to be saved and exit the setting mode.

2. Alarm Setting

- Press the 'MODE' button repeatedly until 'AL1' or 'AL2' appears on the display.
- Press and hold 'MODE' to enter alarm setting mode. The alarm hour will flash.
- Use '+' or '-' to adjust the alarm hour. Press 'MODE' to confirm and move to minutes.
- Adjust minutes with '+' or '-'. Press 'MODE' to confirm.
- To activate or deactivate an alarm, use the physical 'Alarm 1 on/off' or 'Alarm 2 on/off' switch located on the side of the unit. An alarm icon will appear on the display when active.
- When an alarm sounds, press the top 'Snooze/Backlight' button for a 5-minute snooze.
- To stop the alarm, press any button except the top 'Snooze/Backlight' button. The alarm will reset for the next day.
- If left unattended, the alarm will automatically shut off after 2 minutes.

3. Projection Function

The clock can project the time and indoor/outdoor temperature onto a wall or ceiling.

Figure 4: The Protmex PT3531B Projection Clock projecting time and temperature onto a bedroom ceiling, providing clear visibility in low light conditions.

- The projection is in a soft red color, designed not to disturb sleep.
- The effective projection distance is approximately 1.5 to 2 meters (4.9 to 6.5 feet).
- The projected image can be reversed 90 degrees for optimal viewing. Adjust the projection lens to achieve the desired orientation.
- The projected temperature automatically alternates between indoor and outdoor readings.

4. Weather Forecast

The clock predicts the weather for the next 12 hours based on barometric pressure trends.
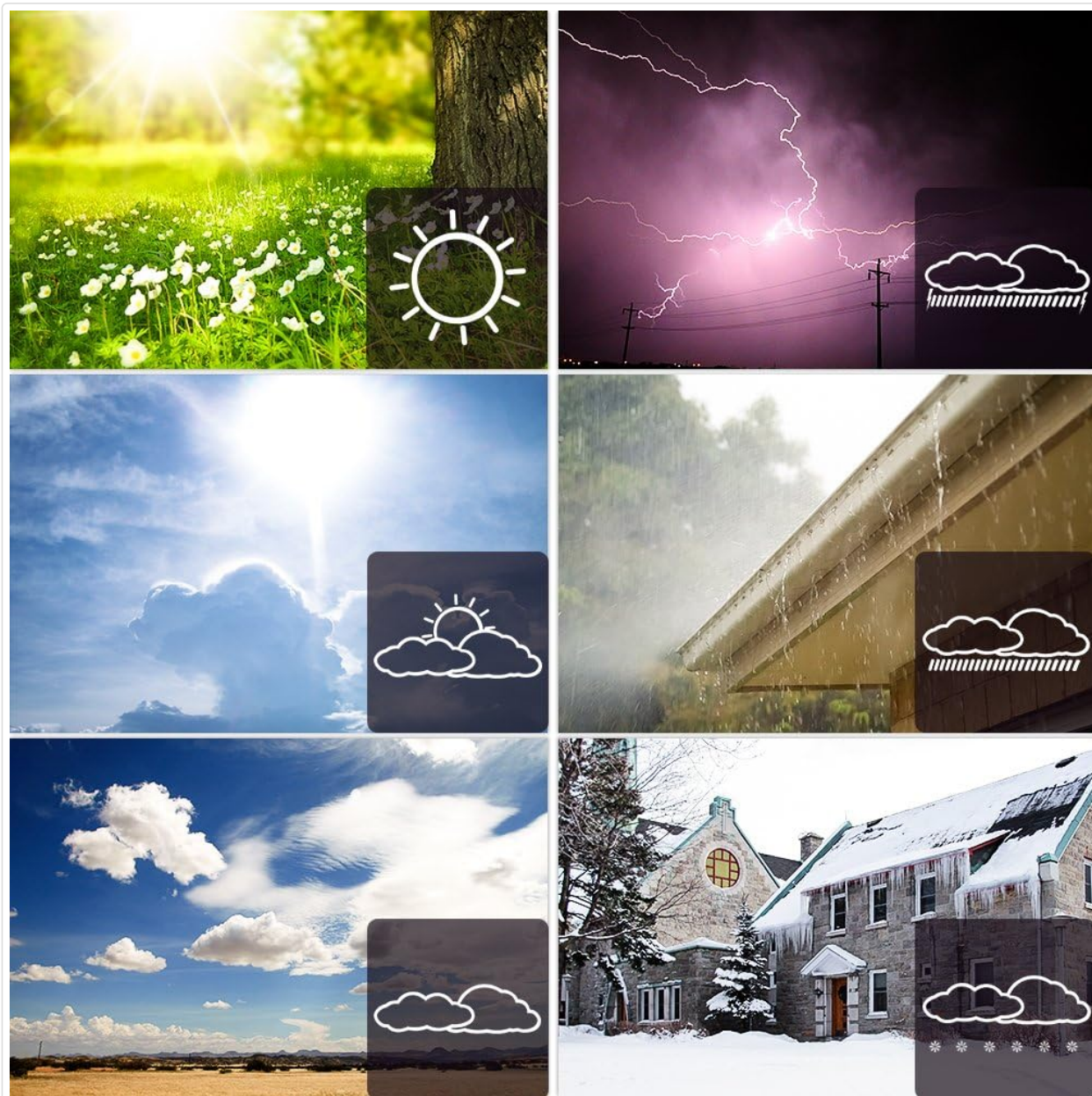
Figure 5: Visual representation of various weather forecast icons (sunny, partly cloudy, cloudy, rainy, snowy) that appear on the clock's display.

- The display shows icons representing sunny, partly cloudy, cloudy, rainy, and snowy conditions.
- It also indicates barometric pressure and temperature trends.

5. Colorful Backlight Function

When powered by the AC adapter, the clock features a colorful backlight.

- Press the 'LOOP' button on the back of the unit once to activate the automatic color-changing backlight (7-color cycle).
- Press the 'LOOP' button again to stop the color cycle and select a static color.
- Press the 'RAINBOW' button to manually cycle through the available colors.
- Press the 'Snooze/Backlight' button on top to temporarily illuminate the display when running on battery power.

6. USB Charging

The clock includes a USB output port for charging external devices.

Figure 6: The Protmex PT3531B Projection Clock charging a smartphone via its 5V/1.2A USB output port, demonstrating its utility as a bedside charging station.

- Connect your smartphone, tablet, or other USB-powered device to the 5V/1.2A USB output interface located on the side of the clock.
- Ensure the clock is connected to the AC power adapter for this function to operate.

MAINTENANCE

- Clean the clock and sensor with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- Avoid exposing the unit to extreme temperatures, direct sunlight, or moisture.
- Replace batteries in both the main unit (for backup) and the wireless sensor annually or when the low battery indicator appears.

TROUBLESHOOTING

Problem	Possible Cause	Solution

Problem	Possible Cause	Solution
Display or projection goes out intermittently.	Loose power connection or faulty adapter.	Ensure the power adapter is securely plugged into both the clock and the wall outlet. Try a different outlet or adapter if available.
Time is incorrect or not setting automatically.	Poor WWVB signal reception; incorrect time zone setting.	Place the clock near a window. Ensure the correct time zone is selected during manual setup. If WWVB is not available in your region, set the time manually.
Outdoor temperature not displayed or inaccurate.	Wireless sensor out of range, low battery, or interference.	Move the sensor closer to the main unit. Replace sensor batteries. Press and hold 'MEM' on the main unit to re-establish connection. Avoid placing near large metal objects or electronics.
Projection is blurry or upside down.	Projection lens out of focus or incorrect orientation.	Rotate the projection lens to adjust focus. Rotate the projection arm to reverse the image 90 degrees.
USB charging not working.	Clock not connected to AC power; device cable issue.	Ensure the clock is powered by the AC adapter. Try a different USB cable or device to rule out cable/device issues.

SPECIFICATIONS

- **Model:** PT3531B
- **Display Type:** Digital
- **Time Format:** 12/24 hour selectable
- **Perpetual Calendar:** Up to Year 2099
- **Indoor Temperature Range:** -9.9°C (14°F) to 50°C (122°F)
- **Outdoor Temperature Range:** -40°C (-40°F) to 70°C (158°F)
- **Temperature Units:** °C or °F selectable
- **Wireless Sensor Transmission Frequency:** 433.92MHz RF
- **Wireless Sensor Transmission Range:** 60 meters (open area)
- **USB Output:** DC 5V, 1.2A
- **Main Unit Power:** DC 5.0V 1.2A Power Adapter (included), 3 x AAA batteries (for backup, not included)
- **Wireless Sensor Power:** 2 x AAA batteries (not included)
- **Special Features:** Projection Clock, Dual Alarms with Snooze, Weather Forecast, Colorful Backlight, WWVB Radio-controlled Time

WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the documentation provided at the time of purchase or contact your retailer. Keep your purchase receipt as proof of purchase.

Related Documents - PT3531B

PT20C Weather Station Clock WWVB RCC / NO RCC Version User Manual	[PT20C Weather Station Clock User Manual](#) User manual for the Protmex PT20C Weather Station Clock, covering features, operation, settings, specifications, and troubleshooting for both WWVB RCC and NO RCC versions.
PT20C Weather Station Clock WWVB RCC/NO RCC Version User Manual	[PT20C Weather Station Clock User Manual](#) User manual for the Protmex PT20C Weather Station Clock, detailing its features, setup, operation, and functions including temperature, humidity, air pressure, weather forecast, and alarm settings. Covers RCC and WWVB versions.
	[Protmex HT607 Temperature & Humidity Meter User Manual](#) Comprehensive user manual for the Protmex HT607 Temperature & Humidity Meter, detailing its features, operation, specifications, and maintenance. Learn how to measure ambient temperature, humidity, dew point, and wet bulb temperature with this high-precision digital hygrometer.
	[Protmex PT6508 Digital Temperature Humidity Meter User Manual](#) Comprehensive user manual for the Protmex PT6508 Digital Temperature Humidity Meter, covering operation, display screen, maintenance, and technical specifications for measuring ambient temperature, dew point, and wet bulb.
	[Protmex HT609 Gas Leak Detector User Manual](#) User manual for the Protmex HT609 Gas Leak Detector, covering safety information, operation, specifications, and maintenance.
	[Protmex PT6708 Digital Sound Level Meter Calibration Guide](#) Step-by-step instructions for calibrating the Protmex PT6708 Digital Sound Level Meter, including entering debugging mode and performing A/C weighted measurements.